BUTLER | SNOW

August 27, 2024

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VIA ELECTRONIC FILING

Hon. David Jones, Chairman
c/o Ectory Lawless, Docket Room Manager
Tennessee Public Utility Commission
502 Deaderick Street, 4th Floor
Nashville, TN 37243
TPUC.DocketRoom@tn.gov

RE: ***Petition of Limestone Water Utility Operating Company, LLC to Increase Charges, Fees and Rates and for Approval of a General Rate Increase and Consolidated Rates,*** **TPUC Docket No. 24-00044**

Dear Chairman Jones:

Attached for filing please find *Limestone Water Utility Operating Company, LLC's Responses to Informal Discovery Requests of the Consumer Advocate* in the above-captioned matter.

Please note that the "Transaction Detail Report" and "MFG 035 – CSWR Insurance 2023 & 2024" contain **CONFIDENTIAL INFORMATION** and are being submitted **UNDER SEAL** as **CONFIDENTIAL and PROPRIETARY**. Both a public version and a nonpublic, **CONFIDENTIAL** version of these responses are attached.

As required, the original plus four (4) hard copies will follow. Should you have any questions concerning this filing, or require additional information, please do not hesitate to contact me.

Very truly yours,

BUTLER SNOW LLP

Melvin J. Malone

clw
Attachments
cc: Russ Mitten, Limestone Water Utility Operating Company, LLC
Shilina B. Brown, Consumer Advocate Division
Victoria B. Glover, Consumer Advocate Division

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BUTLER SNOW LLP

BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION
NASHVILLE, TENNESSEE

PETITION OF LIMESTONE WATER UTILITY OPERATING COMPANY, LLC TO INCREASE CHARGES, FEES AND RATES AND FOR APPROVAL OF A GENERAL RATE INCREASE AND CONSOLIDATED RATES	))))))	**DOCKET NO. 24-00044**

LIMESTONE WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO INFORMAL DISCOVERY REQUESTS OF THE CONSUMER ADVOCATE

Limestone Water Utility Operating Company, LLC ("Limestone"), by and through counsel, hereby submits its Responses to the Informal Discovery Requests propounded by the Consumer Advocate Division of the Attorney General's Office ("Consumer Advocate" or "CAD").

GENERAL OBJECTIONS

1. Limestone objects to all requests that seek information protected by the attorney-client privilege, the work-product doctrine and/or any other applicable privilege or restriction on disclosure.

2. Limestone objects to the definitions and instructions accompanying the requests to the extent the definitions and instructions contradict, are inconsistent with, or impose any obligations beyond those required by applicable provisions of the Tennessee Rules of Civil Procedure or the rules, regulations, or orders of the Tennessee Public Utility Commission ("TPUC").

3. The specific responses set forth below are based on information now available to Limestone, and Limestone reserves the right at any time to revise, correct, add to or clarify the objections or responses and supplement the information produced.

4. Limestone objects to each request to the extent that it is unreasonably cumulative or duplicative, speculative, unduly burdensome, irrelevant or seeks information obtainable from some other source that is more convenient, less burdensome or less expensive.

5. Limestone objects to each request to the extent it seeks information outside Limestone's custody or control.

6. Limestone's decision, now or in the future, to provide information or documents notwithstanding the objectionable nature of any of the definitions or instructions, or the requests themselves, should not be construed as: (a) a stipulation that the material is relevant or admissible, (b) a waiver of Limestone's General Objections or the objections asserted in response to specific discovery requests, or (c) an agreement that requests for similar information will be treated in a similar manner.

7. Limestone objects to those requests that seek the identification of "any" or "all" documents or witnesses (or similar language) related to a particular subject matter on the grounds that they are overbroad and unduly burdensome and exceed the scope of permissible discovery.

8. Limestone objects to those requests that constitute a "fishing expedition," seeking information that is not relevant or reasonably calculated to lead to the discovery of admissible evidence and is not limited to this matter.

9. Limestone does not waive any previously submitted objections to the Consumer Advocate's discovery requests.

RESPONSES TO INFORMAL DISCOVERY REQUESTS

Informal Request No. I. From the CAD's review of the Petition and supporting documentation, the CAD believes that there is public information in the excel spreadsheets marked **CONFIDENTIAL INFORMATION**. As identified by the CAD, the information in question is outlined below:

1. AJS-5 Proposed Rate Design
2. AJS-6 Rate Comparison
3. BT-1.1 Revenue Requirement – Sewer
4. BT-1.2 Revenue Requirement – Water
5. BT-2.1 - Summary Income Statement-Sewer
6. BT-2.2 - Summary Income Statement-Water
7. BT-3.1 - Detailed Income Statement-Sewer
8. BT-3.2 - Detailed Income Statement-Water
9. BT-4.1 - Income Tax Summary-Sewer
10. BT-4.2 - Income Tax Summary-Water
11. BT-5 - Capital Structure
12. BT-6.1 - Depreciation Expense-Sewer
13. BT-6.2 - Depreciation Expense-Water
14. BT-6.3 - Schedule of Depreciation Rates
15. BT-7 – Income Conversion Factor
16. BT-8 - Revenue Conversion Factor
17. BT-9.1 - Rate Base Summary-Sewer
18. BT-9.2 - Rate Base Summary-Water
19. BT-10.1 - UPIS-Sewer
20. BT-10.2 - UPIS-Water
21. BT-11.1 - Accumulated Deprec-Sewer
22. BT-11.2 – Accumulated Deprec-Water
23. BT-12.1 - CIAC-Sewer
24. BT-12.2 - CIAC-Water
25. BT-13.1 - Working Capital-Sewer
26. BT-13.2 - Working Capital-Water
27. BT-14 - Balance Sheet-Limestone Water
28. BT-15 - Balance Sheet-CSWR, LLC
29. Exhibit CD 1.1
30. Exhibit CD 1.2
31. MFG 010 Limestone Trial Balance
32. MFG 010 CSWR Trial Balance
33. MFG 025 Other Revenue
34. MFG 043 Rate Case Expense
35. MFG 059 List of Bank Accounts

RESPONSE: As discussed with the CAD, it is Limestone Water's position that the Excel Workbook provided with formulas and values intact constitute **CONFIDENTIAL INFORMATION** and as confidential work product and commercially sensitive material should be treated as such pursuant to the Protective Order. Many of the schedules within the Excel Workbook, however, are non-confidential, as demonstrated in the public version (PDF filings) previously submitted by Limestone Water in support of the Petition. So, any public information marked **CONFIDENTIAL INFORMATION** in the Excel Workbook is publicly available in Docket No. 24-00044 in PDF form.

It remains Limestone Water's position that the following documents and tabs within the Excel Workbook constitute **CONFIDENTIAL INFORMATION** and should be treated as such:

- MFG 008 – General Ledger
- MFG 011 – Audited Financials
- MFG 013 – Affiliate Party Transactions
- MFG 014 – Outside Professional Services
- MFG 017 – Largest Customers
- MFG 034 – Life Insurance Expenses
- MFG 035 – Insurance Schedule
- MFG 037 – Compensation Information
- MFG 045 – Tax Returns
- MFG 046 – Federal Income Tax
- MFG 053 – Budget
- MFG 070c – Equity Detail

Excepting the above documents and tabs within the Excel Workbook, in the spirit of cooperation Limestone Water is currently attempting in good faith to "de-construct" the full Excel Workbook and break or separate the necessary links to provide CAD with a public version of the Excel Workbook. This public version of the Excel Workbook will not contain the above listed documents and tabs.

Informal Request No. 2. From the CAD's review of the Petition and supporting documentation, the Consumer Advocate believes that certain information the CAD deems necessary for appropriate review of the Petition may be missing from, or not included in, the Petition. As identified by the CAD, the information in question is outlined below:

a. BT-3.1 Detailed Income Statement-Sewer

2. *No source or footnotes, Company has failed to provide the formula supporting how it has allocated Expenses between water and wastewater operations*
   a. BT-3.2 Detailed Income Statement-Water
3. *No source or footnotes, Company has failed to provide the formula supporting how it has allocated Expenses between water and wastewater operations*
   a. BT-10.1 UPIS-Sewer
4. *Plant in Service, while ties to the Trial Balance the support for utility plant is not available on a per system basis. Additionally, it has no formulas or footnotes supporting figures shown*
   a. BT-10.2 UPIS-Water
5. *Plant in Service, while additions ties to the Trial Balance the support for utility plant is not available on a per system basis account basis. Additionally, it has no formulas or footnotes supporting figures shown*
   a. BT-11.1 Accumulated Deprec-Sewer
6. *Sewer does not tie to the Trial Balance for accounts shown; additionally, it has no formulas or footnotes supporting figures shown*
   a. BT-11.2 – Accumulated Deprec-Water
7. *Water does not tie to the Trial Balance for accounts shown; additionally, it has no formulas or footnotes supporting figures shown*

a. BT-12.1 - CIAC-Sewer

8. *CIAC Sewer, while it ties to the Trial Balance it has no formulas supporting figures shown. Nor does it provide the basis for how CIAC was divided between water and sewer*
   a. BT-12.2 - CIAC-Water
9. *CIAC Sewer, while it ties to the Trial Balance it has no formulas supporting figures shown. Nor does it provide the basis for how CIAC was divided between water and sewer*

a. MFG 017 Limestone's 25 largest customers

10. *Limestone provided names and addresses of its 25 largest customers, but it has not provided, in native format, the usage by month for the last 3 years for the 25 largest customers. Limestone has also not provided the correspondence from these customers regarding usage.*
    a. MFG 018 customers by rate class and by month for last 3 years
11. *Limestone has proposed a consolidated rate design. However, Limestone has not provided the historical billing determinants (monthly bills, monthly customer usage) that are necessary to evaluate the Company's current revenues.*
    a. MFG 043 Rate Case Expense

12. *Summary information without any details of the rate case expenses*

RESPONSE: In the spirit of cooperation, please find Limestone Water's responses to each of the Consumer Advocate's requests for additional information:

a. BT-3.1 Detailed Income Statement-Sewer

1. *There are no sources or footnotes, and Company has failed to provide the formula supporting how it has allocated Expenses between water and wastewater operations.*

Response: Limestone used Equivalent Residential Units ("ERU's") to allocate expenses between water and sewer. The split was 77% sewer and 23% water. Please note that the allocation percentage is only necessary for certain expenses. For most systems, which handle only water or sewer services, expenses are recorded to water or sewer only accounts.

a. BT-3.2 Detailed Income Statement-Water

2. *There are no sources or footnotes, and Company has failed to provide the formula supporting how it has allocated Expenses between water and wastewater operations.*

Response: Limestone used ERU's to allocate expenses between water and sewer. The split was 77% sewer and 23% water. Please note that the allocation percentage is only necessary for certain expenses. For most systems, which handle only water or sewer services, expenses are recorded to water or sewer only accounts.

a. BT-10.1 UPIS-Sewer

3. *Plant in Service. While this ties to the Trial Balance, the support for utility plant is not available on a per system basis. Additionally, it has no formulas or footnotes supporting figures shown.*

Response: Please see the new schedule labeled BT 10.1 & 10.2 – UPIS by Service Area.

a. BT-10.2 UPIS-Water

4. *Plant in Service. While additions tie to the Trial Balance, the support for utility plant is not available on a per system basis account basis. Additionally, it has no formulas or footnotes supporting figures shown.*

Response: Please see the new schedule labeled BT 10.1 & 10.2 – UPIS by Service Area.

a. BT-11.1 Accumulated Deprec-Sewer

5. *Sewer does not tie to the Trial Balance for accounts shown. Additionally, it has no formulas or footnotes supporting figures shown.*

Response: Please see the new schedule labeled BT 11.1 & 11.2 Accum Depr Detail. Also, please see the updated Trial Balance labeled MFG 010 – Limestone Trial Balance - Updated. Although the updated version has no flow-through impact on other documents, schedules or exhibits, it does include a corrected Trial Balance. This MFG 010 – Limestone Trial Balance – Updated replaces in the entirety the MFG 010 – Limestone Trial Balance submitted with the Petition.

a. BT-11.2 – Accumulated Deprec-Water

6. *Water does not tie to the Trial Balance for accounts shown. Additionally, it has no formulas or footnotes supporting figures shown.*

Response: Please see the new schedule labeled BT 11.1 & 11.2 Accum Depr Detail, as well as the updated Trial Balance labeled MFG 010 – Limestone Trial Balance - Updated.

a. BT-12.1 - CIAC-Sewer

1. *CIAC Sewer. While it ties to the Trial Balance, it has no formulas or supporting figures shown, nor does it provide the basis for how CIAC was divided between water and sewer.*

   Response: Please see the new schedule labeled BT 12.1 & 12.2 – CIAC Detail.

a. BT-12.2 - CIAC-Water

2. *CIAC Sewer. While it ties to the Trial Balance, it has no formulas or supporting figures shown, nor does it provide the basis for how CIAC was divided between water and sewer.*

   Response: Please see the new schedule labeled BT 12.1 & 12.2 – CIAC Detail.

a. MFG 017 Limestone's 25 largest customers

10. *Limestone provided names and addresses of its 25 largest customers, but it has not provided, in native format, the usage by month for the last 3 years for the 25 largest customers. Limestone has also not provided the correspondence from these customers regarding usage.*

    Response: Please see the workbook labeled "Transaction Detail Report" for usage information. Limestone has not had correspondence with these customers regarding usage. The Transaction Detail Report contains **CONFIDENTIAL INFORMATION** and is being submitted **UNDER SEAL** as **CONFIDENTIAL INFORMATION**.

a. MFG 018 customers by rate class and by month for last 3 years

11. *Limestone has proposed a consolidated rate design. However, Limestone has not provided the historical billing determinants (monthly bills, monthly customer usage) that are necessary to evaluate the Company's current revenues.*

    Response: Please see the workbook labeled "Transaction Detail Report" for Test Year billing determinates. As discussed with the Consumer Advocate, Limestone has included

information regarding non-recurring charges as well. In order to provide the most useful information, Limestone has provided Test Year information. Due to the number of acquisitions in the past 3 years and the transition of billing software, Limestone believes that Test Year data is more representative of the request in this case. The Transaction Detail Report contains **CONFIDENTIAL INFORMATION** and is being submitted **UNDER SEAL** as **CONFIDENTIAL INFORMATION**.

a. MFG 043 Rate Case Expense

12. Summary information without any details of the rate case expenses.

Response: Rate case expense was estimated and amortized into cost of service over a two-year period. Limestone Water hopes to replace the estimate of rate case expense with the amount of rate case expense actually incurred through the hearing date.

Informal Request No. 3. From the CAD's review of the Petition and supporting documentation, the Consumer Advocate believes that certain information the CAD deems necessary for appropriate review of the Petition may be missing from, or not included in, the Petition. As identified by the CAD, the information in question, excel spreadsheets with references intact, is outlined below:

1. DWD-1 Summary of Cost of Capital & Overall Rate of Return
2. DWD-2 Financial Profile & Capital Structure Proxy Groups
3. DWD-3 Long-term debt
4. DWD-4 Discounted Cash Flow Model
5. DWD-5 Risk Premium Model
6. DWD-6 Capital Asset Model
7. DWD-7 Non-Price Regulated Companies
8. DWD-8 Models Comp to Total Risk
9. DWD-9 Est. Market Capitalization
10. MFG 011 Consolidated Financial services
11. MFG 035 liability and property insurance schedules

MFG 050 Rate Base by Year - plant additions btwn normal & special projects

RESPONSE: Limestone Water has attached all excel spreadsheets, except those associated with MFG 011. The excel spreadsheets associated with MFG 011 are a 3rd Party report, and Limestone Water does not have access to any excel documents associated with the audited financials. MFG 35 – CSWR Insurance 2023 & 2024 contains **CONFIDENTIAL INFORMATION** and is being submitted **UNDER SEAL** as **CONFIDENTIAL INFORMATION**.

Informal Request No. 4: Please provide the current tariffs for each service territory.

RESPONSE: Please see the Company's "Revenue K&M Adjustment" workbook, as well as the Company's current tariffs.

RESPECTFULLY SUBMITTED,

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Attorneys for Limestone Water Utility Operating Company, LLC

Limestone Water Operating Company, LLC
24000-XXX
Utility Plant In Service Summary - Sewer
For the Period Ending April 30, 2024

Line Number (A)	System (B)	NARUC Acct. No (C)	Account Title (D)	Balance 4/30/2024 (E)
1				
2	**TN-Aqua-WW**			
3		.	Sewer - Land and Land Rights	$79,646
4		.	Sewer - S&I	$1,716,363
5		.	Sewer - Collection Sewers - Force	$775,097
6		.	Sewer - Collection Sewers - Gravity	$28,616
7		.	Sewer - Services to Customers	$70,362
8		.	Sewer - Flow Measuring Devices	$1,416
9		.	Sewer - Pumping Equip	$572,503
10		.	Sewer - Treatment & Disposal Equip	$35,867
11		.	Sewer - Plant Sewers	$12,128
12		.	Sewer - Outfall Sewer Lines	$5,360
13		.	Sewer - Tools, Shop, and Garage Equip	$571
14		.	Sewer - Communication Equip	$224,447
15		.	Sewer - Misc Equipment	$2,620
16	**TN-Arrington Retreat-WW**			
17		.	Sewer - Land and Land Rights	$40,020
18		.	Sewer - S&I	$1,015
19		.	Sewer - Collection Sewers - Force	$343,443
20		.	Sewer - Services to Customers	$600
21		.	Sewer - Pumping Equip	$449,740
22		.	Sewer - Treatment & Disposal Equip	$28,339
23		.	Sewer - Communication Equip	$7,236
24		.	Sewer - Other Tangible Plant	$634,197
25	**TN-Chapel Woods-WW**			
26		.	Sewer - Land and Land Rights	$57,321
27		.	Sewer - Treatment & Disposal Equip	$63,457
28		.	Sewer - Plant Sewers	$3,594
29		.	Sewer - Communication Equip	$22,947
30	**TN-Grasslands-WW**			
31		.	Sewer - Land and Land Rights	$430,439
32		.	Sewer - S&I	$709,464
33		.	Sewer - Collection Sewers - Force	$28,611
34		.	Sewer - Collection Sewers - Gravity	$863,716
35		.	Sewer - Services to Customers	$4,790
36		.	Sewer - Flow Measuring Devices	$12,236
37		.	Sewer - Receiving Wells	$217,903
38		.	Sewer - Pumping Equip	$130,390
39		.	Sewer - Treatment & Disposal Equip	$1,818,906
40		.	Sewer - Plant Sewers	$41,735
41		.	Sewer - Outfall Sewer Lines	$21,758
42		.	Sewer - Other Plant & Misc. Equip	$36,908
43		.	Sewer - Communication Equip	$8,416
44		.	Sewer - Misc Equipment	$6,117
45		.	Sewer - Other Tangible Plant	$2,209
46	**TN-Hardeman Springs-WW**			
47		.	Sewer - Land and Land Rights	$31,136
48		.	Sewer - Collection Sewers - Gravity	$600
49		.	Sewer - Services to Customers	$1,320
50		.	Sewer - Treatment & Disposal Equip	$6,387
51		.	Sewer - Communication Equip	$8,536
52	**TN-Hideaway-WW**			
53		.	Sewer - Land and Land Rights	$39,165
54		.	Sewer - S&I	$20,969
55		.	Sewer - Services to Customers	$11,101
56		.	Sewer - Pumping Equip	$18,732
57		.	Sewer - Treatment & Disposal Equip	$56,893
58		.	Sewer - Plant Sewers	$1,440
59		.	Sewer - Tools, Shop, and Garage Equip	$18,562
60		.	Sewer - Communication Equip	$7,416
61	**TN-Lakeside Estates-WW**			
62		.	Sewer - Land and Land Rights	$60,492
63		.	Sewer - Pumping Equip	$550
64		.	Sewer - Treatment & Disposal Equip	$90,606
65		.	Sewer - Communication Equip	$17,455
66	**TN-Shiloh Falls-WW**			
67		.	Sewer - Land and Land Rights	$249,950
68		.	Sewer - S&I	$550,767
69		.	Sewer - Services to Customers	$5,825
70		.	Sewer - Pumping Equip	$1,800
71		.	Sewer - Treatment & Disposal Equip	$164,566
72		.	Sewer - Power Operated Equip	$4,149
73		.	Sewer - Communication Equip	$73,194
74		.	Sewer - Misc Equipment	$9,715
75				
76				**$10,961,828**
77				

Limestone Water Operating Company, LLC
24000-XXX
Utility Plant In Service Summary - Water
For the Period Ending April 30, 2024

Line Number	System	NARUC Acct. No	Account Title	Balance 4/30/2024
(A)	(B)	(C)	(D)	(E)
1				
2	**TN-Aqua-W**			
3		.	Water - Land and Land Rights	$79,646
4		.	Water - S&I	$4,607
5		.	Water - S&I Source of Supply	$1,246,688
6		.	Water - Supply Mains	$7,805
7		.	Water - Transmission & Distribution Mains	$112,139
8		.	Water - Services to Customers	$112,860
9		.	Water - Meters and Installation	$30,986
10		.	Water - Hydrants	$20,878
11		.	Water - Other Plant and Misc Equip	$2,032
12		.	Water - Misc Equip	$9,781
13	**TN-Candlewood Lakes-W**			
14		.	Water - Land and Land Rights	$53,812
15		.	Water - Supply Mains	$834
16		.	Water - Treatment Equip	$733
17		.	Water - Communication Equip	$6,019
18				
19				**$1,688,819**
20				
21				
22				

Limestone Water Operating Company, LLC
24000-XXX
Accumulated Depreciation Summary - Sewer
For the Period Ending April 30, 2024

Line Number	System	NARUC Acct. No.	Account Title	Balance 4/30/2024
(A)	(B)	(C)	(D)	(E)
1				
2	**TN-Aqua-WW**			
3		353.000	Sewer - Land and Land Rights	$0
4		354.005	Sewer - S&I	($919,189)
5		360.001	Sewer - Collection Sewers - Force	($8,598)
6		361.001	Sewer - Collection Sewers - Gravity	($13,685)
7		363.000	Sewer - Services to Customers	($1,109)
8		364.002	Sewer - Flow Measuring Devices	($51)
9		371.002	Sewer - Pumping Equip	($126,180)
10		380.003	Sewer - Treatment & Disposal Equip	($1,876)
11		381.001	Sewer - Plant Sewers	($197)
12		382.001	Sewer - Outfall Sewer Lines	($36)
13		393.002	Sewer - Tools, Shop, and Garage Equip	($62)
14		396.002	Sewer - Communication Equip	($23,525)
15		397.001	Sewer - Misc Equipment	($87)
16	**TN-Arrington Retreat-WW**			
17		353.000	Sewer - Land and Land Rights	$0
18		354.005	Sewer - S&I	($27)
19		360.001	Sewer - Collection Sewers - Force	($16,027)
20		361.001	Sewer - Collection Sewers - Gravity	($1,459)
21		363.000	Sewer - Services to Customers	($13)
22		371.002	Sewer - Pumping Equip	($213,663)
23		380.003	Sewer - Treatment & Disposal Equip	($903)
24		396.002	Sewer - Communication Equip	($784)
25		398.002	Sewer - Other Tangible Plant	($150,143)
26	**TN-Chapel Woods-WW**			
27		353.000	Sewer - Land and Land Rights	$0
28		361.001	Sewer - Collection Sewers - Gravity	($1,005)
29		380.003	Sewer - Treatment & Disposal Equip	($20,461)
30		381.001	Sewer - Plant Sewers	($97)
31		396.002	Sewer - Communication Equip	($1,380)
32	**TN-Grasslands-WW**			
33		353.000	Sewer - Land and Land Rights	$0
34		354.005	Sewer - S&I	($63,610)
35		360.001	Sewer - Collection Sewers - Force	($54)
36		361.001	Sewer - Collection Sewers - Gravity	($233,172)
37		363.000	Sewer - Services to Customers	($92)
38		364.002	Sewer - Flow Measuring Devices	($952)
39		370.000	Sewer - Receiving Wells	($125,721)
40		371.002	Sewer - Pumping Equip	($63,325)
41		380.003	Sewer - Treatment & Disposal Equip	($625,459)
42		381.001	Sewer - Plant Sewers	($1,120)
43		382.001	Sewer - Outfall Sewer Lines	($21,758)
44		389.002	Sewer - Other Plant & Misc. Equip	($33,195)
45		396.002	Sewer - Communication Equip	($912)
46		397.001	Sewer - Misc Equipment	($204)
47		398.002	Sewer - Other Tangible Plant	($523)
48	**TN-Hardeman Springs-WW**			
49		353.000	Sewer - Land and Land Rights	$0
50		361.001	Sewer - Collection Sewers - Gravity	($1,087)
51		363.000	Sewer - Services to Customers	($29)
52		380.003	Sewer - Treatment & Disposal Equip	($346)
53		396.002	Sewer - Communication Equip	($925)
54	**TN-Hideaway-WW**			
55		353.000	Sewer - Land and Land Rights	$0
56		354.005	Sewer - S&I	($534)
57		361.001	Sewer - Collection Sewers - Gravity	($1,597)
58		363.000	Sewer - Services to Customers	($234)
59		371.002	Sewer - Pumping Equip	($1,738)
60		380.003	Sewer - Treatment & Disposal Equip	($4,202)
61		381.001	Sewer - Plant Sewers	($39)
62		393.002	Sewer - Tools, Shop, and Garage Equip	($464)
63		396.002	Sewer - Communication Equip	($803)
64	**TN-Lakeside Estates-WW**			
65		353.000	Sewer - Land and Land Rights	$0
66		371.002	Sewer - Pumping Equip	($5)
67		380.003	Sewer - Treatment & Disposal Equip	($6,048)
68		396.002	Sewer - Communication Equip	($145)
69	**TN-Shiloh Falls-WW**			
70		353.000	Sewer - Land and Land Rights	$0
71		354.005	Sewer - S&I	($357,182)
72		361.001	Sewer - Collection Sewers - Gravity	($2,171)
73		363.000	Sewer - Services to Customers	($34)
74		371.002	Sewer - Pumping Equip	($30)
75		380.003	Sewer - Treatment & Disposal Equip	($142,584)
76		395.000	Sewer - Power Operated Equip	($23)
77		396.002	Sewer - Communication Equip	($7,929)
78		397.001	Sewer - Misc Equipment	($324)
79				
80				**($3,199,129)**
81				
82				
83				

Limestone Water Operating Company, LLC
24000-XXX
Accumulated Depreciation Summary - Water
For the Period Ending April 30, 2024

Line Number	System	NARUC Acct. No.	Account Title	Balance 4/30/2024
(A)	(B)	(C)	(D)	(E)
1				
2	**TN-Aqua-W**			
3		303.000	Water - Land and Land Rights	$0
4		304.006	Water - S&I	($38)
5		304.100	Water - S&I Source of Supply	($648,753)
6		309.001	Water - Supply Mains	($846)
7		331.002	Water - Transmission & Distribution Mains	($11,775)
8		333.004	Water - Services to Customers	($6,742)
9		334.001	Water - Meters and Installation	($2,155)
10		335.001	Water - Hydrants	($807)
11		339.000	Water - Other Plant and Misc Equip	($17)
12		347.001	Water - Misc Equip	($2,151)
13	**TN-Candlewood Lakes-W**			
14		303.000	Water - Land and Land Rights	$0
15		309.001	Water - Supply Mains	($28)
16		320.003	Water - Treatment Equip	($74)
17		346.001	Water - Communication Equip	($201)
18				
19				**($673,587)**
20				
21				
22				

For the year 5/1/2022-4/30/2023

Account	May 2022	Jun 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023
000001 - Go Live Clearing Account	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3000 - Retained Earnings	$232,262.49	$232,262.49	$232,262.49	$232,262.49	$232,262.49	$232,262.49	$232,262.49	$232,262.49	$1,007,817.18	$1,007,817.18	$1,007,817.18	$1,007,817.18
105000 - Construction In Progress	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
105001 - CIP Plant	$565,473.76	$661,745.96	$964,424.30	$1,176,593.17	$1,310,236.54	$1,368,145.61	$1,451,828.32	$1,659,435.29	$1,527,925.14	$1,856,715.18	$2,021,936.05	$626,336.74
106000 - Utility Plant Purchased	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
108000 - Accum Depreciation Plant in Service	($2,581,723.36)	($2,612,182.95)	($2,642,642.53)	($2,673,100.73)	($2,703,537.06)	($2,750,001.68)	($2,780,642.00)	($2,811,282.25)	($2,841,922.55)	($3,347,737.50)	($3,380,106.88)	($3,421,335.36)
108009 - Accum Depr 1 Month Difference	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
114000 - Utility Plant Acq Adjustment	$1,240,277.90	$1,240,277.90	$1,240,277.90	$1,240,277.90	$1,240,277.90	$1,198,987.78	$1,198,987.78	$1,198,987.78	$1,198,987.78	$1,198,987.78	$1,198,987.78	$1,198,987.78
131113 - Cash - ENT Operating Limestone	$46,481.92	$37,110.91	$76,344.83	$17,853.04	$55,768.85	$52,360.83	$280,284.05	$148,245.95	$28,933.69	$63,876.82	$30,732.46	($21,458.38)
131213 - Cash - ENT Receipts Limestone	$31,004.30	$38,365.01	$19,413.62	$25,184.63	$10,022.36	$7,965.01	$1,917.73	$1,759.48	$1,676.72	$1,609.05	$1,569.55	$1,532.05
131413 - Cash - ENT Cap Imp Reserve Limestone	$117,459.85	$117,459.85	$117,459.85	$130,902.41	$130,902.41	$130,902.41	$130,902.41	$130,902.41	$130,902.41	$130,902.41	$130,902.41	$130,902.41
131513 - Cash - ENT Tap Fee Escrow Limestone	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01
131613 - Cash - PNC Operating Limestone	$0.00	$0.00	$14,621.57	$29,224.16	$27,719.75	$18,112.55	$66,613.25	$63,594.23	$133,641.14	$98,627.81	$84,080.37	$124,087.92
131813 - Cash - PNC Cap Imp Reserve Limestone	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$18,517.72	$18,517.72	$37,896.79	$59,751.71
131814 - Cash - PNC DSH Escrow Limestone	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
134000 - Other Special Deposits	$9,100.00	$9,100.00	$9,100.00	$9,100.00	$9,100.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
142000 - Accounts Receivable - Trade	$100,747.22	$103,324.67	$124,005.72	$104,559.30	$85,936.75	($563.18)	$3,444.48	$68,624.77	$53,704.58	$50,223.68	$86,514.09	$88,746.37
142100 - AR Adjustments	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
143000 - Accounts Receivable - Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
144000 - Accum Prov for Uncoll Accounts	($3,210.05)	($3,932.69)	($4,671.17)	($5,386.11)	($6,070.21)	($6,774.53)	($7,482.35)	($8,171.69)	($8,869.31)	($9,565.68)	($10,329.58)	($11,068.20)
166000 - Prepayments	$16,072.91	$14,376.78	$12,100.00	$9,823.22	$14,894.04	$12,334.17	$13,847.03	$24,545.53	$20,743.06	$19,463.67	$29,324.66	$33,576.21
173100 - Water - Accrued Utility Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$77,869.86	$78,764.91	$76,833.43	$17,569.92	$16,765.72	$16,695.06	$16,990.63
173200 - Sewer - Accrued Utility Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$60,160.12	$60,826.66	$66,656.46	$64,274.56
183000 - PSI - General	$833.82	$833.82	$833.82	$833.82	$833.82	$8,688.97	$8,688.97	$15,504.53	$15,504.53	$15,504.53	$15,504.53	$15,504.53
183001 - PSI - Engineering	$138,582.71	$140,886.71	$142,194.21	$221,941.88	$251,660.03	$253,831.73	$253,951.73	$261,618.73	$269,230.73	$117,066.52	$202,984.14	$146,457.59
183002 - PSI - Legal	$91,801.58	$99,923.38	$99,923.38	$103,939.18	$103,939.18	$114,950.80	$147,504.90	$147,504.90	$155,531.57	$103,958.78	$103,958.78	$89,412.26
184200 - Customer Cash Clearing Acct	$18,818.77	$19,904.53	$32,297.78	$54,510.26	$56,249.01	$53,673.88	$50,720.21	$9,998.33	$10,080.97	$10,317.67	$9,839.24	$8,356.03
186000 - Misc. Deferred Debits	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
186001 - Deferred Rate Case Expense	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
186010 - Other Deferred Debits	$11,267.56	$11,267.56	$11,267.56	$11,267.56	$11,267.56	$21,227.56	$21,227.56	$21,227.56	$21,227.56	$21,227.56	$25,308.56	$25,308.56
186020 - Deferred Debits - Utility Deposits	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
186100 - Regulatory Asset	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
201000 - Common Stock Issued	($3,823,524.39)	($3,823,524.39)	($3,823,524.39)	($3,823,524.39)	($3,823,524.39)	($3,836,339.54)	($3,836,339.54)	($3,836,339.54)	($3,836,339.54)	($4,331,810.02)	($4,331,810.02)	($4,331,810.02)
232000 - Accounts Payable	($85,745.31)	($192,381.30)	($510,806.61)	($649,685.73)	($848,949.10)	($684,828.95)	($199,757.61)	($278,759.58)	($474,194.03)	($229,467.81)	($332,726.71)	($361,739.70)
232100 - A/P Historic	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
233000 - Notes Payable - Assoc Companies	($832,119.02)	($860,739.02)	($953,547.34)	($1,101,185.86)	($1,128,677.94)	($1,378,602.77)	($2,273,534.19)	($2,298,564.96)	($2,340,743.14)	($2,667,267.41)	($2,822,594.75)	($2,943,574.48)
236000 - Accrued Taxes Payable	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
241000 - Sales Tax Payable	($1,024.00)	$465.00	$1,799.00	$3,217.00	$4,480.00	$4,097.67	$4,868.17	$5,631.43	$6,328.78	$7,024.80	$7,723.21	$8,420.77
241100 - Cap Improvement Reserve	($133,338.75)	($140,333.41)	($147,319.94)	($154,338.44)	($161,407.28)	($168,421.19)	($175,510.49)	($182,487.85)	($189,593.32)	($196,732.05)	($203,915.55)	($211,120.22)
242000 - Misc Current and Accrued Liabilities	($28,076.82)	($30,159.53)	($41,827.24)	($38,600.16)	($39,572.45)	($38,757.72)	($66,075.27)	($124,088.41)	($615.86)	($1,368.35)	($2,141.60)	($14,464.13)
242200 - Impact Fee Liability	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
271000 - CIAC	($5,525,757.00)	($5,525,757.00)	($5,535,757.00)	($5,555,757.00)	($5,575,757.00)	($5,585,757.00)	($5,585,757.00)	($5,588,607.00)	($5,588,607.00)	($5,792,488.00)	($5,852,488.00)	($5,865,338.00)
272000 - CIAC - Accum Amort	$327,337.60	$342,575.43	$357,813.26	$373,078.87	$388,400.04	$403,752.98	$419,157.64	$434,562.30	$449,974.88	$641,015.52	$656,994.44	$673,167.81
303000 - Water - Land and Land Rights	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75	$221,529.75
304000 - Water - S&I	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,237,397.00	$1,246,688.23
304006 - Water - S&I - 40 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
304100 - Water - S&I Source of Supply	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
309000 - Water - Supply Mains	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$7,805.16
309001 - Water - Supply Mains - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
320000 - Water - Treatment Equip	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

320003 - Water - Treatment Equip - 35 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
331000 - Water - Transmission & Distribution Mains	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$205,841.89	$217,511.22
331002 - Water - Transmission & Distribution Mains - 50 Yea	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
333000 - Water - Services to Customers	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$40,409.64
333004 - Water - Services to Customers - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
334000 - Water - Meters and Installation	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$15,398.55
334001 - Water - Meters and Installation - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
335000 - Water - Hydrants	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,480.38
335001 - Water - Hydrants - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
339000 - Water - Other Plant and Misc Equip	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
345000 - Water - Power Operated Equip	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00
346001 - Water - Communication Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
347001 - Water - Misc Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
347004 - Water - Misc Equip - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
353000 - Sewer - Land and Land Rights	$598,376.55	$598,376.55	$598,376.55	$598,376.55	$598,376.55	$603,335.55	$603,335.55	$603,335.55	$603,335.55	$846,733.27	$846,733.27	$846,733.27
354000 - Sewer - S&I	$1,987,316.67	$1,987,316.67	$1,987,316.67	$1,987,316.67	$1,987,316.67	$1,987,316.67	$1,987,316.67	$1,987,316.67	$2,064,439.17	$2,568,302.17	$2,568,302.17	$2,730,183.25
354005 - Sewer - S&I - 40 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
360000 - Sewer - Collection Sewers - Force	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$343,443.00	$628,982.92
360001 - Sewer - Collection Sewers - Force - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
361000 - Sewer - Collection Sewers - Gravity	$1,120,996.82	$1,120,996.82	$1,120,996.82	$1,120,996.82	$1,120,996.82	$1,120,996.82	$1,120,996.82	$1,120,996.82	$1,247,674.40	$1,247,674.40	$1,247,674.40	$1,581,963.87
361001 - Sewer - Collection Sewers - Gravity - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
363000 - Sewer - Services to Customers	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$60,442.98
364000 - Sewer - Flow Measuring Devices	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$28,774.48	$30,190.61
364001 - Sewer - Flow Measuring Devices - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
364002 - Sewer - Flow Measuring Devices - 30 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
370000 - Sewer - Receiving Wells	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00
371000 - Sewer - Pumping Equip	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$801,701.70	$998,192.73
371002 - Sewer - Pumping Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
380000 - Sewer - Treatment & Disposal Equip	$1,722,049.25	$1,722,049.25	$1,722,049.25	$1,722,049.25	$1,722,049.25	$1,779,704.70	$1,779,704.70	$1,779,704.70	$1,780,354.70	$1,943,400.70	$1,943,400.70	$2,063,003.07
380003 - Sewer - Treatment & Disposal Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
381001 - Sewer - Plant Sewers - 40 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
382000 - Sewer - Outfall Sewer Lines	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00
382001 - Sewer - Outfall Sewer Lines - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
389000 - Sewer - Other Plant & Misc. Equip	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00
389002 - Sewer - Other Plant & Misc. Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
390000 - Sewer - Office Furniture and Equipment	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44
390004 - Sewer - Office Furniture and Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
391002 - Sewer - Transportation Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
393000 - Sewer - Tools, Shop, and Garage Equip	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$15,541.19	$16,111.89
393002 - Sewer - Tools, Shop, and Garage Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
393004 - Sewer - Tools, Shop, and Garage Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
395000 - Sewer - Power Operated Equip	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
396000 - Sewer - Communication Equip	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$329,542.26
396002 - Sewer - Communication Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
397001 - Sewer - Misc Equipment - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
398000 - Sewer - Other Tangible Plant	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25
398002 - Sewer - Other Tangible Plant - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
403000 - Depreciation Expense	$152,297.90	$182,757.49	$213,217.07	$243,675.27	$274,111.60	$304,547.89	$335,188.21	$365,828.46	$30,640.30	$61,280.59	$93,649.97	$134,878.45
403100 - Depreciation Expense CIAC	($75,539.73)	($90,777.56)	($106,015.39)	($121,281.00)	($136,602.17)	($151,955.11)	($167,359.77)	($182,764.43)	($15,412.58)	($30,825.16)	($46,804.08)	($62,977.45)
408100 - Taxes - Other	$19,211.00	$19,211.00	$19,211.00	$19,211.00	$19,211.00	$20,704.33	$20,704.33	$20,704.33	$0.00	$5,894.12	$5,894.12	$13,394.12
408160 - Taxes - Property	$11,861.00	$11,861.00	$11,861.00	$11,861.00	$11,861.00	$12,438.00	$12,438.00	$24,167.00	$0.00	$0.00	$0.00	$0.00
414000 - Gain/Loss of Utility Property	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
460000 - Water - Unmetered Revenue	($50,523.96)	($64,207.24)	($78,965.96)	($92,105.88)	($103,699.29)	($116,786.61)	($126,980.89)	($136,493.24)	($9,674.92)	($19,103.61)	($28,442.26)	($38,009.20)

470000 - Water - Late Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
471000 - Water - Misc Service Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	($373.78)	($623.78)	($413.59)	($634.05)	($634.05)	($744.80)
521000 - Sewer - Unmetered Revenue	($273,444.16)	($332,024.59)	($391,114.16)	($449,467.86)	($506,284.51)	($563,629.42)	($624,217.47)	($683,639.33)	($60,087.13)	($120,295.56)	($187,346.58)	($251,641.70)
532000 - Sewer - Late Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
536000 - Sewer - Misc. Service Revenue	($250.00)	($250.00)	$1,175.00	$925.00	$925.00	$925.00	($357.91)	($1,199.42)	($1,499.69)	($1,957.12)	($3,454.52)	($4,330.44)
610000 - Water - Purchased Water	$41,960.52	$63,484.64	$83,868.26	$107,916.13	$130,894.65	$150,912.79	$163,060.48	$171,828.01	$15,307.96	$26,239.41	$41,724.71	$50,161.15
615000 - Water - Purchased Power	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
618000 - Water - Chemicals	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
618500 - Water - Chemicals - T&D	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
620000 - Water - Materials and Supplies	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
620100 - Water - Materials and Supplies - SoS Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
620600 - Water - Materials and Supplies - T&D Maint	$42.47	$42.47	$31.85	$31.85	$31.85	$31.85	$31.85	$92.25	$0.00	$0.00	$0.00	$0.00
629000 - Water - Mowing and Lawn Maintenance	$0.00	$0.00	$391.11	$391.11	$817.77	$613.33	$773.33	$613.33	$860.00	$860.00	$860.00	$1,146.67
630000 - Water - Contract Operations	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630100 - Water - Source of Supply Ops	$35,981.13	$33,857.35	$39,578.02	$44,992.02	$50,545.29	$56,139.29	$61,553.29	$67,527.29	$5,574.00	$10,988.00	$18,223.49	$24,258.99
630200 - Water - Source of Supply Maintenance	$2,093.72	$2,200.38	$2,887.05	$2,847.05	$4,038.15	$3,664.82	$4,111.49	$4,080.15	$561.33	$1,774.66	$2,654.66	$3,539.55
630203 - Water - SoS Maint - Wells and Springs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630300 - Water - Treatment Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630405 - Water - Treatment Maint - Maint of Purification Equ	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630500 - Water - T&D Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630600 - Water - T&D Maintenance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630603 - Water - T&D Maint - Hydrant Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630604 - Water - T&D Maint - Maps and Records	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630605 - Water - T&D Maint - Meter Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630606 - Water - T&D Maint - Maint of Customer Services	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
630607 - Water - T&D Maint - Maint of Mains	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
635000 - Water - Testing	$251.00	$311.00	$311.00	$334.00	$845.89	$723.67	$907.01	$723.67	$0.00	$0.00	$0.00	$20.00
670000 - Water - Bad Debt	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
675000 - Water - Misc Expense	($22.83)	($22.83)	($22.83)	$503.67	$1,409.59	$1,910.39	$1,910.39	$7,077.16	($5,166.77)	($5,166.77)	($5,166.77)	($5,166.77)
710000 - Sewer - Purchased Treatment	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$56.46
711000 - Sewer - Sludge Removal	$0.00	$376.88	$652.44	$652.44	$489.33	$1,149.33	$1,149.33	$22,960.86	$27,424.51	$36,665.18	$26,740.17	$26,820.17
715000 - Sewer - Purchased Power	$36,313.16	$44,987.06	$57,238.73	$66,594.14	$75,424.49	$85,303.89	$94,570.91	$105,646.56	$9,664.39	$17,875.31	$27,760.02	$39,028.79
716000 - Sewer - Fuel for Power Production	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
718000 - Sewer - Chemicals	$7,729.48	$7,798.96	$14,003.64	$13,934.16	$13,934.16	$13,934.16	$20,879.91	$19,219.30	$1,938.89	$8,751.47	$9,010.49	$9,934.08
718500 - Sewer - Chemicals - Treatment and Disposal	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
720000 - Sewer - Materials and Supplies	($1.63)	($1.63)	$1,627.14	$1,627.14	$1,627.14	$1,359.95	$1,359.95	$1,998.28	($638.33)	($411.68)	($11.68)	$197.20
720100 - Sewer - Materials and Supplies - Collection Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
720400 - Sewer - Materials and Supplies - Pumping Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
720500 - Sewer - Materials and Supplies - T&D Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
720600 - Sewer - Materials and Supplies - T&D Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
729000 - Sewer - Mowing and Lawn maintenance	$9,107.99	$12,228.83	$30,957.73	$27,861.06	$52,489.63	$70,169.60	$84,834.69	$84,273.39	$13,600.00	$13,600.00	$13,600.00	$18,689.21
730000 - Sewer - Contract Operations	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730100 - Sewer - Contract Operations - Collection Ops	$141,920.00	$170,084.00	$198,690.67	$226,854.67	$255,472.00	$284,676.00	$312,840.00	$346,192.00	$23,937.34	$52,501.34	$88,588.48	$121,102.98
730200 - Sewer - Collection Maintenance	$5,403.53	$10,332.22	$13,897.11	$12,557.80	$21,909.38	$20,970.11	$24,476.96	$22,361.37	$7,295.68	$8,435.68	$11,145.02	$14,904.19
730201 - Sewer - Collection Maint - Plant S&I	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730202 - Sewer - Collection Maint - Pumping Equip Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730203 - Sewer - Collection Maint - Maint of Meters	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730204 - Sewer - Collection Maint - Maint of Mains	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730205 - Sewer - Collection Maint - Other Collection Plant M	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730206 - Sewer - Collection Maint - Maint Customer Service	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730300 - Sewer - Contract Operations - Pumping Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730400 - Sewer - Pumping Maintenance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730500 - Sewer - T&D Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

730600 - Sewer - T&D Maintenance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730602 - Sewer - T&D Maint - Pumping Equip Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
730603 - Sewer - T&D Maint - Other T&D Plant Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
735000 - Sewer - Contract Svcs - Testing	$8,850.70	$10,859.95	$13,322.09	$16,198.09	$18,116.09	$20,872.09	$22,857.09	$25,724.09	$2,581.00	$4,578.00	$9,964.00	$13,264.00
770000 - Sewer - Bad Debt Exp	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
775000 - Sewer - Misc. Expense	$301.33	$891.15	$1,284.48	$1,284.48	$1,327.48	$2,229.58	$2,229.58	$4,823.88	$0.00	$0.00	$0.00	$0.00
775600 - Sewer - Misc. Expense - T&D Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903100 - Cust Record Collect (Billing)	$19,159.33	$24,541.06	$30,318.55	$37,612.14	$44,363.07	$52,192.25	$58,925.60	$68,842.54	$6,644.11	$12,864.24	$18,412.59	$25,463.73
903200 - Customer Collection Expenses	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
903280 - Cust Record Collect (Bank Fees)	$3,400.58	$4,003.05	$4,655.39	$5,969.47	$7,455.93	$9,947.88	$11,338.73	$11,496.98	$1,222.41	$2,605.18	$4,001.45	$5,448.26
904000 - Uncollectible Accounts	$2,659.96	$3,382.60	$4,121.08	$4,836.02	$5,520.12	$6,224.44	$6,932.26	$8,042.96	$697.62	$1,393.99	$2,157.89	$2,896.51
921110 - Office Exp - Meals and Travel	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
921500 - Office Exp - Communication	$0.00	$0.00	$0.00	$0.00	$363.55	$595.45	$837.35	$1,069.25	$231.90	$463.80	$463.80	$695.70
921800 - Office Exp - Supplies	$0.00	$0.00	$0.00	$835.05	$835.05	$835.05	$835.05	$1,167.27	$0.00	$0.00	$0.00	$0.00
922000 - Admin Expenses Transferred	$143,842.44	$171,275.44	$196,579.44	$221,883.44	$247,187.44	$269,890.44	$292,593.44	$308,480.88	$30,283.00	$60,566.00	$90,849.00	$121,074.00
923100 - OSS - Bank Fees	$0.00	$0.00	$167.04	$167.04	$666.79	$1,081.98	$1,551.05	$4,269.90	$2,499.38	$5,094.32	$6,878.01	$9,302.14
923400 - OSS - Legal	$1,070.61	$2,220.61	$2,220.61	$2,220.61	$2,330.61	$2,351.07	$2,351.07	$2,351.07	$0.00	$220.00	$4,148.11	$4,486.78
923500 - OSS - Audit and Accounting	$2,430.00	$2,916.00	$3,402.00	$3,888.00	$6,224.00	$6,723.88	$7,209.88	$7,209.88	$0.00	$486.00	$3,958.00	$5,151.63
923600 - OSS - MGMT Consult	$2,738.57	$2,979.30	$4,934.57	$7,069.75	$9,010.74	$9,894.81	$12,900.53	$9,934.81	$2,173.46	$2,173.46	$2,173.46	$5,592.30
923900 - OSS - IT	$317.32	$317.32	$317.32	$317.32	$317.32	$317.32	$317.32	$317.32	$20.00	$40.00	$60.00	$0.00
924400 - Property Insurance - Commercial	$27,487.94	$33,147.44	$38,806.94	$44,466.41	$49,381.31	$55,668.75	$62,784.74	$56,947.64	$4,091.08	$8,539.93	$13,482.18	$18,537.77
928100 - Regulatory Expense - DNR	$844.58	$844.58	$844.58	$844.58	$1,490.89	$2,137.20	$2,846.01	$3,693.65	$2,113.39	$4,226.78	$9,883.40	$13,008.43
928300 - Regulatory Expense - Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
930200 - Misc. General Exp	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
930300 - Customer Courtesy Credit	$609.36	$609.36	$609.36	$609.36	$609.36	$609.36	$609.36	$609.36	$0.00	$0.00	$0.00	$0.00
Total	**($0.00)**	**($0.00)**	**($0.00)**	**($0.00)**	**($0.00)**	**$0.00**	**$0.00**	**$0.00**	**($0.00)**	**$0.00**	**$0.00**	**$0.00**

For the year 5/1/2023-4/30/2024

Account	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 20023	;Jan 2024	Feb 2024	Mar 2024	Apr 2024
000001 - Go Live Clearing Account	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$416,724.41	$0.00
3000 - Retained Earnings	$1,007,817.18	$1,007,817.18	$1,007,817.18	$1,007,817.18	$1,007,817.18	$1,007,817.18	$1,007,817.18	$1,007,817.18	$2,187,431.25	$2,187,431.25	$2,187,431.25	$2,187,431.25
105000 - Construction In Progress	$0.00	$0.00	$0.00	$0.00	$128,408.54	$368,525.21	$630,159.75	$1,304,096.94	$1,357,727.90	$1,750,932.16	$1,621,624.80	$778,579.90
105001 - CIP Plant	$1,000,007.48	$1,156,870.12	$1,122,950.93	$1,270,293.41	$1,270,293.41	$1,270,293.41	$1,270,293.41	$1,270,293.41	$1,270,293.41	$1,270,293.41	$1,270,293.41	$1,006,816.42
106000 - Utility Plant Purchased	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$35,595.30	$0.00	$0.00	$0.00
108000 - Accum Depreciation Plant in Service	($3,461,103.83)	($3,500,819.39)	($3,540,896.82)	($3,580,974.16)	($3,621,051.56)	($3,693,057.16)	($3,732,996.68)	($3,772,936.20)	($3,812,875.72)	($3,858,107.84)	($3,898,424.89)	($3,903,483.73)
108009 - Accum Depr 1 Month Difference	$0.00	$0.00	$0.00	$0.00	$0.00	$32,060.13	$32,060.13	$32,060.13	$32,060.13	$32,060.13	$32,060.13	$30,767.93
114000 - Utility Plant Acq Adjustment	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$1,258,309.47	$2,119,131.59
131113 - Cash - ENT Operating Limestone	$9,480.68	$18,906.53	$18,906.53	$13,290.32	$13,290.32	$13,290.32	$13,290.32	$12,922.88	$12,922.88	$12,922.88	$12,922.88	$12,922.88
131213 - Cash - ENT Receipts Limestone	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
131413 - Cash - ENT Cap Imp Reserve Limestone	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92	$139,977.92
131513 - Cash - ENT Tap Fee Escrow Limestone	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01	$509,730.01
131613 - Cash - PNC Operating Limestone	$122,112.92	$106,590.56	$130,019.99	$93,494.27	$20,440.30	$156,977.68	$55,479.72	$88,004.66	$88,534.77	$41,829.08	$26,224.48	$44,741.31
131813 - Cash - PNC Cap Imp Reserve Limestone	$59,751.71	$59,751.71	$72,026.37	$72,026.37	$72,026.37	$93,273.96	$93,273.96	$93,273.96	$93,273.96	$93,273.96	$93,273.96	$93,273.96
131814 - Cash - PNC DSH Escrow Limestone	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$50,853.08	$50,853.08	$50,853.08
134000 - Other Special Deposits	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
142000 - Accounts Receivable - Trade	$78,970.18	$52,286.71	$57,541.54	$63,858.07	$85,262.86	$99,433.75	$215,470.03	$117,676.76	$110,962.68	$137,254.40	$156,520.08	$158,197.13
142100 - AR Adjustments	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,253.98	$1,253.98
143000 - Accounts Receivable - Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$50,853.08	$50,853.08	($0.20)
144000 - Accum Prov for Uncoll Accounts	($12,230.70)	($13,603.63)	($14,828.42)	($16,154.68)	($17,520.84)	($18,832.51)	($20,119.28)	($20,119.28)	($21,384.69)	($22,656.78)	($23,949.38)	($25,258.22)
166000 - Prepayments	$31,838.67	$27,467.28	$22,957.14	$18,447.03	$17,021.36	$12,469.81	$12,182.62	$10,325.08	$9,675.54	$7,980.58	$7,565.12	$6,446.73
173100 - Water - Accrued Utility Revenues	$19,389.82	$27,548.41	$24,874.51	$25,023.23	$26,916.07	$25,231.47	$0.00	$22,744.56	$4,447.79	$13,993.51	$14,377.52	$14,220.71
173200 - Sewer - Accrued Utility Revenues	$66,477.92	$73,803.49	$74,728.96	$74,205.58	$83,678.06	$80,845.50	$0.00	$70,403.96	$88,044.99	$80,760.67	$81,589.84	$82,443.84
183000 - PSI - General	$14,945.21	$21,728.23	$23,289.53	$25,104.00	$26,868.04	$65,601.77	$116,223.00	$122,332.64	$94,688.24	$104,498.43	$108,699.01	$110,737.89
183001 - PSI - Engineering	$64,783.83	$68,383.83	$68,383.83	$87,603.83	$87,603.83	$87,603.83	$87,603.83	$89,387.58	$90,025.08	$90,720.08	$90,720.08	$65,745.02
183002 - PSI - Legal	$92,735.85	$173,333.43	$183,219.93	$235,881.70	$235,881.70	$235,881.70	$281,126.76	$303,941.93	$285,974.43	$310,397.44	$362,117.44	$317,144.98
184200 - Customer Cash Clearing Acct	($12,278.85)	$8,914.39	$8,724.48	$5,299.15	$8,753.45	$5,902.67	$2,617.67	$1,825.10	$10,011.60	$9,558.58	$10,291.74	$10,220.19
186000 - Misc. Deferred Debits	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$592,426.93
186001 - Deferred Rate Case Expense	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$2,355.99
186010 - Other Deferred Debits	$26,158.56	$26,431.68	$26,431.68	$26,431.68	$26,431.68	$26,431.68	$26,431.68	$21,500.68	$21,500.68	$52,647.60	$52,647.60	$52,647.60
186020 - Deferred Debits - Utility Deposits	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$4,931.00	$4,931.00	$4,931.00	$4,931.00	$5,206.00
186100 - Regulatory Asset	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$4,206.59	$4,206.59
201000 - Common Stock Issued	($4,398,545.60)	($4,398,545.60)	($4,398,545.60)	($4,398,545.60)	($4,398,545.60)	($4,398,545.60)	($4,398,545.60)	($4,398,545.60)	($4,434,140.90)	($4,434,140.90)	($4,434,140.90)	($4,434,140.90)
232000 - Accounts Payable	($517,347.14)	($379,639.13)	($240,696.86)	($240,696.86)	($605,303.91)	($871,871.91)	($1,175,709.16)	($1,108,871.50)	($855,986.34)	($1,306,977.11)	($1,528,070.42)	($1,320,126.27)
232100 - A/P Historic	$0.00	$0.00	$0.00	($56,841.40)	$240,696.86	$240,696.86	$240,696.86	$240,136.90	$240,136.90	$240,136.90	$240,136.90	$240,136.90
233000 - Notes Payable - Assoc Companies	($3,158,942.28)	($3,637,795.04)	($4,073,432.30)	($4,249,919.98)	($4,323,453.72)	($4,497,394.41)	($4,521,635.84)	($5,123,051.05)	($5,712,595.86)	($5,747,180.08)	($5,922,702.95)	($6,452,007.99)
236000 - Accrued Taxes Payable	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	($26.02)	($26.02)	($26.02)
241000 - Sales Tax Payable	$10,136.51	$10,663.21	$11,342.24	$12,325.27	$12,200.63	$12,134.72	$11,548.48	$11,494.30	$20,253.45	$20,229.01	$20,152.24	$0.00
241100 - Cap Improvement Reserve	($218,251.60)	($225,541.41)	($232,874.73)	($240,229.23)	($247,602.06)	($254,975.06)	($262,363.07)	($269,758.57)	($277,161.33)	($284,571.33)	($292,001.33)	($299,410.27)
242000 - Misc Current and Accrued Liabilities	($15,305.82)	($5,542.35)	($7,347.22)	($7,117.55)	($8,168.22)	($9,218.90)	($10,269.57)	($287,189.16)	($8,008.64)	($52,751.56)	($54,130.03)	($2,612.66)
242200 - Impact Fee Liability	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	($1,736.82)	($2,699.17)
271000 - CIAC	($5,870,163.00)	($5,870,663.00)	($5,874,938.00)	($5,894,338.00)	($5,918,038.00)	($5,967,188.00)	($5,987,188.00)	($5,991,463.00)	($6,004,313.00)	($6,102,853.93)	($6,124,278.93)	($6,161,403.93)
272000 - CIAC - Accum Amort	$689,321.32	$705,551.70	$721,747.77	$737,943.84	$754,197.74	$770,495.26	$786,792.78	$803,312.52	$819,844.14	$836,411.46	$852,978.78	$869,875.11
303000 - Water - Land and Land Rights	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$227,165.75	$133,457.86
304000 - Water - S&I	$1,246,688.23	$1,246,688.23	$1,246,688.23	$1,246,688.23	$1,246,688.23	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
304006 - Water - S&I - 40 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$4,607.00
304100 - Water - S&I Source of Supply	$0.00	$0.00	$0.00	$0.00	$0.00	$1,246,688.23	$1,246,688.23	$1,246,688.23	$1,246,688.23	$1,246,688.23	$1,246,688.23	$1,246,688.23
309000 - Water - Supply Mains	$7,805.16	$7,805.16	$7,805.16	$7,805.16	$7,805.16	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
309001 - Water - Supply Mains - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$7,805.16	$7,805.16	$7,805.16	$7,805.16	$7,805.16	$7,805.16	$8,638.98

320000 - Water - Treatment Equip	$732.98	$732.98	$732.98	$732.98	$732.98	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
320003 - Water - Treatment Equip - 35 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$732.98	$732.98	$732.98	$732.98	$732.98	$732.98	$732.98
331000 - Water - Transmission & Distribution Mains	$217,511.22	$217,511.22	$217,511.22	$217,511.22	$217,511.22	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
331002 - Water - Transmission & Distribution Mains - 50 Yea	$0.00	$0.00	$0.00	$0.00	$0.00	$217,511.21	$217,511.21	$217,511.21	$217,511.21	$217,511.21	$217,511.21	$112,139.05
333000 - Water - Services to Customers	$40,409.64	$40,409.64	$40,409.64	$40,409.64	$40,409.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
333004 - Water - Services to Customers - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$40,409.64	$40,409.64	$40,409.64	$40,409.64	$40,409.64	$40,409.64	$112,859.89
334000 - Water - Meters and Installation	$15,398.55	$15,398.55	$15,398.55	$15,398.55	$15,398.55	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
334001 - Water - Meters and Installation - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$15,398.55	$15,398.55	$15,398.55	$15,398.55	$15,398.55	$15,398.55	$30,985.83
335000 - Water - Hydrants	$1,480.38	$1,480.38	$1,480.38	$1,480.38	$1,480.38	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
335001 - Water - Hydrants - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$1,480.38	$1,480.38	$1,480.38	$1,480.38	$1,480.38	$1,480.38	$20,877.88
339000 - Water - Other Plant and Misc Equip	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$2,031.85
345000 - Water - Power Operated Equip	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
346001 - Water - Communication Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$6,018.92
347001 - Water - Misc Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$9,781.00
347004 - Water - Misc Equip - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$5,966.00	$0.00
353000 - Sewer - Land and Land Rights	$846,733.27	$846,733.27	$846,733.27	$846,733.27	$846,733.27	$846,733.27	$846,733.27	$846,733.27	$846,733.27	$851,207.67	$851,207.67	$988,169.55
354000 - Sewer - S&I	$2,730,183.25	$2,730,183.25	$2,730,183.25	$2,730,183.25	$2,730,183.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
354005 - Sewer - S&I - 40 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$2,730,183.25	$2,730,183.25	$2,730,183.25	$2,730,183.25	$2,730,183.25	$2,730,183.25	$2,998,578.12
360000 - Sewer - Collection Sewers - Force	$628,982.92	$628,982.92	$628,982.92	$628,982.92	$628,982.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
360001 - Sewer - Collection Sewers - Force - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$628,982.93	$628,982.93	$628,982.93	$628,982.93	$628,982.93	$628,982.93	$1,147,150.88
361000 - Sewer - Collection Sewers - Gravity	$1,581,963.87	$1,581,963.87	$1,799,051.15	$1,799,051.15	$1,799,051.15	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
361001 - Sewer - Collection Sewers - Gravity - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$1,736,245.84	$1,736,245.84	$1,736,245.84	$1,736,245.84	$1,736,245.84	$1,736,245.84	$892,931.85
363000 - Sewer - Services to Customers	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$60,442.98	$93,997.71
364000 - Sewer - Flow Measuring Devices	$30,190.61	$30,190.61	$30,190.61	$30,190.61	$30,190.61	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
364001 - Sewer - Flow Measuring Devices - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$17,954.13	$17,954.13	$17,954.13	$17,954.13	$17,954.13	$17,954.13	$0.00
364002 - Sewer - Flow Measuring Devices - 30 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$12,236.48	$12,236.48	$12,236.48	$12,236.48	$12,236.48	$12,236.48	$13,652.61
370000 - Sewer - Receiving Wells	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00	$217,903.00
371000 - Sewer - Pumping Equip	$998,192.73	$998,192.73	$998,192.73	$998,192.73	$998,192.73	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
371002 - Sewer - Pumping Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$998,192.73	$998,192.73	$998,192.73	$998,192.73	$998,192.73	$998,192.73	$1,173,715.46
380000 - Sewer - Treatment & Disposal Equip	$2,063,003.07	$2,063,003.07	$2,063,003.07	$2,063,003.07	$2,063,003.07	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
380003 - Sewer - Treatment & Disposal Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$2,063,003.07	$2,063,003.07	$2,063,003.07	$2,063,003.07	$2,153,609.07	$2,153,609.07	$2,265,019.65
381001 - Sewer - Plant Sewers - 40 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$62,805.30	$62,805.30	$62,805.30	$62,805.30	$62,805.30	$62,805.30	$58,897.09
382000 - Sewer - Outfall Sewer Lines	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
382001 - Sewer - Outfall Sewer Lines - 50 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$21,758.00	$27,117.57
389000 - Sewer - Other Plant & Misc. Equip	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
389002 - Sewer - Other Plant & Misc. Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00	$36,908.00
390000 - Sewer - Office Furniture and Equipment	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$77,253.44	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
390004 - Sewer - Office Furniture and Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$3,155.19	$3,155.19	$3,155.19	$3,155.19	$3,155.19	$3,155.19	$0.00
391002 - Sewer - Transportation Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$74,098.25	$74,098.25	$74,098.25	$74,098.25	$74,098.25	$74,098.25	$0.00
393000 - Sewer - Tools, Shop, and Garage Equip	$16,111.89	$16,111.89	$16,111.89	$16,111.89	$16,111.89	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
393002 - Sewer - Tools, Shop, and Garage Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$19,132.29
393004 - Sewer - Tools, Shop, and Garage Equip - 20 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$16,111.89	$16,111.89	$16,111.89	$16,111.89	$16,111.89	$16,111.89	$0.00
395000 - Sewer - Power Operated Equip	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$4,149.38
396000 - Sewer - Communication Equip	$329,542.26	$329,542.26	$329,542.26	$329,542.26	$329,542.26	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
396002 - Sewer - Communication Equip - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$329,542.26	$329,542.26	$329,542.26	$329,542.26	$329,542.26	$329,542.26	$369,646.50
397001 - Sewer - Misc Equipment - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$18,452.36
398000 - Sewer - Other Tangible Plant	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
398002 - Sewer - Other Tangible Plant - 10 Years	$0.00	$0.00	$0.00	$0.00	$0.00	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25	$636,406.25
403000 - Depreciation Expense	$174,592.25	$214,307.81	$254,385.24	$294,462.58	$334,539.98	$374,485.46	$414,424.98	$454,364.50	$39,939.52	$80,256.57	$120,573.62	$170,712.21
403100 - Depreciation Expense CIAC	($79,130.96)	($95,361.34)	($111,557.41)	($127,753.48)	($144,007.38)	($160,304.90)	($176,602.42)	($193,122.16)	($16,531.62)	($33,098.94)	($49,666.26)	($66,562.59)
408100 - Taxes - Other	$13,394.12	$13,394.12	$16,086.54	$16,086.54	$16,086.54	$16,086.54	$16,086.54	$16,086.54	$0.00	$0.00	$0.00	$0.00
408160 - Taxes - Property	$0.00	$0.00	$0.00	$0.00	$0.00	$920.00	$920.00	$11,858.00	$19,269.00	$19,269.00	$19,269.00	$19,269.00
414000 - Gain/Loss of Utility Property	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$76,702.08

460000 - Water - Unmetered Revenue	($49,951.55)	($67,429.81)	($81,790.34)	($99,114.56)	($117,998.57)	($135,357.30)	($151,679.31)	($166,740.83)	($14,050.17)	($27,553.48)	($41,527.03)	($55,467.45)
470000 - Water - Late Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	($128.88)	($209.55)	($365.06)	($209.55)
471000 - Water - Misc Service Revenues	($744.80)	($812.53)	($975.49)	($1,075.99)	($1,456.34)	($1,670.76)	($1,810.23)	($1,898.58)	($58.00)	($117.62)	($194.77)	($622.63)
521000 - Sewer - Unmetered Revenue	($317,199.43)	($391,249.84)	($458,541.92)	($529,635.23)	($601,828.61)	($671,914.49)	($741,376.94)	($811,121.27)	($70,310.90)	($141,613.64)	($213,813.60)	($287,129.18)
532000 - Sewer - Late Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$36.73	($27.75)	($176.88)	($30.83)
536000 - Sewer - Misc. Service Revenue	($4,534.48)	($4,872.38)	($5,360.83)	($6,006.23)	($7,069.34)	($13,355.72)	($14,510.25)	($15,023.57)	($797.20)	($1,524.13)	($2,561.63)	($3,854.66)
610000 - Water - Purchased Water	$61,778.88	$79,392.73	$97,211.59	$124,034.11	$140,044.91	$156,510.78	$171,599.88	$179,962.02	$12,039.27	$19,992.04	$28,039.61	$35,075.57
615000 - Water - Purchased Power	$150.27	$822.16	$822.16	$1,230.72	$1,626.51	$2,088.63	$2,553.15	$3,000.68	$857.30	$1,975.95	$1,975.95	$2,322.78
618000 - Water - Chemicals	$0.00	$1,099.58	$1,099.58	$1,099.58	$1,099.58	$1,099.58	$1,099.58	$1,099.58	$0.00	$0.00	$0.00	$0.00
618500 - Water - Chemicals - T&D	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$875.05	$1,166.73	($291.68)	($291.68)	($291.68)	($291.68)
620000 - Water - Materials and Supplies	$0.00	$0.00	$0.00	$0.00	$0.00	$80.00	$80.00	$128.52	$294.52	$389.88	$591.55	$1,062.82
620100 - Water - Materials and Supplies - SoS Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$400.00	$533.33	($133.33)	($133.33)	($133.33)	($133.33)
620600 - Water - Materials and Supplies - T&D Maint	$92.52	$274.37	$274.37	$274.37	$274.37	$274.37	$274.37	$274.37	$0.00	$0.00	$0.00	$0.00
629000 - Water - Mowing and Lawn Maintenance	$860.00	$1,405.40	$1,405.40	$2,045.40	$2,045.40	$2,045.40	$2,685.40	$2,898.73	($213.33)	($213.33)	($53.33)	($53.33)
630000 - Water - Contract Operations	$0.00	$0.00	$0.00	$0.00	$9,040.00	$17,000.00	$25,280.00	$35,460.00	$8,660.00	$17,440.00	$25,840.00	$34,720.00
630100 - Water - Source of Supply Ops	$34,698.99	$42,918.99	$51,998.99	$61,246.72	$61,246.72	$61,246.72	$61,246.72	$61,246.72	$0.00	$0.00	$0.00	$0.00
630200 - Water - Source of Supply Maintenance	$6,404.66	$7,066.01	$7,776.01	$9,046.01	$9,196.01	$9,982.82	$10,132.82	$10,495.09	($212.27)	($212.27)	($212.27)	($212.27)
630203 - Water - SoS Maint - Wells and Springs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$320.00	$426.67	($106.67)	($106.67)	($106.67)	($106.67)
630300 - Water - Treatment Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$200.00
630405 - Water - Treatment Maint - Maint of Purification Equ	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$360.00	$360.00	$360.00	$360.00
630500 - Water - T&D Ops	$0.00	$0.00	$0.00	$0.00	$420.00	$420.00	$980.00	$1,406.67	($246.67)	$173.33	$753.33	$1,353.33
630600 - Water - T&D Maintenance	$0.00	$0.00	$0.00	$0.00	$0.00	$360.00	$520.00	$906.67	$93.33	$173.33	$173.33	$293.33
630603 - Water - T&D Maint - Hydrant Maint	$0.00	$0.00	$0.00	$0.00	$720.00	$720.00	$1,200.00	$1,520.00	($135.00)	$145.00	$145.00	$145.00
630604 - Water - T&D Maint - Maps and Records	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$240.00
630605 - Water - T&D Maint - Meter Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$240.00	$1,140.00	$1,520.00	($380.00)	$100.00	$3,738.13	$3,798.13
630606 - Water - T&D Maint - Maint of Customer Services	$0.00	$0.00	$0.00	$0.00	$960.00	$960.00	$1,200.00	$1,280.00	($80.00)	$280.00	$1,120.00	$1,840.00
630607 - Water - T&D Maint - Maint of Mains	$0.00	$0.00	$0.00	$0.00	$1,272.76	$1,272.76	$1,272.76	$1,272.76	$0.00	$0.00	$360.00	$360.00
635000 - Water - Testing	$180.00	$407.00	$430.00	$430.00	$430.00	$520.00	$520.00	$520.00	$0.00	$48.07	$71.07	$94.07
670000 - Water - Bad Debt	$0.00	$0.00	$0.00	$0.00	$0.00	$260.38	$505.21	$645.20	$210.75	$413.30	$622.90	$832.01
675000 - Water - Misc Expense	($4,693.71)	($4,693.71)	($4,693.71)	($4,693.71)	($4,693.71)	($4,693.71)	($4,693.71)	($4,693.71)	$0.00	$0.00	$80.94	$80.94
710000 - Sewer - Purchased Treatment	$56.46	$121.48	$153.81	$186.14	$186.14	$408.04	$408.04	$408.04	$0.00	$0.00	$0.00	$0.00
711000 - Sewer - Sludge Removal	$26,740.17	$26,740.17	$26,740.17	$26,740.17	$26,740.17	$26,740.17	$26,740.17	$26,740.17	$0.00	$0.00	$0.00	$0.00
715000 - Sewer - Purchased Power	$53,309.26	$67,792.78	$79,235.33	$92,395.60	$106,273.88	$120,917.18	$136,976.94	$155,878.38	$15,627.98	$29,811.24	$45,133.56	$56,419.43
716000 - Sewer - Fuel for Power Production	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$38.16	$38.16	$38.16	$38.16
718000 - Sewer - Chemicals	$17,371.51	$17,371.51	$17,371.51	$17,629.72	$17,629.72	$17,629.72	$17,629.72	$17,629.72	$0.00	$0.00	$0.00	$0.00
718500 - Sewer - Chemicals - Treatment and Disposal	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$7,546.17	$9,291.09	$7,081.30	$1,284.25	$1,284.25	$1,521.01
720000 - Sewer - Materials and Supplies	$1,141.53	$2,893.74	$3,210.07	$3,495.78	$3,534.56	$3,681.95	$3,779.38	$3,860.99	$57.39	$200.78	$2,110.82	$2,827.65
720100 - Sewer - Materials and Supplies - Collection Ops	$0.00	$0.00	$0.00	$0.00	$7.97	$7.97	$484.49	$484.49	$0.00	$0.00	$0.00	$0.00
720400 - Sewer - Materials and Supplies - Pumping Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$160.00	$160.00	$160.00	$160.00
720500 - Sewer - Materials and Supplies - T&D Ops	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$34.95	$46.60	($11.65)	($11.65)	($11.65)	($11.65)
720600 - Sewer - Materials and Supplies - T&D Maint	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$19.13	$558.84	($139.71)	($139.71)	($139.71)	($139.71)
729000 - Sewer - Mowing and Lawn maintenance	$20,116.05	$50,657.80	$66,097.80	$83,217.80	$106,582.43	$124,642.43	$143,842.43	$167,155.76	($12,663.33)	($12,663.33)	($9,910.30)	($6,590.30)
730000 - Sewer - Contract Operations	$0.00	$0.00	$0.00	$0.00	$32,820.21	$63,590.21	$96,447.34	$130,059.72	$30,407.62	$73,827.62	$117,177.62	$160,847.62
730100 - Sewer - Contract Operations - Collection Ops	$159,833.03	$199,072.25	$233,719.15	$269,700.75	$269,760.75	$270,120.75	$271,160.75	$271,840.75	$920.00	$1,320.00	$1,480.00	$3,560.00
730200 - Sewer - Collection Maintenance	$26,813.47	$40,108.43	$47,758.43	$57,429.34	$59,369.34	$61,109.34	$65,304.57	$69,533.79	($826.39)	($266.39)	$3,773.61	$4,053.61
730201 - Sewer - Collection Maint - Plant S&I	$0.00	$0.00	$0.00	$0.00	$0.00	$640.00	$640.00	$853.33	($213.33)	($213.33)	($53.33)	($53.33)
730202 - Sewer - Collection Maint - Pumping Equip Maint	$0.00	$0.00	$0.00	$0.00	$520.00	$1,240.00	$3,480.00	$5,000.00	($1,000.00)	($1,000.00)	($720.00)	$1,634.14
730203 - Sewer - Collection Maint - Maint of Meters	$0.00	$0.00	$0.00	$0.00	$487.76	$487.76	$487.76	$594.43	($26.67)	($26.67)	($26.67)	($26.67)
730204 - Sewer - Collection Maint - Maint of Mains	$0.00	$0.00	$0.00	$0.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$0.00	$0.00	$1,320.00	$2,040.00
730205 - Sewer - Collection Maint - Other Collection Plant M	$0.00	$0.00	$0.00	$0.00	$0.00	$840.00	$1,320.00	$2,346.67	($586.67)	($426.67)	($426.67)	$853.33
730206 - Sewer - Collection Maint - Maint Customer Service	$0.00	$0.00	$0.00	$0.00	$2,870.00	$3,770.00	$7,150.00	$11,910.00	($1,760.00)	($1,160.00)	$220.00	$3,100.00
730300 - Sewer - Contract Operations - Pumping Ops	$0.00	$0.00	$0.00	$0.00	$480.00	$480.00	$480.00	$480.00	$0.00	$0.00	$0.00	$0.00
730400 - Sewer - Pumping Maintenance	$0.00	$0.00	$0.00	$0.00	$0.00	$100.00	$100.00	$133.33	($33.33)	($33.33)	($33.33)	($33.33)

730500 - Sewer - T&D Ops	$0.00	$0.00	$0.00	$0.00	$760.00	$2,400.00	$2,920.00	$3,852.55	($453.14)	($53.14)	$106.86	$106.86
730600 - Sewer - T&D Maintenance	$0.00	$0.00	$0.00	$0.00	$2,260.00	$3,412.50	$7,307.93	$16,428.73	($75.88)	$1,049.83	$6,586.26	$9,829.81
730602 - Sewer - T&D Maint - Pumping Equip Maint	$0.00	$0.00	$0.00	$0.00	$690.49	$690.49	$1,050.49	$1,170.49	($120.00)	($120.00)	($120.00)	($120.00)
730603 - Sewer - T&D Maint - Other T&D Plant Maint	$0.00	$0.00	$0.00	$0.00	$1,498.96	$1,953.09	$2,993.09	$5,077.80	$820.99	$1,380.99	$1,620.99	$1,620.99
735000 - Sewer - Contract Svcs - Testing	$17,046.00	$20,765.00	$24,414.00	$28,586.00	$31,898.00	$35,452.00	$38,183.00	$41,470.00	$4,074.00	$7,115.66	$10,588.66	$14,645.66
770000 - Sewer - Bad Debt Exp	$0.00	$0.00	$0.00	$0.00	$0.00	$1,051.29	$2,093.23	$2,441.91	$1,054.66	$2,124.20	$3,207.20	$4,306.93
775000 - Sewer - Misc. Expense	$451.00	$451.00	$516.40	$516.40	$1,628.20	$2,086.00	$2,624.47	$3,481.60	($1.61)	$584.65	$1,015.11	$1,775.09
775600 - Sewer - Misc. Expense - T&D Maint	$0.00	$0.00	$0.00	$0.00	$194.94	$194.94	$194.94	$194.94	$0.00	$0.00	$0.00	$0.00
903100 - Cust Record Collect (Billing)	$33,129.95	$43,044.78	$51,618.89	$57,056.94	$68,196.48	$75,426.22	$82,967.51	$90,505.21	$7,213.09	$14,480.53	$21,948.82	$30,964.68
903200 - Customer Collection Expenses	$0.00	$0.00	$0.00	$0.00	$0.00	$15.69	$15.69	$15.69	$73.97	$73.97	$147.94	$147.94
903280 - Cust Record Collect (Bank Fees)	$6,908.21	$8,377.38	$9,945.00	$11,542.52	$13,166.56	$14,943.10	$16,644.16	$18,307.60	$1,480.92	$3,633.79	$5,415.10	$7,159.87
904000 - Uncollectible Accounts	$4,059.01	$5,431.94	$6,656.73	$7,982.99	$9,349.15	$9,349.15	$9,349.15	$9,492.72	$0.00	$0.00	$0.00	$0.00
921110 - Office Exp - Meals and Travel	$30.51	$30.51	$30.51	$30.51	$30.51	$30.51	$30.51	$30.51	$0.00	$0.00	$0.00	$0.00
921500 - Office Exp - Communication	$1,149.50	$1,371.40	$1,593.30	$1,815.20	$2,254.78	$2,254.78	$2,602.29	$3,036.83	$267.06	$492.25	$858.61	$1,211.80
921800 - Office Exp - Supplies	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
922000 - Admin Expenses Transferred	$151,299.00	$178,736.61	$210,828.31	$242,666.84	$274,555.80	$304,006.66	$335,451.66	$360,787.02	$47,163.00	$76,702.33	$118,411.22	$153,182.39
923100 - OSS - Bank Fees	$11,482.86	$13,657.02	$15,805.62	$17,938.03	$20,268.78	$22,414.38	$24,782.03	$26,886.93	$1,809.35	$3,476.54	$5,548.15	$7,793.05
923400 - OSS - Legal	$4,486.78	$4,486.78	$5,775.55	$6,355.82	$6,936.09	$7,516.36	$8,356.95	$8,937.22	$176.59	$1,097.20	$1,097.20	$1,097.20
923500 - OSS - Audit and Accounting	$5,637.63	$6,123.63	$6,609.63	$7,095.63	$7,581.63	$8,067.63	$11,646.82	$11,646.82	$0.00	$0.00	$0.00	$728.42
923600 - OSS - MGMT Consult	$6,804.63	$6,804.63	$10,932.49	$11,896.05	$11,896.05	$11,896.05	$11,896.05	$11,896.05	$0.00	$0.00	$0.00	$0.00
923900 - OSS - IT	$0.00	$147.11	$189.11	$500.67	$542.67	$584.67	$626.67	$668.67	$0.00	$0.00	$0.00	$0.00
924400 - Property Insurance - Commercial	$23,593.35	$29,203.80	$34,536.82	$39,869.83	$46,015.53	$52,161.27	$58,307.00	$57,248.84	$4,078.63	$8,414.99	$12,698.39	$17,331.00
928100 - Regulatory Expense - DNR	$16,133.46	$19,291.93	$22,450.40	$25,608.84	$28,121.00	$30,633.16	$33,145.32	$35,657.48	$1,614.54	$3,309.50	$4,974.96	$5,770.62
928300 - Regulatory Expense - Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$400.00
930200 - Misc. General Exp	$0.00	$0.00	$0.00	$0.00	$0.00	($943.50)	($943.50)	($900.30)	$0.00	$0.00	$0.00	$20,090.41
930300 - Customer Courtesy Credit	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

Limestone Water Operating Company, LLC
24000-XXX
Contributions in Aid of Construction - Sewer
For the Period Ending April 30, 2024

Line Number	Service type	Service Area	Date Acquired	CIAC 271.000	Total Accumulated Amortization 272.000
(A)	(B)	(C)	(D)	(E)	(F)
1	Sewer	TN-Aqua	3/31/2023	$1,425	$51
2	Sewer	TN-Aqua	5/31/2023	$1,425	$44
3	Sewer	TN-Aqua	8/31/2023	$4,275	$95
4	Sewer	TN-Aqua	3/31/2021	$270,011	$160,400
5	Sewer	TN-Aqua	8/31/2021	$2,850	$253
6	Sewer	TN-Aqua	10/31/2021	$713	$63
7	Sewer	TN-Aqua	1/31/2022	$10,250	$769
8	Sewer	TN-Aqua	2/28/2022	$27,050	$1,954
9	Sewer	TN-Aqua	3/31/2022	$1,425	$99
10	Sewer	TN-Aqua	1/31/2023	$1,425	$63
11	Sewer	TN-Aqua	9/30/2023	$5,700	$111
12	Sewer	TN-Aqua	4/30/2024	$7,125	$0
13	Sewer	TN-Arrington	9/30/2022	$10,000	$528
14	Sewer	TN-Arrington	3/31/2023	$20,000	$722
15	Sewer	TN-Arrington	2/29/2024	$10,000	$28
16	Sewer	TN-Cartwright Creek	12/31/2021	$4,903,993	$381,422
17	Sewer	TN-Cartwright Creek	4/30/2022	$5,500	$367
18	Sewer	TN-Grasslands	10/31/2023	$30,000	$417
19	Sewer	TN-Grasslands	11/30/2023	$10,000	$139
20	Sewer	TN-Grasslands	1/31/2024	$10,000	$83
21	Sewer	TN-Grasslands	3/31/2024	$20,000	$56
22	Sewer	TN-Grasslands	7/31/2022	$10,000	$583
23	Sewer	TN-Grasslands	4/30/2024	$10,000	$0
24	Sewer	TN-Hardeman Springs	3/31/2022	$20,500	$1,424
25	Sewer	TN-Hardeman Springs	8/31/2022	$10,000	$556
26	Sewer	TN-Hardeman Springs	2/28/2023	$10,000	$389
27	Sewer	TN-Hardeman Springs	3/31/2023	$10,000	$361
28	Sewer	TN-Hardeman Springs	3/31/2023	$10,000	$361
29	Sewer	TN-Hardeman Springs	8/31/2023	$10,000	$222
30	Sewer	TN-Hideaway	3/31/2022	$5,500	$382
31	Sewer	TN-Hideaway	8/31/2022	$10,000	$556
32	Sewer	TN-Hideaway	9/30/2022	$10,000	$528
33	Sewer	TN-Hideaway	10/31/2022	$10,000	$500
34	Sewer	TN-Hideaway	3/31/2023	$30,000	$1,083
35	Sewer	TN-Hideaway	6/30/2023	$500	$14
36	Sewer	TN-Hideaway	9/30/2023	$10,000	$194
37	Sewer	TN-Hideaway	10/31/2023	$20,000	$278
38	Sewer	TN-Hideaway	11/30/2023	$20,000	$278
39	Sewer	TN-Hideaway	4/30/2024	$20,000	$0
40	Sewer	TN-Lakeside Estates	2/1/2024	$85,691	$238
41	Sewer	TN-Shiloh Falls	2/28/2023	$193,881	$183,165

42	Sewer	TN-Shiloh Falls	5/31/2023	$3,400	$104
43	Sewer	TN-Shiloh Falls	8/31/2023	$850	$19
44					
45					
46				**$5,863,488**	**$738,897**
47					

Limestone Water Operating Company, LLC
24000-XXX
Contributions in Aid of Construction - Water
For the Period Ending April 30, 2024

Line Number	Service type	Service Area	Date Acquired	CIAC 271.000
(A)	(B)	(C)	(D)	(E)
1	Water	TN-Aqua	3/31/2023	$1,425
2	Water	TN-Aqua	8/31/2023	$5,700
3	Water	TN-Aqua	3/31/2021	$234,253
4	Water	TN-Aqua	8/31/2021	$2,850
5	Water	TN-Aqua	10/31/2021	$713
6	Water	TN-Aqua	1/31/2022	$10,250
7	Water	TN-Aqua	2/28/2022	$27,050
8	Water	TN-Aqua	3/31/2022	$1,425
9	Water	TN-Aqua	5/31/2022	$1,425
10	Water	TN-Aqua	12/31/2022	$1,425
11	Water	TN-Aqua	12/31/2023	$4,275
12	Water	TN-Aqua	1/31/2024	$2,850
13	Water	TN-Aqua	2/29/2024	$2,850
14	Water	TN-Aqua	3/31/2024	$1,425
15				
16				**$297,916**
17				
18				

Total Accumulated Amortization 272.000
(F)
$51
$127
$127,425
$253
$63
$769
$1,954
$99
$91
$63
$48
$24
$8
$4
$130,978

PUBLIC VERSION

LIMESTONE WATER UTILITY OPERATING COMPANY, LLC
DOCKET NO. 24-00044
INFORMAL DISCOVERY REQUEST OF THE
CONSUMER ADVOCATE DIVISION

Transaction Detail Report

Limestone Water Utility Operating Company, LLC
Recommended Capital Structure and Cost Rates
for Ratemaking Purposes

Type Of Capital	Ratios (1)	Cost Rate		Weighted Cost Rate
Long-Term Debt	43.00%	6.64%	(2)	2.86%
Common Equity	57.00%	11.90%	(3)	6.78%
Total	100.00%			9.64%

Notes:

(1) Hypothetical capital structure based on the high-end of the capital structures maintained by the Proxy Groups as shown on Exhibit DWD-2.

(2) Hypothetical cost of long-term debt based on weighted average cost of long-term debt from recent issuances of Limestone's sister companies as shown on Exhibit DWD-3.

(3) From page 2 of this Exhibit.

Limestone Water Utility Operating Company, LLC
Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Five Water Companies	Proxy Group of Nine Water Companies
1.	Discounted Cash Flow Model (DCF) (1)	9.97%	9.26%
2.	Risk Premium Model (RPM) (2)	10.78%	10.85%
3.	Capital Asset Pricing Model (CAPM) (3)	11.03%	11.05%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	11.42%	11.54%
5.	Indicated Common Equity Cost Rate before Adjustment for Unique Risk	9.26% - 11.54%	
6.	Business Risk Adjustment (5)	1.50%	
7.	Indicated Common Equity Cost Rate after Adjustment	10.76% - 13.04%	
8.	Recommended Common Equity Cost Rate	11.90%	

Notes: (1) From page 1 of Exhibit DWD-4.
(2) From page 1 of Exhibit DWD-5.
(3) From page 1 of Exhibit DWD-6.
(4) From page 1 of Exhibit DWD-8.
(5) Business risk adjustment to reflect the Company's unique risk compared to the Proxy Groups as detailed in the accompanying Direct Testimony.

Proxy Group of Five Water Companies
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2019 - 2023, Inclusive

	2023	2022	2021	2020	2019	
			(MILLIONS OF DOLLARS)			
Capitalization Statistics						
Amount of Capital Employed						
Total Permanent Capital	$5,885.162	$5,151.007	$4,858.217	$4,363.144	$4,000.362	
Short-Term Debt	$181.350	$347.516	$173.899	$392.659	$259.662	
Total Capital Employed	$6,066.512	$5,498.523	$5,032.116	$4,755.803	$4,260.024	
Indicated Average Capital Cost Rates (2)						
Total Debt	4.15 %	3.53 %	3.51 %	3.70 %	4.10 %	
Preferred Stock	5.76 %	5.76 %	5.76 %	5.76 %	5.84 %	
Capital Structure Ratios						5 YEAR AVERAGE
Based on Total Permanent Capital:						
Long-Term Debt	48.56 %	48.61 %	49.83 %	50.22 %	48.52 %	49.15 %
Preferred Stock	0.05	0.06	0.06	0.07	0.08	0.06
Common Equity	51.39	51.33	50.11	49.71	51.40	50.79
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Based on Total Capital:						
Total Debt, Including Short-Term Debt	52.74 %	53.09 %	54.65 %	54.65 %	53.25 %	53.67 %
Preferred Stock	0.05	0.06	0.07	0.07	0.08	0.07
Common Equity	47.21	46.85	45.28	45.28	46.67	46.26
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Financial Statistics						
Financial Ratios - Market Based						
Earnings / Price Ratio	3.03 %	2.84 %	3.14 %	3.38 %	2.65 %	3.01 %
Market / Average Book Ratio	297.18	350.02	375.07	331.18	343.49	339.39
Dividend Yield	1.94	1.70	1.57	1.75	1.67	1.73
Dividend Payout Ratio	69.33	58.70	51.02	51.89	72.01	60.59
Rate of Return on Average Book Common Equity	9.26 %	9.55 %	11.72 %	10.96 %	9.54 %	10.21 %
Total Debt / EBITDA (3)	5.40 x	5.20 x	4.76 x	5.07 x	5.66 x	5.22 x
Funds from Operations / Total Debt (4)	10.41 %	13.69 %	11.85 %	12.92 %	15.36 %	12.85 %
Total Debt / Total Capital	52.74 %	53.09 %	54.65 %	54.65 %	53.25 %	53.67 %

Notes:

(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.

(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.

(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).

(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Five Water Companies
2019 - 2023, Inclusive

	2023	2022	2021	2020	2019	5 YEAR AVERAGE
American States Water Company						
Long-Term Debt	42.60 %	38.65 %	37.56 %	40.72 %	31.87 %	38.28 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	57.40	61.35	62.44	59.28	68.13	61.72
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
American Water Works Company, Inc.						
Long-Term Debt	55.44 %	59.29 %	58.75 %	59.93 %	58.59 %	58.40 %
Preferred Stock	0.01	0.01	0.02	0.02	0.03	0.02
Common Equity	44.55	40.70	41.23	40.05	41.38	41.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	42.41 %	44.39 %	47.28 %	46.04 %	50.90 %	46.20 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	57.59	55.61	52.72	53.96	49.10	53.80
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Middlesex Water Company						
Long-Term Debt	46.26 %	43.34 %	45.86 %	44.61 %	42.20 %	44.46 %
Preferred Stock	0.26	0.29	0.31	0.33	0.37	0.31
Common Equity	53.48	56.37	53.83	55.06	57.43	55.23
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
SJW Group						
Long-Term Debt	56.09 %	57.39 %	59.69 %	59.79 %	59.05 %	58.40 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	43.91	42.61	40.31	40.21	40.95	41.60
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Five Water Companies						
Long-Term Debt	48.56 %	48.61 %	49.83 %	50.22 %	48.52 %	49.15 %
Preferred Stock	0.05	0.06	0.07	0.07	0.08	0.07
Common Equity	51.39	51.33	50.10	49.71	51.40	50.78
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Proxy Group of Nine Water Companies
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2019 - 2023, Inclusive

	2023	2022	2021	2020	2019	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
Capitalization Statistics						
Amount of Capital Employed						
Total Permanent Capital	$4,797.940	$4,285.356	$4,016.054	$3,646.547	$3,071.208	
Short-Term Debt	$118.541	$220.695	$106.800	$229.812	$147.948	
Total Capital Employed	$4,916.481	$4,506.051	$4,122.854	$3,876.359	$3,219.156	
Indicated Average Capital Cost Rates (2)						
Total Debt	4.29 %	3.70 %	3.76 %	4.03 %	4.32 %	
Preferred Stock	5.76 %	5.76 %	5.76 %	5.76 %	5.84 %	
Capital Structure Ratios						
Based on Total Permanent Capital:						
Long-Term Debt	50.43 %	50.88 %	52.66 %	52.87 %	51.08 %	51.58 %
Preferred Stock	0.03	0.03	0.03	0.04	0.05	0.04
Common Equity	49.54	49.09	47.31	47.09	48.87	48.38
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Based on Total Capital:						
Total Debt, Including Short-Term Debt	52.82 %	53.76 %	54.56 %	55.85 %	53.87 %	54.17 %
Preferred Stock	0.03	0.03	0.03	0.04	0.04	0.04
Common Equity	47.15	46.21	45.40	44.11	46.09	45.79
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Financial Statistics						
Financial Ratios - Market Based						
Earnings / Price Ratio	3.31 %	2.96 %	3.01 %	3.09 %	2.66 %	3.01 %
Market / Average Book Ratio	314.01	384.90	448.11	385.54	392.31	384.98
Dividend Yield	2.15	1.90	1.75	1.98	1.96	1.95
Dividend Payout Ratio	68.48	65.83	68.26	116.13	93.86	82.51
Rate of Return on Average Book Common Equity	10.15 %	10.23 %	11.12 %	9.72 %	9.38 %	10.12 %
Total Debt / EBITDA (3)	5.06 x	5.17 x	4.94 x	5.39 x	5.52 x	5.22 x
Funds from Operations / Total Debt (4)	13.54 %	12.93 %	13.46 %	11.90 %	13.38 %	13.04 %
Total Debt / Total Capital	52.82 %	53.76 %	54.56 %	55.85 %	53.87 %	54.17 %

Notes:

(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.

(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.

(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).

(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Nine Water Companies
2019 - 2023, Inclusive

	2023	2022	2021	2020	2019	5 YEAR AVERAGE
American States Water Company						
Long-Term Debt	42.60 %	38.65 %	37.56 %	40.72 %	31.87 %	38.28 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	57.40	61.35	62.44	59.28	68.13	61.72
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
American Water Works Company, Inc.						
Long-Term Debt	55.44 %	59.29 %	58.75 %	59.93 %	58.59 %	58.40 %
Preferred Stock	0.01	0.01	0.02	0.02	0.03	0.02
Common Equity	44.55	40.70	41.23	40.05	41.38	41.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Artesian Resources Corporation						
Long-Term Debt	43.93 %	48.59 %	44.86 %	45.96 %	47.65 %	46.20 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	56.07	51.41	55.14	54.04	52.35	53.80
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	42.41 %	44.39 %	47.28 %	46.04 %	50.90 %	46.20 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	57.59	55.61	52.72	53.96	49.10	53.80
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Essential Utilities Inc.						
Long-Term Debt	53.90 %	54.99 %	53.28 %	54.42 %	44.23 %	52.16 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	46.10	45.01	46.72	45.58	55.77	47.84
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Global Water Resources, Inc.						
Long-Term Debt	68.40 %	71.02 %	78.99 %	78.09 %	82.31 %	75.76 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	31.60	28.98	21.01	21.91	17.69	24.24
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Middlesex Water Company						
Long-Term Debt	46.26 %	43.34 %	45.86 %	44.61 %	42.20 %	44.45 %
Preferred Stock	0.26	0.29	0.31	0.33	0.37	0.31
Common Equity	53.48	56.37	53.84	55.06	57.43	55.24
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
SJW Group						
Long-Term Debt	56.09 %	57.39 %	59.69 %	59.79 %	59.05 %	58.40 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	43.91	42.61	40.31	40.21	40.95	41.60
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
The York Water Company						
Long-Term Debt	44.87 %	40.23 %	47.64 %	46.31 %	42.95 %	44.40 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	55.13	59.77	52.36	53.69	57.05	55.60
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Nine Water Companies						
Long-Term Debt	50.43 %	50.88 %	52.66 %	52.87 %	51.08 %	51.58 %
Preferred Stock	0.03	0.03	0.03	0.04	0.05	0.04
Common Equity	49.54	49.09	47.31	47.09	48.87	48.38
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Limestone Water Utility Operating Company, LLC
Determination of Cost of Long-Term Debt Based on Limestone's Sister Companies Recent Debt Issuances

Utility Operating Company	Long Term Debt	Issuance Date	Debt Proportion	Interest Rate	Weighted Cost
Magnolia Water Utility Operating Company, LLC	$ 18,424,548	October 2023	23.99%	7.07%	1.70%
Magnolia Water Utility Operating Company, LLC	$ 29,030,384	December 2022	37.80%	6.35%	2.40%
Bluegrass Water Utility Operating Company, LLC	$ 2,784,081	November 2022	3.62%	6.70%	0.24%
Confluence Rivers Utility Operating Company, Inc.	$ 6,717,069	December 2022	8.75%	6.60%	0.58%
Great River Utility Operating Company, LLC	$ 19,849,000	May 2024	25.84%	6.68%	1.73%
	$ 76,805,081				**6.64%**

Source: Company Provided, as of May 31, 2024

Limestone Water Utility Operating Company, LLC
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the
Proxy Groups

Proxy Group of Five Water Companies	[1] Average Dividend Yield (1)	[2] Value Line Projected Five Year Growth in EPS (2)	[3] Zack's Five Year Projected Growth Rate in EPS	[4] Yahoo! Finance Projected Five Year Growth in EPS	[5] S&P Capital IQ Projected Five Year Growth in EPS	[6] Average Projected Five Year Growth in EPS (3)	[7] Adjusted Dividend Yield (4)	[8] Indicated Common Equity Cost Rate (5)
American States Water Company	2.40 %	6.50 %	6.30 %	4.40 %	14.00 %	7.80 %	2.49 %	10.29 %
American Water Works Company, Inc.	2.37	3.00	8.00	7.50	7.75	6.56	2.45	9.01
California Water Service Group	2.42	10.00	NA	10.80	9.00	9.93	2.54	12.47
Middlesex Water Company	2.54	6.50	NA	2.70	NA	4.60	2.60	7.20
SJW Group	2.84	6.50	7.50	7.50	NA	7.17	2.94	10.11
							Average	9.82 %
							Median	10.11 %
						Average of Mean and Median		9.97 %

Proxy Group of Nine Water Companies	[1] Average Dividend Yield (1)	[2] Value Line Projected Five Year Growth in EPS (2)	[3] Zack's Five Year Projected Growth Rate in EPS	[4] Yahoo! Finance Projected Five Year Growth in EPS	[5] S&P Capital IQ Projected Five Year Growth in EPS	[6] Average Projected Five Year Growth in EPS (3)	[7] Adjusted Dividend Yield (4)	[8] Indicated Common Equity Cost Rate (5)
American States Water Company	2.40 %	6.50 %	6.30 %	4.40 %	14.00 %	7.80 %	2.49 %	10.29 %
American Water Works Company, Inc.	2.37	3.00	8.00	7.50	7.75	6.56	2.45	9.01
Artesian Resources Corporation	3.27	NA	NA	4.00	NA	4.00	3.34	7.34
California Water Service Group	2.42	10.00	NA	10.80	9.00	9.93	2.54	12.47
Essential Utilities Inc.	3.44	7.00	5.80	5.20	6.40	6.10	3.54	9.64
Global Water Resources, Inc.	2.40	15.00	15.00	15.00	15.00	15.00	2.58	17.58 (6)
Middlesex Water Company	2.54	6.50	NA	2.70	NA	4.60	2.60	7.20
SJW Group	2.84	6.50	7.50	7.50	NA	7.17	2.94	10.11
The York Water Company	2.38	NA	NA	4.90	NA	4.90	2.44	7.34
							Average	9.18 %
							Median	9.33 %
						Average of Mean and Median		9.26 %

NA= Not Available

Notes:

(1) Indicated dividend at 04/30/2024 divided by the average closing price of the last 60 trading days ending 04/30/2024 for each company.
(2) From pages 2 through 10 of this Exhibit.
(3) Average of columns 2 through 5 excluding negative growth rates.
(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 5) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for American States Water Company, 2.40% x (1+(1/2 x 7.80%)) = 2.49%.
(5) Column 6 + Column 7.
(6) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Source of Information:
Value Line Investment Survey
www.zacks.com Downloaded on 04/30/2024
www.yahoo.com Downloaded on 04/30/2024
S&P Capital IQ

Limestone Water Utility Operating Company, LLC
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Five Water Companies	Proxy Group of Nine Water Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.05 %	5.05 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds (2)	0.52	0.52
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	5.57 %	5.57 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.04 (3)	0.08 (4)
5.	Adjusted Bond Yield	5.61 %	5.65 %
6.	Equity Risk Premium (5)	5.17	5.20
7.	Risk Premium Derived Common Equity Cost Rate	10.78 %	10.85 %

Notes: (1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 7 and 8 of this Exhibit).

(2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.52% from page 2 of this Exhibit.

(3) Adjustment to reflect the A2/A3 Moody's LT issuer rating of the Utility Proxy Group as shown on page 3 of this Exhibit. The 0.04% upward adjustment is derived by taking 1/6 of the spread between A2 and Baa2 Public Utility Bonds (1/6 * 0.23% = 0.04%) as derived from page 2 of this Exhibit.

(4) Adjustment to reflect the A3 Moody's LT issuer rating of the Utility Proxy Group as shown on page 3 of this Exhibit. The 0.08% upward adjustment is derived by taking 1/3 of the spread between A2 and Baa2 Public Utility Bonds (1/3 * 0.23% = 0.08%) as derived from page 2 of this Exhibit.

(5) From page 5 of this Exhibit.

Limestone Water Utility Operating Company, LLC
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1] Aaa Rated Corporate Bond	[2] A2 Rated Public Utility Bond	[3] Baa2 Rated Public Utility Bond
Apr-2024	5.28 %	5.79 %	6.01 %
Mar-2024	5.01	5.55	5.79
Feb-2024	5.03	5.56	5.79
Average	5.11 %	5.63 %	5.86 %

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:
0.52 % (1)

Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds:
0.23 % (2)

Notes:
(1) Column [2] - Column [1].
(2) Column [3] - Column [2].

Source of Information:
Bloomberg Professional Services

Limestone Water Utility Operating Company, LLC
Comparison of Long-Term Issuer Ratings for the
Proxy Groups

	Moody's Long-Term Issuer Rating April 2024		Standard & Poor's Long-Term Issuer Rating April 2024	
Proxy Group of Five Water Companies	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
American States Water Company (2)	A2	6.0	A+	5.0
American Water Works Company, Inc. (3)	A3	7.0	A	6.0
California Water Service Group (4)	NR	- -	A+	5.0
Middlesex Water Company	NR	- -	A	6.0
SJW Group (5)	NR	- -	A-	7.0
Average	A2/A3	6.5	A	5.8

Proxy Group of Nine Water Companies	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
American States Water Company (2)	A2	6.0	A+	5.0
American Water Works Company, Inc. (3)	A3	7.0	A	6.0
Artesian Resources Corporation	NR	- -	NR	- -
California Water Service Group (4)	NR	- -	A+	5.0
Essential Utilities Inc. (6)	Baa1	8.0	A-	7.0
Global Water Resources, Inc.	NR	- -	NR	- -
Middlesex Water Company	NR	- -	A	6.0
SJW Group (5)	NR	- -	A-	7.0
The York Water Company	NR	- -	A-	7.0
Average	A3	7.0	A	6.1

Notes:
(1) From page 4 of this Exhibit.
(2) Ratings that of Golden State Water Company.
(3) Ratings that of New Jersey American Water Co., and Pennsylvania American Water Co.
(4) Ratings that of California Water Service Company.
(5) Ratings are that of San Jose Water Company, Connecticut Water Inc., and Connecticut Water Service Inc.
(6) Ratings that of PNG Companies and Aqua Pennsylvania, Inc. (S&P).

Source Information: Moody's Investors Service
Standard & Poor's Global Utilities Rating Service

Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings

Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond Rating
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-
B1	14	B+
B2	15	B
B3	16	B-

Limestone Water Utility Operating Company, LLC
Judgment of Equity Risk Premium for the
Proxy Groups

Line No.		Proxy Group of Five Water Companies	Proxy Group of Nine Water Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	5.74 %	5.81 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A2 rated bonds (2)	4.59	4.59
3.	Average equity risk premium	5.17 %	5.20 %

Notes: (1) From page 6 of this Exhibit.
(2) From page 9 of this Exhibit.

Limestone Water Utility Operating Company, LLC
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Groups

Line No.	Equity Risk Premium Measure	Proxy Group of Five Water Companies	Proxy Group of Nine Water Companies
1.	Kroll Equity Risk Premium (1)	5.96 %	5.96 %
2.	Regression on Kroll Risk Premium Data (2)	7.03	7.03
3.	Kroll Equity Risk Premium based on PRPM (3)	8.23	8.23
4	Equity Risk Premium Based on Value Line Summary and Index (4)	7.22	7.22
5.	Equity Risk Premium Based on Bloomberg, Value Line, and S&P Global Market Intelligence S&P 500 Companies (5)	9.81	9.81
6.	Conclusion of Equity Risk Premium	7.65 %	7.65 %
7.	Adjusted Beta (6)	0.75	0.76
8.	Forecasted Equity Risk Premium	5.74 %	5.81 %

Notes:

(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Kroll 2023 SBBI® Yearbook and Bloomberg Professional Services minus the arithmetic mean monthly yield of Moody's average Aaa and Aa2 corporate bonds from 1928-2023.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa2 rated corporate bond yields from 1928-2023 referenced in Note 1 above. Using the equation generated from the regression, an expected equity risk premium is calculated using the average consensus forecast of Aaa corporate bonds of 5.05% (from page 1 of this Exhibit).

(3) The Predictive Risk Premium Model (PRPM) is discussed in the accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through April 2024.

(4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 5.05% (from page 1 of this Exhibit) from the projected 3-5 year total annual market return of 12.27% (described fully in note 1 on page 2 of Exhibit DWD-6).

(5) Using data from the Bloomberg Professional Services, Value Line, and S&P Global Market Intelligence for the S&P 500 for the S&P 500, an expected total return of 14.86% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 5.05% results in an expected equity risk premium of 9.81%.

(6) Average of mean and median beta from Exhibit DWD-6.

Sources of Information:

Kroll 2023 SBBI® Yearbook
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, December 1, 2023 and May 1, 2024
S&P Capital IQ
Bloomberg Professional Services

Projected Market Appreciation of the S&P Utility Index
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

Line No.		Implied Equity Risk Premium
1.	Historical Equity Risk Premium (1)	4.02 %
2.	Regression of Historical Equity Risk Premium (2)	4.87
3	Forecasted Equity Risk Premium Based on PRPM (3)	4.52
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg, Value Line, and S&P Capital IQ Data) (4)	4.96
5.	Average Equity Risk Premium (5)	4.59 %

Notes:
(1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2023. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.
(2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S&P Utility Index relative to Moody's A2 rated public utility bond yields from 1928 - 2023 referenced in note 1 above. Using the equation generated from the regression, an expected equity risk premium is calculated using the prospective A2 rated public utility bond yield of 5.57% (from line 3, page 1 of this Exhibit).
(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A2 rated public utility bonds from January 1928 - April 2024.
(4) Using data from Bloomberg, Value Line, and S&P Capital IQ for the S&P Utilities Index, an expected return of 10.53% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 5.57%, calculated on line 3 of page 1 of this Exhibit results in an equity risk premium of 4.96%. (10.53% - 5.57% = 4.96%)
(5) Average of lines 1 through 4.

Limestone Water Utility Operating Company, LLC
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

Proxy Group of Five Water Companies Using Prospective Interest Rates

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Five Water Companies	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
American States Water Company	0.70	0.69	0.70	8.58 %	4.31 %	10.32 %	10.96 %	10.64 %
American Water Works Company, Inc.	0.95	0.97	0.96	8.58	4.31	12.55	12.63	12.59
California Water Service Group	0.75	0.71	0.73	8.58	4.31	10.57	11.15	10.86
Middlesex Water Company	0.75	0.71	0.73	8.58	4.31	10.57	11.15	10.86
SJW Group	0.85	0.65	0.75	8.58	4.31	10.75	11.28	11.01
Mean			0.77			10.95 %	11.44 %	11.19 %
Median			0.73			10.57 %	11.15 %	10.86 %
Average of Mean and Median			0.75			10.76 %	11.30 %	11.03 %

Proxy Group of Nine Water Companies Using Prospective Interest Rates

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Nine Water Companies	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
American States Water Company	0.70	0.69	0.70	8.58 %	4.31 %	10.32 %	10.96 %	10.64 %
American Water Works Company, Inc.	0.95	0.97	0.96	8.58	4.31	12.55	12.63	12.59
Artesian Resources Corporation	0.75	0.63	0.69	8.58	4.31	10.23	10.90	10.56
California Water Service Group	0.75	0.71	0.73	8.58	4.31	10.57	11.15	10.86
Essential Utilities Inc.	1.00	0.78	0.89	8.58	4.31	11.95	12.18	12.07
Global Water Resources, Inc.	0.90	0.85	0.87	8.58	4.31	11.78	12.06	11.92
Middlesex Water Company	0.75	0.71	0.73	8.58	4.31	10.57	11.15	10.86
SJW Group	0.85	0.65	0.75	8.58	4.31	10.75	11.28	11.01
The York Water Company	0.80	0.60	0.70	8.58	4.31	10.32	10.96	10.64
Mean			0.78			11.00 %	11.48 %	11.24 %
Median			0.73			10.57 %	11.15 %	10.86 %
Average of Mean and Median			0.76			10.79 %	11.32 %	11.05 %

Notes on page 2 of this Exhibit.

Limestone Water Utility Operating Company, LLC
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

(1) The market risk premium (MRP) is derived by using five different measures from four sources: Kroll, Value Line, Bloomberg, and S&P Capital IQ as illustrated below:

Measure 1: Kroll Arithmetic Mean MRP (1926-2023)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2023:	12.16	%
Arithmetic Mean Income Returns on Long-Term Government Bonds:	4.99	
MRP based on Kroll Historical Data:	7.17	%

Measure 2: Application of a Regression Analysis to Kroll Historical Data

(1926-2023)	8.04	%

Measure 3: Application of the PRPM to Kroll Historical Data

(January 1926 - April 2024)	9.19	%

Measure 4: Value Line Projected MRP (Thirteen weeks ending May 3, 2024)

Total projected return on the market 3-5 years hence*:	12.27	%
Risk-Free Rate (see notes 2 and 3):	4.31	
MRP based on Value Line Summary & Index:	7.96	%

*Forcasted 3-5 year capital appreciation plus expected dividend yield

Measure 5: Bloomberg, Value Line, and S&P Capital IQ Projected Return on the Market based on the S&P 500

Total return on the Market based on the S&P 500:	14.86	%
Risk-Free Rate (see notes 2 and 3):	4.31	
MRP based on Bloomberg, Value Line, and S&P Capital IQ data	10.55	%

Average of all MRP Measures:	8.58	%

(2) For reasons explained in the Direct Testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 7 and 8 of Exhibit DWD-5.) The projection of the risk-free rate is illustrated below:

Second Quarter 2024	4.60	%
Third Quarter 2024	4.50	
Fourth Quarter 2024	4.40	
First Quarter 2025	4.30	
Second Quarter 2025	4.20	
Third Quarter 2025	4.20	
2025-2029	4.10	
2030-2034	4.20	
	4.31	%

(3) Average of Column 6 and Column 7.

Sources of Information:
Value Line Summary and Index
Blue Chip Financial Forecasts, December 1, 2023 and May 1, 2024
Kroll 2023 SBBI® Yearbook
S&P Capital IQ
Bloomberg Professional Services

Limestone Water Utility Operating Company, LLC
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Proxy Group of Five Water Companies

The criteria for selection of the proxy group of non-price regulated companies comparable in total risk to the proxy group of five water companies was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The proxy group of non-price regulated companies was selected based on the unadjusted beta range of 0.51 - 0.79 and residual standard error of the regression range of 2.9156 - 3.4772 of the proxy group of five water companies.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus three standard deviations captures 95.50% of the distribution of unadjusted betas and residual standard errors of the regression.

The standard deviation of the Utility Proxy Group's residual standard error of the regression is 0.1404. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus,} \quad 0.1404 = \frac{3.1964}{\sqrt{518}} = \frac{3.1964}{22.7596}$$

Source of Information: Value Line Proprietary Database, March 2024.
Value Line Investment Survey (Standard Edition).

Limestone Water Utility Operating Company, LLC
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Five Water Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
American States Water Company	0.70	0.51	2.6795	0.0600
American Water Works Company, Inc.	0.95	0.90	3.3981	0.0760
California Water Service Group	0.75	0.56	3.0835	0.0690
Middlesex Water Company	0.75	0.57	3.6336	0.0813
SJW Group	0.85	0.73	3.1874	0.0713
Average	0.80	0.65	3.1964	0.0715
Beta Range (+/- 2 std. Devs. of Beta)	0.51	0.79		
2 std. Devs. of Beta	0.14			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.9156	3.4772		
Std. dev. of the Res. Std. Err.	0.1404			
2 std. devs. of the Res. Std. Err.	0.2808			

Source of Information: Value Line Proprietary Database, March 2024.

Limestone Water Utility Operating Company, LLC
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Five Water Companies

Proxy Group of Thirty-Nine Non-Price Regulated Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
AbbVie Inc.	0.85	0.71	2.9836	0.0668
Abbott Labs.	0.90	0.79	2.9435	0.0659
Assurant Inc.	0.90	0.79	3.0402	0.0680
Akamai Technologies	0.75	0.61	3.3098	0.0741
Smith (A.O.)	0.90	0.79	3.0917	0.0692
Booz Allen Hamilton	0.85	0.73	3.2604	0.0730
Baxter Int'l Inc.	0.70	0.53	3.2992	0.0738
Balchem Corp.	0.75	0.58	3.3842	0.0757
Becton, Dickinson	0.75	0.57	3.0517	0.0683
BWX Technologies	0.80	0.67	3.2423	0.0725
CACI Int'l	0.90	0.79	2.9988	0.0671
Casey's Gen'l Stores	0.90	0.79	3.1675	0.0709
Chemed Corp.	0.75	0.59	2.9312	0.0656
Check Point Software	0.75	0.60	3.0054	0.0672
C.H. Robinson	0.70	0.53	3.4399	0.0770
Cencora	0.80	0.65	2.9558	0.0661
CSG Systems Int'l	0.75	0.59	2.9444	0.0659
CSW Industrials	0.85	0.77	3.2757	0.0733
Casella Waste Sys.	0.85	0.73	3.3876	0.0758
Quest Diagnostics	0.75	0.61	3.3374	0.0747
Fastenal Co.	0.90	0.79	2.9654	0.0664
Heartland Express	0.75	0.54	3.0508	0.0683
J&J Snack Foods	0.90	0.79	3.4247	0.0766
Henry (Jack) & Assoc	0.85	0.74	3.1969	0.0715
McKesson Corp.	0.85	0.70	3.1414	0.0703
McCormick & Co.	0.80	0.63	3.1846	0.0713
NewMarket Corp.	0.75	0.59	2.9383	0.0657
Northrop Grumman	0.75	0.55	3.2656	0.0731
Oracle Corp.	0.85	0.70	3.1087	0.0696
Prestige Consumer	0.85	0.76	3.2454	0.0726
Pfizer, Inc.	0.80	0.67	3.1656	0.0708
Progressive Corp.	0.70	0.54	3.1340	0.0701
RLI Corp.	0.80	0.62	3.0345	0.0679
Stepan Company	0.80	0.64	3.4650	0.0775
Selective Ins. Group	0.85	0.74	2.9866	0.0668
United Parcel Serv.	0.80	0.69	3.4513	0.0772
Universal Corp.	0.80	0.68	3.2741	0.0733
Werner Enterprises	0.75	0.57	3.2085	0.0718
Watsco, Inc.	0.85	0.77	3.1365	0.0702
Average	0.81	0.67	3.1648	0.0708
Proxy Group of Five Water Companies	0.80	0.65	3.1964	0.0715

Source of Information: Value Line Proprietary Database, March 2024.

Limestone Water Utility Operating Company, LLC
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Proxy Group of Nine Water Companies

The criteria for selection of the proxy group of non-price regulated companies comparable in total risk to the proxy group of nine water companies was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The proxy group of non-price regulated companies was selected based on the unadjusted beta range of 0.56 - 0.84 and residual standard error of the regression range of 2.9265 - 3.4905 of the proxy group of nine water companies.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus three standard deviations captures 95.50% of the distribution of unadjusted betas and residual standard errors of the regression.

The standard deviation of the Utility Proxy Group's residual standard error of the regression is 0.1410. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus,} \quad 0.141 = \frac{3.2085}{\sqrt{518}} = \frac{3.2085}{22.7596}$$

Source of Information: Value Line Proprietary Database, March 2024.
Value Line Investment Survey (Standard Edition).

Limestone Water Utility Operating Company, LLC
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Nine Water Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
American States Water Company	0.70	0.51	2.6795	0.0600
American Water Works Company, Inc.	0.95	0.90	3.3981	0.0760
Artesian Resources Corporation	0.75	0.54	3.2962	0.0738
California Water Service Group	0.75	0.56	3.0835	0.0690
Essential Utilities Inc.	1.00	0.97	2.7918	0.0625
Global Water Resources, Inc.	0.90	0.79	3.6425	0.0815
Middlesex Water Company	0.75	0.57	3.6336	0.0813
SJW Group	0.85	0.73	3.1874	0.0713
The York Water Company	0.80	0.69	3.1640	0.0708
Average	0.83	0.70	3.2085	0.0718
Beta Range (+/- 2 std. Devs. of Beta)	0.56	0.84		
2 std. Devs. of Beta	0.14			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.9265	3.4905		
Std. dev. of the Res. Std. Err.	0.1410			
2 std. devs. of the Res. Std. Err.	0.2820			

Source of Information: Value Line Proprietary Database, March 2024.

Limestone Water Utility Operating Company, LLC
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Nine Water Companies

Proxy Group of Forty-Two Non-Price Regulated Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
AbbVie Inc.	0.85	0.71	2.9836	0.0668
Abbott Labs.	0.90	0.79	2.9435	0.0659
Assurant Inc.	0.90	0.79	3.0402	0.0680
Akamai Technologies	0.75	0.61	3.3098	0.0741
Smith (A.O.)	0.90	0.79	3.0917	0.0692
Booz Allen Hamilton	0.85	0.73	3.2604	0.0730
Balchem Corp.	0.75	0.58	3.3842	0.0757
Becton, Dickinson	0.75	0.57	3.0517	0.0683
BWX Technologies	0.80	0.67	3.2423	0.0725
CACI Int'l	0.90	0.79	2.9988	0.0671
Casey's Gen'l Stores	0.90	0.79	3.1675	0.0709
Chemed Corp.	0.75	0.59	2.9312	0.0656
Check Point Software	0.75	0.60	3.0054	0.0672
Cencora	0.80	0.65	2.9558	0.0661
CSG Systems Int'l	0.75	0.59	2.9444	0.0659
CSW Industrials	0.85	0.77	3.2757	0.0733
CVS Health	0.90	0.80	3.3424	0.0748
Casella Waste Sys.	0.85	0.73	3.3876	0.0758
Quest Diagnostics	0.75	0.61	3.3374	0.0747
Danaher Corp.	0.90	0.81	3.0396	0.0680
Fastenal Co.	0.90	0.79	2.9654	0.0664
Franklin Electric	0.90	0.82	2.9449	0.0659
Alphabet Inc.	0.90	0.80	3.1753	0.0710
J&J Snack Foods	0.90	0.79	3.4247	0.0766
Henry (Jack) & Assoc	0.85	0.74	3.1969	0.0715
L3Harris Technologie	0.90	0.83	3.1265	0.0704
McKesson Corp.	0.85	0.70	3.1414	0.0703
McCormick & Co.	0.80	0.63	3.1846	0.0713
NewMarket Corp.	0.75	0.59	2.9383	0.0657
Oracle Corp.	0.85	0.70	3.1087	0.0696
OSI Systems	0.90	0.81	3.0233	0.0676
Prestige Consumer	0.85	0.76	3.2454	0.0726
Pfizer, Inc.	0.80	0.67	3.1656	0.0708
RLI Corp.	0.80	0.62	3.0345	0.0679
Stepan Company	0.80	0.64	3.4650	0.0775
Selective Ins. Group	0.85	0.74	2.9866	0.0668
UniFirst Corp.	0.90	0.81	3.0645	0.0686
United Parcel Serv.	0.80	0.69	3.4513	0.0772
Universal Corp.	0.80	0.68	3.2741	0.0733
Werner Enterprises	0.75	0.57	3.2085	0.0718
Watsco, Inc.	0.85	0.77	3.1365	0.0702
Western Union	0.85	0.72	3.4876	0.0780
Average	0.84	0.71	3.1534	0.0706
Proxy Group of Nine Water Companies	0.83	0.70	3.2085	0.0718

Source of Information: Value Line Proprietary Database, March 2024.

Limestone Water Utility Operating Company, LLC
Summary of Cost of Equity Models Applied to
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Groups

Principal Methods		Proxy Group of Thirty-Nine Non-Price Regulated Companies		Proxy Group of Forty-Two Non-Price Regulated Companies	
Discounted Cash Flow Model (DCF) (1)		11.22	%	10.67	%
Risk Premium Model (RPM) (2)		11.99		12.30	
Capital Asset Pricing Model (CAPM) (3)		11.33		11.57	
	Mean	11.51	%	11.51	%
	Median	11.33	%	11.57	%
	Average of Mean and Median	11.42	%	11.54	%

Notes:
(1) From pages 2-3 of this Exhibit.
(2) From page 4 of this Exhibit.
(3) From pages 8-9 of this Exhibit.

Limestone Water Utility Operating Company, LLC
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Five Water Companies and Proxy Group of Nine Water Companies

Proxy Group of Thirty-Nine Non-Price Regulated Companies	[1] Average Dividend Yield	[2] Value Line Projected Five Year Growth in EPS	[3] Zack's Five Year Projected Growth Rate in EPS	[4] Yahoo! Finance Projected Five Year Growth in EPS	[5] S&P Capital IQ Projected Five Year Growth in EPS	[6] Average Projected Five Year Growth Rate in EPS (1)	[7] Adjusted Dividend Yield	[8] Indicated Common Equity Cost Rate (2)
AbbVie Inc.	3.56 %	4.00 %	7.00 %	6.14 %	8.27 %	6.35 %	3.67 %	10.02 %
Abbott Labs.	1.94	4.00	9.00	8.10	6.50	6.90	2.01	8.91
Assurant Inc.	1.62	9.50	5.00	5.00	5.04	6.13	1.67	7.80
Akamai Technologies	-	5.50	7.30	6.60	9.66	7.27	-	NA
Smith (A.O.)	1.51	9.00	9.00	10.00	10.00	9.50	1.58	11.08
Booz Allen Hamilton	1.40	8.00	12.60	12.60	12.79	11.50	1.48	12.98
Baxter Int'l Inc.	2.80	4.00	6.40	4.07	2.73	4.30	2.86	7.16
Balchem Corp.	0.53	8.50	11.00	24.00	10.50	13.50	0.57	14.07
Becton, Dickinson	1.59	5.50	9.40	8.65	7.57	7.78	1.65	9.43
BWX Technologies	1.00	6.50	10.00	2.49	10.83	7.46	1.04	8.50
CACI Int'l	-	7.00	10.30	6.70	11.17	8.79	-	NA
Casey's Gen'l Stores	0.57	11.00	9.70	10.31	9.74	10.19	0.60	10.79
Chemed Corp.	0.26	7.50	11.30	11.25	11.27	10.33	0.27	10.60
Check Point Software	-	8.00	7.90	7.30	5.90	7.27	-	NA
C.H. Robinson	3.35	3.50	6.00	(1.33)	7.00	5.50	3.44	8.94
Cencora	0.86	8.00	9.80	9.11	8.85	8.94	0.90	9.84
CSG Systems Int'l	2.35	15.50	10.00	10.00	14.33	12.46	2.50	14.96
CSW Industrials	0.36	12.50	15.00	12.00	15.00	13.63	0.38	14.01
Casella Waste Sys.	-	4.50	19.90	14.90	20.14	14.86	-	NA
Quest Diagnostics	2.33	1.50	5.20	4.96	5.25	4.23	2.38	6.61
Fastenal Co.	2.15	9.00	9.00	6.33	NA	8.11	2.24	10.35
Heartland Express	0.68	2.00	NA	68.70	(14.00)	35.35	0.80	36.15 (3)
J&J Snack Foods	2.07	9.00	NA	73.10	NA	41.05	2.49	43.54 (3)
Henry (Jack) & Assoc	1.29	6.50	8.30	7.70	8.35	7.71	1.34	9.05
McKesson Corp.	0.47	8.00	12.10	9.84	10.16	10.03	0.49	10.52
McCormick & Co.	2.37	4.50	6.80	7.15	5.84	6.07	2.44	8.51
NewMarket Corp.	1.65	5.50	NA	7.70	NA	6.60	1.70	8.30
Northrop Grumman	1.62	8.00	9.90	29.69	22.51	17.53	1.76	19.29
Oracle Corp.	1.35	10.00	11.20	10.00	12.13	10.83	1.42	12.25
Prestige Consumer	-	6.00	8.00	8.00	8.50	7.63	-	NA
Pfizer, Inc.	6.23	2.50	9.90	(1.24)	9.74	7.38	6.46	13.84
Progressive Corp.	0.20	14.50	22.50	26.00	32.49	23.87	0.22	24.09
RLI Corp.	0.75	11.00	NA	9.80	NA	10.40	0.79	11.19
Stepan Company	1.71	7.50	NA	4.40	NA	5.95	1.76	7.71
Selective Ins. Group	1.36	12.00	17.70	17.70	19.74	16.79	1.47	18.26
United Parcel Serv.	4.38	2.50	10.60	10.22	13.36	9.17	4.58	13.75
Universal Corp.	6.32	18.50	NA	NA	NA	18.50	6.90	25.40
Werner Enterprises	1.46	2.00	17.10	9.85	13.56	10.63	1.54	12.17
Watsco, Inc.	2.63	9.00	NA	4.42	NA	6.71	2.72	9.43
	NA= Not Available						Mean	11.87 %
							Median	10.56 %
							Average of Mean and Median	11.22 %

Notes on page 3 of this Exhibit.

Limestone Water Utility Operating Company, LLC
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Five Water Companies and Proxy Group of Nine Water Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Forty-Two Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	S&P Capital IQ Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS (1)	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (2)
AbbVie Inc.	3.56 %	4.00 %	7.00 %	6.14 %	8.27 %	6.35 %	3.67 %	10.02 %
Abbott Labs.	1.94	4.00	9.00	8.10	6.50	6.90	2.01	8.91
Assurant Inc.	1.62	9.50	5.00	5.00	5.04	6.13	1.67	7.80
Akamai Technologies	-	5.50	7.30	6.60	9.66	7.27	-	NA
Smith (A.O.)	1.51	9.00	9.00	10.00	10.00	9.50	1.58	11.08
Booz Allen Hamilton	1.40	8.00	12.60	12.60	12.79	11.50	1.48	12.98
Balchem Corp.	0.53	8.50	11.00	24.00	10.50	13.50	0.57	14.07
Becton, Dickinson	1.59	5.50	9.40	8.65	7.57	7.78	1.65	9.43
BWX Technologies	1.00	6.50	10.00	2.49	10.83	7.46	1.04	8.50
CACI Int'l	-	7.00	10.30	6.70	11.17	8.79	-	NA
Casey's Gen'l Stores	0.57	11.00	9.70	10.31	9.74	10.19	0.60	10.79
Chemed Corp.	0.26	7.50	11.30	11.25	11.27	10.33	0.27	10.60
Check Point Software	-	8.00	7.90	7.30	5.90	7.27	-	NA
Cencora	0.86	8.00	9.80	9.11	8.85	8.94	0.90	9.84
CSG Systems Int'l	2.35	15.50	10.00	10.00	14.33	12.46	2.50	14.96
CSW Industrials	0.36	12.50	15.00	12.00	15.00	13.63	0.38	14.01
CVS Health	3.58	5.00	9.10	3.69	2.86	5.16	3.67	8.83
Casella Waste Sys.	-	4.50	19.90	14.90	20.14	14.86	-	NA
Quest Diagnostics	2.33	1.50	5.20	4.96	5.25	4.23	2.38	6.61
Danaher Corp.	0.43	7.00	8.50	7.03	5.08	6.90	0.44	7.34
Fastenal Co.	2.15	9.00	9.00	6.33	NA	8.11	2.24	10.35
Franklin Electric	0.99	7.00	12.00	13.40	12.00	11.10	1.04	12.14
Alphabet Inc.	0.54	12.00	17.20	18.40	18.91	16.63	0.58	17.21
J&J Snack Foods	2.07	9.00	NA	73.10	NA	41.05	2.49	43.54 (3)
Henry (Jack) & Assoc	1.29	6.50	8.30	7.70	8.35	7.71	1.34	9.05
L3Harris Technologie	2.21	10.50	8.50	8.77	8.17	8.99	2.31	11.30
McKesson Corp.	0.47	8.00	12.10	9.84	10.16	10.03	0.49	10.52
McCormick & Co.	2.37	4.50	6.80	7.15	5.84	6.07	2.44	8.51
NewMarket Corp.	1.65	5.50	NA	7.70	NA	6.60	1.70	8.30
Oracle Corp.	1.35	10.00	11.20	10.00	12.13	10.83	1.42	12.25
OSI Systems	-	10.50	11.00	8.00	11.50	10.25	-	NA
Prestige Consumer	-	6.00	8.00	8.00	8.50	7.63	-	NA
Pfizer, Inc.	6.23	2.50	9.90	(1.24)	9.74	7.38	6.46	13.84
RLI Corp.	0.75	11.00	NA	9.80	NA	10.40	0.79	11.19
Stepan Company	1.71	7.50	NA	4.40	NA	5.95	1.76	7.71
Selective Ins. Group	1.36	12.00	17.70	17.70	19.74	16.79	1.47	18.26
UniFirst Corp.	0.79	10.00	NA	7.80	NA	8.90	0.83	9.73
United Parcel Serv.	4.38	2.50	10.60	10.22	13.36	9.17	4.58	13.75
Universal Corp.	6.32	18.50	NA	NA	NA	18.50	6.90	25.40 (3)
Werner Enterprises	1.46	2.00	17.10	9.85	13.56	10.63	1.54	12.17
Watsco, Inc.	2.63	9.00	NA	4.42	NA	6.71	2.72	9.43
Western Union	7.07	(0.50)	1.60	1.62	1.74	1.65	7.13	8.78
	NA= Not Available						Mean	10.89 %
							Median	10.44 %
							Average of Mean and Median	10.67 %

Notes:

(1) Average of columns 2 through 5 excluding negative growth rates.

(2) The application of the DCF model to the domestic, non-price regulated comparable risk companies is identical to the application of the DCF to the Utility Proxy Groups. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of 04/30/2024. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.zacks.com, www.yahoo.com, and S&P Capital IQ (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

(3) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Source of Information:
Value Line Investment Survey.
www.zacks.com, Downloaded on 04/30/2024
www.yahoo.com, Downloaded on 04/30/2024
S&P Capital IQ

Limestone Water Utility Operating Company, LLC
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Thirty-Nine Non-Price Regulated Companies	Proxy Group of Forty-Two Non-Price Regulated Companies
1.	Prospective Yield on Baa2 Rated Corporate Bonds (1)	5.98 %	5.98 %
2.	Adjustment to Reflect Bond rating Difference of Non-Price Regulated Companies (2)	(0.11)	(0.11)
3.	Adjusted Bond Yield	5.87	5.87
4.	Equity Risk Premium (3)	6.12	6.43
5.	Risk Premium Derived Common Equity Cost Rate	11.99 %	12.30 %

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated December 1, 2023 and May 1, 2024 (see pages 7 and 8 of Exhibit DWD-5). The estimates are detailed below.

Second Quarter 2024	6.10 %
Third Quarter 2024	6.10
Fourth Quarter 2024	6.00
First Quarter 2025	5.90
Second Quarter 2025	5.90
Third Quarter 2025	5.80
2025-2029	6.00
2030-2034	6.00
Average	5.98 %

(2) The average yield spread of Baa2 rated corporate bonds over A2 corporate bonds for the three months ending April 2024. To reflect the Baa1 average rating of both Non-Price Regulated Proxy Groups, the yield on Baa corporate bonds must be adjusted by 1/3 of the spread between A2 and Baa2 corporate bond yields as shown below:

	A2 Corp. Bond Yield	Baa2 Corp. Bond Yield	Spread
Apr-24	5.67 %	6.00 %	0.33 %
Mar-24	5.42	5.75	0.33
Feb-24	5.43	5.77	0.34
		Average yield spread	0.33
		1/3 of spread	0.11

(3) From page 7 of this Exhibit.

Limestone Water Utility Operating Company, LLC
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Thirty-Nine Non-Price Regulated Companies and Proxy Group of Forty-Two Non-Price Regulated Companies

Proxy Group of Thirty-Nine Non-Price Regulated Companies	Moody's Long-Term Issuer Rating April 2024		Standard & Poor's Long-Term Issuer Rating April 2024	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
AbbVie Inc.	A3	7.0	A-	7.0
Abbott Labs.	Aa3	4.0	AA-	4.0
Assurant Inc.	Baa2	9.0	BBB	9.0
Akamai Technologies	N/A	--	BBB+	8.0
Smith (A.O.)	N/A	--	N/A	--
Booz Allen Hamilton	N/A	--	N/A	--
Baxter Int'l Inc.	Baa2	9.0	BBB	9.0
Balchem Corp.	N/A	--	N/A	--
Becton, Dickinson	Baa2	9.0	BBB	9.0
BWX Technologies	Ba3	13.0	BB	12.0
CACI Int'l	N/A	--	BB+	11.0
Casey's Gen'l Stores	N/A	--	N/A	--
Chemed Corp.	WR	--	NR	--
Check Point Software	N/A	--	N/A	--
C.H. Robinson	Baa2	9.0	BBB+	8.0
Cencora	Baa2	9.0	BBB+	8.0
CSG Systems Int'l	N/A	--	BB+	11.0
CSW Industrials	N/A	--	N/A	--
Casella Waste Sys.	N/A	--	BB	12.0
Quest Diagnostics	Baa2	9.0	BBB+	8.0
Fastenal Co.	N/A	--	N/A	--
Heartland Express	N/A	--	N/A	--
J&J Snack Foods	N/A	--	N/A	--
Henry (Jack) & Assoc	N/A	--	N/A	--
McKesson Corp.	A3	7.0	BBB+	8.0
McCormick & Co.	Baa2	9.0	BBB	9.0
NewMarket Corp.	Baa2	9.0	BBB+	8.0
Northrop Grumman	Baa1	8.0	BBB+	8.0
Oracle Corp.	Baa2	9.0	BBB	9.0
Prestige Consumer	N/A	--	BB	12.0
Pfizer, Inc.	A2	6.0	A	6.0
Progressive Corp.	A2	6.0	A	6.0
RLI Corp.	WR	--	BBB	9.0
Stepan Company	N/A	--	N/A	--
Selective Ins. Group	Baa2	9.0	BBB	9.0
United Parcel Serv.	A2	6.0	A	6.0
Universal Corp.	WR	--	BBB-	10.0
Werner Enterprises	N/A	--	N/A	--
Watsco, Inc.	N/A	--	N/A	--
Average	Baa1	8.2	BBB	8.6

Notes on page 6 of this Exhibit.

Limestone Water Utility Operating Company, LLC
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Thirty-Nine Non-Price Regulated Companies and Proxy Group of Forty-Two Non-Price Regulated Companies

Proxy Group of Forty-Two Non-Price Regulated Companies	Moody's Long-Term Issuer Rating April 2024		Standard & Poor's Long-Term Issuer Rating April 2024	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
AbbVie Inc.	A3	7.0	A-	7.0
Abbott Labs.	Aa3	4.0	AA-	4.0
Assurant Inc.	Baa2	9.0	BBB	9.0
Akamai Technologies	N/A	--	BBB+	8.0
Smith (A.O.)	N/A	--	N/A	--
Booz Allen Hamilton	N/A	--	N/A	--
Balchem Corp.	N/A	--	N/A	--
Becton, Dickinson	Baa2	9.0	BBB	9.0
BWX Technologies	Ba3	13.0	BB	12.0
CACI Int'l	N/A	--	BB+	11.0
Casey's Gen'l Stores	N/A	--	N/A	--
Chemed Corp.	WR	--	NR	--
Check Point Software	N/A	--	N/A	--
Cencora	Baa2	9.0	BBB+	8.0
CSG Systems Int'l	N/A	--	BB+	11.0
CSW Industrials	N/A	--	N/A	--
CVS Health	Baa2	9.0	BBB	9.0
Casella Waste Sys.	N/A	--	BB	12.0
Quest Diagnostics	Baa2	9.0	BBB+	8.0
Danaher Corp.	A3	7.0	A-	7.0
Fastenal Co.	N/A	--	N/A	--
Franklin Electric	N/A	--	N/A	--
Alphabet Inc.	Aa2	3.0	AA+	2.0
J&J Snack Foods	N/A	--	N/A	--
Henry (Jack) & Assoc	N/A	--	N/A	--
L3Harris Technologie	Baa2	9.0	BBB	9.0
McKesson Corp.	A3	7.0	BBB+	8.0
McCormick & Co.	Baa2	9.0	BBB	9.0
NewMarket Corp.	Baa2	9.0	BBB+	8.0
Oracle Corp.	Baa2	9.0	BBB	9.0
OSI Systems	N/A	--	N/A	--
Prestige Consumer	N/A	--	BB	12.0
Pfizer, Inc.	A2	6.0	A	6.0
RLI Corp.	WR	--	BBB	9.0
Stepan Company	N/A	--	N/A	--
Selective Ins. Group	Baa2	9.0	BBB	9.0
UniFirst Corp.	N/A	--	N/A	--
United Parcel Serv.	A2	6.0	A	6.0
Universal Corp.	WR	--	BBB-	10.0
Werner Enterprises	N/A	--	N/A	--
Watsco, Inc.	N/A	--	N/A	--
Western Union	Baa2	9.0	BBB	9.0
Average	Baa1	8.0	BBB / BBB+	8.5

Notes:
(1) From page 4 of Exhibit DWD-5.

Source of Information:
Bloomberg Professional Services.

Limestone Water Utility Operating Company, LLC
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Two Groups of Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Five Water Companies and Proxy Group of Nine Water Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Thirty-Nine Non-Price Regulated Companies	Proxy Group of Forty-Two Non-Price Regulated Companies
1.	Kroll Equity Risk Premium (1)	5.96 %	5.96 %
2.	Regression on Kroll Risk Premium Data (2)	7.03	7.03
3.	Kroll Equity Risk Premium based on PRPM (3)	8.23	8.23
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	7.22	7.22
5.	Equity Risk Premium Based on Bloomberg, Value Line, and S&P Global Market Intelligence S&P 500 Companies (5)	9.81	9.81
6.	Conclusion of Equity Risk Premium	7.65 %	7.65 %
7.	Adjusted Beta (6)	0.80	0.84
8.	Forecasted Equity Risk Premium	6.12 %	6.43 %

Notes:

(1) From note 1 of page 6 of Exhibit DWD-5.
(2) From note 2 of page 6 of Exhibit DWD-5.
(3) From note 3 of page 6 of Exhibit DWD-5.
(4) From note 4 of page 6 of Exhibit DWD-5.
(5) From note 5 of page 6 of Exhibit DWD-5.
(6) Average of mean and median beta from pages 8 and 9 of this Exhibit.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2023 SBBI Yearbook, Kroll.
Value Line Summary and Index.
Blue Chip Financial Forecasts, December 1, 2023 and May 1, 2024
Bloomberg Professional Services.

Limestone Water Utility Operating Company, LLC
Traditional CAPM and ECAPM Results for the Proxy Groups of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Five Water Companies and Proxy Group of Nine Water Companies

Proxy Group of Thirty-Nine Non-Price Regulated Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Thirty-Nine Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
AbbVie Inc.	0.85	0.57	0.71	8.58 %	4.31 %	10.40 %	11.03 %	10.71 %
Abbott Labs.	0.90	0.79	0.85	8.58	4.31	11.60	11.93	11.77
Assurant Inc.	0.90	0.78	0.84	8.58	4.31	11.52	11.86	11.69
Akamai Technologies	0.75	1.05	0.90	8.58	4.31	12.03	12.25	12.14
Smith (A.O.)	0.90	1.03	0.97	8.58	4.31	12.63	12.70	12.67
Booz Allen Hamilton	0.85	0.88	0.86	8.58	4.31	11.69	11.99	11.84
Baxter Int'l Inc.	0.70	0.87	0.79	8.58	4.31	11.09	11.54	11.31
Balchem Corp.	0.75	0.99	0.87	8.58	4.31	11.78	12.06	11.92
Becton, Dickinson	0.75	0.77	0.76	8.58	4.31	10.83	11.35	11.09
BWX Technologies	0.80	0.82	0.81	8.58	4.31	11.26	11.67	11.47
CACI Int'l	0.90	0.83	0.87	8.58	4.31	11.78	12.06	11.92
Casey's Gen'l Stores	0.90	0.72	0.81	8.58	4.31	11.26	11.67	11.47
Chemed Corp.	0.75	0.54	0.65	8.58	4.31	9.89	10.64	10.26
Check Point Software	0.75	0.71	0.73	8.58	4.31	10.57	11.15	10.86
C.H. Robinson	0.70	0.81	0.76	8.58	4.31	10.83	11.35	11.09
Cencora	0.80	0.66	0.73	8.58	4.31	10.57	11.15	10.86
CSG Systems Int'l	0.75	0.91	0.83	8.58	4.31	11.43	11.80	11.62
CSW Industrials	0.85	0.84	0.85	8.58	4.31	11.60	11.93	11.77
Casella Waste Sys.	0.85	0.81	0.83	8.58	4.31	11.43	11.80	11.62
Quest Diagnostics	0.75	0.69	0.72	8.58	4.31	10.49	11.09	10.79
Fastenal Co.	0.90	0.98	0.94	8.58	4.31	12.38	12.51	12.44
Heartland Express	0.75	0.89	0.82	8.58	4.31	11.35	11.73	11.54
J&J Snack Foods	0.90	0.54	0.72	8.58	4.31	10.49	11.09	10.79
Henry (Jack) & Assoc	0.85	0.86	0.85	8.58	4.31	11.60	11.93	11.77
McKesson Corp.	0.85	0.55	0.70	8.58	4.31	10.32	10.96	10.64
McCormick & Co.	0.80	0.77	0.78	8.58	4.31	11.00	11.48	11.24
NewMarket Corp.	0.75	0.67	0.71	8.58	4.31	10.40	11.03	10.71
Northrop Grumman	0.75	0.62	0.68	8.58	4.31	10.15	10.83	10.49
Oracle Corp.	0.85	1.02	0.94	8.58	4.31	12.38	12.51	12.44
Prestige Consumer	0.85	0.68	0.76	8.58	4.31	10.83	11.35	11.09
Pfizer, Inc.	0.80	0.67	0.74	8.58	4.31	10.66	11.22	10.94
Progressive Corp.	0.70	0.64	0.67	8.58	4.31	10.06	10.77	10.41
RLI Corp.	0.80	0.67	0.74	8.58	4.31	10.66	11.22	10.94
Stepan Company	0.80	0.90	0.85	8.58	4.31	11.60	11.93	11.77
Selective Ins. Group	0.85	0.56	0.71	8.58	4.31	10.40	11.03	10.71
United Parcel Serv.	0.80	0.99	0.89	8.58	4.31	11.95	12.18	12.07
Universal Corp.	0.80	0.67	0.73	8.58	4.31	10.57	11.15	10.86
Werner Enterprises	0.75	0.83	0.79	8.58	4.31	11.09	11.54	11.31
Watsco, Inc.	0.85	1.17	1.01	8.58	4.31	12.98	12.96	12.97 (4)
		Mean	0.80			11.17 %	11.60 %	11.34 %
		Median	0.79			11.09 %	11.54 %	11.31 %
		Average of Mean and Median	0.80			11.13 %	11.57 %	11.33 %

Notes on page 9 of this Exhibit.

Limestone Water Utility Operating Company, LLC
Traditional CAPM and ECAPM Results for the Proxy Groups of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Five Water Companies and Proxy Group of Nine Water Companies

Proxy Group of Forty-Two Non-Price Regulated Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Forty-Two Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (4)
AbbVie Inc.	0.85	0.57	0.71	8.58 %	4.31 %	10.40 %	11.03 %	10.71 %
Abbott Labs.	0.90	0.79	0.85	8.58	4.31	11.60	11.93	11.77
Assurant Inc.	0.90	0.78	0.84	8.58	4.31	11.52	11.86	11.69
Akamai Technologies	0.75	1.05	0.90	8.58	4.31	12.03	12.25	12.14
Smith (A.O.)	0.90	1.03	0.97	8.58	4.31	12.63	12.70	12.67
Booz Allen Hamilton	0.85	0.88	0.86	8.58	4.31	11.69	11.99	11.84
Balchem Corp.	0.75	0.99	0.87	8.58	4.31	11.78	12.06	11.92
Becton, Dickinson	0.75	0.77	0.76	8.58	4.31	10.83	11.35	11.09
BWX Technologies	0.80	0.82	0.81	8.58	4.31	11.26	11.67	11.47
CACI Int'l	0.90	0.83	0.87	8.58	4.31	11.78	12.06	11.92
Casey's Gen'l Stores	0.90	0.72	0.81	8.58	4.31	11.26	11.67	11.47
Chemed Corp.	0.75	0.54	0.65	8.58	4.31	9.89	10.64	10.26
Check Point Software	0.75	0.71	0.73	8.58	4.31	10.57	11.15	10.86
Cencora	0.80	0.66	0.73	8.58	4.31	10.57	11.15	10.86
CSG Systems Int'l	0.75	0.91	0.83	8.58	4.31	11.43	11.80	11.62
CSW Industrials	0.85	0.84	0.85	8.58	4.31	11.60	11.93	11.77
CVS Health	0.90	0.64	0.77	8.58	4.31	10.92	11.41	11.16
Casella Waste Sys.	0.85	0.81	0.83	8.58	4.31	11.43	11.80	11.62
Quest Diagnostics	0.75	0.69	0.72	8.58	4.31	10.49	11.09	10.79
Danaher Corp.	0.90	1.01	0.96	8.58	4.31	12.55	12.63	12.59
Fastenal Co.	0.90	0.98	0.94	8.58	4.31	12.38	12.51	12.44
Franklin Electric	0.90	0.92	0.91	8.58	4.31	12.12	12.31	12.22
Alphabet Inc.	0.90	1.12	1.01	8.58	4.31	12.98	12.96	12.97 (4)
J&J Snack Foods	0.90	0.54	0.72	8.58	4.31	10.49	11.09	10.79
Henry (Jack) & Assoc	0.85	0.86	0.85	8.58	4.31	11.60	11.93	11.77
L3Harris Technologie	0.90	0.90	0.90	8.58	4.31	12.03	12.25	12.14
McKesson Corp.	0.85	0.55	0.70	8.58	4.31	10.32	10.96	10.64
McCormick & Co.	0.80	0.77	0.78	8.58	4.31	11.00	11.48	11.24
NewMarket Corp.	0.75	0.67	0.71	8.58	4.31	10.40	11.03	10.71
Oracle Corp.	0.85	1.02	0.94	8.58	4.31	12.38	12.51	12.44
OSI Systems	0.90	0.95	0.92	8.58	4.31	12.21	12.38	12.29
Prestige Consumer	0.85	0.68	0.76	8.58	4.31	10.83	11.35	11.09
Pfizer, Inc.	0.80	0.67	0.74	8.58	4.31	10.66	11.22	10.94
RLI Corp.	0.80	0.67	0.74	8.58	4.31	10.66	11.22	10.94
Stepan Company	0.80	0.90	0.85	8.58	4.31	11.60	11.93	11.77
Selective Ins. Group	0.85	0.56	0.71	8.58	4.31	10.40	11.03	10.71
UniFirst Corp.	0.90	0.82	0.86	8.58	4.31	11.69	11.99	11.84
United Parcel Serv.	0.80	0.99	0.89	8.58	4.31	11.95	12.18	12.07
Universal Corp.	0.80	0.67	0.73	8.58	4.31	10.57	11.15	10.86
Werner Enterprises	0.75	0.83	0.79	8.58	4.31	11.09	11.54	11.31
Watsco, Inc.	0.85	1.17	1.01	8.58	4.31	12.98	12.96	12.97 (4)
Western Union	0.85	0.90	0.88	8.58	4.31	11.86	12.12	11.99
		Mean	0.83			11.39 %	11.77 %	11.51 %
		Median	0.84			11.48 %	11.83 %	11.62 %
		Average of Mean and Median	0.84			11.44 %	11.80 %	11.57 %

Notes:
(1) From note 1 of page 2 of Exhibit DWD-6.
(2) From note 2 of page 2 of Exhibit DWD-6.
(3) Average of CAPM and ECAPM cost rates.
(4) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Limestone Water Utility Operating Company, LLC
Derivation of Investment Risk Adjustment Based upon
Kroll Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		[1] Market Capitalization on April 30, 2024 (1) (millions)			[2] Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	Limestone Water Utility Operating Company, LLC	$ 3.986			10	4.70%	
2.	Proxy Group of Five Water Companies	$ 2,619.707	657.2	x	6	1.21%	3.49%
3.	Limestone Water Utility Operating Company, LLC	$ 3.986			10	4.70%	
4.	Proxy Group of Nine Water Companies	$ 1,743.653	437.4	x	7	1.39%	3.31%
			[A]		[B]	[C]	[D]

	Decile	Market Capitalization of Smallest Company (millions)	Market Capitalization of Largest Company (millions)	Size Premium (Return in Excess of CAPM)*
Largest	1	$ 36,942.976	$ 2,662,326.048	-0.06%
	2	14,910.719	36,391.113	0.46%
	3	7,493.607	14,820.048	0.61%
	4	4,622.261	7,461.284	0.64%
	5	3,011.224	4,621.785	0.95%
	6	1,864.293	3,010.806	1.21%
	7	1,050.083	1,862.491	1.39%
	8	555.880	1,046.037	1.14%
	9	213.039	554.523	1.99%
Smallest	10	1.576	212.644	4.70%

*From 2024 Kroll Cost of Capital Navigator

Notes:

(1) From pages 2 and 3 of this Exhibit.
(2) Gleaned from Columns [B] and [C] on the bottom of this page. The appropriate decile (Column [A]) corresponds to the market capitalization of the proxy group, which is found in Column [1].
(3) Corresponding risk premium to the decile is provided in Column [D] on the bottom of this page.
(4) Line No. 1 Column [3] – Line No. 2 Column [3]. For example, the 3.49% in Column [4], Line No. 2 is derived as follows 3.49% = 4.7% - 1.21%.

Limestone Water Utility Operating Company, LLC
Market Capitalization of Limestone Water Utility Operating Company, LLC and the
Proxy Group of Five Water Companies and Proxy Group of Nine Water Companies

Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2023 (millions)	[2] Book Value per Share at Fiscal Year End 2023 (1)	[3] Total Common Equity at Fiscal Year End 2023 (millions)	[4] Closing Stock Market Price on April 30, 2024	[5] Market-to-Book Ratio on April 30, 2024 (2)	[6] Market Capitalization on April 30, 2024 (3) (millions)
Limestone Water Utility Operating Company, LLC		NA	NA	1.865 (4)	NA		
Based upon Proxy Group of Five Water Companies						213.7 (5)	$ 3.986 (6)
Proxy Group of Five Water Companies							
American States Water Company	NYSE	36.981	$ 20.987	776.109	$ 70.840	337.5 %	$ 2,619.707
American Water Works Company, Inc.	NYSE	200.145	48.950	9,797.000	122.320	249.9	24,481.732
California Water Service Group	NYSE	57.724	24.778	1,430.312	49.120	198.2	2,835.403
Middlesex Water Company	NASDAQ	17.821	23.736	422.991	50.720	213.7	903.881
SJW Group	NYSE	32.023	38.516	1,233.397	54.450	141.4	1,743.653
Median		36.981	$ 24.778	$ 1,233.397	$ 54.450	213.7 %	$ 2,619.707

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Requested rate base multiplied by the requested common equity ratio.
(5) The market-to-book ratio of Limestone Water Utility Operating Company, LLC on April 30, 2024 is assumed to be equal to the market-to-book ratio of the Proxy Group of Five Water Companies on April 30, 2024 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2023 Annual Forms 10K
yahoo.finance.com
Bloomberg Professional

Limestone Water Utility Operating Company, LLC
Market Capitalization of Limestone Water Utility Operating Company, LLC and the
Proxy Group of Five Water Companies and Proxy Group of Nine Water Companies

Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2023 (millions)	[2] Book Value per Share at Fiscal Year End 2023 (1)	[3] Total Common Equity at Fiscal Year End 2023 (millions)	[4] Closing Stock Market Price on April 30, 2024	[5] Market-to-Book Ratio on April 30, 2024 (2)	[6] Market Capitalization on April 30, 2024 (3) (millions)
Limestone Water Utility Operating Company, LLC		NA	NA	1.865 (4)	NA		
Based upon Proxy Group of Nine Water Companies						213.7 (5)	$ 3.986 (6)
Proxy Group of Nine Water Companies							
American States Water Company	NYSE	36.981	$ 20.987	776.109	$ 70.840	337.5 %	$ 2,619.707
American Water Works Company, Inc.	NYSE	200.145	48.950	9,797.000	122.320	249.9	24,481.732
Artesian Resources Corporation	NASDAQ	10.022	22.989	230.397	34.980	152.2	350.570
California Water Service Group	NYSE	57.724	24.778	1,430.312	49.120	198.2	2,835.403
Essential Utilities Inc.	NYSE	276.595	21.317	5,896.183	36.580	171.6	10,117.853
Global Water Resources, Inc.	NASDAQ	24.493	1.985	48.620	12.240	616.6	299.793
Middlesex Water Company	NASDAQ	17.821	23.736	422.991	50.720	213.7	903.881
SJW Group	NYSE	32.023	38.516	1,233.397	54.450	141.4	1,743.653
The York Water Company	NASDAQ	14.332	15.432	221.178	35.510	230.1	508.938
Median		32.023	$ 22.989	$ 776.109	$ 49.120	213.7 %	$ 1,743.653

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Requested rate base multiplied by the requested common equity ratio.
(5) The market-to-book ratio of Limestone Water Utility Operating Company, LLC on April 30, 2024 is assumed to be equal to the market-to-book ratio of the Proxy Group of Nine Water Companies on April 30, 2024 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2023 Annual Forms 10K
yahoo.finance.com
Bloomberg Professional

Utility Proxy Groups	Proxy Company - Exchange	CEM Proxy Group 1	CEM Proxy Group 2
AWR	NYSE	ABBV	ABBV
AWK	NYSE	ABT	ABT
CWT	NYSE	AIZ	AIZ
MSEX	NASDAQ	AKAM	AKAM
SJW	NYSE	AOS	AOS
		BAH	BAH
5		BAX	BCPC
		BCPC	BDX
		BDX	BWXT
AWR	NYSE	BWXT	CACI
AWK	NYSE	CACI	CASY
ARTNA	NASDAQ	CASY	CHE
CWT	NYSE	CHE	CHKP
WTRG	NYSE	CHKP	COR
GWRS	NASDAQ	CHRW	CSGS
MSEX	NASDAQ	COR	CSWI
SJW	NYSE	CSGS	CVS
YORW	NASDAQ	CSWI	CWST
		CWST	DGX
9		DGX	DHR
		FAST	FAST
		HTLD	FELE
		JJSF	GOOG
		JKHY	JJSF
		MCK	JKHY
		MKC	LHX
		NEU	MCK
		NOC	MKC
		ORCL	NEU
		PBH	ORCL
		PFE	OSIS
		PGR	PBH
		RLI	PFE
		SCL	RLI
		SIGI	SCL
		UPS	SIGI
		UVV	UNF
		WERN	UPS
		WSO	UVV
			WERN
			WSO
			WU

Growth Rate Input Date

4/30/2024

User Computer Title

Recommended Common Equity Cost Rate

DATA INPUTS

Capital Structure		*Source:*
Debt %	43.00%	*Hypothetical*
Equity %	57.00%	*Hypothetical*
Short-Term Debt %	NA	*NA*
Debt Cost (%)	6.64%	*Hypothetical*
Short-Term Debt Cost (%)	NA	*NA*

SBBI (1926-2023)		Notes:
SBBI Common Stocks Total Return (%)	12.16	Update annually from **Stocks, Bonds, Bills, and Infl**
SBBI Long-Term Gov't Bonds Income (%)	4.99	Update annually from **Stocks, Bonds, Bills, and Infl**

VL Appr Potential Week Ending:

5/3/2024

S&P Utilties Index Companies

AEE
AEP
AES
ATO
AWK
CEG
CMS
CNP
D
DTE
DUK
ED
EIX
ES
ETR
EVRG
EXC
FE

Company Name

Limestone Water Utility Operating Company, L

Regulatory Jurisdiction

Tennessee Public Utility Commission

Industry ("Natural Gas", "Water", "Electric"]

Water

- If Data n

Common Stock Shares Outstanding at Fiscal

NA

Book Value per Share at Fiscal Year End

NA

Rate Base

$3,272,329

Closing Stock Market Price

LNT
NEE
NI
NRG
PCG
PEG
PNW
PPL
SO
SRE
WEC
XEL

NA

Date of Annual Report Filing ("'Month Day, Y

December 31, 2023

Business Risk Adjustment

lation - Kroll® SBBI® Market Report
lation - Kroll® SBBI® Market Report

Blue Chip Update Date ("Month Day, Year")

December 1, 2023 and May 1, 2024

Abbreviated

LC

Proxy Groups
Proxy Group of Five Water Companies
Proxy Group of Nine Water Companies
Proxy Group of Thirty-Nine Non-Price Regulated Companies
Proxy Group of Forty-Two Non-Price Regulated Companies

ot available, input NA
Year End

Company Provided

Bond Index - Date	Apr-24	Mar-24	Feb-24
MOODUA Index	5.79	5.55	5.56
MOODUBAA Index	6.01	5.79	5.79
MOODCAAA Index	5.28	5.01	5.03
MOODCAA Index	5.50	5.26	5.25
MOODCA Index	5.67	5.42	5.43
MOODCBAA Index	6.00	5.75	5.77

Historical Risk Premium Data

Arithmetic Mean of Monthly Returns on Large Company Common Stocks (1928 - 2023)	11.91%
Arithmetic Mean of Moody's Aaa and Aa Corporate Bond Yields (1928 - 2023)	5.95%
Arithmetic Mean Holding Period Returns on the S&P Utility Index (1928 - 2023)	10.45%
Arithmetic Mean on Moody's A Rated Public Utility Bond Yields (1928 - 2023)	6.43%

Source: Kroll; Bloomberg Professional

		EPS Growth Rates			
Ticker	**Company Name**	**Zacks**	**Yahoo**	**Value Line**	**Cap IQ**
AWR	American States Water Company	6.30%	4.40%	6.50%	14.00%
AWK	American Water Works Company, Inc.	8.00%	7.50%	3.00%	7.75%
ARTNA	Artesian Resources Corporation	NA	4.00%	NA	NA
CWT	California Water Service Group	NA	10.80%	10.00%	9.00%
WTRG	Essential Utilities Inc.	5.80%	5.20%	7.00%	6.40%
GWRS	Global Water Resources, Inc.	15.00%	15.00%	15.00%	15.00%
MSEX	Middlesex Water Company	NA	2.70%	6.50%	NA
SJW	SJW Group	7.50%	7.50%	6.50%	NA
YORW	The York Water Company	NA	4.90%	NA	NA

Beta		Annual Div.	Value Line Beta Calculation					
Value Line	Bloomberg		Adjusted Beta	Unadjusted Beta	R Factor	Std. Error	Std. Dev Y	Std. Dev Beta
0.70	0.691	1.72	0.70	0.51	0.47	2.68	3.03	0.06
0.95	0.971	2.83	0.95	0.90	0.59	3.40	4.21	0.08
0.75	0.63	1.16	0.75	0.54	0.42	3.30	3.62	0.07
0.75	0.715	1.12	0.75	0.56	0.45	3.08	3.45	0.07
1.00	0.78	1.23	1.00	0.97	0.70	2.79	3.88	0.06
0.90	0.85	0.30	0.90	0.79	0.52	3.64	4.24	0.08
0.75	0.710	1.30	0.75	0.57	0.40	3.63	3.96	0.08
0.85	0.647	1.60	0.85	0.73	0.54	3.19	3.77	0.07
0.80	0.60	0.84	0.80	0.69	0.52	3.16	3.70	0.07

Bond Ratings

S&P	Moody's
A+	A2
A	A3
NR	NR
A+	NR
A-	Baa1
NR	NR
A	NR
A-	NR
A-	NR

	Moodys	S&P	Moodys	S&P
AWR			6.00	5.00
Golden State Water Company	A2	A+	6	5
AWK			7.00	6.00
New Jersey American Water Co.	A3	A	7	6
PA American Water Co.	A3	A	7	6
ARTNA	NR	NR	NA	NA
CWT			NA	5.00
California Water Service Co	NR	A+	NA	5
WTRG			8.00	7.00
Aqua Pennsylvania	NR	A-	NA	7
PNG Companies LLC	Baa1	A-	8	7
GWRS	NR	NR	NA	NA
MSEX	NR	A	NA	6
SJW			NA	6.67
San Jose Water Co.	NR	A	NA	6
Connecticut Water Inc.	NR	A-	NA	7
Connecticut Water Service Inc	NR	A-	NA	7
YORW	NR	A-	NA	7

	Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond Rating
	Aaa	1	AAA
	Aa1	2	AA+
	Aa2	3	AA
	Aa3	4	AA-
	A1	5	A+
	A2	6	A
Ratings Reflect Parent Level	A3	7	A-
	Baa1	8	BBB+
	Baa2	9	BBB
	Baa3	10	BBB-
	Ba1	11	BB+
	Ba2	12	BB
	Ba3	13	BB-
Ratings Reflect Parent Level			
	B1	14	B+
Ratings Reflect Parent Level	B2	15	B
	B3	16	B-

Ratings Reflect Parent Level

Numerical Bond Weighting
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

Date	4/30/2024

Tickers	AWR	AWK	ARTNA	CWT
PX_LAST	AWR US Equity	AWK US Equity	ARTNA US Equity	CWT US Equity
4/30/2024	70.84	122.32	34.98	49.12
4/29/2024	70.25	122.28	35.1	48.42
4/26/2024	69.91	120.78	34.5	47.93
4/25/2024	70.31	121.55	34.52	48.05
4/24/2024	70.76	121.36	34.89	46.57
4/23/2024	70.18	119.87	34.96	46.23
4/22/2024	68.97	119.26	34.84	45.45
4/19/2024	69.25	118.52	34.87	45.79
4/18/2024	67.97	117.35	34.37	44.9
4/17/2024	67.15	115.4	34.33	44.17
4/16/2024	66.57	113.82	33.72	43.77
4/15/2024	67.61	115.98	34.45	44.39
4/12/2024	67.78	116.57	34.04	44.4
4/11/2024	68.45	117.82	34.94	45.03
4/10/2024	69.07	118.31	35.19	45.58
4/9/2024	70.83	121.85	36.42	47.22
4/8/2024	70.33	120.02	35.95	46.51
4/5/2024	69.79	118.52	35.36	45.76
4/4/2024	70.3	120.38	36.59	45.97
4/3/2024	69.55	118.93	35.73	45.27
4/2/2024	70.01	119.56	35.74	46.02
4/1/2024	71.66	120.3	36.81	46.53
3/28/2024	72.24	122.21	37.11	46.48
3/27/2024	72.07	121.5	36.81	46.67
3/26/2024	70.16	117.84	35.49	45.19
3/25/2024	70.45	117.14	34.99	45.7
3/22/2024	71.13	117.75	35.49	46.22
3/21/2024	71.49	118.21	35.71	46.82
3/20/2024	71.4	118.09	35.92	46.49
3/19/2024	70.59	118	35.44	45.75
3/18/2024	70.25	117.23	35.51	45.6
3/15/2024	71.77	117.14	36.63	46.32
3/14/2024	71.79	118.48	35.81	46.62
3/13/2024	72.85	120.54	36.02	47.04
3/12/2024	73.03	119.18	36.25	47.05
3/11/2024	73.94	120.33	36.92	47.87
3/8/2024	72.3	118.44	36.36	46.3
3/7/2024	71.63	118.61	35.89	46.24
3/6/2024	71.39	120.31	35.82	45.6
3/5/2024	71.19	119.26	35.77	45.37
3/4/2024	72.39	121.7	35.5	46.08

3/1/2024	71.64	119.68	34.53	45.53
2/29/2024	71.41	118.54	34.47	45.89
2/28/2024	70.92	117.91	34.43	45.92
2/27/2024	71.62	118.03	34.33	45.95
2/26/2024	72.04	117.43	34.3	45.44
2/23/2024	72.18	118.96	34.73	46.1
2/22/2024	73.82	119.68	34.81	46.73
2/21/2024	76.15	121.73	35.69	47.37
2/20/2024	76.27	121.16	35.66	47.62
2/16/2024	76.37	122.82	35.78	47.52
2/15/2024	77.2	124.26	36.83	47.44
2/14/2024	74.96	120.48	35.42	45.91
2/13/2024	74.44	119.78	35.18	45.92
2/12/2024	76.96	123.64	37.23	47.82
2/9/2024	75.51	122.2	36.44	46.99
2/8/2024	75.11	121.83	35.64	46.66
2/7/2024	74.8	121.95	35.54	46.23
2/6/2024	75.18	122.52	36.15	46.17
2/5/2024	74.11	121.52	35.57	45.09
Average Price	71.67	119.61	35.47	46.25
Indicated Dividend	1.720	2.830	1.159	1.120
Indicated Dividend Yield	2.40%	2.37%	3.27%	2.42%

WTRG	GWRS	MSEX	SJW	YORW
WTRG US Equity	GWRS US Equity	MSEX US Equity	SJW US Equity	YORW US Equity
36.58	12.24	50.72	54.45	35.51
36.47	12.7	50.44	53.79	35.52
36.09	12.19	49.18	53.5	35.37
36.57	12.25	48.78	54.81	35.37
36.54	12.13	49.08	55.13	35.53
36.26	12.23	48.24	55.08	35.55
35.9	12.2	48.02	54.09	35.42
35.44	12.44	48	54.27	35.07
35.16	12.13	46.64	53.09	34.26
34.51	12.12	45.89	52.56	33.8
33.88	12.12	45.84	51.94	33.33
34.56	12.01	47.39	52.77	34.01
34.36	12.2	47.07	52.82	34.04
34.89	12.28	47.96	53.39	34.47
35.03	12.36	47.85	53.54	34.57
36.71	12.55	50	55.38	35.41
36.28	12.71	48.93	54.89	35.07
35.83	12.55	48.26	54.45	34.65
36.5	12.83	49.75	55.27	35.1
36.03	12.65	48.55	54.62	34.92
36.33	12.52	49.64	54.81	35.27
36.77	12.91	51.25	55.92	35.8
37.05	12.84	52.5	56.59	36.27
36.8	12.88	52.4	56.64	35.97
35.59	12.82	50.44	55.56	35.31
36.35	12.7	50.47	55.52	35.4
36.63	12.21	50.98	55.84	35.44
36.54	12.34	51.33	56.61	35.9
36.46	12.48	51.42	56.25	35.48
36	12.5	50.33	55.72	35.26
35.76	12.55	51.39	55.79	35.23
36	12.68	52.57	57.09	35.66
35.99	12.3	51.84	56.9	35.65
36.47	12.52	51.83	57.72	36.21
35.82	12.35	51.45	57.54	35.54
36	12.28	51.55	58.17	35.98
35.45	13.1	52.36	57.39	35.47
35.15	12.35	51.5	57.22	35.23
34.93	13.01	51.9	57.09	35.26
34.55	13.17	51.53	56.3	35.05
35.46	13.05	51.42	56.72	35.77

34.86	12.97	51.3	56.4	35.87
34.78	12.94	50.89	55.06	35.4
34.81	12.76	51.11	55.21	34.96
34.79	12.85	50.92	56.2	35.42
34.18	12.6	50.62	57.16	35.55
35.13	12.59	51.8	57.14	35.63
36.11	12.54	51.47	58.18	35.86
36.36	12.63	54.31	59.7	36.38
36.16	12.44	55.33	60.04	36.62
36.19	12.5	56.08	60.45	36.64
36.2	12.695	56.26	60.48	36.98
35.43	12.57	54.51	58.83	35.83
34.97	12.25	54.29	58.42	35.55
35.9	12.79	57.58	60.61	37.23
35.3	12.82	56.44	59.36	36.61
35.43	12.94	56.03	58.94	36.12
35.6	12.36	54.29	58.81	35.64
35.55	12.09	55.47	59.45	35.87
35.4	11.98	54.56	58.52	35.49
35.71	12.53	51.17	56.27	35.46
1.228	0.301	1.300	1.600	0.843
3.44%	2.40%	2.54%	2.84%	2.38%

Ticker	Company Name	EPS Growth Rates		
		Zacks	Yahoo	Value Line
ABBV	AbbVie Inc.	7.00%	6.14%	4.00%
ABT	Abbott Labs.	9.00%	8.10%	4.00%
AIZ	Assurant Inc.	5.00%	5.00%	9.50%
AKAM	Akamai Technologies	7.30%	6.60%	5.50%
AOS	Smith (A.O.)	9.00%	10.00%	9.00%
BAH	Booz Allen Hamilton	12.60%	12.60%	8.00%
BAX	Baxter Int'l Inc.	6.40%	4.07%	4.00%
BCPC	Balchem Corp.	11.00%	24.00%	8.50%
BDX	Becton, Dickinson	9.40%	8.65%	5.50%
BWXT	BWX Technologies	10.00%	2.49%	6.50%
CACI	CACI Int'l	10.30%	6.70%	7.00%
CASY	Casey's Gen'l Stores	9.70%	10.31%	11.00%
CHE	Chemed Corp.	11.30%	11.25%	7.50%
CHKP	Check Point Software	7.90%	7.30%	8.00%
CHRW	C.H. Robinson	6.00%	-1.33%	3.50%
COR	Cencora	9.80%	9.11%	8.00%
CSGS	CSG Systems Int'l	10.00%	10.00%	15.50%
CSWI	CSW Industrials	15.00%	12.00%	12.50%
CVS	CVS Health	9.10%	3.69%	5.00%
CWST	Casella Waste Sys.	19.90%	14.90%	4.50%
DGX	Quest Diagnostics	5.20%	4.96%	1.50%
DHR	Danaher Corp.	8.50%	7.03%	7.00%
FAST	Fastenal Co.	9.00%	6.33%	9.00%
FELE	Franklin Electric	12.00%	13.40%	7.00%
GOOG	Alphabet Inc.	17.20%	18.40%	12.00%
HTLD	Heartland Express	NA	68.70%	2.00%
JJSF	J&J Snack Foods	NA	73.10%	9.00%
JKHY	Henry (Jack) & Assoc	8.30%	7.70%	6.50%
LHX	L3Harris Technologie	8.50%	8.77%	10.50%
MCK	McKesson Corp.	12.10%	9.84%	8.00%
MKC	McCormick & Co.	6.80%	7.15%	4.50%
NEU	NewMarket Corp.	NA	7.70%	5.50%
NOC	Northrop Grumman	9.90%	29.69%	8.00%
ORCL	Oracle Corp.	11.20%	10.00%	10.00%
OSIS	OSI Systems	11.00%	8.00%	10.50%
PBH	Prestige Consumer	8.00%	8.00%	6.00%
PFE	Pfizer, Inc.	9.90%	-1.24%	2.50%
PGR	Progressive Corp.	22.50%	26.00%	14.50%
RLI	RLI Corp.	NA	9.80%	11.00%
SCL	Stepan Company	NA	4.40%	7.50%
SIGI	Selective Ins. Group	17.70%	17.70%	12.00%
UNF	UniFirst Corp.	NA	7.80%	10.00%
UPS	United Parcel Serv.	10.60%	10.22%	2.50%
UVV	Universal Corp.	NA	NA	18.50%
WERN	Werner Enterprises	17.10%	9.85%	2.00%
WSO	Watsco, Inc.	NA	4.42%	9.00%

WU	Western Union	1.60%	1.62%	-0.50%

Cap IQ
8.27%
6.50%
5.04%
9.66%
10.00%
12.79%
2.73%
10.50%
7.57%
10.83%
11.17%
9.74%
11.27%
5.90%
7.00%
8.85%
14.33%
15.00%
2.86%
20.14%
5.25%
5.08%
NA
12.00%
18.91%
-14.00%
NA
8.35%
8.17%
10.16%
5.84%
NA
22.51%
12.13%
11.50%
8.50%
9.74%
32.49%
NA
NA
19.74%
NA
13.36%
NA
13.56%
NA

1.74%

Beta		Annual Div.		
Value Line	Bloomberg		Adjusted	Unadjusted
0.85	0.57	6.20	0.85	0.71
0.90	0.79	2.20	0.90	0.79
0.90	0.78	2.88	0.90	0.79
0.75	1.05	NA	0.75	0.61
0.90	1.03	1.28	0.90	0.79
0.85	0.88	2.04	0.85	0.73
0.70	0.87	1.16	0.70	0.53
0.75	0.99	0.79	0.75	0.58
0.75	0.77	3.80	0.75	0.57
0.80	0.82	0.96	0.80	0.67
0.90	0.83	NA	0.90	0.79
0.90	0.72	1.72	0.90	0.79
0.75	0.54	1.60	0.75	0.59
0.75	0.71	NA	0.75	0.60
0.70	0.81	2.44	0.70	0.53
0.80	0.66	2.04	0.80	0.65
0.75	0.91	1.20	0.75	0.59
0.85	0.84	0.84	0.85	0.77
0.90	0.64	2.66	0.90	0.80
0.85	0.81	NA	0.85	0.73
0.75	0.69	3.00	0.75	0.61
0.90	1.01	1.08	0.90	0.81
0.90	0.98	1.56	0.90	0.79
0.90	0.92	1.00	0.90	0.82
0.90	1.12	0.80	0.90	0.80
0.75	0.89	0.08	0.75	0.54
0.90	0.54	2.94	0.90	0.79
0.85	0.86	2.20	0.85	0.74
0.90	0.90	4.64	0.90	0.83
0.85	0.55	2.48	0.85	0.70
0.80	0.77	1.68	0.80	0.63
0.75	0.67	10.00	0.75	0.59
0.75	0.62	7.48	0.75	0.55
0.85	1.02	1.60	0.85	0.70
0.90	0.95	NA	0.90	0.81
0.85	0.68	NA	0.85	0.76
0.80	0.67	1.68	0.80	0.67
0.70	0.64	0.40	0.70	0.54
0.80	0.67	1.08	0.80	0.62
0.80	0.90	1.50	0.80	0.64
0.85	0.56	1.40	0.85	0.74
0.90	0.82	1.32	0.90	0.81
0.80	0.99	6.52	0.80	0.69
0.80	0.67	3.20	0.80	0.68
0.75	0.83	0.56	0.75	0.57
0.85	1.17	10.80	0.85	0.77

0.85	0.90	0.94	0.85	0.72

Value Line Beta Calculation				Bond Ratings	
R Factor	Std. Error	Std. Dev Y	Std. Dev Beta	Moody's	S&P
0.5517	2.9836	3.5702	0.0668	A3	A-
0.5977	2.9435	3.6643	0.0659	Aa3	AA-
0.5856	3.0402	3.7433	0.0680	Baa2	BBB
0.4540	3.3098	3.7076	0.0741	N/A	BBB+
0.5797	3.0917	3.7870	0.0692	N/A	N/A
0.5307	3.2604	3.8394	0.0730	N/A	N/A
0.4107	3.2992	3.6113	0.0738	Baa2	BBB
0.4337	3.3842	3.7484	0.0757	N/A	N/A
0.4625	3.0517	3.4352	0.0683	Baa2	BBB
0.4992	3.2423	3.7347	0.0725	Ba3	BB
0.5900	2.9988	3.7070	0.0671	N/A	BB+
0.5699	3.1675	3.8475	0.0709	N/A	N/A
0.4901	2.9312	3.3561	0.0656	WR	NR
0.4872	3.0054	3.4347	0.0672	N/A	N/A
0.3947	3.4399	3.7367	0.0770	Baa2	BBB+
0.5237	2.9558	3.4629	0.0661	Baa2	BBB+
0.4852	2.9444	3.3608	0.0659	N/A	BB+
0.5474	3.2757	3.9067	0.0733	N/A	N/A
0.5549	3.3424	4.0098	0.0748	Baa2	BBB
0.5150	3.3876	3.9442	0.0758	N/A	BB
0.4511	3.3374	3.7323	0.0747	Baa2	BBB+
0.5963	3.0396	3.7790	0.0680	A3	A-
0.5965	2.9654	3.6874	0.0664	N/A	N/A
0.6120	2.9449	3.7165	0.0659	N/A	N/A
0.5743	3.1753	3.8711	0.0710	Aa2	AA+
0.4450	3.0508	3.4001	0.0683	N/A	N/A
0.5413	3.4247	4.0652	0.0766	N/A	N/A
0.5431	3.1969	3.8000	0.0715	N/A	N/A
0.6063	3.1265	3.9231	0.0704	Baa2	BBB
0.5273	3.1414	3.6900	0.0703	A3	BBB+
0.4821	3.1846	3.6280	0.0713	Baa2	BBB
0.4873	2.9383	3.3584	0.0657	Baa2	BBB+
0.4262	3.2656	3.6029	0.0731	Baa1	BBB+
0.5320	3.1087	3.6643	0.0696	Baa2	BBB
0.5984	3.0233	3.7663	0.0676	N/A	N/A
0.5451	3.2454	3.8636	0.0726	N/A	BB
0.5102	3.1656	3.6735	0.0708	A2	A
0.4341	3.1340	3.4721	0.0701	A2	A
0.4961	3.0345	3.4881	0.0679	WR	BBB
0.4587	3.4650	3.8919	0.0775	N/A	N/A
0.5658	2.9866	3.6152	0.0668	Baa2	BBB
0.5911	3.0645	3.7920	0.0686	N/A	N/A
0.4841	3.4513	3.9368	0.0772	A2	A
0.5036	3.2741	3.7823	0.0733	WR	BBB-
0.4450	3.2085	3.5758	0.0718	N/A	N/A
0.5631	3.1365	3.7879	0.0702	N/A	N/A

0.4996	3.4876	4.0183	0.0780	Baa2	BBB

	ABBV	ABT	AIZ
PX_LAST	ABBV US Equity	ABT US Equity	AIZ US Equity
4/30/2024	162.64	105.97	174.4
4/29/2024	161.52	107.27	175.32
4/26/2024	159.62	107.53	172.88
4/25/2024	167.29	106.86	173.64
4/24/2024	167.8	106.89	177.05
4/23/2024	169.54	107.59	176.31
4/22/2024	167.89	107.07	174.6
4/19/2024	166.41	107.28	173.83
4/18/2024	164.66	105.27	170.89
4/17/2024	164.25	105.9	170.08
4/16/2024	162.54	109.21	171.1
4/15/2024	161.67	108.89	172.59
4/12/2024	162.28	109.11	174.19
4/11/2024	167.52	111.45	173.62
4/10/2024	169.03	111.17	177.49
4/9/2024	170.14	112.44	178.8
4/8/2024	169.8	110.52	181.25
4/5/2024	170	111.2	179.85
4/4/2024	167.9	110.11	179.34
4/3/2024	177.33	111.28	184.97
4/2/2024	180.69	112.02	186.62
4/1/2024	180.76	112.09	187.22
3/28/2024	182.1	113.66	188.24
3/27/2024	180.35	113.48	187.41
3/26/2024	179.19	111.5	183.27
3/25/2024	178.53	110.01	181.49
3/22/2024	178.45	110.57	179.68
3/21/2024	177.5	111.51	179.54
3/20/2024	176.27	111.5	180.61
3/19/2024	179.66	113.16	179.26
3/18/2024	178.49	112.44	178.39
3/15/2024	177.88	115.49	181.16
3/14/2024	181.2	118.85	179.82
3/13/2024	179.86	120.16	181.51
3/12/2024	180.92	120.76	181.12
3/11/2024	179.63	120.19	178.35
3/8/2024	178.85	120.96	178.51
3/7/2024	180.57	120.92	178.91
3/6/2024	181.06	119.34	179.84
3/5/2024	179.16	118.48	178.61
3/4/2024	177.05	120.04	178.03
3/1/2024	178.91	118.62	180.46
2/29/2024	176.05	118.64	181.45
2/28/2024	178	120.05	182.25
2/27/2024	178.99	119.4	181.75
2/26/2024	178.81	118.69	178.94
2/23/2024	178.09	119.46	178.37

2/22/2024	176.75	119.02	177.46
2/21/2024	175.14	117.87	174.2
2/20/2024	175.75	116.64	174.63
2/16/2024	177.49	114.01	173.72
2/15/2024	176.59	113.64	172.51
2/14/2024	174.42	112.06	171.78
2/13/2024	173.29	111.34	171.22
2/12/2024	173.07	112.53	171.89
2/9/2024	174.08	111.81	174.49
2/8/2024	174.79	112.43	174.57
2/7/2024	175.01	113.31	175.35
2/6/2024	173.29	114	168.89
2/5/2024	171.26	111.65	168.41

Average Price	173.96	113.26	177.54
Indicated Dividend	6.20	2.20	2.88
Indicated Dividend Yield	3.56	1.94	1.62

AKAM	AOS	BAH	BAX	BCPC
AKAM US Equity	AOS US Equity	BAH US Equity	BAX US Equity	BCPC US Equity
100.93	82.84	147.67	40.37	141.38
101.78	84.31	147.58	40.64	139.23
101.68	83.21	145.13	40.13	139.26
101.79	82.82	145.27	40.23	138.5
102.19	87	144.39	40.93	140.64
101.76	87.92	145.96	41.02	145.07
100.88	86.9	143.01	40.4	143.72
101.5	86.07	142.14	39.47	143.48
100.73	86.69	139.51	39.65	143.12
100.34	86.46	140.26	39.52	143.8
101.33	85.4	142.16	39.57	145.62
102.22	85.15	142.26	40.04	146.76
103.47	86.5	144.09	40.33	147.9
105.09	86.15	144.2	42.12	149.3
104.38	85.53	142.71	42	148.99
107.57	86.47	143.5	42.83	153.56
105.82	86.97	147.32	42.25	152.79
106.24	87.54	146.83	42.62	150.24
105.99	87.14	146.35	42.63	150.87
107.08	88.65	147.74	43.28	152.59
107.38	88.55	146.85	42.91	150.75
109.33	89.08	149.06	43.55	152.12
108.76	89.46	148.44	42.74	154.95
109.63	88.85	148.22	42.69	154.46
108.02	87.88	147.18	41.54	153.44
108.56	88.04	146.13	41.79	153.63
108.97	89.28	147.61	41.94	155.55
109.145	89.88	148.25	42.01	156.93
109.6	87.64	146.83	41.83	156.91
107.79	86.78	146.17	41.95	156.79
107.87	85.86	144.49	41.54	155.87
107.25	87.09	144.79	41.61	156.39
108.95	86.62	145.17	42.02	153.99
109.53	86.16	146.1	42.68	155.27
109.78	85.93	145.64	42.89	155.58
110.03	85.31	144.58	43.48	156.04
111	85.82	147.14	43.77	156.42
112.83	86.65	148.39	43.49	156.99
110.16	84.5	148.9	42.99	157.05
109.38	83.69	149.19	42.41	154.5
110.76	85.1	149.05	42.5	156.99
110.24	83.94	148.18	41.01	156.93
110.92	82.9	147.71	40.92	157.19
108.14	82.89	147.31	41.56	154.08
107.76	82.3	146.53	41.85	154.64
108.07	81.59	147.73	42	155.44
108.17	81.4	148.91	42.55	156.88

106.95	80.61	147.54	42.01	155.29
107.16	80.23	144.89	42.23	153.66
108.36	79.64	145.1	41.77	157.27
109.19	80.09	145.59	41.22	149.2
111.57	81	145.37	40.94	146.39
114.8	81.17	145.13	39.64	142.73
125.05	79.25	144.4	39.62	140.58
128.15	81.28	145.89	40.31	145.33
128.32	80.54	146.69	39.55	145.14
126.78	80.25	144.62	40.46	143.43
125.57	79.84	143.66	39.38	142.28
124.48	78.22	144.05	39.71	141.21
124.61	77.09	141.87	38.53	140.28

109.20	84.70	145.79	41.46	150.26
NA	1.28	2.04	1.16	0.79
-	1.51	1.40	2.80	0.53

BDX	BWXT	CACI	CASY	CHE
BDX US Equity	BWXT US Equity	CACI US Equity	CASY US Equity	CHE US Equity
234.6	95.77	402.23	319.58	568
233.44	96.99	405.01	323.27	566.51
231.55	95.99	404.87	320.03	560.42
230.48	94.69	401.87	317.78	573.34
233.83	94.15	379.38	315.64	617.95
234.36	93.7	382.43	313.32	616.51
233.88	92.31	376.08	313.48	604.42
234.12	91.6	369.38	310.41	600.41
233.15	93.48	364.06	309.4	597.42
232.21	92.91	362.51	309.17	604.17
231.01	93.63	365.91	312.55	609.97
234.72	93.85	364.84	312.78	615.89
235.17	94.56	367.74	310.06	618.51
240.61	95.97	367.78	309.79	618.79
240.99	96.5	367.31	312.33	620.57
245.81	97.03	372.8	312.19	625.11
241.72	99.71	378.64	313.23	623.09
246.17	100.47	374.58	316.67	630.25
243.05	101.14	369.08	311.18	629.32
243.59	100.68	369.8	315.51	633.81
241.02	101.56	369.25	312.5	636.82
244.05	101.9	374.98	315.37	640.63
247.45	102.62	378.83	318.45	641.93
246.53	101.93	378.89	318.69	644.26
241.88	100.26	374.59	316.46	638
241.67	101.47	373.74	319.38	644.8
246.25	102.54	370.2	316.59	648.72
241.62	101.75	372.58	318.11	643.91
237.87	100.59	368.7	315.15	641.81
240.24	101.09	370.33	308.92	650.7
237.72	99.81	368.22	305.17	649.04
236.71	99.45	372.68	305.43	646.99
237.17	99.35	372.05	297.52	650.04
238.8	101.24	373.99	295.91	646.63
237.82	101.29	373.52	294.03	643.83
239.5	101.86	372.06	298.76	647.8
239.9	103.19	374.16	302.18	640.26
237.62	105.55	379.52	307.15	650
235.6	105.6	376.82	300.91	636.24
233.45	104.84	377.01	291.28	636.72
235.65	104.38	378.73	313.7	632.07
235.31	102.38	369.72	306.85	613.81
235.55	100.83	374.85	304.49	626.13
239.15	100.77	372.08	304.12	628.84
241.24	89.28	371.26	300.92	596.6
241.72	89.89	368.71	299.04	598.47
246.2	89.83	369.36	299.75	597.83

243.62	90.09	367.57	294.56	596.71
245.32	88.47	366.44	288.18	588.6
240.66	87.7	364.02	288.48	586.04
240.76	87.71	366.21	287.66	583.43
239.96	87.19	362.56	286.13	584.57
238.61	86.78	359.79	283.75	579.3
239.07	84.24	357.2	280.66	571.74
243.37	84.96	361.9	285.07	589.05
243.75	85.19	360.84	286.44	589
240.71	83.84	355.36	285.02	592.41
239.48	83.95	351.15	275.2	592.8
238.68	83.01	349.38	276.11	592.15
235.07	82.82	346.56	273.52	588.44
239.02	95.77	371.54	304.27	615.69
3.80	0.96	NA	1.72	1.60
1.59	1.00	-	0.57	0.26

CHKP	CHRW	COR	CSGS	CSWI
CHKP US Equity	CHRW US Equity	COR US Equity	CSGS US Equity	CSWI US Equity
149.42	71	239.05	47.24	237.62
150.46	71.7	239.93	48.34	239.98
151.2	70.22	240.88	48.06	239
152.95	70.26	239.76	48.19	237.72
161	70.94	237.95	49.83	238.05
160.8	70.35	237.69	49.55	239.46
158.79	70.76	236.85	49.23	234.35
157.95	71.22	239.13	48.9	231.88
158.38	69.87	237.3	48.4	233.98
158.09	68.81	238.62	48	232.43
156.8	67.89	238.26	47.77	234.66
157.63	69.01	234.21	47.54	235.29
161.73	70.48	234	48.17	236.03
163.14	72.15	235.64	48.47	238.33
164.65	72.01	237.8	48.64	235.1
163.75	72.93	238.57	50	239.66
164.14	72.06	240.36	49.42	236.95
164.39	71.18	243.22	48.67	236.27
162.74	71.68	242.04	49.33	231.05
163.92	71.77	245.8	49.36	230.18
164.25	72.22	243.09	50.34	228.58
164.28	73.34	243	51.15	231.92
164.01	76.14	242.99	51.54	234.6
164.15	74.32	244.64	50.48	232.6
164.14	72.83	242.8	50.3	228.62
164.29	74.82	242.06	50.73	228.18
165.08	74.47	242.5	50.76	232.67
165.65	74.35	242.33	51.39	240.1
165.53	73.95	241.87	51.53	236.99
163.98	74.06	242.35	51.05	234.57
166.48	73.38	239.31	50.77	230.44
164.59	73.94	238.23	50.94	230.08
166.28	74.9	237.68	50.91	231.04
164.8	75.31	234.77	52.27	231.06
164.56	75.68	237.44	53.25	231.47
163.47	75	237.68	53.96	233.11
160	72.45	237.47	53.08	233.72
158.41	72.61	237.63	53.27	238.13
157.75	71.96	234.68	53.26	234.74
157.84	69.65	235.31	53.33	230.8
159	70.45	235.8	53.99	234.35
158.05	73.88	237.03	54.52	228.4
160.42	74.08	235.6	54.56	230.39
162.1	74.39	236.13	54.57	226.77
161.54	74.22	236.51	54.79	229.4
159.43	73.43	238.34	53.31	230.85
160.28	73.35	237.27	53.93	230.47

156.39	73.65	234.4	52.36	228.02
154.87	72.5	233.47	53.06	227
160.1	71.64	232.36	52.08	233.39
162.77	72.25	231.72	53.09	232
164.24	73.7	233.08	53.63	228.69
165.29	73.84	231.58	52.92	222.18
164.13	74.09	231.19	52.5	219.09
162.83	75.76	229.98	54.69	228.37
164.31	74.67	230.69	53.7	229.44
163.18	74.66	230.32	53.34	226.78
164.33	73.66	237.67	46.36	224.98
162.45	74.52	235.01	46.43	220.78
160.8	74.04	234.21	46.33	217.94
161.30	72.74	237.62	50.96	232.01
NA	2.44	2.04	1.20	0.84
-	3.35	0.86	2.35	0.36

CVS	CWST	DGX	DHR	FAST	FELE	GOOG	HTLD
CVS US Equity	CWST US Equity	DGX US Equ	DHR US Eq	FAST US Eq	FELE US Eq	GOOG US Ec	HTLD US Ec
67.71	90.4	138.18	246.62	67.94	96.27	164.64	9.94
67.45	90.82	139.5	246.82	68.48	103.24	167.9	9.96
67.18	90.06	134.26	246.58	68.17	102.77	173.69	10.36
67.33	94.32	135.42	245.8	68.14	102.54	157.95	10.1
67.77	94.99	137.55	250.41	67.74	102.85	161.1	10.33
68.5	95.43	136.7	253.11	67.51	103.62	159.92	10.43
69.63	94.09	130.09	236.08	67.45	102.05	157.95	10.28
69.75	93.43	128.44	235.51	67.57	101.44	155.72	10.49
69.39	92.37	125.91	236.36	67.5	100.51	157.46	10.16
68.6	92.45	126.98	239.39	68.48	100.19	156.88	10.34
69.03	94.31	127.42	240.34	68.79	100.96	156	10.44
68.96	95.64	128.64	239.66	69.39	100.39	156.33	10.68
68.64	95.24	128.53	239.95	70.45	100.45	159.19	10.89
69.74	97.18	130.02	244	69.88	101.42	160.79	10.79
71.15	96.64	131.62	245.87	74.74	101.08	157.66	10.79
73.36	96.72	132.75	249.8	75.9	103.59	158.14	10.89
74.44	95.66	130.04	244.25	75.89	102.92	156.14	11.06
74.58	94.49	130.63	244.28	76.63	103.02	153.94	10.9
73.9	93.86	131.5	241.9	75.17	102.48	151.94	10.95
74.6	94.28	132.39	244.34	76.35	103.8	156.37	11.22
73.82	95.04	132.29	245.94	76.3	103.55	155.87	11.06
79.56	97.25	134.77	247.79	76.59	105.5	156.5	11.3
79.76	98.87	133.11	249.72	77.14	106.81	152.26	11.94
79.43	98.78	131.06	248.77	77.28	106.64	151.94	11.66
79.32	96.11	128.87	248.46	76.78	105.18	151.7	11.49
78.98	96.39	129.28	247.8	77.01	104.28	151.15	11.48
78.48	97.1	129.3	254.8	78.1	105.09	151.77	11.64
78.27	98.69	128.83	254.11	78.42	105.39	148.74	11.81
78.98	97.5	127.72	251.68	77.66	103.09	149.68	11.83
78.06	97.22	129.06	253.74	76.21	102.07	147.92	11.58
77.57	96.46	128.14	251.47	75.7	101.44	148.48	11.53
77.4	96.07	128.28	249.4	75.03	101.85	142.17	11.76
76.42	94.49	127.12	253.22	75.27	100.99	144.34	11.95
75.08	94.86	129.41	255.35	75.04	101.31	140.77	12.13
75.21	93.87	129.74	253.1	75.26	101.52	139.62	12.2
75.94	93.82	129.43	252.8	74.32	101.39	138.94	12.12
75.07	93.27	127.24	253.69	75.63	101.82	136.29	12.22
74.3	94.22	127.39	254.12	75.94	102.55	135.24	12.3
74.34	93.11	126.92	252.9	74.32	102.21	132.56	12.14
73.71	92.35	124.51	254.39	74.34	102.15	133.78	11.98
73.89	92.23	125.31	256.19	74.79	104.19	134.2	12.29
73.84	91.11	124.68	255.87	72.84	103.93	138.08	12.6
74.37	90.1	124.89	253.14	73.01	103.96	139.78	12.78
75.19	90.25	125.66	255.71	73.56	101.05	137.43	12.91
76.27	91.04	126.43	254.86	73.15	100.37	140.1	13
76.43	91.25	126.2	251.65	73	100.03	138.75	12.7
77.2	92.36	127.08	253.84	72.18	100.48	145.29	12.42

77.1	91.23	125.34	252.73	72.06	98.37	145.32	12.49
77.15	90.68	126.73	250.65	70.33	98.07	143.84	12.46
76.31	90.71	123.8	247.77	70.08	99.12	142.2	12.47
77.1	91.83	124	250	70.24	100.28	141.76	12.48
76.6	92.8	125.73	248.96	70.15	100.28	143.94	12.93
76.41	91.96	127.72	247.99	70.13	98.01	147.14	12.81
76.59	87.75	127.86	241.53	68.92	95.59	146.37	12.83
77.29	89.19	130.01	246.83	70.01	99.99	148.73	13.24
76.32	89.28	126.74	242.95	70.02	99.48	150.22	13.22
75.08	87.28	126.54	245.87	69.26	97.72	147.22	12.92
76.05	87.26	127.42	246.64	69.46	96.61	146.68	12.9
73.76	87.51	126.26	248.2	69.48	96.06	145.41	12.84
72.44	86.16	123.78	245.82	69.46	94.92	144.93	12.7

74.28	93.33	129.02	248.36	72.61	101.48	149.28	11.70
2.66	NA	3.00	1.08	1.56	1.00	0.80	0.08
3.58	-	2.33	0.43	2.15	0.99	0.54	0.68

JJSF	JKHY	LHX	MCK	MKC	NEU	NOC	ORCL	OSIS
JJSF US Equ	JKHY US Eq	LHX US Equ	MCK US Eqı	MKC US Eqı	NEU US Eqı	NOC US Eqı	ORCL US Eq	OSIS US Eqı
137.29	162.69	214.05	537.21	76.06	526.92	485.03	113.75	131.44
136.59	166.12	217.06	536.09	76.29	535.1	486.22	116.49	136.13
136.67	164.88	214.54	543.3	75.73	529.41	480.45	117.21	134.82
138.69	165.89	207.36	539.94	75.56	533.59	488.06	114.89	134.15
138.8	165.2	207.71	535.42	75.85	583.25	474.57	115.34	139.71
137.38	166.48	207.68	532	75.02	586.6	474.68	115.09	140.82
136.51	164.84	208.14	527.32	74.69	588.51	470.98	114.53	139.44
137.09	165.6	205.45	524.83	73.92	586.34	462.58	114.88	135.54
134.5	164.77	202.08	518.81	72.7	583.38	452.5	116	133.85
134.22	164.67	201.4	525.92	72.27	583.96	452.05	118.67	134.75
135.02	163.75	200.34	528.35	71.8	588.83	450.35	120.62	137.31
134.4	165.04	203.22	522.68	71.91	594.88	451.29	119.88	137.31
134.58	167.57	202.62	523.01	71.76	592.74	456.11	121.11	139.01
136.38	170.05	202.39	523.37	73.42	600.09	457.83	123.24	138.01
135.02	170.46	205.49	529.99	74.78	600.39	457.91	121.75	136.49
138.55	174.17	206.15	527.28	75.63	603.1	454.66	123.23	142.03
139.4	171.57	208.5	532.23	75.63	614.43	456.36	124.35	142.32
140.25	170.03	208.96	538.75	75.47	618.27	454.5	124.9	142.37
139.88	169.41	209.59	534.79	76.41	616.98	459.48	124.19	140.32
138.34	170.26	204.27	540.09	76.25	624.58	457.01	126.24	139.81
139.3	170.29	205.2	533.27	78.27	626.99	466.36	124.34	138.26
142.18	170.46	208.56	536.49	76.62	633.52	471.35	125.48	140.67
144.56	173.73	213.1	536.85	76.81	634.62	478.66	125.61	142.82
143.54	172.26	212.5	539.26	76.03	629.58	477.36	125.27	141.44
143.14	166.39	211.13	536.09	77.3	625.3	469.91	126.47	139.84
141.91	165.75	211.69	532.55	69.94	630.17	469.32	126.08	136.25
141.97	168.95	211.94	532.57	70.03	625.86	468.75	127.79	137.31
142.91	171.86	213.15	534.18	69.48	625.73	467.49	129.01	137.21
141.15	171.5	212.25	530.75	68.73	622.13	470.75	129.24	136.67
142.05	171.05	211.42	534.34	69.4	621.53	467.48	129.19	135.01
140.08	170.4	210.93	529.71	68.12	615.2	462.39	127.8	132.08
143.34	170.95	212.86	533.64	68.17	622.74	461.75	125.54	130.7
142	170.81	213.36	529.36	67.98	619.91	460.86	125.53	131.19
143.48	172.35	215.72	520.21	68.67	615.44	458.23	125.52	129.7
145.73	171.82	213.6	531.24	68.96	610.77	458.84	127.54	131.33
144.53	173.52	214.61	526.66	69.89	614.95	459.25	114.13	129.36
144.85	174.65	214.6	527.41	68.58	615.36	459.5	112.42	132.52
144.11	173.78	213.02	528.48	68.39	623.6	456.4	114.54	132.26
143.84	174.32	215.6	525.05	68.31	625.66	461.07	112.27	132.46
142.29	172.52	213.83	528.83	68.9	632.79	458.26	110.94	132.38
142.92	173.55	215.96	534.18	68.48	643	460.08	114.06	135.23
142.94	171.96	209.81	525.88	67.81	643.89	454.9	113.78	132.42
145.08	173.77	211.66	521.41	68.86	641.67	461.02	111.68	131.18
145.64	173.33	213.19	523.68	67.73	633.63	458.95	111.68	130.25
143.89	175.19	211.74	518.98	67.84	636.31	458.36	111.38	132.31
143.7	174.42	211.74	519.2	67.88	631.48	459.34	110.97	131
143.89	175.95	214.45	516.24	68.08	631.88	461.1	111.95	131.79

143.73	173.64	213.42	510.3	67.79	619.19	457.05	111.01	131.17
145.62	172.13	213.8	507.42	67.53	612.16	460	108.16	130.64
145.46	173.1	211.83	506.74	68.06	609.13	453.91	108.45	132.79
147.88	172.48	211.98	511.06	66.15	598.05	450.96	111.31	134.63
148.6	174.08	211.28	505.68	65.55	598.17	450	112.78	136.9
146.61	175.26	210.18	501.2	64.99	589.49	446.37	114.26	134.72
146.63	172.61	207.98	504.77	65.35	585.11	446.17	113.68	131.93
150.53	175.71	211.26	494.48	66.07	597.28	451.47	115.84	138.83
148.09	175.93	209.84	501.35	64.65	592.02	454.92	116.64	137.1
146.02	174.05	209.3	494.23	65.82	588.2	451.22	116.68	133.9
141.04	169.18	209.56	516.98	65.62	588.31	453.9	117.27	131.12
144.65	163.91	207.71	506.87	67.05	577.8	448.17	115.3	129.65
155.53	163.24	207.14	507.94	65.85	582.83	442.28	116.39	128.26

141.92	170.41	210.17	524.62	70.78	606.05	461.11	118.57	135.18
2.94	2.20	4.64	2.48	1.68	10.00	7.48	1.60	NA
2.07	1.29	2.21	0.47	2.37	1.65	1.62	1.35	-

PBH	PFE	PGR	RLI	SCL	SIGI	UNF	UPS	UVV
PBH US Equ	PFE US Equ	PGR US Equ	RLI US Equi	SCL US Equi	SIGI US Equ	UNF US Equ	UPS US Equ	UVV US Equ
71.76	25.62	208.25	141.35	82.99	101.65	160.13	147.48	51.43
71.74	25.64	206.67	142.03	84.53	101.4	162.94	148.55	51.58
70.47	25.4	208.03	144.15	83.98	100.13	164.24	147.59	50.8
70.14	25.26	210.07	146.59	83.17	101.7	163.82	147.39	51.25
70.13	26.27	212.2	147.71	84.89	103.14	165.3	146.62	51.91
71.22	26.32	214.02	145.76	85.25	103.7	165.43	148.87	51.87
69.8	26.26	213	141.24	84.75	102.41	160.28	145.36	50.69
69.67	26	214.69	140.21	84.17	102.49	158.51	142.77	51.46
68.35	25.39	209.75	137.09	82.06	101.42	155.91	142.74	50.5
68.03	25.42	209.12	135.7	81.61	100.4	156.16	142.25	49.36
68.06	25.69	208.35	137.87	82.32	101.88	157.29	142.89	49.54
68.14	25.91	206.59	136.26	83.22	100.99	160	144.85	49.44
68.23	25.86	203.9	137.21	84.1	101.19	161.38	144.91	48.55
69.19	26.34	202.26	138.29	85.51	102.15	162.06	149.01	49.05
68.93	26.32	206.15	141.56	84.36	104.07	161.26	147.26	48.59
69.18	26.78	204.81	141.54	88.82	103.57	165.72	150.57	50.37
68.63	26.58	210.39	143.48	87.56	105.3	164.5	150.11	50.62
69.15	26.66	211	144.54	87.05	104.5	164	151.36	47.92
69.78	26.65	209.24	145.82	87.42	104.39	164.03	150	50.15
69.43	27.22	210.77	146.75	88.15	105.02	166.07	152.27	50.31
69.96	27.55	210.03	146.99	86.98	104.96	165.8	149.15	50.73
71.68	27.72	209.95	147.49	88.41	106.9	169.46	147.62	51.01
72.56	27.75	206.82	148.47	90.04	109.17	173.43	148.63	51.72
72.63	27.78	206.15	148.48	89.67	107.42	172.07	147.33	51.46
72	27.59	204.65	145.66	87.67	105.34	167.15	143.79	50.29
71.59	27.43	206.02	145.61	88	103.68	168.69	156.57	50.09
73.25	27.36	205.7	146.42	88.44	103.04	170.04	156.27	50.59
73.89	27.66	205.57	146.81	90.16	104.1	171.79	155.32	51.85
73.39	27.7	205.72	145.36	89.25	103.19	173.8	154.76	51.3
73.56	27.63	205.49	145.75	86.81	103.34	169.33	153.2	50.97
73.63	27.72	206.41	145.17	85.74	102.2	168.11	151.69	51.1
74.67	27.94	204.88	146.93	87.3	102.82	170.05	153.37	50.89
74.02	28.13	201.87	146.08	86.02	103.3	167.9	153.89	50.02
75.07	28.22	199.74	147.71	87.53	104.67	172.95	154.76	50.87
74.15	28.01	198.94	148.18	86.56	104.29	173.09	157.38	50.58
74.58	28.37	196.74	147.66	88.75	104.7	171.93	154.75	50.25
73.7	27.22	198.41	146.45	87.59	104.52	169.41	153.96	50.65
72.61	26.79	196.12	146.38	87.91	105.04	168.6	153.41	50.07
71.4	27.19	196.01	148.54	86.7	104.67	170.08	152.55	49.71
71.24	26.08	189.81	147.43	86.64	103.23	166.39	149.66	48.66
71.98	25.89	189.24	146.99	87.29	104.75	169.42	150.61	48.01
70.13	26.59	187.83	146.22	87.94	103.94	170.05	148.06	48.21
69.58	26.56	189.56	146.45	89.2	104.48	168.72	148.26	48.01
69.58	27.04	192.03	148.28	88.75	103.66	167.75	147.77	47.74
69.86	26.89	192.18	148	90.04	103.6	168.16	148.27	48.33
69.98	27.18	193.58	147.21	90	102.93	168.48	147.5	49.17
69.72	27.76	191.3	146.62	91.01	102.78	166.97	148.63	49.37

69.4	27.55	191.69	145.53	92.04	101.71	167.38	149.73	49.26
69.29	27.67	190.25	142.46	90.76	100.4	167.77	148.27	49.76
68.76	27.59	189.48	141.7	90.93	102.25	168.23	148.64	49.35
69.14	27.62	189.09	141.55	93.11	103.73	169.48	148.41	49.73
68.78	27.51	189.24	142.84	93.35	105.49	173.55	146.98	50.96
67.7	27.11	187.95	141.93	89.45	103.74	171.48	144.22	50.2
66.56	26.97	182.08	139.88	88.21	101.65	170.05	144.9	50.58
67.95	27.66	182.36	141.39	92.41	102.94	177.61	147.45	52.61
68.67	27.56	182.72	140.97	90.24	100.08	171.16	146.26	51.97
68.8	27.57	182.96	137.2	90.01	97.18	171.25	147.92	53.58
62.91	27.56	182.17	137.38	89.31	97.04	167.69	147.24	56.98
62.9	27.5	180.27	137.43	89.54	98.63	170.89	145.92	58.02
61.84	26.57	182.18	137.27	88.48	99.15	170.2	139.08	58.05

70.22	26.96	199.71	143.83	87.57	103.04	167.26	148.92	50.63
NA	1.68	0.40	1.08	1.50	1.40	1.32	6.52	3.20
-	6.23	0.20	0.75	1.71	1.36	0.79	4.38	6.32

WERN	WSO	WU
WERN US E	WSO US Eq	WU US Equity
34.2	447.72	13.44
34.72	447.85	13.51
34.74	443.21	13.47
35.08	444	13.29
35.39	440.6	13.59
35.69	413.57	13.4
35.34	406.5	13.3
35.86	396.92	13.02
35.26	401.93	12.93
35.39	403.94	12.8
36.14	413.37	12.7
36.15	412.43	12.84
36.52	417.71	13.19
36.97	414.85	13.3
36.9	423.34	13.37
38.53	437.09	13.61
38.09	444.57	13.48
38.13	444.14	13.5
38.01	432.22	13.44
38.31	432.19	13.7
38.03	427.36	13.75
38.56	434.17	13.74
39.12	431.97	13.98
38.57	434.28	13.71
38.09	424.25	13.67
37.97	430.48	13.68
38.26	439.5	13.72
38.97	439.25	13.83
38.4	423.15	13.72
37.58	414.73	13.47
37.29	410.09	13.55
37.75	404.2	13.48
38.01	397.15	13.32
38.93	402.75	13.55
38.87	400.4	13.81
39.19	394.9	14.06
38.68	401.08	14.04
39.11	404.54	14.09
37.88	394.25	13.76
37.38	392.73	13.74
37.98	397.41	13.87
38.98	394.54	13.49
40.14	394.12	13.41
39.4	395.97	13.14
40.47	389.11	12.92
40.12	383.71	12.8
40.72	384.98	12.96

41.38	383.27	12.95
40.46	379.87	12.91
39.89	377.91	12.92
39.97	381.46	12.79
40.26	397.37	13.08
41.29	387.76	12.8
41.08	384.17	12.61
42.24	410.4	12.59
41.61	415.52	12.47
41.49	409.41	12.08
42.06	402.72	11.84
40.21	394.37	12.54
39.71	392.79	12.4

38.36	411.27	13.29
0.56	10.80	0.94
1.46	2.63	7.07

Date of Value Line Summary & Index	Est. Median Appreciation Potential 3 - 5 Yrs.	Est. Median Annual Appreciation Potential
3-May-2024	50%	10.67%
26-Apr-2024	50%	10.67%
19-Apr-2024	45%	9.73%
12-Apr-2024	45%	9.73%
5-Apr-2024	45%	9.73%
29-Mar-2024	45%	9.73%
22-Mar-2024	45%	9.73%
15-Mar-2024	45%	9.73%
8-Mar-2024	45%	9.73%
1-Mar-2024	50%	10.67%
23-Feb-2024	45%	9.73%
16-Feb-2024	50%	10.67%
9-Feb-2024	50%	10.67%
Average	47%	10.11%

Blue Chip Financial Forecasts

Consensus Forecast Yield for 30-year Treasury Bonds

Second Quarter 2024	4.60
Third Quarter 2024	4.50
Fourth Quarter 2024	4.40
First Quarter 2025	4.30
Second Quarter 2025	4.20
Third Quarter 2025	4.20
2025-2029	4.10
2030-2034	4.20
Average	4.31 %

Est. Median Dividend Yield	Est. Median Annual Total Return
2.20%	12.87%
2.20%	12.87%
2.10%	11.83%
2.10%	11.83%
2.10%	11.83%
2.10%	11.83%
2.10%	11.83%
2.20%	11.93%
2.20%	11.93%
2.20%	12.87%
2.20%	11.93%
2.20%	12.87%
2.20%	12.87%
2.16%	12.27%

	Aaa Bonds	Baa Bonds
Second Quarter 2024	5.3	6.1
Third Quarter 2024	5.2	6.1
Fourth Quarter 2024	5.1	6.0
First Quarter 2025	5.0	5.9
Second Quarter 2025	5.0	5.9
Third Quarter 2025	4.9	5.8
2025-2029	4.9	6.0
2030-2034	5.0	6.0
	5.05	5.98

Date: 4/30/2024

Company	Ticker	Bloomberg Estimated Dividend Yield	Bloomberg Market Cap
Agilent Technologies Inc	A	0.70%	$ 40,160.30
American Airlines Group Inc	AAL	0.00%	$ 8,829.33
Apple Inc	AAPL	0.58%	$ 2,630,215.59
AbbVie Inc	ABBV	3.81%	$ 287,978.03
Airbnb Inc	ABNB	0.00%	$ 102,605.04
Abbott Laboratories	ABT	1.99%	$ 183,877.48
Arch Capital Group Ltd	ACGL	0.00%	$ 34,998.10
Accenture PLC	ACN	1.68%	$ 201,947.24
Adobe Inc	ADBE	0.00%	$ 207,347.84
Analog Devices Inc	ADI	1.81%	$ 99,484.13
Archer-Daniels-Midland Co	ADM	3.37%	$ 29,003.72
Automatic Data Processing Inc	ADP	2.08%	$ 99,366.13
Autodesk Inc	ADSK	0.00%	$ 45,531.88
Ameren Corp	AEE	3.62%	$ 19,687.13
American Electric Power Co Inc	AEP	4.17%	$ 45,302.56
AES Corp/The	AES	3.90%	$ 12,714.14
Aflac Inc	AFL	2.39%	$ 48,132.89
American International Group Inc	AIG	2.02%	$ 50,761.33
Assurant Inc	AIZ	1.66%	$ 9,064.90
Arthur J Gallagher & Co	AJG	1.01%	$ 50,880.79
Akamai Technologies Inc	AKAM	0.00%	$ 15,463.63
Albemarle Corp	ALB	1.36%	$ 14,139.39
Align Technology Inc	ALGN	0.00%	$ 21,257.38
Allstate Corp/The	ALL	2.17%	$ 44,854.90
Allegion plc	ALLE	1.59%	$ 10,629.29
Applied Materials Inc	AMAT	0.67%	$ 165,057.76
Amcor PLC	AMCR	5.54%	$ 12,921.37
Advanced Micro Devices Inc	AMD	0.00%	$ 255,908.32
AMETEK Inc	AME	0.60%	$ 40,383.40
Amgen Inc	AMGN	3.36%	$ 146,934.72
Ameriprise Financial Inc	AMP	1.41%	$ 41,257.61
American Tower Corp	AMT	3.81%	$ 80,114.23
Amazon.com Inc	AMZN	0.00%	$ 1,817,791.73
Arista Networks Inc	ANET	0.00%	$ 80,209.28
ANSYS Inc	ANSS	0.00%	$ 28,362.02
Aon PLC	AON	0.90%	$ 61,317.65
A O Smith Corp	AOS	1.56%	$ 12,150.23
APA Corp	APA	3.10%	$ 11,660.73
Air Products and Chemicals Inc	APD	2.99%	$ 52,539.78
Amphenol Corp	APH	0.73%	$ 72,534.94
Aptiv PLC	APTV	0.19%	$ 19,360.18

Alexandria Real Estate Equities Inc	ARE	4.41%	$	20,263.71
Atmos Energy Corp	ATO	2.66%	$	17,784.00
AvalonBay Communities Inc	AVB	3.58%	$	26,923.74
Broadcom Inc	AVGO	1.60%	$	602,572.73
Avery Dennison Corp	AVY	1.54%	$	17,502.63
American Water Works Co Inc	AWK	2.47%	$	23,822.47
Axon Enterprise Inc	AXON	0.00%	$	23,669.83
American Express Co	AXP	1.19%	$	168,338.49
AutoZone Inc	AZO	0.00%	$	51,154.29
Boeing Co/The	BA	0.03%	$	103,034.33
Bank of America Corp	BAC	2.68%	$	289,431.90
Ball Corp	BALL	1.19%	$	21,959.34
Baxter International Inc	BAX	2.99%	$	20,507.96
Bath & Body Works Inc	BBWI	1.83%	$	10,214.80
Best Buy Co Inc	BBY	5.11%	$	15,860.69
Becton Dickinson & Co	BDX	1.63%	$	67,776.46
Franklin Resources Inc	BEN	5.42%	$	12,015.93
Brown-Forman Corp	BF/B	1.77%	$	22,816.60
Bunge Global SA	BG	2.66%	$	14,408.72
Biogen Inc	BIIB	0.00%	$	31,277.12
Bio-Rad Laboratories Inc	BIO	0.00%	$	7,744.62
Bank of New York Mellon Corp/The	BK	3.10%	$	42,244.13
Booking Holdings Inc	BKNG	0.97%	$	117,959.41
Baker Hughes Co	BKR	2.52%	$	32,554.68
Builders FirstSource Inc	BLDR	0.00%	$	22,293.08
BlackRock Inc	BLK	2.71%	$	112,989.35
Bristol-Myers Squibb Co	BMY	5.50%	$	89,070.78
Broadridge Financial Solutions Inc	BR	1.65%	$	22,778.32
Berkshire Hathaway Inc	BRK/B	0.00%	$	858,036.01
Brown & Brown Inc	BRO	0.64%	$	23,259.22
Boston Scientific Corp	BSX	0.00%	$	105,641.38
BorgWarner Inc	BWA	1.35%	$	7,568.42
Blackstone Inc	BX	3.51%	$	142,410.28
Boston Properties Inc	BXP	6.37%	$	9,719.77
Citigroup Inc	C	3.51%	$	117,224.12
Conagra Brands Inc	CAG	4.51%	$	14,714.77
Cardinal Health Inc	CAH	1.96%	$	25,062.74
Carrier Global Corp	CARR	1.22%	$	55,403.26
Caterpillar Inc	CAT	1.62%	$	163,622.40
Chubb Ltd	CB	1.44%	$	100,963.02
Cboe Global Markets Inc	CBOE	1.27%	$	19,126.10
CBRE Group Inc	CBRE	0.00%	$	26,561.91
Crown Castle Inc	CCI	6.56%	$	40,794.30
Carnival Corp	CCL	0.00%	$	18,553.39
Cadence Design Systems Inc	CDNS	0.00%	$	75,008.29
CDW Corp/DE	CDW	1.04%	$	32,498.30
Celanese Corp	CE	1.83%	$	16,729.12

Constellation Energy Corp	CEG	0.70%	$	58,593.59
CF Industries Holdings Inc	CF	2.39%	$	14,873.04
Citizens Financial Group Inc	CFG	5.00%	$	15,638.92
Church & Dwight Co Inc	CHD	1.05%	$	26,314.89
CH Robinson Worldwide Inc	CHRW	3.44%	$	8,215.54
Charter Communications Inc	CHTR	0.00%	$	41,277.83
Cigna Group/The	CI	1.56%	$	101,273.47
Cincinnati Financial Corp	CINF	2.80%	$	18,112.24
Colgate-Palmolive Co	CL	2.21%	$	75,414.95
Clorox Co/The	CLX	3.25%	$	18,363.71
Comerica Inc	CMA	5.69%	$	6,651.90
Comcast Corp	CMCSA	3.14%	$	149,529.39
CME Group Inc	CME	4.58%	$	75,476.34
Chipotle Mexican Grill Inc	CMG	0.00%	$	86,785.70
Cummins Inc	CMI	2.44%	$	40,073.14
CMS Energy Corp	CMS	3.43%	$	17,683.79
Centene Corp	CNC	0.00%	$	39,080.22
CenterPoint Energy Inc	CNP	2.76%	$	18,446.54
Capital One Financial Corp	COF	1.72%	$	54,804.96
Cooper Cos Inc/The	COO	0.02%	$	17,701.23
ConocoPhillips	COP	1.85%	$	147,113.75
Cencora Inc	COR	0.85%	$	47,686.17
Costco Wholesale Corp	COST	1.54%	$	320,609.07
Corpay Inc	CPAY	0.00%	$	21,709.85
Campbell Soup Co	CPB	3.26%	$	13,626.27
Copart Inc	CPRT	0.00%	$	52,216.99
Camden Property Trust	CPT	4.10%	$	10,662.66
Charles River Laboratories International Inc	CRL	0.00%	$	11,759.10
Salesforce Inc	CRM	0.00%	$	260,871.80
Cisco Systems Inc	CSCO	3.35%	$	190,230.81
CoStar Group Inc	CSGP	0.00%	$	37,375.57
CSX Corp	CSX	1.44%	$	64,942.68
Cintas Corp	CTAS	0.79%	$	66,797.32
Catalent Inc	CTLT	0.00%	$	10,107.41
Coterra Energy Inc	CTRA	3.05%	$	20,570.55
Cognizant Technology Solutions Corp	CTSH	1.83%	$	32,656.02
Corteva Inc	CTVA	1.24%	$	37,230.45
CVS Health Corp	CVS	3.92%	$	85,347.11
Chevron Corp	CVX	4.03%	$	297,917.29
Caesars Entertainment Inc	CZR	0.00%	$	7,752.00
Dominion Energy Inc	D	5.24%	$	42,700.51
Delta Air Lines Inc	DAL	0.80%	$	32,310.79
Dayforce Inc	DAY	0.00%	$	9,610.54
DuPont de Nemours Inc	DD	2.10%	$	30,274.76
Deere & Co	DE	1.43%	$	108,952.19
Deckers Outdoor Corp	DECK	0.00%	$	21,008.67
Discover Financial Services	DFS	2.24%	$	31,809.23

Dollar General Corp	DG	1.74%	$	30,576.05
Quest Diagnostics Inc	DGX	2.12%	$	15,350.63
DR Horton Inc	DHI	0.84%	$	46,923.70
Danaher Corp	DHR	0.44%	$	182,668.11
Walt Disney Co/The	DIS	0.68%	$	203,793.93
Digital Realty Trust Inc	DLR	3.57%	$	44,139.95
Dollar Tree Inc	DLTR	0.00%	$	25,776.49
Healthpeak Properties Inc	DOC	6.49%	$	13,097.37
Dover Corp	DOV	1.17%	$	24,641.23
Dow Inc	DOW	4.98%	$	40,015.96
Domino's Pizza Inc	DPZ	1.14%	$	18,461.05
Darden Restaurants Inc	DRI	3.43%	$	18,310.86
DTE Energy Co	DTE	3.72%	$	22,827.97
Duke Energy Corp	DUK	4.26%	$	75,758.46
DaVita Inc	DVA	0.00%	$	12,191.18
Devon Energy Corp	DVN	3.52%	$	32,499.30
Dexcom Inc	DXCM	0.00%	$	50,660.94
Electronic Arts Inc	EA	0.61%	$	33,905.39
eBay Inc	EBAY	2.11%	$	26,697.72
Ecolab Inc	ECL	1.01%	$	64,659.01
Consolidated Edison Inc	ED	3.53%	$	32,560.79
Equifax Inc	EFX	0.71%	$	27,217.97
Everest Group Ltd	EG	1.93%	$	15,895.44
Edison International	EIX	4.39%	$	27,281.70
Estee Lauder Cos Inc/The	EL	1.80%	$	52,591.63
Elevance Health Inc	ELV	1.18%	$	122,851.44
Eastman Chemical Co	EMN	3.45%	$	11,110.82
Emerson Electric Co	EMR	1.97%	$	61,617.83
Enphase Energy Inc	ENPH	0.00%	$	14,798.18
EOG Resources Inc	EOG	4.04%	$	76,635.65
EPAM Systems Inc	EPAM	0.00%	$	13,643.98
Equinix Inc	EQIX	2.41%	$	67,488.04
Equity Residential	EQR	4.19%	$	24,403.72
EQT Corp	EQT	1.58%	$	17,703.42
Eversource Energy	ES	4.75%	$	21,261.07
Essex Property Trust Inc	ESS	3.86%	$	15,810.80
Eaton Corp PLC	ETN	1.17%	$	127,269.65
Entergy Corp	ETR	4.30%	$	22,749.88
Etsy Inc	ETSY	0.00%	$	8,038.76
Evergy Inc	EVRG	4.96%	$	12,050.17
Edwards Lifesciences Corp	EW	0.00%	$	50,912.07
Exelon Corp	EXC	4.05%	$	37,570.05
Expeditors International of Washington Inc	EXPD	1.26%	$	16,017.43
Expedia Group Inc	EXPE	0.00%	$	18,348.52
Extra Space Storage Inc	EXR	4.91%	$	28,416.39
Ford Motor Co	F	5.21%	$	48,506.90
Diamondback Energy Inc	FANG	3.19%	$	35,869.52

Fastenal Co	FAST	2.28%	$	38,898.87
Freeport-McMoRan Inc	FCX	1.21%	$	71,634.39
FactSet Research Systems Inc	FDS	0.97%	$	15,890.11
FedEx Corp	FDX	1.92%	$	64,419.02
FirstEnergy Corp	FE	4.39%	$	22,065.30
F5 Inc	FFIV	0.00%	$	9,721.26
Fiserv Inc	FI	0.00%	$	89,327.50
Fair Isaac Corp	FICO	0.00%	$	28,005.65
Fidelity National Information Services Inc	FIS	2.27%	$	39,153.55
Fifth Third Bancorp	FITB	3.92%	$	24,931.79
FMC Corp	FMC	3.99%	$	7,365.43
Fox Corp	FOXA	1.67%	$	14,177.01
Federal Realty Investment Trust	FRT	4.20%	$	8,622.70
First Solar Inc	FSLR	0.00%	$	18,868.60
Fortinet Inc	FTNT	0.00%	$	48,208.30
Fortive Corp	FTV	0.41%	$	26,497.20
General Dynamics Corp	GD	1.94%	$	78,767.18
General Electric Co	GE	0.53%	$	177,129.25
GE HealthCare Technologies Inc	GEHC	0.11%	$	34,800.92
Gen Digital Inc	GEN	2.52%	$	12,827.37
GE Vernova Inc	GEV	0.00%	$	42,129.69
Gilead Sciences Inc	GILD	4.72%	$	81,302.40
General Mills Inc	GIS	3.35%	$	39,778.11
Globe Life Inc	GL	1.21%	$	7,162.79
Corning Inc	GLW	3.45%	$	28,551.67
General Motors Co	GM	1.26%	$	50,781.78
Generac Holdings Inc	GNRC	0.00%	$	8,194.22
Alphabet Inc	GOOG	0.17%	$	2,022,889.17
Genuine Parts Co	GPC	2.54%	$	21,899.14
Global Payments Inc	GPN	0.82%	$	31,672.82
Garmin Ltd	GRMN	2.07%	$	27,749.70
Goldman Sachs Group Inc/The	GS	2.65%	$	143,408.28
WW Grainger Inc	GWW	0.87%	$	45,209.54
Halliburton Co	HAL	1.82%	$	33,172.24
Hasbro Inc	HAS	4.63%	$	8,507.92
Huntington Bancshares Inc/OH	HBAN	4.66%	$	19,521.45
HCA Healthcare Inc	HCA	0.85%	$	81,942.89
Home Depot Inc/The	HD	2.69%	$	331,222.23
Hess Corp	HES	1.15%	$	48,524.09
Hartford Financial Services Group Inc/The	HIG	1.95%	$	28,655.74
Huntington Ingalls Industries Inc	HII	1.90%	$	10,968.78
Hilton Worldwide Holdings Inc	HLT	0.33%	$	49,329.09
Hologic Inc	HOLX	0.00%	$	17,785.61
Honeywell International Inc	HON	2.29%	$	125,502.98
Hewlett Packard Enterprise Co	HPE	3.01%	$	22,100.00
HP Inc	HPQ	3.94%	$	27,485.54
Hormel Foods Corp	HRL	3.18%	$	19,475.77

Henry Schein Inc	HSIC	0.00%	$	8,901.17
Host Hotels & Resorts Inc	HST	4.74%	$	13,276.93
Hershey Co/The	HSY	2.67%	$	39,600.70
Hubbell Inc	HUBB	1.32%	$	19,890.54
Humana Inc	HUM	1.21%	$	36,402.04
Howmet Aerospace Inc	HWM	0.32%	$	27,387.77
International Business Machines Corp	IBM	4.02%	$	152,671.76
Intercontinental Exchange Inc	ICE	1.39%	$	73,730.09
IDEXX Laboratories Inc	IDXX	0.00%	$	40,943.12
IDEX Corp	IEX	1.18%	$	16,687.80
International Flavors & Fragrances Inc	IFF	1.89%	$	21,612.75
Illumina Inc	ILMN	0.00%	$	19,552.65
Incyte Corp	INCY	0.00%	$	11,687.35
Intel Corp	INTC	1.67%	$	129,706.90
Intuit Inc	INTU	0.57%	$	175,160.46
Invitation Homes Inc	INVH	3.30%	$	20,928.97
International Paper Co	IP	5.29%	$	12,135.79
Interpublic Group of Cos Inc/The	IPG	4.30%	$	11,488.77
IQVIA Holdings Inc	IQV	0.00%	$	42,185.29
Ingersoll Rand Inc	IR	0.09%	$	37,648.65
Iron Mountain Inc	IRM	3.38%	$	22,720.81
Intuitive Surgical Inc	ISRG	0.00%	$	131,461.07
Gartner Inc	IT	0.00%	$	32,029.55
Illinois Tool Works Inc	ITW	2.30%	$	72,926.70
Invesco Ltd	IVZ	5.79%	$	6,373.67
Jacobs Solutions Inc	J	0.79%	$	18,034.68
JB Hunt Transport Services Inc	JBHT	1.06%	$	16,776.67
Jabil Inc	JBL	0.28%	$	14,153.30
Johnson Controls International plc	JCI	2.23%	$	44,343.71
Jack Henry & Associates Inc	JKHY	1.29%	$	11,854.84
Johnson & Johnson	JNJ	3.39%	$	348,430.53
Juniper Networks Inc	JNPR	2.53%	$	11,316.08
JPMorgan Chase & Co	JPM	2.42%	$	550,694.64
Kellanova	K	3.97%	$	19,711.64
Keurig Dr Pepper Inc	KDP	2.61%	$	45,682.85
KeyCorp	KEY	5.69%	$	13,660.82
Keysight Technologies Inc	KEYS	0.00%	$	25,823.79
Kraft Heinz Co/The	KHC	4.17%	$	46,935.79
Kimco Realty Corp	KIM	5.28%	$	12,559.10
KLA Corp	KLAC	0.83%	$	92,805.97
Kimberly-Clark Corp	KMB	3.56%	$	45,970.89
Kinder Morgan Inc	KMI	6.30%	$	40,570.35
CarMax Inc	KMX	0.00%	$	10,697.63
Coca-Cola Co/The	KO	3.11%	$	266,302.25
Kroger Co/The	KR	2.15%	$	39,967.07
Kenvue Inc	KVUE	4.25%	$	36,033.68
Loews Corp	L	0.00%	$	16,688.68

Leidos Holdings Inc	LDOS	1.10%	$	18,959.36
Lennar Corp	LEN	1.26%	$	41,828.41
Laboratory Corp of America Holdings	LH	1.46%	$	16,974.21
L3Harris Technologies Inc	LHX	2.17%	$	40,601.08
Linde PLC	LIN	1.24%	$	212,355.96
LKQ Corp	LKQ	2.78%	$	11,506.04
Eli Lilly & Co	LLY	0.66%	$	742,361.65
Lockheed Martin Corp	LMT	2.76%	$	111,554.44
Alliant Energy Corp	LNT	3.86%	$	12,585.41
Lowe's Cos Inc	LOW	2.01%	$	130,454.12
Lam Research Corp	LRCX	0.84%	$	116,931.59
Lululemon Athletica Inc	LULU	0.00%	$	45,438.52
Southwest Airlines Co	LUV	2.80%	$	15,523.96
Las Vegas Sands Corp	LVS	1.79%	$	33,050.29
Lamb Weston Holdings Inc	LW	1.52%	$	12,033.55
LyondellBasell Industries NV	LYB	5.12%	$	32,552.46
Live Nation Entertainment Inc	LYV	0.00%	$	20,520.22
Mastercard Inc	MA	0.57%	$	420,920.64
Mid-America Apartment Communities Inc	MAA	4.52%	$	15,169.38
Marriott International Inc/MD	MAR	0.95%	$	68,066.62
Masco Corp	MAS	1.72%	$	15,075.73
McDonald's Corp	MCD	2.48%	$	196,863.09
Microchip Technology Inc	MCHP	1.87%	$	49,704.88
McKesson Corp	MCK	0.44%	$	70,593.85
Moody's Corp	MCO	0.90%	$	67,585.23
Mondelez International Inc	MDLZ	2.45%	$	96,768.51
Medtronic PLC	MDT	3.30%	$	106,544.48
MetLife Inc	MET	3.02%	$	51,392.28
Meta Platforms Inc	META	0.36%	$	1,091,271.79
MGM Resorts International	MGM	0.32%	$	12,503.10
Mohawk Industries Inc	MHK	0.00%	$	7,364.69
McCormick & Co Inc/MD	MKC	2.21%	$	20,406.89
MarketAxess Holdings Inc	MKTX	1.50%	$	7,576.96
Martin Marietta Materials Inc	MLM	0.53%	$	36,187.11
Marsh & McLennan Cos Inc	MMC	1.45%	$	98,263.95
3M Co	MMM	5.52%	$	53,404.89
Monster Beverage Corp	MNST	0.00%	$	55,622.01
Altria Group Inc	MO	9.20%	$	75,249.21
Molina Healthcare Inc	MOH	0.00%	$	20,183.90
Mosaic Co/The	MOS	2.62%	$	10,097.82
Marathon Petroleum Corp	MPC	1.85%	$	64,025.50
Monolithic Power Systems Inc	MPWR	0.71%	$	32,570.27
Merck & Co Inc	MRK	2.37%	$	327,317.90
Moderna Inc	MRNA	0.00%	$	42,235.45
Marathon Oil Corp	MRO	1.65%	$	15,344.16
Morgan Stanley	MS	3.85%	$	147,796.68
MSCI Inc	MSCI	1.34%	$	36,901.84

Microsoft Corp	MSFT	0.76%	$	2,893,619.61
Motorola Solutions Inc	MSI	1.07%	$	56,340.67
M&T Bank Corp	MTB	3.67%	$	24,073.28
Match Group Inc	MTCH	0.00%	$	8,260.12
Mettler-Toledo International Inc	MTD	0.00%	$	26,300.76
Micron Technology Inc	MU	0.39%	$	125,088.30
Norwegian Cruise Line Holdings Ltd	NCLH	0.00%	$	8,053.44
Nasdaq Inc	NDAQ	1.56%	$	34,426.11
Nordson Corp	NDSN	1.07%	$	14,766.47
NextEra Energy Inc	NEE	3.07%	$	135,528.13
Newmont Corp	NEM	2.46%	$	46,863.62
Netflix Inc	NFLX	0.00%	$	237,306.56
NiSource Inc	NI	3.80%	$	12,486.51
NIKE Inc	NKE	1.56%	$	139,253.44
Northrop Grumman Corp	NOC	1.62%	$	71,779.57
ServiceNow Inc	NOW	0.00%	$	142,397.24
NRG Energy Inc	NRG	2.26%	$	15,116.89
Norfolk Southern Corp	NSC	2.34%	$	52,032.52
NetApp Inc	NTAP	1.96%	$	21,093.76
Northern Trust Corp	NTRS	3.73%	$	16,856.31
Nucor Corp	NUE	1.28%	$	40,443.82
NVIDIA Corp	NVDA	0.02%	$	2,160,050.00
NVR Inc	NVR	0.00%	$	23,563.49
News Corp	NWSA	0.85%	$	13,734.05
NXP Semiconductors NV	NXPI	1.65%	$	65,503.63
Realty Income Corp	O	5.84%	$	46,105.96
Old Dominion Freight Line Inc	ODFL	0.68%	$	39,553.60
ONEOK Inc	OKE	5.03%	$	46,177.57
Omnicom Group Inc	OMC	3.12%	$	18,181.20
ON Semiconductor Corp	ON	0.00%	$	30,185.07
Oracle Corp	ORCL	1.39%	$	312,643.47
O'Reilly Automotive Inc	ORLY	0.00%	$	59,764.23
Otis Worldwide Corp	OTIS	1.63%	$	36,874.24
Occidental Petroleum Corp	OXY	1.28%	$	58,170.09
Palo Alto Networks Inc	PANW	0.00%	$	93,986.56
Paramount Global	PARA	1.77%	$	7,969.73
Paycom Software Inc	PAYC	0.00%	$	10,931.05
Paychex Inc	PAYX	2.97%	$	42,767.24
PACCAR Inc	PCAR	3.37%	$	55,602.78
PG&E Corp	PCG	0.22%	$	36,504.32
Public Service Enterprise Group Inc	PEG	3.48%	$	34,442.36
PepsiCo Inc	PEP	3.03%	$	241,838.60
Pfizer Inc	PFE	6.59%	$	144,670.46
Principal Financial Group Inc	PFG	3.59%	$	18,609.77
Procter & Gamble Co/The	PG	2.35%	$	385,174.08
Progressive Corp/The	PGR	0.78%	$	121,972.03
Parker-Hannifin Corp	PH	1.11%	$	69,972.36

PulteGroup Inc	PHM	0.72%	$	23,436.32
Packaging Corp of America	PKG	2.91%	$	15,525.78
Prologis Inc	PLD	3.73%	$	94,482.38
Philip Morris International Inc	PM	5.55%	$	147,589.64
PNC Financial Services Group Inc/The	PNC	4.12%	$	60,973.78
Pentair PLC	PNR	1.17%	$	13,130.89
Pinnacle West Capital Corp	PNW	4.81%	$	8,363.50
Insulet Corp	PODD	0.00%	$	12,039.67
Pool Corp	POOL	1.19%	$	13,895.33
PPG Industries Inc	PPG	2.06%	$	30,361.59
PPL Corp	PPL	3.76%	$	20,241.44
Prudential Financial Inc	PRU	4.68%	$	39,704.32
Public Storage	PSA	4.72%	$	45,618.95
Phillips 66	PSX	3.11%	$	60,714.19
PTC Inc	PTC	0.00%	$	21,213.38
Quanta Services Inc	PWR	0.14%	$	37,684.86
Pioneer Natural Resources Co	PXD	2.07%	$	62,919.38
PayPal Holdings Inc	PYPL	0.00%	$	71,047.45
QUALCOMM Inc	QCOM	2.00%	$	185,088.60
Qorvo Inc	QRVO	0.00%	$	11,280.72
Royal Caribbean Cruises Ltd	RCL	0.00%	$	35,933.67
Regency Centers Corp	REG	4.56%	$	11,264.75
Regeneron Pharmaceuticals Inc	REGN	0.00%	$	97,760.53
Regions Financial Corp	RF	5.10%	$	17,706.51
Robert Half Inc	RHI	2.97%	$	7,267.80
Raymond James Financial Inc	RJF	1.45%	$	25,290.60
Ralph Lauren Corp	RL	1.85%	$	10,460.78
ResMed Inc	RMD	0.92%	$	31,436.67
Rockwell Automation Inc	ROK	1.85%	$	31,049.85
Rollins Inc	ROL	1.38%	$	21,577.31
Roper Technologies Inc	ROP	0.56%	$	54,737.64
Ross Stores Inc	ROST	1.13%	$	43,421.81
Republic Services Inc	RSG	1.14%	$	60,380.69
RTX Corp	RTX	2.40%	$	134,971.45
Revvity Inc	RVTY	0.27%	$	12,657.59
SBA Communications Corp	SBAC	2.11%	$	20,104.94
Starbucks Corp	SBUX	2.60%	$	100,188.38
Charles Schwab Corp/The	SCHW	1.38%	$	134,912.09
Sherwin-Williams Co/The	SHW	0.95%	$	75,965.83
J M Smucker Co/The	SJM	3.67%	$	12,194.26
Schlumberger NV	SLB	2.31%	$	67,864.96
Super Micro Computer Inc	SMCI	0.00%	$	50,283.12
Snap-on Inc	SNA	2.81%	$	14,126.46
Synopsys Inc	SNPS	0.00%	$	80,938.16
Southern Co/The	SO	3.90%	$	80,455.56
Solventum Corp	SOLV	0.00%	$	11,227.82
Simon Property Group Inc	SPG	5.60%	$	45,780.96

S&P Global Inc	SPGI	0.89%	$	133,172.40
Sempra	SRE	3.53%	$	45,280.90
STERIS PLC	STE	0.95%	$	20,213.40
Steel Dynamics Inc	STLD	1.40%	$	20,821.56
State Street Corp	STT	3.94%	$	21,856.06
Seagate Technology Holdings PLC	STX	3.26%	$	18,040.12
Constellation Brands Inc	STZ	1.56%	$	46,377.18
Stanley Black & Decker Inc	SWK	3.58%	$	14,057.51
Skyworks Solutions Inc	SWKS	2.59%	$	17,101.77
Synchrony Financial	SYF	2.31%	$	17,659.89
Stryker Corp	SYK	0.92%	$	128,028.10
Sysco Corp	SYY	2.72%	$	36,998.71
AT&T Inc	T	6.62%	$	121,101.30
Molson Coors Beverage Co	TAP	3.03%	$	12,188.17
TransDigm Group Inc	TDG	2.81%	$	69,398.28
Teledyne Technologies Inc	TDY	0.00%	$	18,090.73
Bio-Techne Corp	TECH	0.50%	$	9,936.09
TE Connectivity Ltd	TEL	1.69%	$	43,325.21
Teradyne Inc	TER	0.40%	$	17,793.89
Truist Financial Corp	TFC	5.58%	$	50,245.50
Teleflex Inc	TFX	0.65%	$	9,832.39
Target Corp	TGT	2.71%	$	74,322.89
TJX Cos Inc/The	TJX	1.58%	$	106,601.51
Thermo Fisher Scientific Inc	TMO	0.26%	$	216,859.91
T-Mobile US Inc	TMUS	1.62%	$	192,383.31
Tapestry Inc	TPR	3.50%	$	9,156.30
Targa Resources Corp	TRGP	2.59%	$	25,453.10
Trimble Inc	TRMB	0.00%	$	14,669.55
T Rowe Price Group Inc	TROW	4.51%	$	24,466.97
Travelers Cos Inc/The	TRV	1.95%	$	48,583.24
Tractor Supply Co	TSCO	1.61%	$	29,474.13
Tesla Inc	TSLA	0.00%	$	584,515.87
Tyson Foods Inc	TSN	3.23%	$	21,612.53
Trane Technologies PLC	TT	1.00%	$	71,830.68
Take-Two Interactive Software Inc	TTWO	0.00%	$	24,384.26
Texas Instruments Inc	TXN	2.98%	$	160,627.26
Textron Inc	TXT	0.10%	$	16,131.23
Tyler Technologies Inc	TYL	0.00%	$	19,595.23
United Airlines Holdings Inc	UAL	0.00%	$	16,920.21
Uber Technologies Inc	UBER	0.00%	$	137,943.94
UDR Inc	UDR	4.50%	$	12,540.86
Universal Health Services Inc	UHS	0.47%	$	11,475.77
Ulta Beauty Inc	ULTA	0.00%	$	19,406.02
UnitedHealth Group Inc	UNH	1.62%	$	445,042.63
Union Pacific Corp	UNP	2.22%	$	144,696.56
United Parcel Service Inc	UPS	4.42%	$	125,847.60
United Rentals Inc	URI	0.98%	$	44,481.40

US Bancorp	USB	4.86%	$	63,301.54
Visa Inc	V	0.78%	$	551,462.55
VICI Properties Inc	VICI	5.94%	$	29,781.56
Valero Energy Corp	VLO	2.68%	$	52,276.91
Veralto Corp	VLTO	0.32%	$	23,124.61
Vulcan Materials Co	VMC	0.70%	$	34,077.15
Verisk Analytics Inc	VRSK	0.71%	$	31,253.26
VeriSign Inc	VRSN	0.00%	$	16,971.48
Vertex Pharmaceuticals Inc	VRTX	0.00%	$	101,525.41
Ventas Inc	VTR	4.14%	$	17,891.28
Viatris Inc	VTRS	4.25%	$	13,740.18
Verizon Communications Inc	VZ	6.81%	$	166,223.48
Westinghouse Air Brake Technologies Corp	WAB	0.48%	$	28,412.09
Waters Corp	WAT	0.00%	$	18,329.09
Walgreens Boots Alliance Inc	WBA	8.01%	$	15,295.91
Warner Bros Discovery Inc	WBD	0.00%	$	18,032.96
Western Digital Corp	WDC	0.01%	$	23,127.74
WEC Energy Group Inc	WEC	4.03%	$	26,078.00
Welltower Inc	WELL	2.60%	$	56,969.46
Wells Fargo & Co	WFC	2.48%	$	207,720.84
Waste Management Inc	WM	1.44%	$	83,433.31
Williams Cos Inc/The	WMB	4.97%	$	46,738.78
Walmart Inc	WMT	1.34%	$	478,245.19
W R Berkley Corp	WRB	1.79%	$	19,746.58
Westrock Co	WRK	2.35%	$	12,380.78
West Pharmaceutical Services Inc	WST	0.22%	$	26,039.97
Willis Towers Watson PLC	WTW	1.40%	$	25,675.54
Weyerhaeuser Co	WY	3.11%	$	22,012.53
Wynn Resorts Ltd	WYNN	1.05%	$	10,270.92
Xcel Energy Inc	XEL	4.07%	$	29,854.51
Exxon Mobil Corp	XOM	3.25%	$	466,339.42
Xylem Inc/NY	XYL	1.10%	$	31,599.39
Yum! Brands Inc	YUM	1.88%	$	39,761.88
Zimmer Biomet Holdings Inc	ZBH	0.84%	$	24,667.51
Zebra Technologies Corp	ZBRA	0.00%	$	16,174.49
Zoetis Inc	ZTS	1.07%	$	72,764.27
			$	44,029,453.85

Long-Term Growth Est.						
Bloomberg	Value Line	S&P Global Market Intelligence	Average Growth Rate	DCF Result	% Total Mkt Cap	Weighted DCF Result
N/A	8.00%	6.30%	7.15%	7.87%	0.09%	0.01%
-1.53%	N/A	4.78%	1.62%	1.62%	0.02%	0.00%
13.00%	6.50%	10.22%	9.91%	10.51%	5.97%	0.63%
8.62%	3.50%	8.27%	6.80%	10.74%	0.65%	0.07%
19.82%	23.00%	14.28%	19.03%	19.03%	0.23%	0.04%
4.19%	4.00%	6.50%	4.90%	6.93%	0.42%	0.03%
5.50%	23.50%	14.85%	14.62%	14.62%	0.08%	0.01%
10.00%	8.50%	8.39%	8.96%	10.72%	0.46%	0.05%
16.73%	13.50%	16.54%	15.59%	15.59%	0.47%	0.07%
4.50%	7.50%	10.60%	7.53%	9.41%	0.23%	0.02%
-2.35%	3.50%	-2.35%	-0.40%	2.97%	0.07%	0.00%
16.00%	10.50%	13.47%	13.32%	15.54%	0.23%	0.04%
12.76%	10.00%	14.92%	12.56%	12.56%	0.10%	0.01%
6.00%	6.00%	6.27%	6.09%	9.82%	0.04%	0.00%
6.20%	6.50%	6.23%	6.31%	10.61%	0.10%	0.01%
7.85%	N/A	7.10%	7.48%	11.52%	0.03%	0.00%
6.69%	7.50%	6.38%	6.86%	9.33%	0.11%	0.01%
9.50%	8.50%	N/A	9.00%	11.11%	0.12%	0.01%
5.04%	9.50%	5.04%	6.53%	8.24%	0.02%	0.00%
12.32%	12.00%	12.31%	12.21%	13.28%	0.12%	0.02%
8.33%	5.50%	9.66%	7.83%	7.83%	0.04%	0.00%
-19.50%	-3.50%	-3.42%	-8.81%	-7.51%	0.03%	0.00%
6.87%	13.50%	11.74%	10.70%	10.70%	0.05%	0.01%
53.70%	11.00%	162.00%	75.57%	78.55%	0.10%	0.08%
7.25%	8.50%	7.24%	7.66%	9.32%	0.02%	0.00%
14.23%	10.00%	10.49%	11.57%	12.28%	0.37%	0.05%
1.33%	7.50%	2.63%	3.82%	9.46%	0.03%	0.00%
34.03%	17.50%	42.78%	31.44%	31.44%	0.58%	0.18%
7.56%	9.00%	8.78%	8.45%	9.07%	0.09%	0.01%
4.49%	4.50%	5.09%	4.69%	8.13%	0.33%	0.03%
N/A	11.00%	16.90%	13.95%	15.46%	0.09%	0.01%
17.48%	5.50%	17.94%	13.64%	17.71%	0.18%	0.03%
24.94%	24.50%	23.25%	24.23%	24.23%	4.13%	1.00%
15.67%	10.50%	18.24%	14.80%	14.80%	0.18%	0.03%
8.63%	9.50%	8.63%	8.92%	8.92%	0.06%	0.01%
10.59%	9.00%	10.59%	10.06%	11.00%	0.14%	0.02%
N/A	9.00%	10.00%	9.50%	11.13%	0.03%	0.00%
-2.00%	6.50%	-5.67%	-0.39%	2.71%	0.03%	0.00%
9.40%	8.50%	10.59%	9.50%	12.63%	0.12%	0.02%
11.57%	13.00%	11.57%	12.05%	12.82%	0.16%	0.02%
11.44%	27.00%	15.66%	18.03%	18.24%	0.04%	0.01%

5.49%	8.50%	4.80%	6.26%	10.81%	0.05%	0.00%
7.00%	7.00%	7.00%	7.00%	9.76%	0.04%	0.00%
5.81%	5.50%	6.41%	5.91%	9.59%	0.06%	0.01%
14.20%	N/A	14.99%	14.60%	16.31%	1.37%	0.22%
7.00%	5.00%	13.00%	8.33%	9.94%	0.04%	0.00%
7.70%	4.00%	7.75%	6.48%	9.03%	0.05%	0.00%
N/A	21.50%	15.10%	18.30%	18.30%	0.05%	0.01%
15.22%	9.00%	13.70%	12.64%	13.91%	0.38%	0.05%
14.75%	12.50%	14.37%	13.87%	13.87%	0.12%	0.02%
74.41%	N/A	-242.20%	-83.90%	-83.88%	0.23%	-0.20%
N/A	5.00%	-6.00%	-0.50%	2.17%	0.66%	0.01%
9.50%	10.00%	14.00%	11.17%	12.42%	0.05%	0.01%
2.73%	4.00%	2.73%	3.15%	6.20%	0.05%	0.00%
13.65%	5.50%	11.00%	10.05%	11.97%	0.02%	0.00%
3.36%	N/A	4.94%	4.15%	9.36%	0.04%	0.00%
8.36%	5.50%	7.57%	7.14%	8.83%	0.15%	0.01%
N/A	4.00%	5.29%	4.65%	10.19%	0.03%	0.00%
2.73%	15.50%	3.42%	7.22%	9.04%	0.05%	0.00%
-8.30%	-0.50%	-8.30%	-5.70%	-3.11%	0.03%	0.00%
4.62%	-1.00%	8.21%	3.94%	3.94%	0.07%	0.00%
N/A	9.00%	N/A	9.00%	9.00%	0.02%	0.00%
10.00%	8.50%	9.90%	9.47%	12.71%	0.10%	0.01%
22.55%	17.00%	19.97%	19.84%	20.90%	0.27%	0.06%
27.93%	28.00%	30.22%	28.72%	31.60%	0.07%	0.02%
11.65%	20.00%	11.65%	14.43%	14.43%	0.05%	0.01%
11.89%	8.00%	13.28%	11.06%	13.91%	0.26%	0.04%
-4.12%	25.50%	-3.13%	6.08%	11.75%	0.20%	0.02%
N/A	9.50%	12.20%	10.85%	12.59%	0.05%	0.01%
N/A	N/A	N/A	N/A	N/A	N/A	N/A
9.56%	9.00%	9.56%	9.37%	10.05%	0.05%	0.01%
12.08%	12.50%	11.71%	12.10%	12.10%	0.24%	0.03%
5.67%	5.50%	8.24%	6.47%	7.86%	0.02%	0.00%
23.93%	16.00%	23.85%	21.26%	25.15%	0.32%	0.08%
0.37%	0.50%	0.89%	0.59%	6.98%	0.02%	0.00%
17.34%	3.00%	26.67%	15.67%	19.45%	0.27%	0.05%
1.82%	3.50%	1.74%	2.35%	6.92%	0.03%	0.00%
11.91%	10.00%	14.19%	12.03%	14.11%	0.06%	0.01%
7.87%	12.00%	8.47%	9.45%	10.73%	0.13%	0.01%
15.00%	13.00%	8.98%	12.33%	14.04%	0.37%	0.05%
6.00%	16.00%	8.13%	10.04%	11.55%	0.23%	0.03%
14.28%	15.00%	9.53%	12.94%	14.29%	0.04%	0.01%
N/A	5.00%	N/A	5.00%	5.00%	0.06%	0.00%
7.00%	6.00%	-8.54%	1.49%	8.09%	0.09%	0.01%
N/A	N/A	N/A	N/A	N/A	N/A	N/A
16.32%	12.50%	16.21%	15.01%	15.01%	0.17%	0.03%
8.93%	7.00%	8.93%	8.29%	9.37%	0.07%	0.01%
4.32%	5.00%	10.03%	6.45%	8.34%	0.04%	0.00%

9.00%	N/A	18.00%	13.50%	14.25%	0.13%	0.02%
2.50%	2.00%	6.00%	3.50%	5.93%	0.03%	0.00%
-5.79%	5.50%	-5.79%	-2.03%	2.92%	0.04%	0.00%
7.35%	5.50%	8.93%	7.26%	8.35%	0.06%	0.00%
5.00%	3.50%	7.00%	5.17%	8.69%	0.02%	0.00%
5.89%	8.50%	10.67%	8.35%	8.35%	0.09%	0.01%
11.62%	12.00%	10.84%	11.49%	13.14%	0.23%	0.03%
7.35%	10.50%	7.35%	8.40%	11.32%	0.04%	0.00%
8.18%	8.00%	8.36%	8.18%	10.48%	0.17%	0.02%
13.86%	7.00%	13.07%	11.31%	14.74%	0.04%	0.01%
N/A	2.50%	10.13%	6.31%	12.19%	0.02%	0.00%
8.67%	8.00%	9.42%	8.69%	11.98%	0.34%	0.04%
4.90%	7.00%	4.12%	5.34%	10.04%	0.17%	0.02%
22.81%	22.50%	20.78%	22.03%	22.03%	0.20%	0.04%
6.07%	7.50%	27.31%	13.63%	16.23%	0.09%	0.01%
7.36%	5.00%	7.27%	6.54%	10.08%	0.04%	0.00%
5.16%	10.00%	8.44%	7.86%	7.86%	0.09%	0.01%
7.95%	6.00%	7.90%	7.28%	10.15%	0.04%	0.00%
50.10%	5.50%	50.10%	35.23%	37.26%	0.12%	0.05%
11.77%	9.50%	15.38%	12.22%	12.24%	0.04%	0.00%
N/A	4.00%	8.00%	6.00%	7.91%	0.33%	0.03%
10.10%	8.00%	8.85%	8.98%	9.87%	0.11%	0.01%
10.16%	9.00%	9.15%	9.44%	11.05%	0.73%	0.08%
13.65%	14.00%	14.46%	14.04%	14.04%	0.05%	0.01%
4.87%	6.00%	4.76%	5.21%	8.55%	0.03%	0.00%
N/A	8.00%	15.00%	11.50%	11.50%	0.12%	0.01%
5.93%	-6.50%	4.62%	1.35%	5.48%	0.02%	0.00%
14.00%	7.00%	13.26%	11.42%	11.42%	0.03%	0.00%
22.50%	21.50%	21.32%	21.77%	21.77%	0.59%	0.13%
7.50%	4.50%	5.04%	5.68%	9.13%	0.43%	0.04%
20.00%	15.00%	20.00%	18.33%	18.33%	0.08%	0.02%
10.76%	7.00%	8.66%	8.81%	10.31%	0.15%	0.02%
10.83%	14.00%	11.41%	12.08%	12.92%	0.15%	0.02%
35.27%	5.50%	26.07%	22.28%	22.28%	0.02%	0.01%
N/A	N/A	15.00%	15.00%	18.28%	0.05%	0.01%
12.00%	8.00%	7.12%	9.04%	10.95%	0.07%	0.01%
13.66%	9.00%	10.82%	11.16%	12.46%	0.08%	0.01%
7.62%	4.50%	2.86%	4.99%	9.01%	0.19%	0.02%
7.00%	16.50%	4.33%	9.28%	13.50%	0.68%	0.09%
-28.24%	N/A	N/A	-28.24%	-28.24%	0.02%	0.00%
10.65%	0.50%	7.49%	6.21%	11.61%	0.10%	0.01%
12.00%	N/A	8.53%	10.27%	11.11%	0.07%	0.01%
N/A	N/A	24.03%	24.03%	24.03%	0.02%	0.01%
6.72%	8.50%	9.12%	8.11%	10.30%	0.07%	0.01%
-4.67%	5.00%	2.92%	1.08%	2.52%	0.25%	0.01%
19.98%	16.50%	18.96%	18.48%	18.48%	0.05%	0.01%
61.27%	-1.00%	-7.29%	17.66%	20.10%	0.07%	0.01%

-1.47%	3.50%	1.63%	1.22%	2.97%	0.07%	0.00%
-0.82%	1.50%	5.25%	1.98%	4.12%	0.03%	0.00%
4.37%	4.00%	12.46%	6.94%	7.81%	0.11%	0.01%
-7.56%	7.00%	5.08%	1.51%	1.95%	0.41%	0.01%
21.90%	32.50%	17.52%	23.97%	24.73%	0.46%	0.11%
4.80%	-5.00%	6.20%	2.00%	5.61%	0.10%	0.01%
14.10%	25.00%	15.42%	18.17%	18.17%	0.06%	0.01%
2.24%	18.50%	0.53%	7.09%	13.81%	0.03%	0.00%
9.50%	6.00%	9.51%	8.34%	9.56%	0.06%	0.01%
2.46%	1.00%	31.84%	11.77%	17.04%	0.09%	0.02%
12.99%	11.50%	12.31%	12.27%	13.48%	0.04%	0.01%
10.97%	13.00%	10.17%	11.38%	15.01%	0.04%	0.01%
6.50%	6.00%	6.98%	6.49%	10.34%	0.05%	0.01%
6.65%	5.50%	6.28%	6.14%	10.53%	0.17%	0.02%
14.97%	9.50%	13.06%	12.51%	12.51%	0.03%	0.00%
N/A	9.50%	-5.00%	2.25%	5.81%	0.07%	0.00%
30.31%	24.00%	29.99%	28.10%	28.10%	0.12%	0.03%
12.50%	16.50%	10.66%	13.22%	13.87%	0.08%	0.01%
1.99%	6.00%	2.20%	3.39%	5.54%	0.06%	0.00%
12.50%	7.00%	13.91%	11.14%	12.20%	0.15%	0.02%
5.70%	6.00%	5.21%	5.64%	9.27%	0.07%	0.01%
11.56%	4.50%	19.00%	11.68%	12.43%	0.06%	0.01%
3.93%	10.50%	1.85%	5.43%	7.41%	0.04%	0.00%
7.80%	6.00%	6.70%	6.83%	11.37%	0.06%	0.01%
17.63%	2.50%	19.44%	13.19%	15.11%	0.12%	0.02%
10.02%	11.50%	9.78%	10.43%	11.67%	0.28%	0.03%
6.19%	3.50%	17.38%	9.02%	12.63%	0.03%	0.00%
14.13%	7.00%	12.94%	11.36%	13.44%	0.14%	0.02%
19.27%	14.00%	16.65%	16.64%	16.64%	0.03%	0.01%
5.00%	13.00%	4.37%	7.46%	11.65%	0.17%	0.02%
2.97%	13.00%	17.58%	11.18%	11.18%	0.03%	0.00%
12.49%	16.00%	11.49%	13.33%	15.89%	0.15%	0.02%
4.75%	-4.50%	9.68%	3.31%	7.57%	0.06%	0.00%
31.59%	N/A	N/A	31.59%	33.42%	0.04%	0.01%
N/A	5.50%	5.11%	5.30%	10.18%	0.05%	0.00%
4.48%	1.00%	2.77%	2.75%	6.66%	0.04%	0.00%
15.00%	12.50%	12.24%	13.25%	14.49%	0.29%	0.04%
7.02%	0.50%	6.94%	4.82%	9.22%	0.05%	0.00%
4.48%	4.50%	9.64%	6.21%	6.21%	0.02%	0.00%
5.00%	5.50%	4.85%	5.12%	10.20%	0.03%	0.00%
10.03%	10.00%	11.83%	10.62%	10.62%	0.12%	0.01%
5.25%	2.00%	5.70%	4.32%	8.46%	0.09%	0.01%
2.85%	-1.00%	9.42%	3.76%	5.05%	0.04%	0.00%
19.47%	39.00%	19.53%	26.00%	26.00%	0.04%	0.01%
1.62%	5.00%	3.50%	3.37%	8.37%	0.06%	0.01%
1.67%	37.00%	0.68%	13.12%	18.67%	0.11%	0.02%
2.00%	2.50%	2.00%	2.17%	5.40%	0.08%	0.00%

N/A	9.00%	N/A	9.00%	11.38%	0.09%	0.01%
1.14%	12.50%	3.70%	5.78%	7.03%	0.16%	0.01%
10.32%	11.00%	9.76%	10.36%	11.38%	0.04%	0.00%
13.00%	5.50%	14.00%	10.83%	12.86%	0.15%	0.02%
6.65%	4.50%	6.02%	5.72%	10.24%	0.05%	0.01%
7.81%	10.50%	7.81%	8.71%	8.71%	0.02%	0.00%
15.47%	9.50%	14.61%	13.19%	13.19%	0.20%	0.03%
N/A	18.00%	18.13%	18.07%	18.07%	0.06%	0.01%
16.00%	0.50%	10.34%	8.95%	11.32%	0.09%	0.01%
25.00%	5.00%	17.25%	15.75%	19.98%	0.06%	0.01%
8.00%	5.00%	8.00%	7.00%	11.13%	0.02%	0.00%
6.24%	8.50%	8.27%	7.67%	9.40%	0.03%	0.00%
5.18%	N/A	6.59%	5.89%	10.21%	0.02%	0.00%
29.52%	34.00%	38.00%	33.84%	33.84%	0.04%	0.01%
18.05%	15.50%	14.86%	16.14%	16.14%	0.11%	0.02%
8.98%	15.00%	10.49%	11.49%	11.93%	0.06%	0.01%
12.64%	10.00%	13.02%	11.89%	13.94%	0.18%	0.02%
23.50%	24.00%	33.32%	26.94%	27.54%	0.40%	0.11%
12.03%	N/A	8.02%	10.02%	10.14%	0.08%	0.01%
11.51%	9.00%	11.51%	10.67%	13.33%	0.03%	0.00%
N/A	N/A	28.00%	28.00%	28.00%	0.10%	0.03%
13.35%	3.00%	8.36%	8.24%	13.15%	0.18%	0.02%
4.00%	5.50%	6.15%	5.22%	8.65%	0.09%	0.01%
7.00%	8.00%	7.00%	7.33%	8.58%	0.02%	0.00%
10.78%	12.50%	10.93%	11.40%	15.05%	0.06%	0.01%
15.71%	8.50%	11.02%	11.74%	13.07%	0.12%	0.02%
6.00%	12.50%	7.67%	8.72%	8.72%	0.02%	0.00%
15.01%	12.00%	18.91%	15.31%	15.49%	4.59%	0.71%
N/A	8.50%	N/A	8.50%	11.15%	0.05%	0.01%
11.98%	12.00%	11.56%	11.85%	12.72%	0.07%	0.01%
5.60%	5.00%	7.80%	6.13%	8.27%	0.06%	0.01%
9.31%	1.50%	10.61%	7.14%	9.89%	0.33%	0.03%
N/A	7.00%	13.00%	10.00%	10.92%	0.10%	0.01%
11.60%	20.50%	11.60%	14.57%	16.52%	0.08%	0.01%
17.10%	6.50%	17.10%	13.57%	18.51%	0.02%	0.00%
4.46%	8.00%	4.46%	5.64%	10.43%	0.04%	0.00%
9.57%	10.00%	9.58%	9.72%	10.60%	0.19%	0.02%
4.31%	6.00%	6.66%	5.66%	8.43%	0.75%	0.06%
18.00%	20.00%	16.50%	18.17%	19.42%	0.11%	0.02%
7.00%	7.00%	7.00%	7.00%	9.02%	0.07%	0.01%
40.00%	11.50%	7.25%	19.58%	21.67%	0.02%	0.01%
15.52%	18.00%	15.77%	16.43%	16.78%	0.11%	0.02%
8.68%	-1.00%	8.68%	5.45%	5.45%	0.04%	0.00%
8.50%	10.00%	7.83%	8.78%	11.17%	0.29%	0.03%
2.86%	5.50%	2.73%	3.70%	6.76%	0.05%	0.00%
0.50%	7.00%	0.50%	2.67%	6.66%	0.06%	0.00%
6.59%	5.00%	5.80%	5.80%	9.07%	0.04%	0.00%

9.38%	7.50%	8.94%	8.61%	8.61%	0.02%	0.00%
N/A	N/A	34.70%	34.70%	40.27%	0.03%	0.01%
5.50%	7.00%	4.79%	5.76%	8.51%	0.09%	0.01%
18.00%	N/A	17.11%	17.55%	18.99%	0.05%	0.01%
-6.15%	8.00%	4.27%	2.04%	3.26%	0.08%	0.00%
14.19%	17.00%	16.40%	15.86%	16.20%	0.06%	0.01%
3.19%	4.00%	4.09%	3.76%	7.86%	0.35%	0.03%
10.83%	7.50%	10.23%	9.52%	10.98%	0.17%	0.02%
11.51%	11.00%	14.95%	12.49%	12.49%	0.09%	0.01%
N/A	5.50%	12.00%	8.75%	9.99%	0.04%	0.00%
-1.97%	0.50%	10.76%	3.10%	5.02%	0.05%	0.00%
3.00%	-6.00%	40.91%	12.64%	12.64%	0.04%	0.01%
25.33%	16.50%	19.33%	20.39%	20.39%	0.03%	0.01%
0.41%	6.00%	40.88%	15.76%	17.56%	0.29%	0.05%
18.76%	13.50%	16.85%	16.37%	16.99%	0.40%	0.07%
6.43%	8.50%	7.93%	7.62%	11.04%	0.05%	0.01%
-2.00%	5.50%	5.50%	3.00%	8.37%	0.03%	0.00%
4.94%	5.50%	4.17%	4.87%	9.27%	0.03%	0.00%
8.92%	11.50%	10.82%	10.41%	10.41%	0.10%	0.01%
N/A	10.00%	12.12%	11.06%	11.15%	0.09%	0.01%
N/A	7.00%	9.50%	8.25%	11.77%	0.05%	0.01%
16.21%	12.50%	12.78%	13.83%	13.83%	0.30%	0.04%
10.78%	10.00%	10.78%	10.52%	10.52%	0.07%	0.01%
6.77%	9.50%	6.05%	7.44%	9.83%	0.17%	0.02%
8.71%	10.50%	10.31%	9.84%	15.92%	0.01%	0.00%
12.41%	9.00%	12.41%	11.27%	12.11%	0.04%	0.00%
12.00%	8.50%	11.37%	10.62%	11.74%	0.04%	0.00%
12.00%	15.00%	12.00%	13.00%	13.29%	0.03%	0.00%
9.77%	9.50%	11.64%	10.30%	12.65%	0.10%	0.01%
7.69%	6.50%	8.35%	7.51%	8.85%	0.03%	0.00%
5.05%	3.50%	4.18%	4.24%	7.71%	0.79%	0.06%
4.78%	8.50%	13.19%	8.82%	11.46%	0.03%	0.00%
3.50%	7.00%	4.00%	4.83%	7.31%	1.25%	0.09%
8.42%	3.00%	5.62%	5.68%	9.76%	0.04%	0.00%
7.12%	10.00%	7.06%	8.06%	10.78%	0.10%	0.01%
9.83%	0.50%	20.00%	10.11%	16.09%	0.03%	0.00%
-0.99%	8.00%	1.13%	2.72%	2.72%	0.06%	0.00%
3.87%	4.00%	3.83%	3.90%	8.15%	0.11%	0.01%
2.80%	18.00%	3.15%	7.98%	13.48%	0.03%	0.00%
9.54%	10.50%	12.19%	10.74%	11.62%	0.21%	0.02%
7.72%	7.50%	6.64%	7.29%	10.98%	0.10%	0.01%
4.00%	15.00%	4.00%	7.67%	14.20%	0.09%	0.01%
25.76%	5.00%	14.87%	15.21%	15.21%	0.02%	0.00%
6.36%	7.00%	5.89%	6.42%	9.63%	0.60%	0.06%
4.76%	5.00%	5.10%	4.95%	7.16%	0.09%	0.01%
15.35%	N/A	6.85%	11.10%	15.58%	0.08%	0.01%
N/A	18.50%	N/A	18.50%	18.50%	0.04%	0.01%

8.16%	7.50%	9.66%	8.44%	9.59%	0.04%	0.00%
8.82%	4.00%	4.96%	5.93%	7.22%	0.10%	0.01%
9.46%	-1.50%	8.94%	5.63%	7.13%	0.04%	0.00%
7.29%	9.50%	8.17%	8.32%	10.58%	0.09%	0.01%
11.00%	7.50%	10.50%	9.67%	10.97%	0.48%	0.05%
N/A	7.00%	N/A	7.00%	9.88%	0.03%	0.00%
42.18%	27.50%	35.27%	34.98%	35.76%	1.69%	0.60%
2.39%	9.00%	2.44%	4.61%	7.43%	0.25%	0.02%
7.00%	6.00%	6.48%	6.49%	10.48%	0.03%	0.00%
2.12%	6.50%	1.89%	3.50%	5.54%	0.30%	0.02%
11.92%	9.00%	13.69%	11.54%	12.42%	0.27%	0.03%
N/A	16.00%	14.97%	15.48%	15.48%	0.10%	0.02%
21.33%	N/A	25.87%	23.60%	26.73%	0.04%	0.01%
N/A	N/A	N/A	N/A	N/A	N/A	N/A
11.56%	14.50%	11.56%	12.54%	14.15%	0.03%	0.00%
8.00%	N/A	-2.23%	2.88%	8.08%	0.07%	0.01%
N/A	N/A	30.27%	30.27%	30.27%	0.05%	0.01%
16.78%	14.50%	17.10%	16.13%	16.74%	0.96%	0.16%
2.99%	-11.00%	3.37%	-1.55%	2.94%	0.03%	0.00%
4.74%	11.00%	4.74%	6.83%	7.81%	0.15%	0.01%
8.64%	6.50%	8.64%	7.92%	9.71%	0.03%	0.00%
7.57%	10.00%	7.54%	8.37%	10.95%	0.45%	0.05%
2.30%	6.00%	-7.20%	0.37%	2.24%	0.11%	0.00%
12.22%	8.50%	10.16%	10.29%	10.75%	0.16%	0.02%
9.45%	5.50%	14.00%	9.65%	10.59%	0.15%	0.02%
8.55%	9.50%	7.88%	8.64%	11.21%	0.22%	0.02%
3.83%	6.50%	5.25%	5.19%	8.58%	0.24%	0.02%
14.63%	7.00%	15.26%	12.30%	15.50%	0.12%	0.02%
18.58%	17.50%	21.13%	19.07%	19.46%	2.48%	0.48%
9.87%	N/A	N/A	9.87%	10.20%	0.03%	0.00%
2.74%	1.00%	2.73%	2.16%	2.16%	0.02%	0.00%
5.96%	5.00%	5.84%	5.60%	7.87%	0.05%	0.00%
5.09%	10.00%	5.09%	6.73%	8.27%	0.02%	0.00%
9.71%	10.50%	9.71%	9.97%	10.52%	0.08%	0.01%
6.90%	11.00%	8.45%	8.78%	10.29%	0.22%	0.02%
5.50%	30.50%	-0.06%	11.98%	17.83%	0.12%	0.02%
12.45%	12.00%	16.77%	13.74%	13.74%	0.13%	0.02%
4.00%	4.50%	3.82%	4.11%	13.49%	0.17%	0.02%
11.72%	12.00%	12.12%	11.95%	11.95%	0.05%	0.01%
16.00%	-6.00%	N/A	5.00%	7.68%	0.02%	0.00%
-12.00%	14.50%	-8.00%	-1.83%	0.00%	0.15%	0.00%
16.00%	10.50%	17.30%	14.60%	15.36%	0.07%	0.01%
39.45%	15.50%	38.19%	31.05%	33.78%	0.74%	0.25%
17.62%	-17.50%	-92.16%	-30.68%	-30.68%	0.10%	-0.03%
7.00%	13.50%	7.00%	9.17%	10.89%	0.03%	0.00%
5.29%	7.00%	5.28%	5.86%	9.82%	0.34%	0.03%
11.45%	12.50%	12.32%	12.09%	13.51%	0.08%	0.01%

16.54%	14.00%	13.72%	14.75%	15.57%	6.57%	1.02%
8.85%	10.50%	8.22%	9.19%	10.31%	0.13%	0.01%
8.00%	4.50%	8.50%	7.00%	10.79%	0.05%	0.01%
36.66%	12.50%	27.00%	25.39%	25.39%	0.02%	0.00%
9.18%	9.00%	14.89%	11.02%	11.02%	0.06%	0.01%
-4.00%	19.50%	-4.00%	3.83%	4.23%	0.28%	0.01%
48.23%	N/A	N/A	48.23%	48.23%	0.02%	0.01%
5.72%	6.00%	6.74%	6.15%	7.76%	0.08%	0.01%
N/A	8.50%	13.00%	10.75%	11.88%	0.03%	0.00%
8.10%	8.50%	8.12%	8.24%	11.44%	0.31%	0.04%
18.15%	5.00%	12.10%	11.75%	14.36%	0.11%	0.02%
35.61%	13.00%	29.34%	25.98%	25.98%	0.54%	0.14%
7.00%	6.00%	7.13%	6.71%	10.64%	0.03%	0.00%
10.85%	12.00%	11.42%	11.42%	13.07%	0.32%	0.04%
18.93%	8.00%	22.51%	16.48%	18.23%	0.16%	0.03%
25.00%	32.50%	25.28%	27.59%	27.59%	0.32%	0.09%
3.00%	1.00%	10.95%	4.98%	7.30%	0.03%	0.00%
N/A	9.50%	3.95%	6.73%	9.15%	0.12%	0.01%
7.40%	8.50%	7.40%	7.76%	9.80%	0.05%	0.00%
10.80%	3.00%	11.11%	8.30%	12.19%	0.04%	0.00%
0.83%	2.00%	-0.59%	0.75%	2.03%	0.09%	0.00%
37.63%	33.00%	35.12%	35.25%	35.27%	4.91%	1.73%
4.87%	1.50%	4.87%	3.75%	3.75%	0.05%	0.00%
N/A	13.50%	26.60%	20.05%	20.99%	0.03%	0.01%
20.00%	10.00%	7.62%	12.54%	14.29%	0.15%	0.02%
4.82%	5.50%	4.54%	4.95%	10.94%	0.10%	0.01%
13.12%	8.50%	21.17%	14.26%	15.00%	0.09%	0.01%
1.56%	13.50%	3.78%	6.28%	11.47%	0.10%	0.01%
7.46%	7.00%	6.33%	6.93%	10.16%	0.04%	0.00%
3.32%	13.00%	9.18%	8.50%	8.50%	0.07%	0.01%
14.30%	10.00%	12.13%	12.14%	13.62%	0.71%	0.10%
10.51%	10.50%	13.00%	11.34%	11.34%	0.14%	0.02%
9.00%	11.00%	10.50%	10.17%	11.88%	0.08%	0.01%
20.00%	15.50%	20.00%	18.50%	19.90%	0.13%	0.03%
20.50%	N/A	24.82%	22.66%	22.66%	0.21%	0.05%
48.12%	-5.00%	13.54%	18.89%	20.83%	0.02%	0.00%
5.50%	17.00%	10.23%	10.91%	10.91%	0.02%	0.00%
7.00%	9.00%	7.31%	7.77%	10.85%	0.10%	0.01%
12.00%	14.50%	4.43%	10.31%	13.86%	0.13%	0.02%
10.10%	9.50%	9.23%	9.61%	9.84%	0.08%	0.01%
6.28%	4.00%	6.61%	5.63%	9.21%	0.08%	0.01%
7.91%	6.50%	7.50%	7.30%	10.45%	0.55%	0.06%
9.59%	2.50%	9.74%	7.28%	14.10%	0.33%	0.05%
11.79%	4.00%	12.39%	9.39%	13.16%	0.04%	0.01%
8.09%	5.00%	7.85%	6.98%	9.41%	0.87%	0.08%
32.49%	14.50%	32.49%	26.49%	27.38%	0.28%	0.08%
16.28%	11.50%	14.18%	13.99%	15.17%	0.16%	0.02%

7.65%	6.50%	15.10%	9.75%	10.51%	0.05%	0.01%
3.00%	7.00%	5.67%	5.22%	8.21%	0.04%	0.00%
8.70%	0.50%	9.55%	6.25%	10.09%	0.21%	0.02%
8.23%	6.00%	8.68%	7.64%	13.40%	0.34%	0.04%
15.32%	6.00%	31.00%	17.44%	21.91%	0.14%	0.03%
13.13%	11.00%	13.70%	12.61%	13.85%	0.03%	0.00%
7.28%	4.00%	6.61%	5.96%	10.92%	0.02%	0.00%
33.03%	69.50%	33.03%	45.19%	45.19%	0.03%	0.01%
4.73%	4.00%	4.73%	4.49%	5.70%	0.03%	0.00%
7.82%	9.50%	7.52%	8.28%	10.43%	0.07%	0.01%
7.22%	7.50%	8.47%	7.73%	11.63%	0.05%	0.01%
11.02%	5.50%	10.08%	8.87%	13.76%	0.09%	0.01%
3.51%	7.00%	2.96%	4.49%	9.31%	0.10%	0.01%
N/A	17.50%	-7.00%	5.25%	8.44%	0.14%	0.01%
21.10%	11.00%	17.49%	16.53%	16.53%	0.05%	0.01%
10.00%	15.50%	18.00%	14.50%	14.65%	0.09%	0.01%
-13.00%	2.50%	6.50%	-1.33%	0.73%	0.14%	0.00%
5.52%	11.50%	10.31%	9.11%	9.11%	0.16%	0.01%
10.65%	7.50%	11.31%	9.82%	11.92%	0.42%	0.05%
17.72%	9.50%	19.61%	15.61%	15.61%	0.03%	0.00%
27.45%	N/A	N/A	27.45%	27.45%	0.08%	0.02%
3.63%	14.50%	3.87%	7.33%	12.06%	0.03%	0.00%
13.00%	3.00%	4.38%	6.79%	6.79%	0.22%	0.02%
1.71%	4.50%	1.71%	2.64%	7.80%	0.04%	0.00%
7.15%	6.00%	7.15%	6.77%	9.84%	0.02%	0.00%
15.38%	9.00%	15.38%	13.25%	14.81%	0.06%	0.01%
12.64%	13.50%	11.98%	12.70%	14.67%	0.02%	0.00%
8.30%	8.50%	13.10%	9.97%	10.93%	0.07%	0.01%
10.87%	10.00%	8.27%	9.71%	11.66%	0.07%	0.01%
13.02%	9.00%	13.02%	11.68%	13.14%	0.05%	0.01%
N/A	9.50%	10.00%	9.75%	10.34%	0.12%	0.01%
10.00%	14.00%	11.60%	11.87%	13.06%	0.10%	0.01%
9.04%	11.00%	9.04%	9.69%	10.89%	0.14%	0.01%
10.21%	12.00%	10.62%	10.94%	13.47%	0.31%	0.04%
8.26%	-2.50%	18.12%	7.96%	8.24%	0.03%	0.00%
8.00%	19.00%	10.45%	12.48%	14.73%	0.05%	0.01%
13.62%	9.00%	14.38%	12.33%	15.09%	0.23%	0.03%
14.20%	10.50%	25.78%	16.83%	18.32%	0.31%	0.06%
9.56%	11.50%	10.42%	10.49%	11.50%	0.17%	0.02%
7.04%	7.00%	6.77%	6.93%	10.73%	0.03%	0.00%
14.81%	21.50%	14.81%	17.04%	19.54%	0.15%	0.03%
53.91%	39.00%	50.20%	47.70%	47.70%	0.11%	0.05%
3.83%	5.50%	6.92%	5.42%	8.30%	0.03%	0.00%
18.70%	15.00%	18.35%	17.35%	17.35%	0.18%	0.03%
7.10%	6.00%	5.82%	6.31%	10.33%	0.18%	0.02%
-4.00%	N/A	-4.00%	-4.00%	-4.00%	0.03%	0.00%
1.58%	3.50%	1.84%	2.31%	7.97%	0.10%	0.01%

12.93%	8.00%	13.20%	11.38%	12.32%	0.30%	0.04%
3.85%	6.00%	5.05%	4.97%	8.59%	0.10%	0.01%
N/A	7.50%	N/A	7.50%	8.49%	0.05%	0.00%
-1.63%	1.50%	2.00%	0.62%	2.03%	0.05%	0.00%
8.06%	5.50%	9.59%	7.72%	11.81%	0.05%	0.01%
1.21%	11.00%	-4.89%	2.44%	5.74%	0.04%	0.00%
11.01%	6.50%	9.33%	8.94%	10.57%	0.11%	0.01%
10.00%	3.00%	30.64%	14.55%	18.38%	0.03%	0.01%
9.03%	1.50%	10.80%	7.11%	9.79%	0.04%	0.00%
N/A	3.00%	14.89%	8.94%	11.36%	0.04%	0.00%
8.45%	8.50%	9.58%	8.84%	9.80%	0.29%	0.03%
14.00%	14.00%	12.77%	13.59%	16.50%	0.08%	0.01%
2.78%	4.00%	2.09%	2.95%	9.67%	0.28%	0.03%
4.67%	11.50%	5.17%	7.11%	10.25%	0.03%	0.00%
14.52%	21.00%	16.20%	17.24%	20.30%	0.16%	0.03%
7.49%	9.50%	7.49%	8.16%	8.16%	0.04%	0.00%
2.00%	10.00%	5.56%	5.85%	6.37%	0.02%	0.00%
5.04%	8.00%	7.02%	6.69%	8.43%	0.10%	0.01%
-1.44%	16.50%	12.49%	9.18%	9.60%	0.04%	0.00%
10.30%	1.50%	10.29%	7.36%	13.15%	0.11%	0.02%
7.21%	9.00%	7.60%	7.94%	8.62%	0.02%	0.00%
-2.13%	10.00%	15.03%	7.63%	10.45%	0.17%	0.02%
10.00%	15.00%	10.41%	11.80%	13.48%	0.24%	0.03%
N/A	5.00%	9.68%	7.34%	7.61%	0.49%	0.04%
5.00%	19.50%	25.67%	16.72%	18.47%	0.44%	0.08%
11.00%	9.00%	9.50%	9.83%	13.51%	0.02%	0.00%
9.00%	N/A	9.00%	9.00%	11.71%	0.06%	0.01%
N/A	5.50%	10.00%	7.75%	7.75%	0.03%	0.00%
5.88%	4.50%	6.90%	5.76%	10.40%	0.06%	0.01%
18.24%	10.50%	17.29%	15.34%	17.45%	0.11%	0.02%
5.54%	11.00%	7.02%	7.85%	9.53%	0.07%	0.01%
-11.00%	23.00%	12.17%	8.06%	8.06%	1.33%	0.11%
53.81%	-8.50%	53.81%	33.04%	36.80%	0.05%	0.02%
13.47%	12.50%	13.01%	12.99%	14.06%	0.16%	0.02%
22.73%	52.50%	22.92%	32.72%	32.72%	0.06%	0.02%
10.00%	3.00%	3.89%	5.63%	8.69%	0.36%	0.03%
10.12%	13.00%	10.12%	11.08%	11.18%	0.04%	0.00%
N/A	8.00%	14.25%	11.13%	11.13%	0.04%	0.00%
12.79%	N/A	7.52%	10.15%	10.15%	0.04%	0.00%
51.75%	N/A	42.44%	47.10%	47.10%	0.31%	0.15%
6.06%	2.50%	5.11%	4.56%	9.15%	0.03%	0.00%
12.42%	6.00%	15.14%	11.19%	11.69%	0.03%	0.00%
6.90%	8.00%	9.96%	8.29%	8.29%	0.04%	0.00%
11.58%	12.00%	10.29%	11.29%	13.00%	1.01%	0.13%
11.00%	6.50%	9.50%	9.00%	11.32%	0.33%	0.04%
8.77%	3.50%	13.36%	8.54%	13.15%	0.29%	0.04%
5.27%	19.00%	9.04%	11.10%	12.13%	0.10%	0.01%

5.00%	4.50%	5.00%	4.83%	9.81%	0.14%	0.01%
13.53%	13.50%	13.14%	13.39%	14.22%	1.25%	0.18%
1.98%	9.50%	3.89%	5.12%	11.22%	0.07%	0.01%
-24.00%	6.50%	-16.50%	-11.33%	-8.80%	0.12%	-0.01%
N/A	N/A	6.52%	6.52%	6.85%	0.05%	0.00%
15.78%	8.00%	16.89%	13.56%	14.31%	0.08%	0.01%
11.97%	9.00%	12.58%	11.18%	11.94%	0.07%	0.01%
N/A	12.50%	N/A	12.50%	12.50%	0.04%	0.00%
16.71%	9.50%	31.85%	19.35%	19.35%	0.23%	0.04%
5.78%	N/A	6.93%	6.35%	10.63%	0.04%	0.00%
-1.69%	-1.50%	-1.69%	-1.63%	2.59%	0.03%	0.00%
1.22%	0.50%	1.38%	1.03%	7.87%	0.38%	0.03%
15.49%	12.00%	15.49%	14.33%	14.84%	0.06%	0.01%
7.23%	5.00%	5.10%	5.78%	5.78%	0.04%	0.00%
-1.67%	-1.50%	N/A	-1.59%	6.37%	0.03%	0.00%
35.28%	N/A	-0.82%	17.23%	17.23%	0.04%	0.01%
-11.96%	7.00%	-13.95%	-6.30%	-6.29%	0.05%	0.00%
6.85%	6.50%	6.46%	6.60%	10.77%	0.06%	0.01%
14.52%	25.50%	2.52%	14.18%	16.97%	0.13%	0.02%
13.41%	9.50%	13.41%	12.11%	14.74%	0.47%	0.07%
11.11%	6.00%	10.55%	9.22%	10.73%	0.19%	0.02%
2.50%	10.00%	3.00%	5.17%	10.26%	0.11%	0.01%
7.00%	7.00%	6.75%	6.92%	8.30%	1.09%	0.09%
11.50%	16.00%	14.00%	13.83%	15.75%	0.04%	0.01%
5.28%	8.50%	14.78%	9.52%	11.98%	0.03%	0.00%
7.72%	7.50%	9.86%	8.36%	8.59%	0.06%	0.01%
12.37%	10.00%	12.37%	11.58%	13.06%	0.06%	0.01%
N/A	-1.00%	N/A	-1.00%	2.10%	0.05%	0.00%
N/A	N/A	14.00%	14.00%	15.12%	0.02%	0.00%
6.71%	7.00%	6.24%	6.65%	10.85%	0.07%	0.01%
-12.00%	7.00%	6.00%	0.33%	3.59%	1.06%	0.04%
N/A	11.50%	12.15%	11.82%	12.98%	0.07%	0.01%
8.59%	10.50%	11.56%	10.22%	12.19%	0.09%	0.01%
6.89%	4.50%	8.25%	6.55%	7.41%	0.06%	0.00%
N/A	-1.00%	N/A	-1.00%	-1.00%	0.04%	0.00%
10.10%	7.50%	9.87%	9.16%	10.28%	0.17%	0.02%
			S&P 500 Est. Required Market Return			14.86%

S&P 500 4/30/2024

Company Name	Ticker	Market Capitalization	Dividend Yield	Bloomberg
Ameren Corp	AEE	$ 19,687.13	3.62%	6.00%
American Electric Power Co Inc	AEP	$ 45,302.56	4.17%	6.20%
AES Corp/The	AES	$ 12,714.14	3.90%	7.85%
Atmos Energy Corp	ATO	$ 17,784.00	2.66%	7.00%
American Water Works Co Inc	AWK	$ 23,822.47	2.47%	7.70%
Constellation Energy Corp	CEG	$ 58,593.59	0.70%	9.00%
CMS Energy Corp	CMS	$ 17,683.79	3.43%	7.36%
CenterPoint Energy Inc	CNP	$ 18,446.54	2.76%	7.95%
Dominion Energy Inc	D	$ 42,700.51	5.24%	10.65%
DTE Energy Co	DTE	$ 22,827.97	3.72%	6.50%
Duke Energy Corp	DUK	$ 75,758.46	4.26%	6.65%
Consolidated Edison Inc	ED	$ 32,560.79	3.53%	5.70%
Edison International	EIX	$ 27,281.70	4.39%	7.80%
Eversource Energy	ES	$ 21,261.07	4.75%	N/A
Entergy Corp	ETR	$ 22,749.88	4.30%	7.02%
Evergy Inc	EVRG	$ 12,050.17	4.96%	5.00%
Exelon Corp	EXC	$ 37,570.05	4.05%	5.25%
FirstEnergy Corp	FE	$ 22,065.30	4.39%	6.65%
Alliant Energy Corp	LNT	$ 12,585.41	3.86%	7.00%
NextEra Energy Inc	NEE	$ 135,528.13	3.07%	8.10%
NiSource Inc	NI	$ 12,486.51	3.80%	7.00%
NRG Energy Inc	NRG	$ 15,116.89	2.26%	3.00%
PG&E Corp	PCG	$ 36,504.32	0.22%	10.10%
Public Service Enterprise Group Inc	PEG	$ 34,442.36	3.48%	6.28%
Pinnacle West Capital Corp	PNW	$ 8,363.50	4.81%	7.28%
PPL Corp	PPL	$ 20,241.44	3.76%	7.22%
Southern Co/The	SO	$ 80,455.56	3.90%	7.10%
Sempra Energy	SRE	$ 45,280.90	3.53%	3.85%
WEC Energy Group Inc	WEC	$ 26,078.00	4.03%	6.85%
Xcel Energy Inc	XEL	$ 29,854.51	4.07%	6.71%
		$ 987,797.63		

Value Line	S&P Global Market Intelligence	Average Growth Rate	DCF Result	Weight in Index	Weighted DCF
6.00%	6.27%	6.09%	9.82%	1.99%	0.1957%
6.50%	6.23%	6.31%	10.61%	4.59%	0.4865%
N/A	7.10%	7.48%	11.52%	1.29%	0.1483%
7.00%	7.00%	7.00%	9.76%	1.80%	0.1756%
4.00%	7.75%	6.48%	9.03%	2.41%	0.2178%
N/A	18.00%	13.50%	14.25%	5.93%	0.8451%
5.00%	7.27%	6.54%	10.08%	1.79%	0.1805%
6.00%	7.90%	7.28%	10.15%	1.87%	0.1895%
0.50%	7.49%	6.21%	11.61%	4.32%	0.5020%
6.00%	6.98%	6.49%	10.34%	2.31%	0.2389%
5.50%	6.28%	6.14%	10.53%	7.67%	0.8078%
6.00%	5.21%	5.64%	9.27%	3.30%	0.3054%
6.00%	6.70%	6.83%	11.37%	2.76%	0.3141%
5.50%	5.11%	5.30%	10.18%	2.15%	0.2190%
0.50%	6.94%	4.82%	9.22%	2.30%	0.2125%
5.50%	4.85%	5.12%	10.20%	1.22%	0.1244%
2.00%	5.70%	4.32%	8.46%	3.80%	0.3216%
4.50%	6.02%	5.72%	10.24%	2.23%	0.2287%
6.00%	6.48%	6.49%	10.48%	1.27%	0.1335%
8.50%	8.12%	8.24%	11.44%	13.72%	1.5696%
6.00%	7.13%	6.71%	10.64%	1.26%	0.1345%
1.00%	10.95%	4.98%	7.30%	1.53%	0.1117%
9.50%	9.23%	9.61%	9.84%	3.70%	0.3637%
4.00%	6.61%	5.63%	9.21%	3.49%	0.3210%
4.00%	6.61%	5.96%	10.92%	0.85%	0.0925%
7.50%	8.47%	7.73%	11.63%	2.05%	0.2384%
6.00%	5.82%	6.31%	10.33%	8.14%	0.8415%
6.00%	5.05%	4.97%	8.59%	4.58%	0.3936%
6.50%	6.46%	6.60%	10.77%	2.64%	0.2843%
7.00%	6.24%	6.65%	10.85%	3.02%	0.3279%
					10.53%

Input Date: (ROE model)
User: (CPU title)

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp
Jan-26	0.0000%		0.3100%		
Feb-26	-3.8500%		0.2800%		
Mar-26	-5.7500%		0.3200%		
Apr-26	2.5300%		0.3000%		
May-26	1.7900%		0.2800%		
Jun-26	4.5700%		0.3300%		
Jul-26	4.7900%		0.3100%		
Aug-26	2.4800%		0.3100%		
Sep-26	2.5200%		0.3000%		
Oct-26	-2.8400%		0.3000%		
Nov-26	3.4700%		0.3100%		
Dec-26	1.9600%		0.3000%		
Jan-27	-1.9300%		0.3000%		
Feb-27	5.3700%		0.2700%		
Mar-27	0.8700%		0.2900%		
Apr-27	2.0100%		0.2700%		
May-27	6.0700%		0.2800%		
Jun-27	-0.6700%		0.2700%		
Jul-27	6.7000%		0.2700%		
Aug-27	5.1500%		0.2900%		
Sep-27	4.5000%		0.2700%		
Oct-27	-5.0200%		0.2800%		
Nov-27	7.2100%		0.2700%		
Dec-27	2.7900%		0.2700%		
Jan-28	-0.4000%	3.7500%	0.2700%	0.3717%	0.3842%
Feb-28	-1.2500%	-0.8000%	0.2500%	0.3717%	0.3842%
Mar-28	11.0100%	7.2300%	0.2700%	0.3717%	0.3825%
Apr-28	3.4500%	9.8600%	0.2600%	0.3717%	0.3833%
May-28	1.9700%	2.0800%	0.2700%	0.3742%	0.3867%
Jun-28	-3.8500%	-4.0100%	0.2700%	0.3808%	0.3958%
Jul-28	1.4100%	-0.7600%	0.2700%	0.3842%	0.3992%
Aug-28	8.0300%	6.8200%	0.2900%	0.3867%	0.4017%
Sep-28	2.5900%	2.8700%	0.2700%	0.3842%	0.3992%
Oct-28	1.6800%	-0.9200%	0.3000%	0.3842%	0.3983%
Nov-28	12.9200%	21.4700%	0.2700%	0.3817%	0.3933%
Dec-28	0.4900%	1.0000%	0.2900%	0.3842%	0.3975%
Jan-29	5.8300%	13.2500%	0.2900%	0.3850%	0.3992%
Feb-29	-0.1900%	-2.3200%	0.2700%	0.3883%	0.4050%
Mar-29	-0.1200%	-1.1000%	0.2800%	0.3917%	0.4100%
Apr-29	1.7600%	3.4700%	0.3400%	0.3908%	0.4092%
May-29	-3.6200%	4.7000%	0.3000%	0.3917%	0.4092%
Jun-29	11.4000%	21.7800%	0.2900%	0.3975%	0.4150%

Jul-29	4.7100%	9.0500%	0.3200%	0.3975%	0.4142%
Aug-29	10.2800%	10.3300%	0.3000%	0.3992%	0.4158%
Sep-29	-4.7600%	0.0400%	0.3200%	0.4000%	0.4175%
Oct-29	-19.7300%	-30.2200%	0.3100%	0.3975%	0.4175%
Nov-29	-12.4600%	-14.2400%	0.2600%	0.3967%	0.4117%
Dec-29	2.8200%	6.8000%	0.3100%	0.3892%	0.4033%
Jan-30	6.3900%	7.4000%	0.2900%	0.3883%	0.4050%
Feb-30	2.5900%	8.8500%	0.2600%	0.3908%	0.4075%
Mar-30	8.1200%	8.9100%	0.2900%	0.3850%	0.4000%
Apr-30	-0.8000%	3.4100%	0.2700%	0.3833%	0.3983%
May-30	-0.9600%	-2.3600%	0.2700%	0.3833%	0.3975%
Jun-30	-16.2500%	-19.0300%	0.2900%	0.3808%	0.3967%
Jul-30	3.8600%	1.7600%	0.2800%	0.3767%	0.3950%
Aug-30	1.4100%	0.7600%	0.2600%	0.3725%	0.3900%
Sep-30	-12.8200%	-11.0800%	0.2900%	0.3683%	0.3875%
Oct-30	-8.5500%	-8.1800%	0.2700%	0.3683%	0.3892%
Nov-30	-0.8900%	-7.3000%	0.2600%	0.3725%	0.3958%
Dec-30	-7.0600%	-3.3900%	0.2800%	0.3767%	0.4042%
Jan-31	5.0200%	5.4000%	0.2800%	0.3683%	0.3917%
Feb-31	11.9300%	15.2400%	0.2600%	0.3692%	0.3917%
Mar-31	-6.7500%	-2.3900%	0.2900%	0.3658%	0.3892%
Apr-31	-9.3500%	-10.5400%	0.2700%	0.3667%	0.3967%
May-31	-12.7900%	-10.2900%	0.2600%	0.3642%	0.3967%
Jun-31	14.2100%	13.7300%	0.2800%	0.3633%	0.4008%
Jul-31	-7.2200%	-6.2200%	0.2700%	0.3633%	0.4008%
Aug-31	1.8200%	2.5600%	0.2700%	0.3667%	0.4042%
Sep-31	-29.7300%	-31.4900%	0.2700%	0.3792%	0.4233%
Oct-31	8.9600%	9.9000%	0.2900%	0.4158%	0.4642%
Nov-31	-7.9800%	-6.1400%	0.3100%	0.4117%	0.4675%
Dec-31	-14.0000%	-12.8300%	0.3200%	0.4433%	0.5217%
Jan-32	-2.7100%	-2.0000%	0.3200%	0.4333%	0.5067%
Feb-32	5.7000%	7.9900%	0.3200%	0.4358%	0.5108%
Mar-32	-11.5800%	-10.5800%	0.3100%	0.4150%	0.4875%
Apr-32	-19.9700%	-15.3500%	0.3000%	0.4308%	0.5092%
May-32	-21.9600%	-28.0600%	0.2800%	0.4467%	0.5317%
Jun-32	-0.2200%	0.9000%	0.2800%	0.4508%	0.5500%
Jul-32	38.1500%	33.1800%	0.2800%	0.4383%	0.5425%
Aug-32	38.6900%	40.3000%	0.2800%	0.4092%	0.4858%
Sep-32	-3.4600%	-2.7000%	0.2600%	0.3917%	0.4617%
Oct-32	-13.4900%	-10.4700%	0.2700%	0.3867%	0.4592%
Nov-32	-4.1700%	-3.5400%	0.2600%	0.3858%	0.4642%
Dec-32	5.6500%	8.9300%	0.2700%	0.3825%	0.4667%
Jan-33	0.8700%	-3.1100%	0.2700%	0.3700%	0.4417%
Feb-33	-17.7200%	-19.8400%	0.2300%	0.3733%	0.4458%
Mar-33	3.5300%	-10.8000%	0.2700%	0.3900%	0.4675%
Apr-33	42.5600%	26.3500%	0.2500%	0.3983%	0.4842%
May-33	16.8300%	17.3200%	0.2800%	0.3858%	0.4500%
Jun-33	13.3800%	14.2600%	0.2500%	0.3717%	0.4242%

Jul-33	-8.6200%	-12.0400%	0.2600%	0.3633%	0.4025%
Aug-33	12.0600%	-0.5600%	0.2600%	0.3583%	0.3975%
Sep-33	-11.1800%	-17.5900%	0.2500%	0.3633%	0.4133%
Oct-33	-8.5500%	-7.1200%	0.2600%	0.3617%	0.4142%
Nov-33	11.2700%	-1.8000%	0.2500%	0.3783%	0.4458%
Dec-33	2.5300%	1.2600%	0.2800%	0.3750%	0.4392%
Jan-34	10.6900%	17.4600%	0.2900%	0.3625%	0.4167%
Feb-34	-3.2200%	-2.4200%	0.2400%	0.3500%	0.3917%
Mar-34	0.0000%	-1.1100%	0.2700%	0.3442%	0.3792%
Apr-34	-2.5100%	-3.5100%	0.2500%	0.3392%	0.3692%
May-34	-7.3600%	-7.6500%	0.2500%	0.3342%	0.3642%
Jun-34	2.2900%	4.7800%	0.2400%	0.3275%	0.3583%
Jul-34	-11.3200%	-16.0300%	0.2400%	0.3242%	0.3567%
Aug-34	6.1100%	2.6900%	0.2400%	0.3275%	0.3617%
Sep-34	-0.3300%	0.9500%	0.2300%	0.3300%	0.3683%
Oct-34	-2.8600%	-6.6600%	0.2700%	0.3250%	0.3633%
Nov-34	9.4200%	-0.4800%	0.2500%	0.3217%	0.3567%
Dec-34	-0.1000%	-7.0100%	0.2500%	0.3175%	0.3558%
Jan-35	-4.1100%	-2.3100%	0.2500%	0.3142%	0.3508%
Feb-35	-3.4100%	-11.3600%	0.2100%	0.3075%	0.3442%
Mar-35	-2.8600%	10.4300%	0.2200%	0.3058%	0.3425%
Apr-35	9.8000%	11.7800%	0.2300%	0.3050%	0.3400%
May-35	4.0900%	11.0600%	0.2300%	0.3042%	0.3358%
Jun-35	6.9900%	10.3600%	0.2200%	0.3008%	0.3325%
Jul-35	8.5000%	8.7000%	0.2400%	0.2967%	0.3242%
Aug-35	2.8000%	5.6300%	0.2300%	0.3000%	0.3225%
Sep-35	2.5600%	-1.2200%	0.2300%	0.2992%	0.3208%
Oct-35	7.7700%	12.2400%	0.2300%	0.2933%	0.3183%
Nov-35	4.7400%	1.0800%	0.2400%	0.2892%	0.3108%
Dec-35	3.9400%	4.7900%	0.2400%	0.2867%	0.3042%
Jan-36	6.7000%	11.0300%	0.2400%	0.2808%	0.2975%
Feb-36	2.2400%	-3.4200%	0.2300%	0.2767%	0.2958%
Mar-36	2.6800%	0.3300%	0.2400%	0.2742%	0.2958%
Apr-36	-7.5100%	-8.1400%	0.2200%	0.2742%	0.2975%
May-36	5.4500%	7.6100%	0.2200%	0.2725%	0.2942%
Jun-36	3.3300%	3.5000%	0.2400%	0.2700%	0.2925%
Jul-36	7.0100%	10.0900%	0.2300%	0.2692%	0.2900%
Aug-36	1.5100%	-0.1800%	0.2300%	0.2675%	0.2867%
Sep-36	0.3100%	-2.2500%	0.2100%	0.2650%	0.2842%
Oct-36	7.7500%	5.6600%	0.2300%	0.2650%	0.2808%
Nov-36	1.3400%	-1.6900%	0.2200%	0.2625%	0.2758%
Dec-36	-0.2900%	-1.7400%	0.2200%	0.2583%	0.2733%
Jan-37	3.9000%	1.9500%	0.2100%	0.2583%	0.2750%
Feb-37	1.9100%	-3.5300%	0.2000%	0.2683%	0.2833%
Mar-37	-0.7700%	-5.7300%	0.2200%	0.2767%	0.2917%
Apr-37	-8.0900%	-7.3600%	0.2300%	0.2850%	0.2975%
May-37	-0.2400%	-5.1600%	0.2200%	0.2775%	0.2900%
Jun-37	-5.0400%	-4.6700%	0.2500%	0.2733%	0.2858%
Jul-37	10.4500%	16.7100%	0.2400%	0.2708%	0.2842%

Aug-37	-4.8300%	-9.0300%	0.2300%	0.2700%	0.2842%
Sep-37	-14.0300%	-11.7400%	0.2300%	0.2733%	0.2883%
Oct-37	-9.8100%	-5.1600%	0.2300%	0.2725%	0.2942%
Nov-37	-8.6600%	0.8000%	0.2400%	0.2700%	0.2950%
Dec-37	-4.5900%	-9.5100%	0.2300%	0.2675%	0.2917%
Jan-38	1.5200%	-3.6800%	0.2300%	0.2642%	0.2917%
Feb-38	6.7400%	3.4100%	0.2100%	0.2667%	0.2925%
Mar-38	-24.8700%	-19.8400%	0.2300%	0.2683%	0.2967%
Apr-38	14.4700%	15.3800%	0.2200%	0.2750%	0.3108%
May-38	-3.3000%	1.8100%	0.2200%	0.2683%	0.2967%
Jun-38	25.0300%	16.2200%	0.2100%	0.2717%	0.3067%
Jul-38	7.4400%	1.4800%	0.2100%	0.2683%	0.3017%
Aug-38	-2.2600%	-5.5700%	0.2200%	0.2650%	0.2975%
Sep-38	1.6600%	1.9100%	0.2100%	0.2675%	0.3000%
Oct-38	7.7600%	18.0100%	0.2200%	0.2625%	0.2942%
Nov-38	-2.7300%	-6.2000%	0.2100%	0.2583%	0.2883%
Dec-38	4.0100%	3.9100%	0.2200%	0.2567%	0.2850%
Jan-39	-6.7400%	1.6500%	0.2100%	0.2508%	0.2767%
Feb-39	3.9000%	8.0100%	0.1900%	0.2500%	0.2717%
Mar-39	-13.3900%	-13.7800%	0.2100%	0.2492%	0.2683%
Apr-39	-0.2700%	2.8500%	0.1900%	0.2517%	0.2683%
May-39	7.3300%	6.6500%	0.2000%	0.2475%	0.2633%
Jun-39	-6.1200%	-4.2300%	0.1800%	0.2433%	0.2608%
Jul-39	11.0500%	12.0800%	0.1900%	0.2408%	0.2567%
Aug-39	-6.4800%	-6.4700%	0.1800%	0.2442%	0.2592%
Sep-39	16.7300%	4.2100%	0.1900%	0.2708%	0.2908%
Oct-39	-1.2300%	1.3000%	0.2300%	0.2625%	0.2792%
Nov-39	-3.9800%	-1.5700%	0.2000%	0.2500%	0.2633%
Dec-39	2.7000%	2.7200%	0.1900%	0.2450%	0.2617%
Jan-40	-3.3600%	0.6900%	0.2000%	0.2400%	0.2567%
Feb-40	1.3300%	-1.0200%	0.1800%	0.2383%	0.2542%
Mar-40	1.2400%	0.9400%	0.1900%	0.2367%	0.2533%
Apr-40	-0.2400%	-0.9200%	0.1800%	0.2350%	0.2492%
May-40	-22.8900%	-19.6400%	0.1900%	0.2442%	0.2567%
Jun-40	8.0900%	15.0600%	0.1900%	0.2467%	0.2583%
Jul-40	3.4100%	0.6500%	0.2000%	0.2400%	0.2508%
Aug-40	3.5000%	-0.9400%	0.1900%	0.2375%	0.2525%
Sep-40	1.2300%	-2.1100%	0.1800%	0.2350%	0.2508%
Oct-40	4.2200%	3.1700%	0.1800%	0.2325%	0.2508%
Nov-40	-3.1600%	-12.0700%	0.1800%	0.2292%	0.2467%
Dec-40	0.0900%	1.5400%	0.1700%	0.2258%	0.2433%
Jan-41	-4.6300%	-0.8400%	0.1600%	0.2292%	0.2458%
Feb-41	-0.6000%	-2.3300%	0.1600%	0.2317%	0.2500%
Mar-41	0.7100%	-2.8000%	0.1800%	0.2333%	0.2508%
Apr-41	-6.1200%	-8.4400%	0.1700%	0.2350%	0.2533%
May-41	1.8300%	-3.3700%	0.1700%	0.2342%	0.2492%
Jun-41	5.7800%	2.5700%	0.1600%	0.2308%	0.2458%
Jul-41	5.7900%	5.3800%	0.1600%	0.2283%	0.2417%
Aug-41	0.1000%	-1.9200%	0.1600%	0.2283%	0.2417%

Sep-41	-0.6800%	-2.8200%	0.1600%	0.2292%	0.2425%
Oct-41	-6.5700%	-8.4800%	0.1600%	0.2275%	0.2392%
Nov-41	-2.8400%	-6.5200%	0.1400%	0.2267%	0.2383%
Dec-41	-4.0700%	-6.7800%	0.1600%	0.2333%	0.2458%
Jan-42	1.6100%	2.5200%	0.2100%	0.2358%	0.2467%
Feb-42	-1.5900%	-3.3900%	0.1900%	0.2375%	0.2483%
Mar-42	-6.5200%	-10.4600%	0.2100%	0.2383%	0.2500%
Apr-42	-4.0000%	-4.3200%	0.2000%	0.2358%	0.2483%
May-42	7.9600%	9.5600%	0.1900%	0.2375%	0.2500%
Jun-42	2.2100%	0.5700%	0.2100%	0.2375%	0.2508%
Jul-42	3.3700%	0.4000%	0.2100%	0.2358%	0.2492%
Aug-42	1.6400%	0.2600%	0.2100%	0.2342%	0.2492%
Sep-42	2.9000%	4.6600%	0.2000%	0.2333%	0.2483%
Oct-42	6.7800%	13.6200%	0.2100%	0.2333%	0.2458%
Nov-42	-0.2100%	-0.1500%	0.2000%	0.2325%	0.2450%
Dec-42	5.4900%	3.2800%	0.2100%	0.2342%	0.2467%
Jan-43	7.3700%	12.1700%	0.2000%	0.2325%	0.2442%
Feb-43	5.8300%	7.1900%	0.1900%	0.2308%	0.2408%
Mar-43	5.4500%	4.1200%	0.2100%	0.2300%	0.2400%
Apr-43	0.3500%	3.8700%	0.2000%	0.2300%	0.2400%
May-43	5.5200%	3.4700%	0.1900%	0.2283%	0.2392%
Jun-43	2.2300%	5.3800%	0.2100%	0.2267%	0.2375%
Jul-43	-5.2600%	0.3800%	0.2100%	0.2242%	0.2350%
Aug-43	1.7100%	1.0500%	0.2100%	0.2242%	0.2342%
Sep-43	2.6300%	3.2300%	0.2000%	0.2242%	0.2350%
Oct-43	-1.0800%	0.8200%	0.2000%	0.2250%	0.2358%
Nov-43	-6.5400%	-7.7500%	0.2100%	0.2258%	0.2367%
Dec-43	6.1700%	5.7800%	0.2100%	0.2283%	0.2392%
Jan-44	1.7100%	1.0600%	0.2100%	0.2267%	0.2358%
Feb-44	0.4200%	1.7900%	0.2000%	0.2283%	0.2358%
Mar-44	1.9500%	1.0400%	0.2100%	0.2283%	0.2350%
Apr-44	-1.0000%	-0.9100%	0.2000%	0.2283%	0.2350%
May-44	5.0500%	3.0100%	0.2200%	0.2275%	0.2342%
Jun-44	5.4300%	5.2600%	0.2000%	0.2275%	0.2342%
Jul-44	-1.9300%	0.2900%	0.2100%	0.2267%	0.2333%
Aug-44	1.5700%	3.5700%	0.2100%	0.2258%	0.2325%
Sep-44	-0.0800%	-1.5000%	0.2000%	0.2267%	0.2325%
Oct-44	0.2300%	1.3900%	0.2100%	0.2267%	0.2342%
Nov-44	1.3300%	-1.3000%	0.2000%	0.2267%	0.2333%
Dec-44	3.7400%	3.2400%	0.2000%	0.2250%	0.2300%
Jan-45	1.5800%	4.9700%	0.2100%	0.2242%	0.2300%
Feb-45	6.8300%	6.9500%	0.1800%	0.2208%	0.2275%
Mar-45	-4.4100%	-3.5700%	0.2000%	0.2183%	0.2267%
Apr-45	9.0200%	10.6600%	0.1900%	0.2175%	0.2275%
May-45	1.9500%	1.7100%	0.1900%	0.2183%	0.2267%
Jun-45	-0.0700%	6.6200%	0.1900%	0.2175%	0.2242%
Jul-45	-1.8000%	-0.5100%	0.1800%	0.2167%	0.2233%
Aug-45	6.4100%	0.3100%	0.1900%	0.2175%	0.2250%
Sep-45	4.3800%	7.3900%	0.1800%	0.2183%	0.2250%

Oct-45	3.2200%	6.4100%	0.1900%	0.2183%	0.2250%
Nov-45	3.9600%	4.7100%	0.1800%	0.2183%	0.2233%
Dec-45	1.1600%	-1.1700%	0.1800%	0.2175%	0.2233%
Jan-46	7.1400%	11.9900%	0.1700%	0.2117%	0.2183%
Feb-46	-6.4100%	-6.4000%	0.1500%	0.2067%	0.2133%
Mar-46	4.8000%	6.3100%	0.1600%	0.2058%	0.2117%
Apr-46	3.9300%	3.3800%	0.1700%	0.2050%	0.2133%
May-46	2.8800%	3.0100%	0.1800%	0.2092%	0.2150%
Jun-46	-3.7000%	-2.7600%	0.1600%	0.2075%	0.2158%
Jul-46	-2.3900%	-3.9500%	0.1900%	0.2067%	0.2158%
Aug-46	-6.7400%	-7.2400%	0.1700%	0.2092%	0.2183%
Sep-46	-9.9700%	-10.5100%	0.1800%	0.2150%	0.2233%
Oct-46	-0.6000%	2.2000%	0.1900%	0.2167%	0.2250%
Nov-46	-0.2700%	0.5800%	0.1800%	0.2158%	0.2242%
Dec-46	4.5700%	7.0600%	0.1900%	0.2175%	0.2242%
Jan-47	2.5500%	-0.0200%	0.1800%	0.2142%	0.2208%
Feb-47	-0.7700%	-0.8900%	0.1600%	0.2125%	0.2200%
Mar-47	-1.4900%	-3.6400%	0.1800%	0.2125%	0.2200%
Apr-47	-3.6300%	-3.2000%	0.1700%	0.2108%	0.2192%
May-47	0.1400%	-2.7900%	0.1700%	0.2108%	0.2192%
Jun-47	5.5400%	4.2800%	0.1900%	0.2125%	0.2200%
Jul-47	3.8100%	2.1400%	0.1800%	0.2125%	0.2200%
Aug-47	-2.0300%	-0.2200%	0.1700%	0.2133%	0.2200%
Sep-47	-1.1100%	-1.4200%	0.1800%	0.2175%	0.2242%
Oct-47	2.3800%	-1.3300%	0.1800%	0.2250%	0.2325%
Nov-47	-1.7500%	-8.2400%	0.1700%	0.2308%	0.2375%
Dec-47	2.3300%	1.8900%	0.2100%	0.2383%	0.2450%
Jan-48	-3.7900%	0.7000%	0.2000%	0.2383%	0.2450%
Feb-48	-3.8800%	-3.7200%	0.1900%	0.2375%	0.2442%
Mar-48	7.9300%	6.1700%	0.2200%	0.2358%	0.2417%
Apr-48	2.9200%	1.6000%	0.2000%	0.2317%	0.2392%
May-48	8.7900%	5.8300%	0.1800%	0.2300%	0.2383%
Jun-48	0.5400%	2.1200%	0.2100%	0.2300%	0.2375%
Jul-48	-5.0800%	-4.4300%	0.1900%	0.2342%	0.2408%
Aug-48	1.5800%	0.3600%	0.2100%	0.2367%	0.2450%
Sep-48	-2.7600%	-0.7100%	0.2000%	0.2367%	0.2442%
Oct-48	7.1000%	4.0300%	0.1900%	0.2367%	0.2450%
Nov-48	-9.6100%	-9.1300%	0.2100%	0.2367%	0.2433%
Dec-48	3.4600%	2.2100%	0.2000%	0.2325%	0.2400%
Jan-49	0.3900%	5.0400%	0.2000%	0.2258%	0.2342%
Feb-49	-2.9600%	0.0500%	0.1800%	0.2258%	0.2333%
Mar-49	3.2800%	3.6400%	0.1900%	0.2250%	0.2325%
Apr-49	-1.7900%	0.5800%	0.1800%	0.2250%	0.2325%
May-49	-2.5800%	0.3400%	0.2000%	0.2258%	0.2317%
Jun-49	0.1400%	-1.3400%	0.1900%	0.2258%	0.2317%
Jul-49	6.5000%	5.6900%	0.1700%	0.2225%	0.2292%
Aug-49	2.1900%	3.4600%	0.1900%	0.2183%	0.2258%
Sep-49	2.6300%	3.7300%	0.1700%	0.2167%	0.2242%
Oct-49	3.4000%	1.1200%	0.1800%	0.2175%	0.2250%

Nov-49	1.7500%	1.5900%	0.1700%	0.2167%	0.2233%
Dec-49	4.8600%	3.9600%	0.1700%	0.2150%	0.2225%
Jan-50	1.9700%	3.5300%	0.1800%	0.2142%	0.2208%
Feb-50	1.9900%	1.0000%	0.1600%	0.2150%	0.2208%
Mar-50	0.7000%	0.8400%	0.1800%	0.2150%	0.2217%
Apr-50	4.8600%	1.8500%	0.1600%	0.2167%	0.2217%
May-50	5.0900%	1.9200%	0.1900%	0.2175%	0.2242%
Jun-50	-5.4800%	-7.7100%	0.1700%	0.2183%	0.2242%
Jul-50	1.1900%	-4.3600%	0.1800%	0.2208%	0.2267%
Aug-50	4.4300%	1.5400%	0.1800%	0.2175%	0.2225%
Sep-50	5.9200%	4.1800%	0.1700%	0.2200%	0.2258%
Oct-50	0.9300%	-0.2700%	0.1900%	0.2225%	0.2267%
Nov-50	1.6900%	-1.7600%	0.1800%	0.2225%	0.2267%
Dec-50	5.1300%	3.1200%	0.1800%	0.2225%	0.2267%
Jan-51	6.3700%	4.3800%	0.2000%	0.2217%	0.2258%
Feb-51	1.5700%	2.6800%	0.1700%	0.2217%	0.2258%
Mar-51	-1.5600%	-1.7400%	0.1900%	0.2317%	0.2350%
Apr-51	5.0900%	0.0500%	0.2000%	0.2392%	0.2442%
May-51	-2.9900%	0.6600%	0.2100%	0.2408%	0.2442%
Jun-51	-2.2800%	-0.4000%	0.2000%	0.2450%	0.2492%
Jul-51	7.1100%	4.3900%	0.2300%	0.2450%	0.2492%
Aug-51	4.7800%	1.5200%	0.2100%	0.2400%	0.2433%
Sep-51	0.1300%	0.8600%	0.1900%	0.2367%	0.2400%
Oct-51	-1.0300%	0.2900%	0.2300%	0.2408%	0.2442%
Nov-51	0.9600%	1.2000%	0.2100%	0.2467%	0.2517%
Dec-51	4.2400%	3.5200%	0.2200%	0.2508%	0.2550%
Jan-52	1.8100%	3.0500%	0.2300%	0.2483%	0.2542%
Feb-52	-2.8200%	0.5900%	0.2100%	0.2442%	0.2508%
Mar-52	5.0300%	1.7600%	0.2300%	0.2467%	0.2525%
Apr-52	-4.0200%	-1.5400%	0.2200%	0.2442%	0.2508%
May-52	3.4300%	1.9000%	0.2000%	0.2442%	0.2500%
Jun-52	4.9000%	0.4900%	0.2200%	0.2450%	0.2525%
Jul-52	1.9600%	2.0600%	0.2200%	0.2458%	0.2533%
Aug-52	-0.7100%	2.0300%	0.2100%	0.2450%	0.2550%
Sep-52	-1.7600%	0.1500%	0.2300%	0.2458%	0.2558%
Oct-52	0.2000%	1.0100%	0.2300%	0.2508%	0.2567%
Nov-52	5.7100%	4.2300%	0.2100%	0.2483%	0.2550%
Dec-52	3.8200%	2.1300%	0.2400%	0.2475%	0.2542%
Jan-53	-0.4900%	1.0300%	0.2300%	0.2517%	0.2575%
Feb-53	-1.0600%	-0.6700%	0.2100%	0.2558%	0.2617%
Mar-53	-2.1200%	-0.4300%	0.2500%	0.2600%	0.2650%
Apr-53	-2.3700%	-1.9200%	0.2400%	0.2692%	0.2742%
May-53	0.7700%	0.2400%	0.2400%	0.2783%	0.2842%
Jun-53	-1.3400%	-2.7300%	0.2700%	0.2833%	0.2917%
Jul-53	2.7300%	3.4500%	0.2500%	0.2733%	0.2850%
Aug-53	-5.0100%	0.1600%	0.2500%	0.2700%	0.2825%
Sep-53	0.3400%	1.1900%	0.2500%	0.2742%	0.2858%
Oct-53	5.4000%	4.1100%	0.2300%	0.2633%	0.2775%
Nov-53	2.0400%	2.7400%	0.2400%	0.2592%	0.2725%

Dec-53	0.5300%	0.6400%	0.2400%	0.2608%	0.2733%
Jan-54	5.3600%	3.2700%	0.2300%	0.2550%	0.2683%
Feb-54	1.1100%	1.1700%	0.2200%	0.2458%	0.2600%
Mar-54	3.2500%	2.7000%	0.2500%	0.2383%	0.2525%
Apr-54	5.1600%	1.2100%	0.2200%	0.2375%	0.2500%
May-54	4.1800%	2.5700%	0.2000%	0.2400%	0.2525%
Jun-54	0.3100%	0.9600%	0.2500%	0.2417%	0.2550%
Jul-54	5.8900%	4.9500%	0.2200%	0.2408%	0.2533%
Aug-54	-2.7500%	-1.3100%	0.2300%	0.2392%	0.2525%
Sep-54	8.5100%	1.7800%	0.2200%	0.2408%	0.2533%
Oct-54	-1.6700%	-3.6800%	0.2100%	0.2392%	0.2533%
Nov-54	9.0900%	5.6500%	0.2300%	0.2408%	0.2533%
Dec-54	5.3400%	3.4100%	0.2300%	0.2417%	0.2533%
Jan-55	1.9700%	1.4300%	0.2200%	0.2442%	0.2550%
Feb-55	0.9800%	3.4400%	0.2200%	0.2442%	0.2583%
Mar-55	-0.3000%	-1.1000%	0.2400%	0.2517%	0.2608%
Apr-55	3.9600%	2.0200%	0.2200%	0.2508%	0.2608%
May-55	0.5500%	-0.5800%	0.2500%	0.2533%	0.2625%
Jun-55	8.4100%	2.1100%	0.2300%	0.2542%	0.2617%
Jul-55	6.2200%	4.6600%	0.2300%	0.2550%	0.2617%
Aug-55	-0.2500%	0.5200%	0.2700%	0.2592%	0.2667%
Sep-55	1.3000%	-2.9000%	0.2400%	0.2608%	0.2683%
Oct-55	-2.8400%	-0.8500%	0.2500%	0.2583%	0.2658%
Nov-55	8.2700%	2.9200%	0.2400%	0.2583%	0.2650%
Dec-55	0.1500%	-0.6700%	0.2400%	0.2625%	0.2683%
Jan-56	-3.4700%	0.3000%	0.2500%	0.2592%	0.2658%
Feb-56	4.1300%	1.7800%	0.2300%	0.2567%	0.2633%
Mar-56	7.1000%	3.9400%	0.2300%	0.2583%	0.2650%
Apr-56	-0.0400%	-2.8700%	0.2600%	0.2700%	0.2750%
May-56	-5.9300%	-1.3800%	0.2600%	0.2733%	0.2783%
Jun-56	4.0900%	2.1100%	0.2300%	0.2717%	0.2792%
Jul-56	5.3000%	5.2500%	0.2600%	0.2733%	0.2825%
Aug-56	-3.2800%	-2.5900%	0.2600%	0.2858%	0.2917%
Sep-56	-4.4000%	-3.1900%	0.2500%	0.2967%	0.3025%
Oct-56	0.6600%	0.6300%	0.2900%	0.2992%	0.3075%
Nov-56	-0.5000%	0.2800%	0.2700%	0.3075%	0.3133%
Dec-56	3.7000%	1.0400%	0.2800%	0.3125%	0.3208%
Jan-57	-4.0100%	3.2400%	0.2900%	0.3142%	0.3242%
Feb-57	-2.6400%	-0.6100%	0.2500%	0.3058%	0.3192%
Mar-57	2.1500%	0.7800%	0.2600%	0.3050%	0.3167%
Apr-57	3.8800%	4.0200%	0.2900%	0.3058%	0.3158%
May-57	4.3700%	1.8000%	0.2900%	0.3117%	0.3192%
Jun-57	0.0400%	-4.1800%	0.2500%	0.3258%	0.3317%
Jul-57	1.3100%	0.3500%	0.3300%	0.3325%	0.3417%
Aug-57	-5.0500%	-2.9400%	0.3000%	0.3417%	0.3508%
Sep-57	-6.0200%	-1.3800%	0.3100%	0.3433%	0.3550%
Oct-57	-3.0200%	-0.7400%	0.3100%	0.3417%	0.3567%
Nov-57	2.3100%	4.2800%	0.2900%	0.3400%	0.3575%
Dec-57	-3.9500%	1.9500%	0.2900%	0.3175%	0.3400%

Jan-58	4.4500%	6.0200%	0.2700%	0.3000%	0.3175%
Feb-58	-1.4100%	1.3700%	0.2500%	0.2992%	0.3142%
Mar-58	3.2800%	2.0000%	0.2700%	0.3025%	0.3150%
Apr-58	3.3700%	5.1600%	0.2600%	0.3000%	0.3150%
May-58	2.1200%	1.6400%	0.2400%	0.2975%	0.3150%
Jun-58	2.7900%	1.7200%	0.2700%	0.2975%	0.3150%
Jul-58	4.4900%	1.0900%	0.2700%	0.3058%	0.3192%
Aug-58	1.7600%	-0.6700%	0.2700%	0.3208%	0.3317%
Sep-58	5.0100%	3.3200%	0.3200%	0.3408%	0.3500%
Oct-58	2.7000%	4.0600%	0.3200%	0.3425%	0.3508%
Nov-58	2.8400%	2.6300%	0.2800%	0.3408%	0.3508%
Dec-58	5.3500%	6.5500%	0.3300%	0.3400%	0.3483%
Jan-59	0.5300%	1.3400%	0.3100%	0.3433%	0.3517%
Feb-59	0.4900%	2.0600%	0.3100%	0.3450%	0.3533%
Mar-59	0.2000%	1.0200%	0.3500%	0.3442%	0.3525%
Apr-59	4.0200%	-0.2800%	0.3300%	0.3525%	0.3600%
May-59	2.4000%	-1.2000%	0.3300%	0.3642%	0.3717%
Jun-59	-0.2200%	-0.8800%	0.3600%	0.3717%	0.3800%
Jul-59	3.6300%	3.7100%	0.3500%	0.3725%	0.3817%
Aug-59	-1.0200%	1.7500%	0.3500%	0.3692%	0.3817%
Sep-59	-4.4300%	-3.9300%	0.3400%	0.3767%	0.3908%
Oct-59	1.2800%	1.5700%	0.3500%	0.3808%	0.3967%
Nov-59	1.8600%	0.0100%	0.3500%	0.3800%	0.3917%
Dec-59	2.9200%	2.3000%	0.3600%	0.3817%	0.3950%
Jan-60	-7.0000%	-1.0800%	0.3500%	0.3842%	0.3975%
Feb-60	1.4700%	1.8100%	0.3700%	0.3800%	0.3925%
Mar-60	-1.2300%	1.4100%	0.3600%	0.3742%	0.3850%
Apr-60	-1.6100%	0.7500%	0.3200%	0.3708%	0.3817%
May-60	3.2600%	2.3300%	0.3700%	0.3717%	0.3842%
Jun-60	2.1100%	4.0800%	0.3400%	0.3708%	0.3833%
Jul-60	-2.3400%	-1.0000%	0.3200%	0.3675%	0.3800%
Aug-60	3.1700%	5.0200%	0.3400%	0.3567%	0.3700%
Sep-60	-5.9000%	-5.1400%	0.3200%	0.3542%	0.3675%
Oct-60	-0.0700%	-0.1200%	0.3300%	0.3583%	0.3700%
Nov-60	4.6500%	3.8600%	0.3200%	0.3592%	0.3725%
Dec-60	4.7900%	7.2400%	0.3300%	0.3625%	0.3750%
Jan-61	6.4500%	6.1900%	0.3300%	0.3600%	0.3733%
Feb-61	3.1900%	3.5700%	0.3000%	0.3558%	0.3667%
Mar-61	2.7000%	3.1900%	0.3100%	0.3517%	0.3608%
Apr-61	0.5100%	1.0900%	0.3100%	0.3542%	0.3642%
May-61	2.3900%	1.3300%	0.3400%	0.3558%	0.3675%
Jun-61	-2.7500%	-2.2700%	0.3200%	0.3608%	0.3708%
Jul-61	3.4200%	4.2400%	0.3300%	0.3675%	0.3775%
Aug-61	2.4300%	4.5400%	0.3300%	0.3708%	0.3808%
Sep-61	-1.8400%	-0.6700%	0.3200%	0.3708%	0.3825%
Oct-61	2.9800%	4.8000%	0.3400%	0.3683%	0.3800%
Nov-61	4.4700%	3.3500%	0.3200%	0.3658%	0.3783%
Dec-61	0.4600%	-2.9200%	0.3100%	0.3683%	0.3800%
Jan-62	-3.6600%	-3.6600%	0.3700%	0.3683%	0.3792%

Feb-62	2.0900%	3.0000%	0.3200%	0.3683%	0.3800%
Mar-62	-0.4600%	0.8100%	0.3300%	0.3658%	0.3775%
Apr-62	-6.0700%	-3.5300%	0.3300%	0.3608%	0.3742%
May-62	-8.1100%	-9.1200%	0.3200%	0.3567%	0.3692%
Jun-62	-8.0300%	-5.4800%	0.3000%	0.3567%	0.3700%
Jul-62	6.5200%	6.8900%	0.3400%	0.3617%	0.3742%
Aug-62	2.0800%	2.7100%	0.3400%	0.3625%	0.3742%
Sep-62	-4.6500%	-3.3400%	0.3000%	0.3600%	0.3717%
Oct-62	0.6400%	-0.1400%	0.3500%	0.3567%	0.3675%
Nov-62	10.8600%	7.6800%	0.3100%	0.3542%	0.3667%
Dec-62	1.5300%	3.1200%	0.3200%	0.3533%	0.3650%
Jan-63	5.0600%	5.5800%	0.3200%	0.3508%	0.3642%
Feb-63	-2.3900%	-2.0600%	0.2900%	0.3492%	0.3633%
Mar-63	3.7000%	1.8600%	0.3100%	0.3492%	0.3617%
Apr-63	5.0000%	2.3200%	0.3400%	0.3508%	0.3625%
May-63	1.9300%	0.7000%	0.3300%	0.3517%	0.3633%
Jun-63	-1.8800%	-1.2300%	0.3000%	0.3525%	0.3633%
Jul-63	-0.2200%	1.2300%	0.3600%	0.3550%	0.3658%
Aug-63	5.3500%	4.2500%	0.3300%	0.3575%	0.3667%
Sep-63	-0.9700%	-2.5800%	0.3400%	0.3592%	0.3675%
Oct-63	3.3900%	-0.3300%	0.3400%	0.3600%	0.3692%
Nov-63	-0.4600%	-0.8200%	0.3200%	0.3608%	0.3700%
Dec-63	2.6200%	3.1700%	0.3600%	0.3625%	0.3717%
Jan-64	2.8300%	1.2700%	0.3500%	0.3642%	0.3742%
Feb-64	1.4700%	0.3200%	0.3200%	0.3633%	0.3717%
Mar-64	1.6500%	-0.3500%	0.3700%	0.3650%	0.3725%
Apr-64	0.7500%	0.6700%	0.3500%	0.3667%	0.3742%
May-64	1.6200%	0.3200%	0.3200%	0.3675%	0.3750%
Jun-64	1.7800%	2.3400%	0.3800%	0.3675%	0.3758%
Jul-64	1.9500%	4.7100%	0.3500%	0.3667%	0.3750%
Aug-64	-1.1800%	0.3100%	0.3500%	0.3675%	0.3742%
Sep-64	3.0100%	1.7000%	0.3400%	0.3683%	0.3733%
Oct-64	0.9600%	1.6500%	0.3400%	0.3683%	0.3742%
Nov-64	0.0500%	1.1400%	0.3500%	0.3692%	0.3742%
Dec-64	0.5600%	0.8600%	0.3500%	0.3700%	0.3750%
Jan-65	3.4500%	3.7100%	0.3300%	0.3692%	0.3733%
Feb-65	0.3100%	0.0900%	0.3200%	0.3675%	0.3717%
Mar-65	-1.3300%	0.0700%	0.3800%	0.3683%	0.3733%
Apr-65	3.5600%	1.0900%	0.3300%	0.3692%	0.3733%
May-65	-0.3000%	-0.8400%	0.3300%	0.3700%	0.3742%
Jun-65	-4.7300%	-3.4000%	0.3800%	0.3717%	0.3767%
Jul-65	1.4700%	1.0500%	0.3400%	0.3733%	0.3800%
Aug-65	2.7200%	0.9700%	0.3700%	0.3742%	0.3825%
Sep-65	3.3400%	1.9400%	0.3500%	0.3767%	0.3858%
Oct-65	2.8900%	1.2900%	0.3400%	0.3800%	0.3883%
Nov-65	-0.3100%	-1.1600%	0.3700%	0.3833%	0.3908%
Dec-65	1.0600%	-0.0800%	0.3700%	0.3900%	0.4000%
Jan-66	0.6200%	-2.9700%	0.3800%	0.3950%	0.4025%
Feb-66	-1.3100%	-4.1400%	0.3400%	0.3983%	0.4083%

Mar-66	-2.0500%	-0.4500%	0.4000%	0.4100%	0.4208%
Apr-66	2.2000%	1.7200%	0.3600%	0.4108%	0.4250%
May-66	-4.9200%	-2.9600%	0.4100%	0.4150%	0.4250%
Jun-66	-1.4600%	-1.8100%	0.3900%	0.4225%	0.4300%
Jul-66	-1.2000%	0.0900%	0.3800%	0.4300%	0.4375%
Aug-66	-7.2500%	-8.7500%	0.4300%	0.4425%	0.4483%
Sep-66	-0.5300%	4.7500%	0.4100%	0.4575%	0.4650%
Oct-66	4.9400%	9.7000%	0.4000%	0.4508%	0.4583%
Nov-66	0.9500%	-0.7600%	0.3800%	0.4458%	0.4550%
Dec-66	0.0200%	2.2100%	0.3900%	0.4492%	0.4567%
Jan-67	7.9800%	2.7100%	0.4000%	0.4333%	0.4417%
Feb-67	0.7200%	-1.5700%	0.3400%	0.4192%	0.4317%
Mar-67	4.0900%	1.9700%	0.3900%	0.4275%	0.4358%
Apr-67	4.3700%	2.0200%	0.3500%	0.4258%	0.4383%
May-67	-4.7700%	-5.0600%	0.4300%	0.4367%	0.4517%
Jun-67	1.9000%	-1.3100%	0.3900%	0.4533%	0.4692%
Jul-67	4.6800%	2.0400%	0.4300%	0.4650%	0.4767%
Aug-67	-0.7000%	-0.6500%	0.4200%	0.4683%	0.4800%
Sep-67	3.4200%	-0.3700%	0.4000%	0.4708%	0.4892%
Oct-67	-2.7600%	-5.7200%	0.4500%	0.4850%	0.5008%
Nov-67	0.6500%	2.9300%	0.4500%	0.5058%	0.5192%
Dec-67	2.7800%	2.8600%	0.4400%	0.5158%	0.5292%
Jan-68	-4.2500%	0.8200%	0.5000%	0.5142%	0.5242%
Feb-68	-2.6100%	-2.3300%	0.4200%	0.5083%	0.5225%
Mar-68	1.1000%	-3.9900%	0.4300%	0.5092%	0.5233%
Apr-68	8.3400%	2.7500%	0.4900%	0.5175%	0.5317%
May-68	1.6100%	-0.6200%	0.4600%	0.5225%	0.5400%
Jun-68	1.0500%	8.0700%	0.4200%	0.5233%	0.5417%
Jul-68	-1.7200%	-0.7000%	0.4800%	0.5200%	0.5375%
Aug-68	1.6400%	0.0400%	0.4200%	0.5017%	0.5208%
Sep-68	4.0000%	1.0000%	0.4400%	0.4975%	0.5192%
Oct-68	0.8700%	0.8600%	0.4500%	0.5075%	0.5267%
Nov-68	5.3100%	7.8100%	0.4300%	0.5158%	0.5375%
Dec-68	-4.0200%	-3.0900%	0.4900%	0.5375%	0.5550%
Jan-69	-0.6800%	1.6900%	0.5000%	0.5492%	0.5608%
Feb-69	-4.2600%	-5.3200%	0.4600%	0.5550%	0.5642%
Mar-69	3.5900%	-0.9600%	0.4700%	0.5708%	0.5792%
Apr-69	2.2900%	1.3900%	0.5500%	0.5742%	0.5850%
May-69	0.2600%	-0.0600%	0.4700%	0.5658%	0.5800%
Jun-69	-5.4200%	-5.1600%	0.5500%	0.5817%	0.5933%
Jul-69	-5.8700%	-3.6300%	0.5200%	0.5900%	0.6033%
Aug-69	4.5400%	-1.1400%	0.4800%	0.5808%	0.6025%
Sep-69	-2.3600%	-3.7200%	0.5500%	0.5950%	0.6133%
Oct-69	4.5900%	7.9800%	0.5700%	0.6108%	0.6275%
Nov-69	-2.9700%	-5.8800%	0.4900%	0.6125%	0.6317%
Dec-69	-1.7700%	-0.9700%	0.6000%	0.6433%	0.6608%
Jan-70	-7.4300%	-4.5300%	0.5600%	0.6592%	0.6792%
Feb-70	5.5800%	10.5300%	0.5200%	0.6608%	0.6775%
Mar-70	0.4400%	2.3200%	0.5600%	0.6533%	0.6717%

Apr-70	-8.7500%	-9.2900%	0.5400%	0.6525%	0.6692%
May-70	-5.7800%	-5.1500%	0.5500%	0.6758%	0.6867%
Jun-70	-4.6600%	-5.8200%	0.6400%	0.7067%	0.7150%
Jul-70	7.6900%	9.7300%	0.5900%	0.7033%	0.7200%
Aug-70	4.7800%	5.8100%	0.5700%	0.6775%	0.7075%
Sep-70	3.6200%	-1.1400%	0.5600%	0.6742%	0.7058%
Oct-70	-0.8300%	-1.4900%	0.5500%	0.6692%	0.7033%
Nov-70	5.0600%	9.7500%	0.5800%	0.6708%	0.7017%
Dec-70	5.9700%	7.3500%	0.5300%	0.6367%	0.6775%
Jan-71	4.3200%	2.5700%	0.5100%	0.6133%	0.6583%
Feb-71	1.1700%	-2.7700%	0.4600%	0.5900%	0.6392%
Mar-71	3.9400%	3.3100%	0.5600%	0.6008%	0.6442%
Apr-71	3.8900%	-3.4900%	0.4800%	0.6042%	0.6450%
May-71	-3.9100%	-3.5100%	0.4700%	0.6275%	0.6533%
Jun-71	0.3300%	3.9800%	0.5600%	0.6367%	0.6633%
Jul-71	-3.8700%	-2.2500%	0.5200%	0.6367%	0.6633%
Aug-71	3.8800%	-2.4700%	0.5500%	0.6325%	0.6608%
Sep-71	-0.4400%	-1.4600%	0.5000%	0.6200%	0.6508%
Oct-71	-3.9200%	1.7000%	0.4700%	0.6158%	0.6408%
Nov-71	0.0200%	-0.5500%	0.5100%	0.6050%	0.6300%
Dec-71	8.8800%	8.0600%	0.5000%	0.6042%	0.6308%
Jan-72	2.0600%	-0.7400%	0.5000%	0.5992%	0.6267%
Feb-72	2.7700%	-2.4000%	0.4700%	0.6058%	0.6267%
Mar-72	0.8300%	-0.3600%	0.4900%	0.6033%	0.6275%
Apr-72	0.6800%	-2.7700%	0.4800%	0.6083%	0.6308%
May-72	1.9700%	-0.1700%	0.5500%	0.6083%	0.6300%
Jun-72	-1.9400%	-2.1000%	0.4900%	0.6025%	0.6258%
Jul-72	0.4800%	-0.1400%	0.5100%	0.6008%	0.6250%
Aug-72	3.6900%	5.7400%	0.4900%	0.5992%	0.6192%
Sep-72	-0.2500%	0.2700%	0.4700%	0.6017%	0.6175%
Oct-72	1.1800%	6.5100%	0.5200%	0.6008%	0.6208%
Nov-72	4.8100%	6.3900%	0.4800%	0.5933%	0.6158%
Dec-72	1.4200%	-1.7400%	0.4500%	0.5900%	0.6133%
Jan-73	-1.4900%	-4.3900%	0.5400%	0.5958%	0.6142%
Feb-73	-3.5200%	-2.3400%	0.5100%	0.6017%	0.6225%
Mar-73	0.0800%	-1.3500%	0.5600%	0.6075%	0.6242%
Apr-73	-3.8300%	-0.4900%	0.5700%	0.6050%	0.6242%
May-73	-1.6300%	0.6700%	0.5800%	0.6075%	0.6242%
Jun-73	-0.4000%	-1.6700%	0.5500%	0.6142%	0.6292%
Jul-73	4.0700%	-1.9900%	0.6100%	0.6208%	0.6367%
Aug-73	-3.4100%	-2.8400%	0.6200%	0.6400%	0.6533%
Sep-73	4.2700%	7.7100%	0.5500%	0.6358%	0.6550%
Oct-73	0.1700%	-3.8800%	0.6300%	0.6333%	0.6533%
Nov-73	-11.0900%	-11.7200%	0.5600%	0.6392%	0.6583%
Dec-73	1.9800%	3.7500%	0.6000%	0.6400%	0.6600%
Jan-74	-0.7200%	4.1800%	0.6100%	0.6525%	0.6667%
Feb-74	-0.0700%	0.6000%	0.5500%	0.6542%	0.6708%
Mar-74	-2.0500%	-3.8900%	0.5900%	0.6675%	0.6817%
Apr-74	-3.5900%	-12.9600%	0.6800%	0.6875%	0.7025%

May-74	-3.0200%	-4.8400%	0.6800%	0.6975%	0.7150%
Jun-74	-1.1300%	-5.7000%	0.6100%	0.7058%	0.7292%
Jul-74	-7.4200%	-0.8900%	0.7200%	0.7267%	0.7508%
Aug-74	-8.6400%	-8.7100%	0.6500%	0.7500%	0.7733%
Sep-74	-11.5200%	-0.8600%	0.7100%	0.7700%	0.8050%
Oct-74	16.8100%	11.9900%	0.7000%	0.7725%	0.8033%
Nov-74	-4.8900%	-1.1900%	0.6200%	0.7408%	0.7783%
Dec-74	-1.5600%	0.4400%	0.6700%	0.7408%	0.7667%
Jan-75	12.7200%	18.9700%	0.6800%	0.7358%	0.7608%
Feb-75	6.3800%	1.4300%	0.6000%	0.7183%	0.7425%
Mar-75	2.5400%	-2.1600%	0.6600%	0.7225%	0.7433%
Apr-75	5.1000%	-1.4000%	0.6700%	0.7458%	0.7658%
May-75	4.7600%	8.6600%	0.6700%	0.7417%	0.7700%
Jun-75	4.7700%	10.6700%	0.7000%	0.7308%	0.7608%
Jul-75	-6.4400%	-5.1000%	0.6800%	0.7367%	0.7608%
Aug-75	-1.7600%	-2.1200%	0.6500%	0.7458%	0.7692%
Sep-75	-3.1200%	-0.4900%	0.7300%	0.7458%	0.7792%
Oct-75	6.5300%	7.0800%	0.7200%	0.7383%	0.7767%
Nov-75	2.8200%	3.5000%	0.6100%	0.7317%	0.7692%
Dec-75	-0.8100%	0.7700%	0.7500%	0.7325%	0.7713%
Jan-76	12.1700%	8.9400%	0.6500%	0.7167%	0.7608%
Feb-76	-0.8400%	-3.5600%	0.6100%	0.7125%	0.7517%
Mar-76	3.3700%	1.0000%	0.7100%	0.7100%	0.7508%
Apr-76	-0.7800%	0.3700%	0.6400%	0.7000%	0.7408%
May-76	-1.1100%	-1.3900%	0.5900%	0.7150%	0.7433%
Jun-76	4.4300%	3.3700%	0.7300%	0.7183%	0.7408%
Jul-76	-0.4800%	3.4100%	0.6500%	0.7133%	0.7342%
Aug-76	-0.1800%	3.8300%	0.6900%	0.7042%	0.7217%
Sep-76	2.5800%	3.8100%	0.6400%	0.6983%	0.7117%
Oct-76	-1.8600%	-0.2100%	0.6100%	0.6933%	0.7067%
Nov-76	-0.4100%	2.6800%	0.6600%	0.6875%	0.7050%
Dec-76	5.6100%	6.3100%	0.6300%	0.6650%	0.6871%
Jan-77	-4.7300%	0.3500%	0.5900%	0.6633%	0.6800%
Feb-77	-1.8200%	-3.7200%	0.5700%	0.6700%	0.6883%
Mar-77	-1.0500%	1.0200%	0.6500%	0.6750%	0.6900%
Apr-77	0.4200%	2.0900%	0.6100%	0.6700%	0.6900%
May-77	-1.9600%	2.1100%	0.6700%	0.6708%	0.6900%
Jun-77	4.9400%	5.3100%	0.6200%	0.6625%	0.6825%
Jul-77	-1.2400%	1.6400%	0.5900%	0.6617%	0.6767%
Aug-77	-1.7200%	-3.5300%	0.6700%	0.6650%	0.6808%
Sep-77	0.1600%	2.4700%	0.6100%	0.6600%	0.6792%
Oct-77	-3.9000%	-2.9600%	0.6300%	0.6700%	0.6883%
Nov-77	3.1600%	3.8100%	0.6300%	0.6733%	0.6950%
Dec-77	0.7500%	0.1900%	0.6200%	0.6825%	0.7004%
Jan-78	-5.7400%	-5.3300%	0.6900%	0.7008%	0.7158%
Feb-78	-2.0300%	-0.6200%	0.6000%	0.7058%	0.7208%
Mar-78	2.9400%	3.0900%	0.6900%	0.7058%	0.7217%
Apr-78	9.0200%	1.0600%	0.6300%	0.7133%	0.7275%
May-78	0.9200%	0.4300%	0.7500%	0.7242%	0.7367%

Jun-78	-1.3800%	0.3600%	0.6900%	0.7300%	0.7458%
Jul-78	5.8300%	3.1600%	0.7300%	0.7400%	0.7558%
Aug-78	3.0100%	-0.0300%	0.7000%	0.7242%	0.7467%
Sep-78	-0.3200%	-0.5600%	0.6500%	0.7242%	0.7433%
Oct-78	-8.7200%	-6.8400%	0.7300%	0.7408%	0.7558%
Nov-78	2.1500%	3.5600%	0.7100%	0.7525%	0.7700%
Dec-78	1.9600%	-1.4900%	0.6800%	0.7633%	0.7775%
Jan-79	4.4300%	6.9200%	0.7900%	0.7708%	0.7900%
Feb-79	-3.2100%	-2.1200%	0.6500%	0.7717%	0.7917%
Mar-79	5.9600%	1.9600%	0.7400%	0.7808%	0.8008%
Apr-79	0.6300%	-2.4900%	0.7600%	0.7817%	0.8042%
May-79	-2.1700%	1.5000%	0.7700%	0.7917%	0.8217%
Jun-79	4.3500%	3.8600%	0.7100%	0.7742%	0.8050%
Jul-79	1.3400%	3.4200%	0.7600%	0.7667%	0.7908%
Aug-79	5.7700%	1.0200%	0.7300%	0.7692%	0.7942%
Sep-79	0.4300%	-1.7700%	0.6800%	0.7867%	0.8083%
Oct-79	-6.4000%	-5.0500%	0.8200%	0.8442%	0.8717%
Nov-79	4.7500%	6.0700%	0.8300%	0.8967%	0.9350%
Dec-79	2.1400%	0.2200%	0.8300%	0.8950%	0.9292%
Jan-80	6.2200%	-0.2300%	0.8300%	0.9242%	0.9633%
Feb-80	-0.0100%	-2.4700%	0.8400%	1.0317%	1.0608%
Mar-80	-9.7200%	-5.2900%	0.9900%	1.0800%	1.1258%
Apr-80	4.6200%	11.8600%	1.0000%	1.0033%	1.0883%
May-80	5.1500%	3.2300%	0.8700%	0.9158%	0.9925%
Jun-80	3.1600%	3.3700%	0.8600%	0.8817%	0.9492%
Jul-80	6.9600%	-0.4100%	0.8400%	0.9225%	0.9525%
Aug-80	1.0100%	-1.3900%	0.8100%	0.9700%	1.0075%
Sep-80	2.9400%	-1.1400%	0.9700%	1.0017%	1.0433%
Oct-80	2.0200%	2.7400%	0.9700%	1.0258%	1.0567%
Nov-80	10.6500%	5.0100%	0.9100%	1.0808%	1.1117%
Dec-80	-3.0200%	-0.1400%	1.0800%	1.1008%	1.1483%
Jan-81	-4.1800%	-1.8600%	0.9400%	1.0675%	1.1267%
Feb-81	1.7400%	-2.2400%	0.8800%	1.1125%	1.1575%
Mar-81	4.0000%	4.2000%	1.1100%	1.1108%	1.1583%
Apr-81	-1.9300%	-0.9600%	1.0100%	1.1567%	1.1992%
May-81	0.2600%	2.9100%	1.0400%	1.1933%	1.2400%
Jun-81	-0.6300%	2.7200%	1.0900%	1.1458%	1.2008%
Jul-81	0.2100%	3.4100%	1.0900%	1.1983%	1.2325%
Aug-81	-5.7700%	-0.2400%	1.1000%	1.2408%	1.2850%
Sep-81	-4.9300%	-4.0900%	1.1400%	1.2908%	1.3292%
Oct-81	5.4000%	6.1700%	1.1700%	1.2833%	1.3183%
Nov-81	4.1300%	4.8100%	1.1300%	1.1850%	1.2475%
Dec-81	-2.5600%	-3.0500%	1.0000%	1.1858%	1.2500%
Jan-82	-1.3100%	0.3700%	1.0800%	1.2650%	1.3125%
Feb-82	-5.5900%	-0.3500%	1.0300%	1.2725%	1.3100%
Mar-82	-0.5200%	1.6800%	1.2400%	1.2150%	1.2675%
Apr-82	4.5200%	5.4800%	1.1200%	1.2050%	1.2417%
May-82	-3.4100%	-1.8700%	1.0100%	1.1883%	1.2308%
Jun-82	-1.5000%	-1.6100%	1.2000%	1.2342%	1.2717%

Jul-82	-1.7800%	-1.9800%	1.1400%	1.2175%	1.2675%
Aug-82	12.1400%	12.1100%	1.1200%	1.1425%	1.2067%
Sep-82	1.2500%	0.5200%	1.0000%	1.0783%	1.1433%
Oct-82	11.5100%	6.5900%	0.9100%	1.0100%	1.0808%
Nov-82	4.0400%	0.1700%	0.9500%	0.9733%	1.0425%
Dec-82	1.9300%	3.6000%	0.9300%	0.9858%	1.0367%
Jan-83	3.7200%	3.7200%	0.8700%	0.9825%	1.0292%
Feb-83	2.2900%	-0.0500%	0.8100%	1.0008%	1.0483%
Mar-83	3.6900%	0.1700%	0.8900%	0.9775%	1.0267%
Apr-83	7.8800%	5.7100%	0.8500%	0.9592%	1.0050%
May-83	-0.8700%	1.2400%	0.9100%	0.9550%	0.9958%
Jun-83	3.8900%	-1.2300%	0.9000%	0.9783%	1.0125%
Jul-83	-2.9500%	3.3900%	0.8800%	1.0125%	1.0325%
Aug-83	1.5000%	0.4000%	1.0300%	1.0425%	1.0600%
Sep-83	1.3800%	4.4500%	0.9600%	1.0308%	1.0517%
Oct-83	-1.1600%	5.3200%	0.9500%	1.0208%	1.0408%
Nov-83	2.1100%	-2.0400%	0.9400%	1.0342%	1.0508%
Dec-83	-0.5200%	-2.2600%	0.9400%	1.0475%	1.0633%
Jan-84	-0.5600%	4.8200%	1.0300%	1.0167%	1.0592%
Feb-84	-3.5200%	-4.1100%	0.9200%	1.0067%	1.0583%
Mar-84	1.7300%	-0.5500%	0.9800%	1.0475%	1.1017%
Apr-84	0.9500%	1.5900%	1.0400%	1.0675%	1.1233%
May-84	-5.5400%	-2.3000%	1.0300%	1.1067%	1.1750%
Jun-84	2.1700%	0.6900%	1.0600%	1.1292%	1.1942%
Jul-84	-1.2400%	4.3300%	1.1600%	1.1200%	1.1767%
Aug-84	11.0400%	6.4600%	1.0600%	1.0725%	1.1225%
Sep-84	0.0200%	4.3800%	0.9400%	1.0550%	1.1058%
Oct-84	0.3900%	2.7200%	1.0800%	1.0525%	1.0925%
Nov-84	-1.1200%	2.7000%	0.9100%	1.0242%	1.0550%
Dec-84	2.6300%	3.1600%	0.9800%	1.0108%	1.0417%
Jan-85	7.7900%	2.3500%	0.9600%	1.0067%	1.0358%
Feb-85	1.2200%	1.9300%	0.8200%	1.0108%	1.0408%
Mar-85	0.0700%	3.6200%	0.9400%	1.0467%	1.0758%
Apr-85	-0.0900%	2.0700%	1.0200%	1.0192%	1.0575%
May-85	5.7800%	6.0600%	0.9700%	0.9767%	1.0250%
Jun-85	1.5700%	2.7900%	0.8000%	0.9117%	0.9550%
Jul-85	-0.1500%	-4.2700%	0.9400%	0.9142%	0.9517%
Aug-85	-0.8500%	1.8100%	0.8500%	0.9208%	0.9558%
Sep-85	-3.1300%	-5.2100%	0.8800%	0.9225%	0.9550%
Oct-85	4.6200%	6.3800%	0.8900%	0.9183%	0.9542%
Nov-85	6.8600%	5.2200%	0.8100%	0.8792%	0.9225%
Dec-85	4.8400%	6.9400%	0.8600%	0.8467%	0.8858%
Jan-86	0.5600%	2.9300%	0.7900%	0.8375%	0.8717%
Feb-86	7.4700%	6.2300%	0.7300%	0.8058%	0.8442%
Mar-86	5.5800%	5.1400%	0.7100%	0.7500%	0.7908%
Apr-86	-1.1300%	-3.3300%	0.6300%	0.7325%	0.7675%
May-86	5.3200%	5.2500%	0.6200%	0.7575%	0.7858%
Jun-86	1.6900%	5.9700%	0.7000%	0.7608%	0.7908%
Jul-86	-5.5900%	2.8300%	0.6600%	0.7400%	0.7733%

Aug-86	7.4200%	8.8400%	0.6300%	0.7267%	0.7683%
Sep-86	-8.2700%	-11.3700%	0.6500%	0.7408%	0.7800%
Oct-86	5.7700%	5.0500%	0.6900%	0.7383%	0.7775%
Nov-86	2.4300%	2.1100%	0.5900%	0.7233%	0.7667%
Dec-86	-2.5500%	-2.5400%	0.7000%	0.7075%	0.7517%
Jan-87	13.4700%	9.8400%	0.6400%	0.6967%	0.7383%
Feb-87	3.9500%	-3.0100%	0.5900%	0.6983%	0.7400%
Mar-87	2.8900%	-1.8900%	0.6600%	0.6967%	0.7367%
Apr-87	-0.8900%	-4.1400%	0.6500%	0.7375%	0.7625%
May-87	0.8700%	-0.6400%	0.6600%	0.7775%	0.7992%
Jun-87	5.0500%	4.3900%	0.7500%	0.7767%	0.8042%
Jul-87	5.0700%	-0.2500%	0.7300%	0.7850%	0.8042%
Aug-87	3.7300%	5.2700%	0.7500%	0.8058%	0.8217%
Sep-87	-2.1900%	0.2100%	0.7500%	0.8483%	0.8625%
Oct-87	-21.5400%	-7.0500%	0.7900%	0.8767%	0.8950%
Nov-87	-8.2400%	-5.5500%	0.7500%	0.8342%	0.8558%
Dec-87	7.6100%	1.0800%	0.7800%	0.8425%	0.8608%
Jan-88	4.2100%	11.5300%	0.7200%	0.8233%	0.8408%
Feb-88	4.6600%	-1.7500%	0.7100%	0.7833%	0.8000%
Mar-88	-3.0900%	-5.2700%	0.7200%	0.7825%	0.7992%
Apr-88	1.1100%	0.1900%	0.7000%	0.8058%	0.8217%
May-88	0.8600%	4.6000%	0.7800%	0.8250%	0.8417%
Jun-88	4.5900%	3.1500%	0.7600%	0.8217%	0.8442%
Jul-88	-0.3800%	0.1700%	0.7100%	0.8300%	0.8550%
Aug-88	-3.3900%	-1.3700%	0.8300%	0.8425%	0.8642%
Sep-88	4.2600%	4.1300%	0.7600%	0.8183%	0.8383%
Oct-88	2.7800%	2.6200%	0.7600%	0.7917%	0.8083%
Nov-88	-1.4300%	-0.7900%	0.7000%	0.7875%	0.8100%
Dec-88	1.7400%	0.6300%	0.7500%	0.7975%	0.8175%
Jan-89	7.3200%	5.7100%	0.8000%	0.8017%	0.8175%
Feb-89	-2.4900%	-2.1500%	0.6900%	0.8033%	0.8192%
Mar-89	2.3300%	2.6900%	0.7900%	0.8167%	0.8317%
Apr-89	5.1900%	6.3400%	0.7000%	0.8158%	0.8283%
May-89	4.0500%	5.8000%	0.8000%	0.7975%	0.8125%
Jun-89	-0.5700%	1.6100%	0.7000%	0.7583%	0.7742%
Jul-89	9.0300%	8.0400%	0.6800%	0.7442%	0.7617%
Aug-89	1.9500%	-0.5700%	0.6600%	0.7467%	0.7617%
Sep-89	-0.4100%	1.7000%	0.6500%	0.7508%	0.7692%
Oct-89	-2.3200%	0.4500%	0.7200%	0.7433%	0.7658%
Nov-89	2.0400%	3.3600%	0.6400%	0.7408%	0.7617%
Dec-89	2.4000%	7.3100%	0.6400%	0.7383%	0.7592%
Jan-90	-6.7100%	-8.0900%	0.7300%	0.7492%	0.7725%
Feb-90	1.2900%	-1.0900%	0.6600%	0.7683%	0.7867%
Mar-90	2.6500%	1.8700%	0.7100%	0.7808%	0.7925%
Apr-90	-2.4900%	-3.8500%	0.7500%	0.7883%	0.8033%
May-90	9.7500%	6.8200%	0.7500%	0.7892%	0.8083%
Jun-90	-0.6700%	-2.1100%	0.6800%	0.7717%	0.7908%
Jul-90	-0.3200%	-0.3200%	0.7400%	0.7700%	0.7892%
Aug-90	-9.0400%	-7.9200%	0.7100%	0.7842%	0.8025%

Sep-90	-4.8700%	4.1100%	0.6900%	0.7967%	0.8142%
Oct-90	-0.4300%	6.5300%	0.8100%	0.7942%	0.8142%
Nov-90	6.4600%	1.9300%	0.7100%	0.7750%	0.7992%
Dec-90	2.7900%	0.8600%	0.7200%	0.7542%	0.7825%
Jan-91	4.3600%	-3.0100%	0.7100%	0.7533%	0.7808%
Feb-91	7.1500%	3.4900%	0.6400%	0.7358%	0.7633%
Mar-91	2.4200%	1.9800%	0.6400%	0.7442%	0.7675%
Apr-91	0.2400%	-1.6200%	0.7600%	0.7383%	0.7600%
May-91	4.3100%	-1.3000%	0.6800%	0.7383%	0.7625%
Jun-91	-4.5800%	-1.3900%	0.6300%	0.7508%	0.7733%
Jul-91	4.6600%	3.0700%	0.7600%	0.7500%	0.7708%
Aug-91	2.3700%	2.5800%	0.6800%	0.7292%	0.7492%
Sep-91	-1.6700%	2.0200%	0.6800%	0.7175%	0.7383%
Oct-91	1.3400%	2.0000%	0.6500%	0.7125%	0.7358%
Nov-91	-4.0300%	-0.9800%	0.6000%	0.7067%	0.7317%
Dec-91	11.4400%	7.3300%	0.6800%	0.6925%	0.7175%
Jan-92	-1.8600%	-5.3600%	0.6100%	0.6833%	0.7092%
Feb-92	1.3000%	-2.7300%	0.5900%	0.6908%	0.7225%
Mar-92	-1.9400%	-1.4300%	0.6700%	0.6958%	0.7275%
Apr-92	2.9400%	6.4500%	0.6500%	0.6942%	0.7242%
May-92	0.4900%	-0.1500%	0.6100%	0.6900%	0.7192%
Jun-92	-1.4900%	1.4100%	0.6700%	0.6850%	0.7133%
Jul-92	4.0900%	7.9000%	0.6300%	0.6725%	0.6975%
Aug-92	-2.0500%	-0.7400%	0.6000%	0.6625%	0.6842%
Sep-92	1.1800%	0.7300%	0.5800%	0.6600%	0.6808%
Oct-92	0.3500%	-0.9400%	0.5700%	0.6658%	0.6933%
Nov-92	3.4100%	-0.1500%	0.6100%	0.6750%	0.7000%
Dec-92	1.2300%	3.5800%	0.6300%	0.6650%	0.6867%
Jan-93	0.8400%	1.5700%	0.5900%	0.6592%	0.6758%
Feb-93	1.3600%	7.2100%	0.5500%	0.6425%	0.6583%
Mar-93	2.1100%	1.8000%	0.6300%	0.6317%	0.6433%
Apr-93	-2.4200%	-0.2700%	0.5700%	0.6217%	0.6350%
May-93	2.6800%	-1.9100%	0.5200%	0.6192%	0.6342%
Jun-93	0.2900%	4.6300%	0.6200%	0.6108%	0.6258%
Jul-93	-0.4000%	2.2600%	0.5400%	0.5975%	0.6125%
Aug-93	3.7900%	4.8400%	0.5600%	0.5708%	0.5883%
Sep-93	-0.7700%	-0.2000%	0.5000%	0.5550%	0.5708%
Oct-93	2.0700%	-0.2100%	0.4900%	0.5558%	0.5725%
Nov-93	-0.9500%	-5.0700%	0.5300%	0.5775%	0.5933%
Dec-93	1.2100%	-0.5300%	0.5500%	0.5775%	0.5933%
Jan-94	3.4000%	0.7200%	0.5500%	0.5767%	0.5933%
Feb-94	-2.7100%	-5.6700%	0.4900%	0.5900%	0.6075%
Mar-94	-4.3600%	-3.3800%	0.5800%	0.5900%	0.6075%
Apr-94	1.2800%	2.4600%	0.5700%	0.6233%	0.6408%
May-94	1.6400%	-2.6800%	0.6300%	0.6658%	0.6825%
Jun-94	-2.4500%	0.2100%	0.6100%	0.6642%	0.6808%
Jul-94	3.2800%	3.3600%	0.6000%	0.6758%	0.6925%
Aug-94	4.1000%	-0.2800%	0.6600%	0.6725%	0.6875%
Sep-94	-2.4500%	-2.5400%	0.6100%	0.6950%	0.7075%

Oct-94	2.2500%	0.8600%	0.6600%	0.7142%	0.7258%
Nov-94	-3.6400%	-1.4600%	0.6400%	0.7233%	0.7358%
Dec-94	1.4800%	0.5200%	0.6600%	0.7050%	0.7183%
Jan-95	2.5900%	7.7900%	0.7000%	0.7050%	0.7167%
Feb-95	3.9000%	-0.1500%	0.5900%	0.6883%	0.6992%
Mar-95	2.9500%	-0.6000%	0.6400%	0.6767%	0.6867%
Apr-95	2.9400%	3.6500%	0.5800%	0.6692%	0.6767%
May-95	4.0000%	3.1600%	0.6500%	0.6375%	0.6450%
Jun-95	2.3200%	0.4700%	0.5400%	0.6083%	0.6192%
Jul-95	3.3200%	2.5500%	0.5600%	0.6175%	0.6283%
Aug-95	0.2500%	2.0200%	0.5700%	0.6308%	0.6408%
Sep-95	4.2200%	6.3800%	0.5200%	0.6100%	0.6208%
Oct-95	-0.3600%	2.3800%	0.5700%	0.5933%	0.6058%
Nov-95	4.3900%	1.3600%	0.5100%	0.5850%	0.5983%
Dec-95	1.9300%	7.0800%	0.4900%	0.5683%	0.5825%
Jan-96	3.4000%	1.2900%	0.5400%	0.5675%	0.5825%
Feb-96	0.9300%	-3.9500%	0.4800%	0.5825%	0.5967%
Mar-96	0.9600%	-2.0300%	0.5200%	0.6125%	0.6267%
Apr-96	1.4700%	1.1000%	0.5900%	0.6250%	0.6400%
May-96	2.5800%	-0.2500%	0.5800%	0.6350%	0.6475%
Jun-96	0.3800%	4.1600%	0.5400%	0.6425%	0.6558%
Jul-96	-4.4200%	-6.2800%	0.6200%	0.6375%	0.6517%
Aug-96	2.1100%	2.1300%	0.5700%	0.6217%	0.6358%
Sep-96	5.6300%	0.9500%	0.6000%	0.6383%	0.6517%
Oct-96	2.7600%	5.0800%	0.5800%	0.6158%	0.6317%
Nov-96	7.5600%	2.1100%	0.5200%	0.5917%	0.6092%
Dec-96	-1.9800%	-0.6000%	0.5600%	0.6000%	0.6175%
Jan-97	6.2500%	0.6600%	0.5600%	0.6183%	0.6358%
Feb-97	0.7800%	-0.9500%	0.5100%	0.6092%	0.6283%
Mar-97	-4.1100%	-3.0100%	0.5900%	0.6292%	0.6475%
Apr-97	5.9700%	-1.5000%	0.5900%	0.6442%	0.6608%
May-97	6.0900%	4.2300%	0.5800%	0.6317%	0.6500%
Jun-97	4.4800%	3.1400%	0.5900%	0.6175%	0.6350%
Jul-97	7.9600%	2.3000%	0.5800%	0.5950%	0.6133%
Aug-97	-5.6000%	-1.8300%	0.4900%	0.6017%	0.6167%
Sep-97	5.4800%	4.3300%	0.5800%	0.5950%	0.6117%
Oct-97	-3.3400%	0.9800%	0.5400%	0.5833%	0.6000%
Nov-97	4.6300%	7.0700%	0.4700%	0.5725%	0.5892%
Dec-97	1.7200%	7.5200%	0.5400%	0.5633%	0.5825%
Jan-98	1.1100%	-3.9500%	0.4800%	0.5508%	0.5683%
Feb-98	7.2100%	3.4100%	0.4400%	0.5558%	0.5733%
Mar-98	5.1200%	6.4200%	0.5200%	0.5592%	0.5775%
Apr-98	1.0100%	-1.9300%	0.4900%	0.5575%	0.5750%
May-98	-1.7200%	-0.5000%	0.4800%	0.5575%	0.5758%
Jun-98	4.0600%	3.6900%	0.5200%	0.5442%	0.5650%
Jul-98	-1.0600%	-4.9300%	0.4900%	0.5458%	0.5650%
Aug-98	-14.4600%	1.6100%	0.4800%	0.5433%	0.5642%
Sep-98	6.4100%	8.3500%	0.4400%	0.5333%	0.5567%
Oct-98	8.1300%	-1.6600%	0.4200%	0.5308%	0.5583%

Nov-98	6.0600%	1.3400%	0.4500%	0.5342%	0.5658%
Dec-98	5.7600%	2.9500%	0.4500%	0.5183%	0.5542%
Jan-99	4.1800%	-4.5100%	0.4200%	0.5200%	0.5567%
Feb-99	-3.1100%	-3.6400%	0.4000%	0.5333%	0.5658%
Mar-99	4.0000%	-1.4800%	0.5300%	0.5517%	0.5817%
Apr-99	3.8700%	8.8400%	0.4800%	0.5533%	0.5800%
May-99	-2.3600%	6.0900%	0.4500%	0.5775%	0.6025%
Jun-99	5.5500%	-3.3200%	0.5500%	0.6025%	0.6267%
Jul-99	-3.1200%	-1.1400%	0.5100%	0.5992%	0.6233%
Aug-99	-0.4900%	1.1700%	0.5400%	0.6167%	0.6400%
Sep-99	-2.7400%	-4.8000%	0.5200%	0.6158%	0.6400%
Oct-99	6.3300%	1.5700%	0.5000%	0.6292%	0.6492%
Nov-99	2.0300%	-7.7300%	0.5600%	0.6133%	0.6350%
Dec-99	5.8900%	0.9300%	0.5500%	0.6292%	0.6483%
Jan-00	-5.0200%	10.8500%	0.5700%	0.6483%	0.6633%
Feb-00	-1.8900%	-5.7800%	0.5100%	0.6400%	0.6517%
Mar-00	9.7800%	3.4900%	0.5400%	0.6400%	0.6525%
Apr-00	-3.0100%	7.9400%	0.4700%	0.6367%	0.6517%
May-00	-2.0500%	4.8600%	0.5600%	0.6658%	0.6867%
Jun-00	2.4700%	-5.7500%	0.5200%	0.6392%	0.6558%
Jul-00	-1.5600%	6.7700%	0.5200%	0.6375%	0.6508%
Aug-00	6.2100%	13.7200%	0.5000%	0.6292%	0.6417%
Sep-00	-5.2800%	9.1500%	0.4600%	0.6350%	0.6525%
Oct-00	-0.4200%	-3.5700%	0.5300%	0.6292%	0.6508%
Nov-00	-7.8800%	-1.3200%	0.4800%	0.6208%	0.6458%
Dec-00	0.4900%	9.8200%	0.4500%	0.6008%	0.6233%
Jan-01	3.5500%	-9.6700%	0.4900%	0.5958%	0.6150%
Feb-01	-9.1200%	3.5300%	0.4200%	0.5917%	0.6100%
Mar-01	-6.3400%	-0.6300%	0.4500%	0.5817%	0.6017%
Apr-01	7.7700%	6.0500%	0.4700%	0.6000%	0.6192%
May-01	0.6700%	-3.4300%	0.5000%	0.6075%	0.6250%
Jun-01	-2.4300%	-7.9100%	0.4700%	0.5983%	0.6117%
Jul-01	-0.9800%	-4.4800%	0.5200%	0.5942%	0.6058%
Aug-01	-6.2600%	-2.9000%	0.4600%	0.6000%	0.5925%
Sep-01	-8.0800%	-11.5200%	0.4100%	0.5975%	0.6058%
Oct-01	1.9100%	-0.1700%	0.4800%	0.5858%	0.5942%
Nov-01	7.6700%	-5.5200%	0.4100%	0.5808%	0.5842%
Dec-01	0.8800%	2.6000%	0.4600%	0.5633%	0.5992%
Jan-02	-1.4600%	-5.6500%	0.4800%	0.5458%	0.5858%
Feb-02	-1.9300%	-2.3500%	0.4300%	0.5425%	0.5792%
Mar-02	3.7600%	12.2300%	0.4300%	0.5675%	0.6017%
Apr-02	-6.0600%	-1.7100%	0.5400%	0.5633%	0.5967%
May-02	-0.7400%	-9.0200%	0.4900%	0.5625%	0.6000%
Jun-02	-7.1200%	-7.1000%	0.4400%	0.5533%	0.5900%
Jul-02	-7.8000%	-13.8000%	0.5100%	0.5442%	0.5817%
Aug-02	0.6600%	3.5000%	0.4400%	0.5308%	0.5700%
Sep-02	-10.8700%	-12.8300%	0.4200%	0.5125%	0.5525%
Oct-02	8.8000%	-1.7300%	0.4000%	0.5275%	0.5617%
Nov-02	5.8900%	2.4900%	0.4000%	0.5258%	0.5592%

Dec-02	-5.8700%	4.1600%	0.4500%	0.5175%	0.5525%
Jan-03	-2.6200%	-2.9200%	0.4100%	0.5142%	0.5492%
Feb-03	-1.5000%	-4.9000%	0.3800%	0.4958%	0.5283%
Mar-03	0.9700%	5.0500%	0.4000%	0.4908%	0.5233%
Apr-03	8.2400%	8.8500%	0.4000%	0.4783%	0.5183%
May-03	5.2700%	10.2100%	0.3900%	0.4350%	0.4875%
Jun-03	1.2800%	1.1900%	0.3600%	0.4142%	0.4767%
Jul-03	1.7600%	-6.5000%	0.3800%	0.4575%	0.5058%
Aug-03	1.9500%	1.7500%	0.4200%	0.4892%	0.5258%
Sep-03	-1.0600%	4.5700%	0.4600%	0.4767%	0.5108%
Oct-03	5.6600%	1.1200%	0.4100%	0.4750%	0.5092%
Nov-03	0.8800%	-0.0500%	0.3900%	0.4708%	0.5067%
Dec-03	5.2400%	6.7500%	0.4700%	0.4708%	0.5017%
Jan-04	1.8400%	2.1600%	0.4200%	0.4617%	0.4925%
Feb-04	1.3900%	1.8100%	0.3800%	0.4583%	0.4892%
Mar-04	-1.5100%	1.0400%	0.4300%	0.4442%	0.4750%
Apr-04	-1.5700%	-3.6200%	0.3900%	0.4775%	0.5083%
May-04	1.3700%	0.7900%	0.4000%	0.5033%	0.5333%
Jun-04	1.9400%	1.5500%	0.4800%	0.5008%	0.5175%
Jul-04	-3.3100%	1.7300%	0.4300%	0.4850%	0.5017%
Aug-04	0.4000%	3.9300%	0.4500%	0.4708%	0.4892%
Sep-04	1.0800%	0.9100%	0.4000%	0.4550%	0.4775%
Oct-04	1.5300%	4.9500%	0.3800%	0.4558%	0.4742%
Nov-04	4.0500%	4.0700%	0.4100%	0.4600%	0.4767%
Dec-04	3.4000%	2.6500%	0.4300%	0.4558%	0.4742%
Jan-05	-2.4400%	2.2100%	0.4100%	0.4467%	0.4650%
Feb-05	2.1000%	1.9700%	0.3500%	0.4333%	0.4533%
Mar-05	-1.7700%	1.0800%	0.4100%	0.4500%	0.4700%
Apr-05	-1.9000%	3.2100%	0.3900%	0.4442%	0.4533%
May-05	3.1800%	0.0800%	0.4000%	0.4292%	0.4408%
Jun-05	0.1400%	5.7600%	0.3600%	0.4133%	0.4183%
Jul-05	3.7200%	2.3300%	0.3400%	0.4217%	0.4283%
Aug-05	-0.9100%	0.7300%	0.4000%	0.4242%	0.4333%
Sep-05	0.8100%	4.0200%	0.3500%	0.4275%	0.4367%
Oct-05	-1.6700%	-6.1700%	0.3900%	0.4450%	0.4550%
Nov-05	3.7800%	-0.3900%	0.3900%	0.4521%	0.4625%
Dec-05	0.0300%	1.1000%	0.3900%	0.4483%	0.4592%
Jan-06	2.6500%	2.6348%	0.4000%	0.4408%	0.4542%
Feb-06	0.2700%	0.9527%	0.3600%	0.4458%	0.4592%
Mar-06	1.2400%	-4.6345%	0.3900%	0.4600%	0.4725%
Apr-06	1.3400%	1.7167%	0.3900%	0.4867%	0.5000%
May-06	-2.8800%	1.4281%	0.4800%	0.4958%	0.5108%
Jun-06	0.1400%	2.4158%	0.4400%	0.4908%	0.5092%
Jul-06	0.6200%	5.1109%	0.4500%	0.4875%	0.5067%
Aug-06	2.3800%	2.7122%	0.4300%	0.4733%	0.4925%
Sep-06	2.5800%	-1.7362%	0.3900%	0.4592%	0.4792%
Oct-06	3.2600%	5.6026%	0.4200%	0.4592%	0.4783%
Nov-06	1.9000%	2.1405%	0.3900%	0.4442%	0.4642%
Dec-06	1.4000%	1.1817%	0.3600%	0.4408%	0.4650%

Jan-07	1.5100%	-0.1134%	0.4300%	0.4500%	0.4792%
Feb-07	-1.9600%	5.0341%	0.3800%	0.4492%	0.4767%
Mar-07	1.1200%	4.1373%	0.3900%	0.4417%	0.4717%
Apr-07	4.4300%	4.3759%	0.4200%	0.4558%	0.4858%
May-07	3.4900%	0.5145%	0.4100%	0.4558%	0.4875%
Jun-07	-1.6600%	-5.0621%	0.4000%	0.0483%	0.5142%
Jul-07	-3.1000%	-3.5666%	0.4600%	0.4775%	0.5075%
Aug-07	1.5000%	2.0956%	0.4200%	0.4825%	0.5050%
Sep-07	3.7400%	3.5427%	0.3700%	0.4783%	0.5017%
Oct-07	1.5900%	6.8641%	0.4300%	0.4717%	0.4950%
Nov-07	-4.1800%	0.3405%	0.3900%	0.4533%	0.4817%
Dec-07	-0.6900%	0.2754%	0.3700%	0.4575%	0.4925%
Jan-08	-6.0000%	-6.8133%	0.4000%	0.4442%	0.4817%
Feb-08	-3.2500%	-4.9956%	0.3400%	0.4608%	0.4975%
Mar-08	-0.4300%	1.7056%	0.3700%	0.4592%	0.4917%
Apr-08	4.8700%	5.5163%	0.3500%	0.4625%	0.4942%
May-08	1.3000%	3.1987%	0.3700%	0.4642%	0.5000%
Jun-08	-8.4300%	-0.8668%	0.4000%	0.4733%	0.5092%
Jul-08	-0.8400%	-6.1108%	0.3900%	0.4725%	0.5042%
Aug-08	1.4500%	-1.6602%	0.3600%	0.4700%	0.5008%
Sep-08	-8.9100%	-11.4823%	0.3900%	0.4708%	0.5025%
Oct-08	-16.7900%	-11.6128%	0.3700%	0.5233%	0.5658%
Nov-08	-7.1800%	2.7894%	0.3600%	0.5100%	0.5608%
Dec-08	1.0600%	-1.6797%	0.3300%	0.4217%	0.4842%
Jan-09	-8.4300%	-0.4541%	0.2400%	0.4208%	0.4867%
Feb-09	-10.6500%	-12.5708%	0.3000%	0.4392%	0.5017%
Mar-09	8.7600%	2.5255%	0.3500%	0.4583%	0.5092%
Apr-09	9.5700%	0.8462%	0.2900%	0.4492%	0.5142%
May-09	5.5900%	3.5287%	0.3300%	0.4617%	0.5200%
Jun-09	0.2000%	5.5202%	0.3800%	0.4675%	0.5100%
Jul-09	7.5600%	4.0755%	0.3600%	0.4508%	0.4758%
Aug-09	3.6100%	0.5460%	0.3600%	0.4383%	0.4542%
Sep-09	3.7300%	1.4284%	0.3400%	0.4275%	0.4342%
Oct-09	-1.8600%	-2.8427%	0.3300%	0.4292%	0.4367%
Nov-09	6.0000%	4.5586%	0.3500%	0.4325%	0.4408%
Dec-09	1.9300%	5.5813%	0.3400%	0.4383%	0.4533%
Jan-10	-3.6000%	-4.7493%	0.3600%	0.4383%	0.4583%
Feb-10	3.1000%	-1.4896%	0.3300%	0.4458%	0.4683%
Mar-10	6.0300%	2.7978%	0.4000%	0.4392%	0.4642%
Apr-10	1.5800%	2.8058%	0.3800%	0.4408%	0.4642%
May-10	-7.9900%	-5.7600%	0.3400%	0.4133%	0.4375%
Jun-10	-5.2300%	-0.6360%	0.3700%	0.4067%	0.4300%
Jul-10	7.0100%	7.7413%	0.3100%	0.3933%	0.4133%
Aug-10	-4.5100%	1.2496%	0.3200%	0.3742%	0.3933%
Sep-10	8.9200%	2.9575%	0.2600%	0.3775%	0.3933%
Oct-10	3.8000%	1.2869%	0.2700%	0.3900%	0.4025%
Nov-10	0.0100%	-3.2323%	0.3200%	0.4058%	0.4225%
Dec-10	6.6800%	3.1151%	0.3200%	0.4183%	0.4383%
Jan-11	2.3700%	1.4241%	0.3500%	0.4200%	0.4383%

Feb-11	3.4300%	1.1235%	0.3200%	0.4350%	0.4475%
Mar-11	0.0400%	0.1474%	0.3600%	0.4275%	0.4400%
Apr-11	2.9600%	4.1878%	0.3400%	0.4300%	0.4408%
May-11	-1.1300%	1.9754%	0.3600%	0.4133%	0.4217%
Jun-11	-1.6700%	-0.1283%	0.3200%	0.4158%	0.4200%
Jul-11	-2.0300%	-0.7538%	0.3200%	0.4108%	0.4192%
Aug-11	-5.4300%	2.0388%	0.3400%	0.3642%	0.3725%
Sep-11	-7.0300%	0.2271%	0.2600%	0.3408%	0.3525%
Oct-11	10.9300%	3.8747%	0.2200%	0.3317%	0.3467%
Nov-11	-0.2200%	0.8014%	0.2400%	0.3225%	0.3308%
Dec-11	1.0200%	3.3767%	0.2200%	0.3275%	0.3358%
Jan-12	4.4800%	-3.3237%	0.2100%	0.3342%	0.3342%
Feb-12	4.3200%	0.3451%	0.2000%	0.3325%	0.3325%
Mar-12	3.2900%	1.3720%	0.2200%	0.3325%	0.3450%
Apr-12	-0.6300%	2.1237%	0.2500%	0.3300%	0.3400%
May-12	-6.0100%	0.2161%	0.2300%	0.3167%	0.3258%
Jun-12	4.1200%	4.1004%	0.1800%	0.3033%	0.3150%
Jul-12	1.3900%	2.8439%	0.2000%	0.2833%	0.2950%
Aug-12	2.2500%	-4.4721%	0.1800%	0.2900%	0.3008%
Sep-12	2.5800%	1.2281%	0.1700%	0.2908%	0.3067%
Oct-12	-1.8500%	1.7240%	0.2100%	0.2892%	0.3025%
Nov-12	0.5800%	-4.6428%	0.1900%	0.2917%	0.2975%
Dec-12	0.9100%	0.1108%	0.1900%	0.3042%	0.3083%
Jan-13	5.1800%	3.5100%	0.2200%	0.3167%	0.3225%
Feb-13	1.3600%	3.3900%	0.2200%	0.3250%	0.3292%
Mar-13	3.7500%	5.4000%	0.2100%	0.3167%	0.3225%
Apr-13	1.9300%	5.9000%	0.2600%	0.3108%	0.3142%
May-13	2.3400%	-8.9600%	0.2300%	0.3242%	0.3283%
Jun-13	-1.3400%	1.1400%	0.2400%	0.3558%	0.3600%
Jul-13	5.0900%	3.8500%	0.3000%	0.3617%	0.3717%
Aug-13	-2.9000%	-5.0000%	0.2800%	0.3783%	0.3858%
Sep-13	3.1400%	1.0800%	0.2900%	0.3867%	0.3908%
Oct-13	4.6000%	3.7700%	0.2900%	0.3775%	0.3825%
Nov-13	3.0500%	-1.9900%	0.2700%	0.3858%	0.3892%
Dec-13	2.5300%	0.7600%	0.3100%	0.3850%	0.3900%
Jan-14	-3.4600%	2.8100%	0.3200%	0.3742%	0.3775%
Feb-14	4.5700%	3.3500%	0.2600%	0.3708%	0.3717%
Mar-14	0.8400%	3.3700%	0.2900%	0.3650%	0.3700%
Apr-14	0.7400%	4.2600%	0.2800%	0.3533%	0.3608%
May-14	2.3500%	-1.0500%	0.2800%	0.3467%	0.3500%
Jun-14	2.0700%	4.4800%	0.2500%	0.3542%	0.3550%
Jul-14	-1.3800%	-6.8000%	0.2700%	0.3467%	0.3500%
Aug-14	4.0000%	4.9500%	0.2600%	0.3400%	0.3417%
Sep-14	-1.4000%	-1.8600%	0.2300%	0.3425%	0.3492%
Oct-14	2.4400%	8.0200%	0.2500%	0.3267%	0.3325%
Nov-14	2.6900%	1.2000%	0.2300%	0.3267%	0.3367%
Dec-14	-0.2500%	3.5000%	0.2200%	0.3158%	0.3242%
Jan-15	-3.0000%	2.3300%	0.2000%	0.2883%	0.2950%
Feb-15	5.7500%	-6.3300%	0.1500%	0.3008%	0.3033%

Mar-15	-1.5800%	-0.4900%	0.2100%	0.3033%	0.3083%
Apr-15	0.9600%	-1.2900%	0.1900%	0.2933%	0.3033%
May-15	1.2900%	0.6500%	0.2000%	0.3317%	0.3400%
Jun-15	-1.9400%	-6.0000%	0.2300%	0.3492%	0.3558%
Jul-15	2.1000%	4.8100%	0.2400%	0.3458%	0.3542%
Aug-15	-6.0300%	-3.9700%	0.2200%	0.3367%	0.3442%
Sep-15	-2.4700%	2.9000%	0.2100%	0.3392%	0.3508%
Oct-15	8.4400%	1.0800%	0.2100%	0.3292%	0.3425%
Nov-15	0.3000%	-2.1300%	0.2200%	0.3383%	0.3508%
Dec-15	-1.5800%	2.1600%	0.2200%	0.3308%	0.3467%
Jan-16	-4.9600%	4.9223%	0.2100%	0.3333%	0.3433%
Feb-16	-0.1300%	1.9408%	0.2000%	0.3300%	0.3317%
Mar-16	6.7800%	8.1400%	0.1800%	0.3183%	0.3258%
Apr-16	0.3900%	-2.4100%	0.1700%	0.3183%	0.3258%
May-16	1.8000%	1.5100%	0.2000%	0.3042%	0.3083%
Jun-16	0.2600%	7.7900%	0.1800%	0.2917%	0.3000%
Jul-16	3.6900%	-0.8000%	0.1400%	0.2733%	0.2825%
Aug-16	0.1400%	-5.5100%	0.1600%	0.2767%	0.2850%
Sep-16	0.0200%	0.4000%	0.1500%	0.2842%	0.2917%
Oct-16	-1.8200%	0.8600%	0.1600%	0.2842%	0.2917%
Nov-16	3.7000%	-5.3900%	0.1800%	0.3217%	0.3275%
Dec-16	1.9800%	4.9400%	0.2200%	0.3383%	0.3433%
Jan-17	1.9000%	1.2600%	0.2400%	0.3267%	0.3317%
Feb-17	3.9700%	5.2600%	0.2100%	0.3292%	0.3342%
Mar-17	0.1200%	2.9800%	0.2300%	0.3292%	0.3342%
Apr-17	1.0300%	0.7800%	0.2100%	0.3225%	0.3275%
May-17	1.4100%	4.2200%	0.2400%	0.3208%	0.3275%
Jun-17	0.6200%	-2.7000%	0.2100%	0.3067%	0.3142%
Jul-17	2.0600%	2.4400%	0.2200%	0.3150%	0.3225%
Aug-17	0.3100%	3.2400%	0.2200%	0.3083%	0.3167%
Sep-17	2.0600%	-2.7300%	0.1900%	0.3025%	0.3100%
Oct-17	2.3300%	3.9000%	0.2200%	0.3000%	0.3117%
Nov-17	3.0700%	2.7500%	0.2100%	0.3000%	0.3117%
Dec-17	1.1100%	-6.1300%	0.2000%	0.2925%	0.3008%
Jan-18	5.7300%	-3.0700%	0.2400%	0.2925%	0.3008%
Feb-18	-3.6900%	-3.8400%	0.2200%	0.2958%	0.3067%
Mar-18	-2.5400%	3.7700%	0.2400%	0.3225%	0.3325%
Apr-18	0.3800%	2.1000%	0.2500%	0.3208%	0.3342%
May-18	2.4100%	-1.1400%	0.2500%	0.3325%	0.3433%
Jun-18	0.6200%	2.7300%	0.2300%	0.3300%	0.3425%
Jul-18	3.7200%	1.8600%	0.2500%	0.3225%	0.3392%
Aug-18	3.2600%	1.1300%	0.2500%	0.3233%	0.3375%
Sep-18	0.5700%	-0.6000%	0.2200%	0.3233%	0.3375%
Oct-18	-6.8400%	1.9500%	0.3000%	0.3450%	0.3567%
Nov-18	2.0400%	3.5500%	0.2800%	0.3517%	0.3683%
Dec-18	-9.0300%	-4.0100%	0.2700%	0.3517%	0.3642%
Jan-19	8.0100%	4.8400%	0.2500%	0.3275%	0.3450%
Feb-19	3.2100%	4.1100%	0.2200%	0.3158%	0.3325%
Mar-19	1.9400%	2.8800%	0.2300%	0.3158%	0.3325%

Apr-19	4.0500%	0.9300%	0.2300%	0.3075%	0.3208%
May-19	-6.3500%	-0.7800%	0.2300%	0.3058%	0.3167%
Jun-19	7.0500%	3.2200%	0.1800%	0.3058%	0.3167%
Jul-19	1.4400%	-0.2700%	0.2100%	0.2742%	0.2883%
Aug-19	-1.5800%	5.1300%	0.1900%	0.2742%	0.2883%
Sep-19	1.8700%	4.2500%	0.1500%	0.2483%	0.2567%
Oct-19	2.1700%	-0.7700%	0.1600%	0.2525%	0.2608%
Nov-19	3.6300%	-1.8600%	0.1600%	0.2558%	0.2642%
Dec-19	3.0200%	3.4300%	0.1800%	0.2508%	0.2592%
Jan-20	-0.0400%	6.6537%	0.2000%	0.2450%	0.2508%
Feb-20	-8.2300%	-9.8453%	0.1500%	0.2317%	0.2375%
Mar-20	-12.3500%	-9.9853%	0.1300%	0.2517%	0.2567%
Apr-20	12.8200%	3.2287%	0.0900%	0.2025%	0.2292%
May-20	4.7600%	4.3538%	0.0900%	0.2075%	0.2267%
Jun-20	1.9900%	-4.6515%	0.0900%	0.2008%	0.2192%
Jul-20	5.6400%	7.8156%	0.1000%	0.1783%	0.1933%
Aug-20	7.1900%	-2.6496%	0.0800%	0.1875%	0.1975%
Sep-20	-3.8000%	1.1209%	0.0000%	0.1925%	0.2058%
Oct-20	-2.6600%	5.0417%	0.0900%	0.1958%	0.2125%
Nov-20	10.9500%	0.7352%	0.1100%	0.1917%	0.2058%
Dec-20	3.8400%	0.7033%	0.1100%	0.1883%	0.2033%
Jan-21	-1.0100%	-0.9149%	0.1100%	0.2042%	0.2175%
Feb-21	2.7600%	-6.0950%	0.1200%	0.2250%	0.2358%
Mar-21	4.3800%	10.4988%	0.1800%	0.2533%	0.2642%
Apr-21	5.3400%	4.2771%	0.1900%	0.2417%	0.2525%
May-21	0.7000%	-2.3728%	0.1800%	0.2467%	0.2558%
Jun-21	2.3300%	-2.1630%	0.1700%	0.2325%	0.2425%
Jul-21	2.3800%	3.8580%	0.1600%	0.2142%	0.2258%
Aug-21	3.0400%	3.9755%	0.1500%	0.2125%	0.2275%
Sep-21	-4.6500%	-6.1695%	0.1400%	0.2108%	0.2275%
Oct-21	7.0100%	4.7338%	0.1500%	0.2233%	0.2383%
Nov-21	-0.6900%	-1.6394%	0.1700%	0.2183%	0.2308%
Dec-21	4.4800%	9.6216%	0.1500%	0.2200%	0.2308%
Jan-22	-5.1700%	-3.2749%	0.1700%	0.2442%	0.2517%
Feb-22	-2.9900%	-3.4092%	0.1700%	0.2708%	0.2800%
Mar-22	3.7100%	10.3402%	0.2000%	0.2858%	0.3017%
Apr-22	-8.7200%	-4.2501%	0.2100%	0.3125%	0.3267%
May-22	0.1800%	4.3041%	0.2800%	0.3442%	0.3633%
Jun-22	-8.2500%	-4.9726%	0.2800%	0.3533%	0.3742%
Jul-22	9.2200%	5.4986%	0.2700%	0.3383%	0.3642%
Aug-22	-4.0800%	0.5100%	0.2900%	0.3392%	0.3633%
Sep-22	-9.2100%	-11.3165%	0.2900%	0.3808%	0.4050%
Oct-22	8.1000%	1.6754%	0.3500%	0.4250%	0.4500%
Nov-22	5.5900%	6.9879%	0.3600%	0.4083%	0.4358%
Dec-22	-5.7600%	-0.4901%	0.3300%	0.3675%	0.3958%
Jan-23	6.2834%	-2.0054%	0.3050%	0.3667%	0.3933%
Feb-23	-2.4400%	-5.8516%	0.3167%	0.3800%	0.4033%
Mar-23	3.6714%	4.8888%	0.3142%	0.3833%	0.4117%
Apr-23	0.7188%	1.8900%	0.3067%	0.3725%	0.4017%

May-23	0.4347%	-5.8087%	0.3217%	0.3892%	0.4217%
Jun-23	6.6076%	1.6572%	0.3225%	0.3875%	0.4183%
Jul-23	3.2125%	2.4678%	0.3300%	0.3883%	0.4225%
Aug-23	-1.5921%	-6.1408%	0.3567%	0.4133%	0.4475%
Sep-23	-4.7678%	-5.5938%	0.3725%	0.4275%	0.4592%
Oct-23	-2.7391%	1.2938%	0.4125%	0.4675%	0.4975%
Nov-23	8.6885%	5.1596%	0.3883%	0.4400%	0.4725%
Dec-23	4.5431%	1.9135%	0.3450%	0.3950%	0.4217%

Avg Aaa and Aa Corp	A PU	RPMKT	RPAAAAA	RPSPA	Mkt Annlized Return
		-4.1300%			
		-6.0700%			
		2.2300%			
		1.5100%			
		4.2400%			
		4.4800%			
		2.1700%			
		2.2200%			
		-3.1400%			
		3.1600%			
		1.6600%			11.61%
		-2.2300%			9.45%
		5.1000%			19.95%
		0.5800%			28.37%
		1.7400%			27.72%
		5.7900%			33.09%
		-0.9400%			26.42%
		6.4300%			28.73%
		4.8600%			32.08%
		4.2300%			34.63%
		-5.3000%			31.61%
		6.9400%			36.37%
		2.5200%			37.48%
0.3779%	0.4042%	-0.6700%	-0.7779%	3.3458%	39.62%
0.3779%	0.4042%	-1.5000%	-1.6279%	-1.2042%	30.85%
0.3771%	0.4017%	10.7400%	10.6329%	6.8283%	44.01%
0.3775%	0.4017%	3.1900%	3.0725%	9.4583%	46.04%
0.3804%	0.4058%	1.7000%	1.5896%	1.6742%	40.39%
0.3883%	0.4158%	-4.1200%	-4.2383%	-4.4258%	35.90%
0.3917%	0.4200%	1.1400%	1.0183%	-1.1800%	29.16%
0.3942%	0.4233%	7.7400%	7.6358%	6.3967%	32.70%
0.3917%	0.4208%	2.3200%	2.1983%	2.4492%	30.27%
0.3913%	0.4158%	1.3800%	1.2888%	-1.3358%	39.46%
0.3875%	0.4150%	12.6500%	12.5325%	21.0550%	46.89%
0.3908%	0.4208%	0.2000%	0.0992%	0.5792%	43.61%
0.3921%	0.4208%	5.5400%	5.4379%	12.8292%	52.59%
0.3967%	0.4250%	-0.4600%	-0.5867%	-2.7450%	54.23%
0.4008%	0.4283%	-0.4000%	-0.5208%	-1.5283%	38.76%
0.4000%	0.4283%	1.4200%	1.3600%	3.0417%	36.50%
0.4004%	0.4283%	-3.9200%	-4.0204%	4.2717%	29.01%
0.4063%	0.4358%	11.1100%	10.9938%	21.3442%	49.48%

0.4058%	0.4367%	4.3900%	4.3042%	8.6133%	54.34%
0.4075%	0.4417%	9.9800%	9.8725%	9.8883%	57.55%
0.4088%	0.4483%	-5.0800%	-5.1688%	-0.4083%	46.27%
0.4075%	0.4450%	-20.0400%	-20.1375%	-30.6650%	15.47%
0.4042%	0.4408%	-12.7200%	-12.8642%	-14.6808%	-10.48%
0.3963%	0.4358%	2.5100%	2.4238%	6.3642%	-8.41%
0.3967%	0.4383%	6.1000%	5.9933%	6.9617%	-7.92%
0.3992%	0.4408%	2.3300%	2.1908%	8.4092%	-5.36%
0.3925%	0.4317%	7.8300%	7.7275%	8.4783%	2.45%
0.3908%	0.4292%	-1.0700%	-1.1908%	2.9808%	-0.13%
0.3904%	0.4200%	-1.2300%	-1.3504%	-2.7800%	2.63%
0.3888%	0.4175%	-16.5400%	-16.6388%	-19.4475%	-22.85%
0.3858%	0.4158%	3.5800%	3.4742%	1.3442%	-23.47%
0.3813%	0.4125%	1.1500%	1.0288%	0.3475%	-29.63%
0.3779%	0.4050%	-13.1100%	-13.1979%	-11.4850%	-35.58%
0.3788%	0.4067%	-8.8200%	-8.9288%	-8.5867%	-26.61%
0.3842%	0.4133%	-1.1500%	-1.2742%	-7.7133%	-16.91%
0.3904%	0.4258%	-7.3400%	-7.4504%	-3.8158%	-24.90%
0.3800%	0.4175%	4.7400%	4.6400%	4.9825%	-25.86%
0.3804%	0.4175%	11.6700%	11.5496%	14.8225%	-19.11%
0.3775%	0.4150%	-7.0400%	-7.1275%	-2.8050%	-30.24%
0.3817%	0.4050%	-9.6200%	-9.7317%	-10.9450%	-36.25%
0.3804%	0.4033%	-13.0500%	-13.1704%	-10.6933%	-43.86%
0.3821%	0.4058%	13.9300%	13.8279%	13.3242%	-23.45%
0.3821%	0.4025%	-7.4900%	-7.6021%	-6.6225%	-31.61%
0.3854%	0.4008%	1.5500%	1.4346%	2.1592%	-31.34%
0.4013%	0.4208%	-30.0000%	-30.1313%	-31.9108%	-44.66%
0.4400%	0.4617%	8.6700%	8.5200%	9.4383%	-34.06%
0.4396%	0.4592%	-8.2900%	-8.4196%	-6.5992%	-38.78%
0.4825%	0.5200%	-14.3200%	-14.4825%	-13.3500%	-43.35%
0.4700%	0.5142%	-3.0300%	-3.1800%	-2.5142%	-47.52%
0.4733%	0.5342%	5.3800%	5.2267%	7.4558%	-50.44%
0.4513%	0.5050%	-11.8900%	-12.0313%	-11.0850%	-53.01%
0.4700%	0.5692%	-20.2700%	-20.4400%	-15.9192%	-58.51%
0.4892%	0.6133%	-22.2400%	-22.4492%	-28.6733%	-62.87%
0.5004%	0.6308%	-0.5000%	-0.7204%	0.2692%	-67.57%
0.4904%	0.6067%	37.8700%	37.6596%	32.5733%	-51.70%
0.4475%	0.5292%	38.4100%	38.2425%	39.7708%	-34.22%
0.4267%	0.4925%	-3.7200%	-3.8867%	-3.1925%	-9.62%
0.4229%	0.4842%	-13.7600%	-13.9129%	-10.9542%	-28.24%
0.4250%	0.4900%	-4.4300%	-4.5950%	-4.0300%	-25.27%
0.4246%	0.4875%	5.3800%	5.2254%	8.4425%	-8.20%
0.4058%	0.4492%	0.6000%	0.4642%	-3.5592%	-4.82%
0.4096%	0.4808%	-17.9500%	-18.1296%	-20.3208%	-25.91%
0.4288%	0.5283%	3.2600%	3.1013%	-11.3283%	-13.25%
0.4413%	0.5742%	42.3100%	42.1188%	25.7758%	54.53%
0.4179%	0.5417%	16.5500%	16.4121%	16.7783%	131.34%
0.3979%	0.5092%	13.1300%	12.9821%	13.7508%	162.88%

0.3829%	0.4925%	-8.8800%	-9.0029%	-12.5325%	73.88%
0.3779%	0.4983%	11.8000%	11.6821%	-1.0583%	40.49%
0.3883%	0.5300%	-11.4300%	-11.5683%	-18.1200%	29.26%
0.3879%	0.5300%	-8.8100%	-8.9379%	-7.6500%	36.64%
0.4121%	0.5883%	11.0200%	10.8579%	-2.3883%	58.66%
0.4071%	0.6017%	2.2500%	2.1229%	0.6583%	53.97%
0.3896%	0.5467%	10.4000%	10.3004%	16.9133%	68.96%
0.3708%	0.4817%	-3.4600%	-3.5908%	-2.9017%	98.73%
0.3617%	0.4717%	-0.2700%	-0.3617%	-1.5817%	91.96%
0.3542%	0.4533%	-2.7600%	-2.8642%	-3.9633%	31.27%
0.3492%	0.4492%	-7.6100%	-7.7092%	-8.0992%	4.09%
0.3429%	0.4500%	2.0500%	1.9471%	4.3300%	-6.09%
0.3404%	0.4408%	-11.5600%	-11.6604%	-16.4708%	-8.86%
0.3446%	0.4525%	5.8700%	5.7654%	2.2375%	-13.70%
0.3492%	0.4633%	-0.5600%	-0.6792%	0.4867%	-3.16%
0.3442%	0.4500%	-3.1300%	-3.2042%	-7.1100%	2.86%
0.3392%	0.4483%	9.1700%	9.0808%	-0.9283%	1.15%
0.3367%	0.4467%	-0.3500%	-0.4367%	-7.4567%	-1.44%
0.3325%	0.4317%	-4.3600%	-4.4425%	-2.7417%	-14.62%
0.3258%	0.4133%	-3.6200%	-3.7358%	-11.7733%	-14.79%
0.3242%	0.4067%	-3.0800%	-3.1842%	10.0233%	-17.22%
0.3225%	0.3992%	9.5700%	9.4775%	11.3808%	-6.77%
0.3200%	0.3842%	3.8600%	3.7700%	10.6758%	4.75%
0.3167%	0.3775%	6.7700%	6.6733%	9.9825%	9.56%
0.3104%	0.3683%	8.2600%	8.1896%	8.3317%	34.05%
0.3113%	0.3700%	2.5700%	2.4888%	5.2600%	29.87%
0.3100%	0.3692%	2.3300%	2.2500%	-1.5892%	33.63%
0.3058%	0.3667%	7.5400%	7.4642%	11.8733%	48.26%
0.3000%	0.3625%	4.5000%	4.4400%	0.7175%	41.92%
0.2954%	0.3575%	3.7000%	3.6446%	4.4325%	47.66%
0.2892%	0.3508%	6.4600%	6.4108%	10.6792%	64.30%
0.2863%	0.3475%	2.0100%	1.9538%	-3.7675%	73.91%
0.2850%	0.3475%	2.4400%	2.3950%	-0.0175%	83.83%
0.2858%	0.3475%	-7.7300%	-7.7958%	-8.4875%	54.85%
0.2833%	0.3450%	5.2300%	5.1667%	7.2650%	56.87%
0.2813%	0.3433%	3.0900%	3.0488%	3.1567%	51.51%
0.2796%	0.3392%	6.7800%	6.7304%	9.7508%	49.43%
0.2771%	0.3383%	1.2800%	1.2329%	-0.5183%	47.55%
0.2746%	0.3375%	0.1000%	0.0354%	-2.5875%	44.31%
0.2729%	0.3367%	7.5200%	7.4771%	5.3233%	44.29%
0.2692%	0.3292%	1.1200%	1.0708%	-2.0192%	39.60%
0.2658%	0.3192%	-0.5100%	-0.5558%	-2.0592%	33.92%
0.2667%	0.3183%	3.6900%	3.6333%	1.6317%	30.41%
0.2758%	0.3242%	1.7100%	1.6342%	-3.8542%	29.99%
0.2842%	0.3333%	-0.9900%	-1.0542%	-6.0633%	25.62%
0.2913%	0.3392%	-8.3200%	-8.3813%	-7.6992%	24.83%
0.2838%	0.3333%	-0.4600%	-0.5238%	-5.4933%	18.10%
0.2796%	0.3325%	-5.2900%	-5.3196%	-5.0025%	8.53%
0.2775%	0.3283%	10.2100%	10.1725%	16.3817%	12.02%

0.2771%	0.3242%	-5.0600%	-5.1071%	-9.3542%	5.02%
0.2808%	0.3300%	-14.2600%	-14.3108%	-12.0700%	-9.99%
0.2833%	0.3408%	-10.0400%	-10.0933%	-5.5008%	-24.66%
0.2825%	0.3400%	-8.9000%	-8.9425%	0.4600%	-32.09%
0.2796%	0.3358%	-4.8200%	-4.8696%	-9.8458%	-35.02%
0.2779%	0.3342%	1.2900%	1.2421%	-4.0142%	-36.51%
0.2796%	0.3358%	6.5300%	6.4604%	3.0742%	-33.50%
0.2825%	0.3325%	-25.1000%	-25.1525%	-20.1725%	-49.65%
0.2929%	0.3400%	14.2500%	14.1771%	15.0400%	-37.29%
0.2825%	0.3292%	-3.5200%	-3.5825%	1.4808%	-39.22%
0.2892%	0.3292%	24.8200%	24.7408%	15.8908%	-19.97%
0.2850%	0.3217%	7.2300%	7.1550%	1.1583%	-22.15%
0.2813%	0.3200%	-2.4800%	-2.5413%	-5.8900%	-20.05%
0.2838%	0.3233%	1.4500%	1.3763%	1.5867%	-5.46%
0.2783%	0.3158%	7.5400%	7.4817%	17.6942%	12.96%
0.2733%	0.3108%	-2.9400%	-3.0033%	-6.5108%	20.29%
0.2708%	0.3117%	3.7900%	3.7392%	3.5983%	31.14%
0.2638%	0.3067%	-6.9500%	-7.0038%	1.3433%	20.47%
0.2608%	0.2992%	3.7100%	3.6392%	7.7108%	17.26%
0.2588%	0.2950%	-13.6000%	-13.6488%	-14.0750%	35.18%
0.2600%	0.2958%	-0.4600%	-0.5300%	2.5542%	17.77%
0.2554%	0.2917%	7.1300%	7.0746%	6.3583%	30.72%
0.2521%	0.2892%	-6.3000%	-6.3721%	-4.5192%	-1.85%
0.2488%	0.2858%	10.8600%	10.8013%	11.7942%	1.45%
0.2517%	0.2842%	-6.6600%	-6.7317%	-6.7542%	-2.93%
0.2808%	0.3092%	16.5400%	16.4492%	3.9008%	11.46%
0.2708%	0.2983%	-1.4600%	-1.5008%	1.0017%	2.16%
0.2567%	0.2842%	-4.1800%	-4.2367%	-1.8542%	0.85%
0.2533%	0.2817%	2.5100%	2.4467%	2.4383%	-0.42%
0.2483%	0.2783%	-3.5600%	-3.6083%	0.4117%	3.19%
0.2463%	0.2792%	1.1500%	1.0838%	-1.2992%	0.63%
0.2450%	0.2783%	1.0500%	0.9950%	0.6617%	17.63%
0.2421%	0.2708%	-0.4200%	-0.4821%	-1.1908%	17.67%
0.2504%	0.2750%	-23.0800%	-23.1404%	-19.9150%	-15.46%
0.2525%	0.2783%	7.9000%	7.8375%	14.7817%	-2.67%
0.2454%	0.2692%	3.2100%	3.1646%	0.3808%	-9.36%
0.2450%	0.2675%	3.3100%	3.2550%	-1.2075%	0.31%
0.2429%	0.2650%	1.0500%	0.9871%	-2.3750%	-13.01%
0.2417%	0.2625%	4.0400%	3.9783%	2.9075%	-8.21%
0.2379%	0.2592%	-3.3400%	-3.3979%	-12.3292%	-7.43%
0.2346%	0.2583%	-0.0800%	-0.1446%	1.2817%	-9.78%
0.2375%	0.2625%	-4.7900%	-4.8675%	-1.1025%	-10.96%
0.2408%	0.2667%	-0.7600%	-0.8408%	-2.5967%	-12.66%
0.2421%	0.2633%	0.5300%	0.4679%	-3.0633%	-13.12%
0.2442%	0.2617%	-6.2900%	-6.3642%	-8.7017%	-18.24%
0.2417%	0.2567%	1.6600%	1.5883%	-3.6267%	7.97%
0.2383%	0.2525%	5.6200%	5.5417%	2.3175%	5.67%
0.2350%	0.2500%	5.6300%	5.5550%	5.1300%	8.10%
0.2350%	0.2483%	-0.0600%	-0.1350%	-2.1683%	4.55%

0.2358%	0.2500%	-0.8400%	-0.9158%	-3.0700%	2.57%
0.2333%	0.2500%	-6.7300%	-6.8033%	-8.7300%	-8.05%
0.2325%	0.2483%	-2.9800%	-3.0725%	-6.7683%	-7.74%
0.2396%	0.2550%	-4.2300%	-4.3096%	-7.0350%	-11.58%
0.2413%	0.2575%	1.4000%	1.3688%	2.2625%	-5.79%
0.2429%	0.2575%	-1.7800%	-1.8329%	-3.6475%	-6.73%
0.2442%	0.2600%	-6.7300%	-6.7642%	-10.7200%	-13.43%
0.2421%	0.2575%	-4.2000%	-4.2421%	-4.5775%	-11.47%
0.2438%	0.2583%	7.7700%	7.7163%	9.3017%	-6.14%
0.2442%	0.2600%	2.0000%	1.9658%	0.3100%	-9.31%
0.2425%	0.2583%	3.1600%	3.1275%	0.1417%	-11.38%
0.2417%	0.2583%	1.4300%	1.3983%	0.0017%	-10.02%
0.2408%	0.2567%	2.7000%	2.6592%	4.4033%	-6.78%
0.2396%	0.2567%	6.5700%	6.5404%	13.3633%	6.54%
0.2388%	0.2558%	-0.4100%	-0.4488%	-0.4058%	9.43%
0.2404%	0.2550%	5.2800%	5.2496%	3.0250%	20.33%
0.2383%	0.2542%	7.1700%	7.1317%	11.9158%	27.15%
0.2358%	0.2517%	5.6400%	5.5942%	6.9383%	36.74%
0.2350%	0.2508%	5.2400%	5.2150%	3.8692%	54.25%
0.2350%	0.2500%	0.1500%	0.1150%	3.6200%	61.24%
0.2338%	0.2500%	5.3300%	5.2863%	3.2200%	57.60%
0.2321%	0.2483%	2.0200%	1.9979%	5.1317%	57.63%
0.2296%	0.2467%	-5.4700%	-5.4896%	0.1333%	44.47%
0.2292%	0.2467%	1.5000%	1.4808%	0.8033%	44.57%
0.2296%	0.2467%	2.4300%	2.4004%	2.9833%	44.19%
0.2304%	0.2475%	-1.2800%	-1.3104%	0.5725%	33.57%
0.2313%	0.2483%	-6.7500%	-6.7713%	-7.9983%	25.10%
0.2338%	0.2492%	5.9600%	5.9363%	5.5308%	25.91%
0.2313%	0.2492%	1.5000%	1.4788%	0.8108%	19.27%
0.2321%	0.2492%	0.2200%	0.1879%	1.5408%	13.17%
0.2317%	0.2475%	1.7400%	1.7183%	0.7925%	9.42%
0.2317%	0.2492%	-1.2000%	-1.2317%	-1.1592%	7.94%
0.2308%	0.2492%	4.8300%	4.8192%	2.7608%	7.46%
0.2308%	0.2492%	5.2300%	5.1992%	5.0108%	10.83%
0.2300%	0.2467%	-2.1400%	-2.1600%	0.0433%	14.72%
0.2292%	0.2450%	1.3600%	1.3408%	3.3250%	14.57%
0.2296%	0.2442%	-0.2800%	-0.3096%	-1.7442%	11.54%
0.2304%	0.2450%	0.0200%	-0.0004%	1.1450%	13.02%
0.2300%	0.2467%	1.1300%	1.1000%	-1.5467%	22.53%
0.2275%	0.2475%	3.5400%	3.5125%	2.9925%	19.73%
0.2271%	0.2492%	1.3700%	1.3529%	4.7208%	19.58%
0.2242%	0.2483%	6.6500%	6.6058%	6.7017%	27.21%
0.2225%	0.2475%	-4.6100%	-4.6325%	-3.8175%	19.27%
0.2225%	0.2458%	8.8300%	8.7975%	10.4142%	31.35%
0.2225%	0.2433%	1.7600%	1.7275%	1.4667%	27.47%
0.2208%	0.2392%	-0.2600%	-0.2908%	6.3808%	20.82%
0.2200%	0.2358%	-1.9800%	-2.0200%	-0.7458%	20.98%
0.2213%	0.2333%	6.2200%	6.1888%	0.0767%	26.75%
0.2217%	0.2325%	4.2000%	4.1583%	7.1575%	32.40%

0.2217%	0.2325%	3.0300%	2.9983%	6.1775%	36.35%
0.2208%	0.2308%	3.7800%	3.7392%	4.4792%	39.89%
0.2204%	0.2292%	0.9800%	0.9396%	-1.3992%	36.41%
0.2150%	0.2242%	6.9700%	6.9250%	11.7658%	43.88%
0.2100%	0.2225%	-6.5600%	-6.6200%	-6.6225%	26.05%
0.2088%	0.2217%	4.6400%	4.5913%	6.0883%	38.19%
0.2092%	0.2208%	3.7600%	3.7208%	3.1592%	31.74%
0.2121%	0.2242%	2.7000%	2.6679%	2.7858%	32.94%
0.2117%	0.2250%	-3.8600%	-3.9117%	-2.9850%	28.11%
0.2113%	0.2242%	-2.5800%	-2.6013%	-4.1742%	27.34%
0.2138%	0.2258%	-6.9100%	-6.9538%	-7.4658%	11.61%
0.2192%	0.2292%	-10.1500%	-10.1892%	-10.7392%	-3.74%
0.2208%	0.2300%	-0.7900%	-0.8208%	1.9700%	-7.30%
0.2200%	0.2300%	-0.4500%	-0.4900%	0.3500%	-11.07%
0.2208%	0.2300%	4.3800%	4.3492%	6.8300%	-8.07%
0.2175%	0.2267%	2.3700%	2.3325%	-0.2467%	-12.01%
0.2163%	0.2267%	-0.9300%	-0.9863%	-1.1167%	-6.71%
0.2163%	0.2267%	-1.6700%	-1.7063%	-3.8667%	-12.31%
0.2150%	0.2250%	-3.8000%	-3.8450%	-3.4250%	-18.69%
0.2150%	0.2250%	-0.0300%	-0.0750%	-3.0150%	-20.85%
0.2163%	0.2258%	5.3500%	5.3238%	4.0542%	-13.26%
0.2163%	0.2275%	3.6300%	3.5938%	1.9125%	-7.75%
0.2167%	0.2275%	-2.2000%	-2.2467%	-0.4475%	-3.09%
0.2208%	0.2333%	-1.2900%	-1.3308%	-1.6533%	6.45%
0.2288%	0.2400%	2.2000%	2.1513%	-1.5700%	9.64%
0.2342%	0.2442%	-1.9200%	-1.9842%	-8.4842%	8.01%
0.2417%	0.2542%	2.1200%	2.0883%	1.6358%	5.70%
0.2417%	0.2542%	-3.9900%	-4.0317%	0.4458%	-0.84%
0.2408%	0.2542%	-4.0700%	-4.1208%	-3.9742%	-3.95%
0.2388%	0.2517%	7.7100%	7.6913%	5.9183%	5.24%
0.2354%	0.2475%	2.7200%	2.6846%	1.3525%	12.39%
0.2342%	0.2450%	8.6100%	8.5558%	5.5850%	22.10%
0.2338%	0.2450%	0.3300%	0.3063%	1.8750%	16.32%
0.2375%	0.2492%	-5.2700%	-5.3175%	-4.6792%	6.35%
0.2408%	0.2525%	1.3700%	1.3392%	0.1075%	10.27%
0.2404%	0.2542%	-2.9600%	-3.0004%	-0.9642%	8.43%
0.2408%	0.2525%	6.9100%	6.8592%	3.7775%	13.43%
0.2400%	0.2558%	-9.8200%	-9.8500%	-9.3858%	4.36%
0.2363%	0.2550%	3.2600%	3.2238%	1.9550%	5.51%
0.2300%	0.2492%	0.1900%	0.1600%	4.7908%	10.09%
0.2296%	0.2492%	-3.1400%	-3.1896%	-0.1992%	11.15%
0.2288%	0.2475%	3.0900%	3.0513%	3.3925%	6.36%
0.2288%	0.2467%	-1.9700%	-2.0188%	0.3333%	1.49%
0.2288%	0.2458%	-2.7800%	-2.8088%	0.0942%	-9.11%
0.2288%	0.2450%	-0.0500%	-0.0888%	-1.5850%	-9.48%
0.2258%	0.2417%	6.3300%	6.2742%	5.4483%	1.57%
0.2221%	0.2383%	2.0000%	1.9679%	3.2217%	2.18%
0.2204%	0.2375%	2.4600%	2.4096%	3.4925%	7.84%
0.2213%	0.2358%	3.2200%	3.1788%	0.8842%	4.12%

0.2200%	0.2342%	1.5800%	1.5300%	1.3558%	17.20%
0.2188%	0.2317%	4.6900%	4.6413%	3.7283%	18.79%
0.2175%	0.2300%	1.7900%	1.7525%	3.3000%	20.66%
0.2179%	0.2300%	1.8300%	1.7721%	0.7700%	26.81%
0.2183%	0.2300%	0.5200%	0.4817%	0.6100%	23.64%
0.2192%	0.2308%	4.7000%	4.6408%	1.6192%	32.01%
0.2208%	0.2325%	4.9000%	4.8692%	1.6875%	42.41%
0.2213%	0.2325%	-5.6500%	-5.7013%	-7.9425%	34.42%
0.2238%	0.2325%	1.0100%	0.9663%	-4.5925%	27.71%
0.2200%	0.2300%	4.2500%	4.2100%	1.3100%	30.51%
0.2229%	0.2333%	5.7500%	5.6971%	3.9467%	34.70%
0.2246%	0.2358%	0.7400%	0.7054%	-0.5058%	31.48%
0.2246%	0.2383%	1.5100%	1.4654%	-1.9983%	31.40%
0.2246%	0.2383%	4.9500%	4.9054%	2.8817%	31.74%
0.2238%	0.2358%	6.1700%	6.1463%	4.1442%	37.43%
0.2238%	0.2367%	1.4000%	1.3463%	2.4433%	36.86%
0.2333%	0.2458%	-1.7500%	-1.7933%	-1.9858%	33.79%
0.2417%	0.2575%	4.8900%	4.8483%	-0.2075%	34.08%
0.2425%	0.2608%	-3.2000%	-3.2325%	0.3992%	23.77%
0.2471%	0.2675%	-2.4800%	-2.5271%	-0.6675%	27.96%
0.2471%	0.2717%	6.8800%	6.8629%	4.1183%	35.45%
0.2417%	0.2658%	4.5700%	4.5383%	1.2542%	35.90%
0.2383%	0.2617%	-0.0600%	-0.1083%	0.5983%	28.47%
0.2425%	0.2642%	-1.2600%	-1.2725%	0.0258%	25.98%
0.2492%	0.2700%	0.7500%	0.7108%	0.9300%	25.07%
0.2529%	0.2742%	4.0200%	3.9871%	3.2458%	24.02%
0.2513%	0.2742%	1.5800%	1.5588%	2.7758%	18.70%
0.2475%	0.2692%	-3.0300%	-3.0675%	0.3208%	13.57%
0.2496%	0.2708%	4.8000%	4.7804%	1.4892%	21.17%
0.2475%	0.2692%	-4.2400%	-4.2675%	-1.8092%	10.67%
0.2471%	0.2683%	3.2300%	3.1829%	1.6317%	17.99%
0.2488%	0.2683%	4.6800%	4.6513%	0.2217%	26.66%
0.2496%	0.2683%	1.7400%	1.7104%	1.7917%	20.57%
0.2500%	0.2700%	-0.9200%	-0.9600%	1.7600%	14.25%
0.2508%	0.2700%	-1.9900%	-2.0108%	-0.1200%	12.10%
0.2538%	0.2717%	-0.0300%	-0.0538%	0.7383%	13.49%
0.2517%	0.2700%	5.5000%	5.4583%	3.9600%	18.83%
0.2508%	0.2683%	3.5800%	3.5692%	1.8617%	18.35%
0.2546%	0.2708%	-0.7200%	-0.7446%	0.7592%	15.68%
0.2588%	0.2750%	-1.2700%	-1.3188%	-0.9450%	17.77%
0.2625%	0.2800%	-2.3700%	-2.3825%	-0.7100%	9.75%
0.2717%	0.2892%	-2.6100%	-2.6417%	-2.2092%	11.64%
0.2813%	0.3025%	0.5300%	0.4888%	-0.0625%	8.77%
0.2875%	0.3092%	-1.6100%	-1.6275%	-3.0392%	2.30%
0.2792%	0.3050%	2.4800%	2.4508%	3.1450%	3.07%
0.2763%	0.3008%	-5.2600%	-5.2863%	-0.1408%	-1.39%
0.2800%	0.3017%	0.0900%	0.0600%	0.8883%	0.72%
0.2704%	0.2908%	5.1700%	5.1296%	3.8192%	5.94%
0.2658%	0.2833%	1.8000%	1.7742%	2.4567%	2.27%

0.2671%	0.2817%	0.2900%	0.2629%	0.3583%	-0.98%
0.2617%	0.2767%	5.1300%	5.0983%	2.9933%	4.85%
0.2529%	0.2692%	0.8900%	0.8571%	0.9008%	7.15%
0.2454%	0.2633%	3.0000%	3.0046%	2.4367%	13.02%
0.2438%	0.2633%	4.9400%	4.9163%	0.9467%	21.74%
0.2463%	0.2617%	3.9800%	3.9338%	2.3083%	25.86%
0.2483%	0.2633%	0.0600%	0.0617%	0.6967%	27.97%
0.2471%	0.2617%	5.6700%	5.6429%	4.6883%	31.90%
0.2458%	0.2608%	-2.9800%	-2.9958%	-1.5708%	35.04%
0.2471%	0.2600%	8.2900%	8.2629%	1.5200%	46.04%
0.2463%	0.2600%	-1.8800%	-1.9163%	-3.9400%	36.24%
0.2471%	0.2592%	8.8600%	8.8429%	5.3908%	45.65%
0.2475%	0.2592%	5.1100%	5.0925%	3.1508%	52.62%
0.2496%	0.2608%	1.7500%	1.7204%	1.1692%	47.71%
0.2513%	0.2617%	0.7600%	0.7288%	3.1783%	47.52%
0.2563%	0.2625%	-0.5400%	-0.5563%	-1.3625%	42.45%
0.2558%	0.2625%	3.7400%	3.7042%	1.7575%	40.82%
0.2579%	0.2658%	0.3000%	0.2921%	-0.8458%	35.92%
0.2579%	0.2675%	8.1800%	8.1521%	1.8425%	46.89%
0.2583%	0.2675%	5.9900%	5.9617%	4.3925%	47.35%
0.2629%	0.2700%	-0.5200%	-0.5129%	0.2500%	51.14%
0.2646%	0.2725%	1.0600%	1.0354%	-3.1725%	41.10%
0.2621%	0.2750%	-3.0900%	-3.1021%	-1.1250%	39.42%
0.2617%	0.2767%	8.0300%	8.0083%	2.6433%	38.37%
0.2654%	0.2792%	-0.0900%	-0.1154%	-0.9492%	31.55%
0.2625%	0.2758%	-3.7200%	-3.7325%	0.0242%	24.53%
0.2600%	0.2742%	3.9000%	3.8700%	1.5058%	28.42%
0.2617%	0.2742%	6.8700%	6.8383%	3.6658%	37.95%
0.2725%	0.2833%	-0.3000%	-0.3125%	-3.1533%	32.64%
0.2758%	0.2900%	-6.1900%	-6.2058%	-1.6700%	24.09%
0.2754%	0.2908%	3.8600%	3.8146%	1.8192%	19.15%
0.2779%	0.2958%	5.0400%	5.0221%	4.9542%	18.12%
0.2888%	0.3025%	-3.5400%	-3.5688%	-2.8925%	14.53%
0.2996%	0.3100%	-4.6500%	-4.6996%	-3.5000%	8.08%
0.3033%	0.3158%	0.3700%	0.3567%	0.3142%	11.98%
0.3104%	0.3183%	-0.7700%	-0.8104%	-0.0383%	2.91%
0.3167%	0.3258%	3.4200%	3.3833%	0.7142%	6.56%
0.3192%	0.3300%	-4.3000%	-4.3292%	2.9100%	5.96%
0.3125%	0.3375%	-2.8900%	-2.9525%	-0.9475%	-0.93%
0.3108%	0.3375%	1.8900%	1.8392%	0.4425%	-5.51%
0.3108%	0.3342%	3.5900%	3.5692%	3.6858%	-1.80%
0.3154%	0.3342%	4.0800%	4.0546%	1.4658%	8.95%
0.3288%	0.3408%	-0.2100%	-0.2888%	-4.5208%	4.71%
0.3371%	0.3500%	0.9800%	0.9729%	0.0000%	0.74%
0.3463%	0.3642%	-5.3500%	-5.3963%	-3.3042%	-1.10%
0.3492%	0.3792%	-6.3300%	-6.3692%	-1.7592%	-2.78%
0.3492%	0.3842%	-3.3300%	-3.3692%	-1.1242%	-6.33%
0.3488%	0.3850%	2.0200%	1.9613%	3.8950%	-3.69%
0.3288%	0.3633%	-4.2400%	-4.2788%	1.5867%	-10.79%

0.3088%	0.3275%	4.1800%	4.1413%	5.6925%	-2.93%
0.3067%	0.3300%	-1.6600%	-1.7167%	1.0400%	-1.70%
0.3088%	0.3442%	3.0100%	2.9713%	1.6558%	-0.62%
0.3075%	0.3292%	3.1100%	3.0625%	4.8308%	-1.10%
0.3063%	0.3342%	1.8800%	1.8138%	1.3058%	-3.24%
0.3063%	0.3325%	2.5200%	2.4838%	1.3875%	-0.58%
0.3125%	0.3367%	4.2200%	4.1775%	0.7533%	2.55%
0.3263%	0.3575%	1.4900%	1.4338%	-1.0275%	9.90%
0.3454%	0.3792%	4.6900%	4.6646%	2.9408%	22.80%
0.3467%	0.3800%	2.3800%	2.3533%	3.6800%	30.04%
0.3458%	0.3725%	2.5600%	2.4942%	2.2575%	30.72%
0.3442%	0.3742%	5.0200%	5.0058%	6.1758%	43.37%
0.3475%	0.3767%	0.2200%	0.1825%	0.9633%	37.99%
0.3492%	0.3750%	0.1800%	0.1408%	1.6850%	40.65%
0.3483%	0.3725%	-0.1500%	-0.1483%	0.6475%	36.46%
0.3563%	0.3800%	3.6900%	3.6638%	-0.6600%	37.31%
0.3679%	0.3975%	2.0700%	2.0321%	-1.5975%	37.69%
0.3758%	0.4050%	-0.5800%	-0.5958%	-1.2850%	33.66%
0.3771%	0.4067%	3.2800%	3.2529%	3.3033%	32.56%
0.3754%	0.4075%	-1.3700%	-1.3954%	1.3425%	28.94%
0.3838%	0.4192%	-4.7700%	-4.8138%	-4.3492%	17.35%
0.3888%	0.4133%	0.9300%	0.8913%	1.1567%	15.72%
0.3858%	0.4083%	1.5100%	1.4742%	-0.3983%	14.62%
0.3883%	0.4133%	2.5600%	2.5317%	1.8867%	11.98%
0.3908%	0.4183%	-7.3500%	-7.3908%	-1.4983%	3.59%
0.3863%	0.4167%	1.1000%	1.0838%	1.3933%	4.60%
0.3796%	0.4092%	-1.5900%	-1.6096%	1.0008%	3.11%
0.3763%	0.3992%	-1.9300%	-1.9863%	0.3508%	-2.47%
0.3779%	0.4050%	2.8900%	2.8821%	1.9250%	-1.65%
0.3771%	0.4033%	1.7700%	1.7329%	3.6767%	0.64%
0.3738%	0.3992%	-2.6600%	-2.7138%	-1.3992%	-5.16%
0.3633%	0.3867%	2.8300%	2.8067%	4.6333%	-1.14%
0.3608%	0.3808%	-6.2200%	-6.2608%	-5.5208%	-2.66%
0.3642%	0.3842%	-0.4000%	-0.4342%	-0.5042%	-3.96%
0.3658%	0.3851%	4.3300%	4.2842%	3.4749%	-1.33%
0.3688%	0.3875%	4.4600%	4.4213%	6.8525%	0.46%
0.3667%	0.3867%	6.1200%	6.0833%	5.8033%	14.99%
0.3613%	0.3825%	2.8900%	2.8288%	3.1875%	16.94%
0.3563%	0.3733%	2.3900%	2.3438%	2.8167%	21.60%
0.3592%	0.3733%	0.2000%	0.1508%	0.7167%	24.22%
0.3617%	0.3767%	2.0500%	2.0283%	0.9533%	23.17%
0.3658%	0.3808%	-3.0700%	-3.1158%	-2.6508%	17.31%
0.3725%	0.3875%	3.0900%	3.0475%	3.8525%	24.23%
0.3758%	0.3942%	2.1000%	2.0542%	4.1458%	23.34%
0.3767%	0.3942%	-2.1600%	-2.2167%	-1.0642%	28.66%
0.3742%	0.3925%	2.6400%	2.6058%	4.4075%	32.58%
0.3721%	0.3900%	4.1500%	4.0979%	2.9600%	32.36%
0.3742%	0.3875%	0.1500%	0.0858%	-3.3075%	26.89%
0.3738%	0.3875%	-4.0300%	-4.0338%	-4.0475%	14.84%

0.3742%	0.3883%	1.7700%	1.7158%	2.6117%	13.61%
0.3717%	0.3867%	-0.7900%	-0.8317%	0.4233%	10.12%
0.3675%	0.3825%	-6.4000%	-6.4375%	-3.9125%	2.91%
0.3629%	0.3758%	-8.4300%	-8.4729%	-9.4958%	-7.65%
0.3633%	0.3733%	-8.3300%	-8.3933%	-5.8533%	-12.66%
0.3679%	0.3750%	6.1800%	6.1521%	6.5150%	-10.04%
0.3683%	0.3775%	1.7400%	1.7117%	2.3325%	-10.35%
0.3658%	0.3758%	-4.9500%	-5.0158%	-3.7158%	-12.92%
0.3621%	0.3742%	0.2900%	0.2779%	-0.5142%	-14.90%
0.3604%	0.3708%	10.5500%	10.4996%	7.3092%	-9.69%
0.3592%	0.3700%	1.2100%	1.1708%	2.7500%	-8.73%
0.3575%	0.3658%	4.7400%	4.7025%	5.2142%	-0.47%
0.3563%	0.3642%	-2.6800%	-2.7463%	-2.4242%	-4.83%
0.3554%	0.3642%	3.3900%	3.3446%	1.4958%	-0.86%
0.3567%	0.3642%	4.6600%	4.6433%	1.9558%	10.83%
0.3575%	0.3642%	1.6000%	1.5725%	0.3358%	22.94%
0.3579%	0.3642%	-2.1800%	-2.2379%	-1.5942%	31.16%
0.3604%	0.3658%	-0.5800%	-0.5804%	0.8642%	22.86%
0.3621%	0.3650%	5.0200%	4.9879%	3.8850%	26.79%
0.3633%	0.3667%	-1.3100%	-1.3333%	-2.9467%	31.69%
0.3646%	0.3675%	3.0500%	3.0254%	-0.6975%	35.29%
0.3654%	0.3683%	-0.7800%	-0.8254%	-1.1883%	21.47%
0.3671%	0.3717%	2.2600%	2.2529%	2.7983%	22.78%
0.3692%	0.3742%	2.4800%	2.4608%	0.8958%	20.17%
0.3675%	0.3750%	1.1500%	1.1025%	-0.0550%	24.92%
0.3688%	0.3758%	1.2800%	1.2813%	-0.7258%	22.45%
0.3704%	0.3767%	0.4000%	0.3796%	0.2933%	17.50%
0.3713%	0.3775%	1.3000%	1.2488%	-0.0575%	17.14%
0.3717%	0.3792%	1.4000%	1.4083%	1.9608%	21.51%
0.3708%	0.3783%	1.6000%	1.5792%	4.3317%	24.15%
0.3708%	0.3783%	-1.5300%	-1.5508%	-0.0683%	16.46%
0.3708%	0.3775%	2.6700%	2.6392%	1.3225%	21.14%
0.3713%	0.3758%	0.6200%	0.5888%	1.2742%	18.29%
0.3717%	0.3775%	-0.3000%	-0.3217%	0.7625%	18.89%
0.3725%	0.3783%	0.2100%	0.1875%	0.4817%	16.51%
0.3713%	0.3775%	3.1200%	3.0788%	3.3325%	17.21%
0.3696%	0.3758%	-0.0100%	-0.0596%	-0.2858%	15.87%
0.3708%	0.3750%	-1.7100%	-1.7008%	-0.3050%	12.47%
0.3713%	0.3742%	3.2300%	3.1888%	0.7158%	15.61%
0.3721%	0.3750%	-0.6300%	-0.6721%	-1.2150%	13.43%
0.3742%	0.3767%	-5.1100%	-5.1042%	-3.7767%	6.17%
0.3767%	0.3783%	1.1300%	1.0933%	0.6717%	5.67%
0.3783%	0.3817%	2.3500%	2.3417%	0.5883%	9.84%
0.3813%	0.3858%	2.9900%	2.9588%	1.5542%	10.19%
0.3842%	0.3883%	2.5500%	2.5058%	0.9017%	12.30%
0.3871%	0.3925%	-0.6800%	-0.6971%	-1.5525%	11.90%
0.3950%	0.4025%	0.6900%	0.6650%	-0.4825%	12.45%
0.3988%	0.4050%	0.2400%	0.2213%	-3.3750%	9.38%
0.4033%	0.4100%	-1.6500%	-1.7133%	-4.5500%	7.61%

0.4154%	0.4283%	-2.4500%	-2.4654%	-0.8783%	6.82%
0.4179%	0.4375%	1.8400%	1.7821%	1.2825%	5.42%
0.4200%	0.4375%	-5.3300%	-5.3400%	-3.3975%	0.54%
0.4263%	0.4500%	-1.8500%	-1.8863%	-2.2600%	3.99%
0.4338%	0.4542%	-1.5800%	-1.6338%	-0.3642%	1.25%
0.4454%	0.4650%	-7.6800%	-7.6954%	-9.2150%	-8.58%
0.4613%	0.4842%	-0.9400%	-0.9913%	4.2658%	-12.00%
0.4546%	0.4783%	4.5400%	4.4854%	9.2217%	-10.25%
0.4504%	0.4692%	0.5700%	0.4996%	-1.2292%	-9.11%
0.4529%	0.4725%	-0.3700%	-0.4329%	1.7375%	-10.05%
0.4375%	0.4550%	7.5800%	7.5425%	2.2550%	-3.47%
0.4254%	0.4400%	0.3800%	0.2946%	-2.0100%	-1.48%
0.4317%	0.4533%	3.7000%	3.6583%	1.5167%	4.69%
0.4321%	0.4517%	4.0200%	3.9379%	1.5683%	6.92%
0.4442%	0.4717%	-5.2000%	-5.2142%	-5.5317%	7.08%
0.4613%	0.4867%	1.5100%	1.4388%	-1.7967%	10.74%
0.4708%	0.4950%	4.2500%	4.2092%	1.5450%	17.33%
0.4742%	0.4967%	-1.1200%	-1.1742%	-1.1467%	25.61%
0.4800%	0.5042%	3.0200%	2.9400%	-0.8742%	30.60%
0.4929%	0.5150%	-3.2100%	-3.2529%	-6.2350%	21.02%
0.5125%	0.5400%	0.2000%	0.1375%	2.3900%	20.66%
0.5225%	0.5558%	2.3400%	2.2575%	2.3042%	23.99%
0.5192%	0.5450%	-4.7500%	-4.7692%	0.2750%	9.94%
0.5154%	0.5308%	-3.0300%	-3.1254%	-2.8608%	6.31%
0.5163%	0.5342%	0.6700%	0.5838%	-4.5242%	3.26%
0.5246%	0.5483%	7.8500%	7.8154%	2.2017%	7.18%
0.5313%	0.5517%	1.1500%	1.0788%	-1.1717%	14.36%
0.5325%	0.5517%	0.6300%	0.5175%	7.5183%	13.41%
0.5288%	0.5442%	-2.2000%	-2.2488%	-1.2442%	6.48%
0.5113%	0.5225%	1.2200%	1.1288%	-0.4825%	8.99%
0.5083%	0.5225%	3.5600%	3.4917%	0.4775%	9.60%
0.5171%	0.5333%	0.4200%	0.3529%	0.3267%	13.69%
0.5267%	0.5492%	4.8800%	4.7833%	7.2608%	18.95%
0.5463%	0.5725%	-4.5100%	-4.5663%	-3.6625%	11.08%
0.5550%	0.5867%	-1.1800%	-1.2350%	1.1033%	15.22%
0.5596%	0.5942%	-4.7200%	-4.8196%	-5.9142%	13.27%
0.5750%	0.6058%	3.1200%	3.0150%	-1.5658%	16.06%
0.5796%	0.6083%	1.7400%	1.7104%	0.7817%	9.58%
0.5729%	0.5967%	-0.2100%	-0.3129%	-0.6567%	8.12%
0.5875%	0.6175%	-5.9700%	-6.0075%	-5.7775%	1.20%
0.5967%	0.6267%	-6.3900%	-6.4667%	-4.2567%	-3.07%
0.5917%	0.6200%	4.0600%	3.9483%	-1.7600%	-0.31%
0.6042%	0.6358%	-2.9100%	-2.9642%	-4.3558%	-6.40%
0.6192%	0.6683%	4.0200%	3.9708%	7.3117%	-2.95%
0.6221%	0.6667%	-3.4600%	-3.5921%	-6.5467%	-10.58%
0.6521%	0.7158%	-2.3700%	-2.4221%	-1.6858%	-8.49%
0.6692%	0.7242%	-7.9900%	-8.0992%	-5.2542%	-14.71%
0.6692%	0.7092%	5.0600%	4.9108%	9.8208%	-5.94%
0.6625%	0.6925%	-0.1200%	-0.2225%	1.6275%	-8.80%

0.6608%	0.6925%	-9.2900%	-9.4108%	-9.9825%	-18.64%
0.6813%	0.7225%	-6.3300%	-6.4613%	-5.8725%	-23.54%
0.7108%	0.7533%	-5.3000%	-5.3708%	-6.5733%	-22.93%
0.7117%	0.7550%	7.1000%	6.9783%	8.9750%	-11.83%
0.6925%	0.7400%	4.2100%	4.0875%	5.0700%	-11.62%
0.6900%	0.7350%	3.0600%	2.9300%	-1.8750%	-6.21%
0.6863%	0.7300%	-1.3800%	-1.5163%	-2.2200%	-11.07%
0.6863%	0.7325%	4.4800%	4.3738%	9.0175%	-3.71%
0.6571%	0.7067%	5.4400%	5.3129%	6.6433%	3.87%
0.6358%	0.6792%	3.8100%	3.6842%	1.8908%	17.06%
0.6146%	0.6575%	0.7100%	0.5554%	-3.4275%	12.17%
0.6225%	0.6708%	3.3800%	3.3175%	2.6392%	16.08%
0.6246%	0.6725%	3.4100%	3.2654%	-4.1625%	32.16%
0.6404%	0.6950%	-4.3800%	-4.5504%	-4.2050%	34.78%
0.6500%	0.7042%	-0.2300%	-0.3200%	3.2758%	41.83%
0.6500%	0.7042%	-4.3900%	-4.5200%	-2.9542%	26.61%
0.6467%	0.7000%	3.3300%	3.2333%	-3.1700%	25.52%
0.6354%	0.6817%	-0.9400%	-1.0754%	-2.1417%	20.60%
0.6283%	0.6750%	-4.3900%	-4.5483%	1.0250%	16.85%
0.6175%	0.6633%	-0.4900%	-0.5975%	-1.2133%	11.24%
0.6175%	0.6583%	8.3800%	8.2625%	7.4017%	14.30%
0.6129%	0.6492%	1.5600%	1.4471%	-1.3892%	11.82%
0.6163%	0.6483%	2.3000%	2.1538%	-3.0483%	13.59%
0.6154%	0.6475%	0.3400%	0.2146%	-1.0075%	10.19%
0.6196%	0.6517%	0.2000%	0.0604%	-3.4217%	6.78%
0.6192%	0.6533%	1.4200%	1.3508%	-0.8233%	13.32%
0.6142%	0.6475%	-2.4300%	-2.5542%	-2.7475%	10.75%
0.6129%	0.6517%	-0.0300%	-0.1329%	-0.7917%	15.77%
0.6092%	0.6367%	3.2000%	3.0808%	5.1033%	15.55%
0.6096%	0.6342%	-0.7200%	-0.8596%	-0.3642%	15.78%
0.6108%	0.6383%	0.6600%	0.5692%	5.8717%	21.92%
0.6046%	0.6333%	4.3300%	4.2054%	5.7567%	27.76%
0.6017%	0.6233%	0.9700%	0.8183%	-2.3633%	19.01%
0.6050%	0.6267%	-2.0300%	-2.0950%	-5.0167%	14.87%
0.6121%	0.6350%	-4.0300%	-4.1321%	-2.9750%	7.84%
0.6158%	0.6383%	-0.4800%	-0.5358%	-1.9883%	7.03%
0.6146%	0.6358%	-4.4000%	-4.4446%	-1.1258%	2.24%
0.6158%	0.6358%	-2.2100%	-2.2458%	0.0342%	-1.37%
0.6217%	0.6425%	-0.9500%	-1.0217%	-2.3125%	0.18%
0.6288%	0.6517%	3.4600%	3.4413%	-2.6417%	3.76%
0.6467%	0.6700%	-4.0300%	-4.0567%	-3.5100%	-3.35%
0.6454%	0.6700%	3.7200%	3.6246%	7.0400%	1.03%
0.6433%	0.6683%	-0.4600%	-0.4733%	-4.5483%	0.02%
0.6488%	0.6792%	-11.6500%	-11.7388%	-12.3992%	-15.15%
0.6500%	0.6867%	1.3800%	1.3300%	3.0633%	-14.68%
0.6596%	0.6967%	-1.3300%	-1.3796%	3.4833%	-14.01%
0.6625%	0.7017%	-0.6200%	-0.7325%	-0.1017%	-10.94%
0.6746%	0.7050%	-2.6400%	-2.7246%	-4.5950%	-12.83%
0.6950%	0.7308%	-4.2700%	-4.2850%	-13.6908%	-12.62%

0.7063%	0.7500%	-3.7000%	-3.7263%	-5.5900%	-13.85%
0.7175%	0.7767%	-1.7400%	-1.8475%	-6.4767%	-14.48%
0.7388%	0.8050%	-8.1400%	-8.1588%	-1.6950%	-23.92%
0.7617%	0.8358%	-9.2900%	-9.4017%	-9.5458%	-28.04%
0.7875%	0.8708%	-12.2300%	-12.3075%	-1.7308%	-38.94%
0.7879%	0.8983%	16.1100%	16.0221%	11.0917%	-28.80%
0.7596%	0.8717%	-5.5100%	-5.6496%	-2.0617%	-23.83%
0.7538%	0.8558%	-2.2300%	-2.3138%	-0.4158%	-26.48%
0.7483%	0.8642%	12.0400%	11.9717%	18.1058%	-16.52%
0.7304%	0.8325%	5.7800%	5.6496%	0.5975%	-11.14%
0.7329%	0.8100%	1.8800%	1.8071%	-2.9700%	-6.97%
0.7558%	0.8383%	4.4300%	4.3442%	-2.2383%	1.41%
0.7558%	0.8525%	4.0900%	4.0042%	7.8075%	9.55%
0.7458%	0.8417%	4.0700%	4.0242%	9.8283%	16.09%
0.7488%	0.8342%	-7.1200%	-7.1888%	-5.9342%	17.32%
0.7575%	0.8433%	-2.4100%	-2.5175%	-2.9633%	26.15%
0.7625%	0.8492%	-3.8500%	-3.8825%	-1.3392%	38.13%
0.7575%	0.8467%	5.8100%	5.7725%	6.2333%	25.97%
0.7504%	0.8367%	2.2100%	2.0696%	2.6633%	36.18%
0.7519%	0.8425%	-1.5600%	-1.5619%	-0.0725%	37.22%
0.7388%	0.8250%	11.5200%	11.4313%	8.1150%	36.55%
0.7321%	0.8092%	-1.4500%	-1.5721%	-4.3692%	27.28%
0.7304%	0.8058%	2.6600%	2.6396%	0.1942%	28.31%
0.7204%	0.7942%	-1.4200%	-1.5004%	-0.4242%	21.13%
0.7292%	0.7958%	-1.7000%	-1.8392%	-2.1858%	14.35%
0.7296%	0.7950%	3.7000%	3.7004%	2.5750%	13.98%
0.7238%	0.7808%	-1.1300%	-1.2038%	2.6292%	21.24%
0.7129%	0.7608%	-0.8700%	-0.8929%	3.0692%	23.19%
0.7050%	0.7417%	1.9400%	1.8750%	3.0683%	30.43%
0.7000%	0.7325%	-2.4700%	-2.5600%	-0.9425%	20.16%
0.6963%	0.7300%	-1.0700%	-1.1063%	1.9500%	16.39%
0.6760%	0.7183%	4.9800%	4.9340%	5.5917%	23.92%
0.6717%	0.7175%	-5.3200%	-5.4017%	-0.3675%	5.25%
0.6792%	0.7208%	-2.3900%	-2.4992%	-4.4408%	4.21%
0.6825%	0.7250%	-1.7000%	-1.7325%	0.2950%	-0.25%
0.6800%	0.7258%	-0.1900%	-0.2600%	1.3642%	0.96%
0.6804%	0.7258%	-2.6300%	-2.6404%	1.3842%	0.09%
0.6725%	0.7150%	4.3200%	4.2675%	4.5950%	0.58%
0.6692%	0.7092%	-1.8300%	-1.9092%	0.9308%	-0.19%
0.6729%	0.7075%	-2.3900%	-2.3929%	-4.2375%	-1.73%
0.6696%	0.7050%	-0.4500%	-0.5096%	1.7650%	-4.05%
0.6792%	0.7175%	-4.5300%	-4.5792%	-3.6775%	-6.04%
0.6842%	0.7200%	2.5300%	2.4758%	3.0900%	-2.67%
0.6915%	0.7200%	0.1300%	0.0585%	-0.5300%	-7.15%
0.7083%	0.7433%	-6.4300%	-6.4483%	-6.0733%	-8.13%
0.7133%	0.7475%	-2.6300%	-2.7433%	-1.3675%	-8.33%
0.7138%	0.7483%	2.2500%	2.2263%	2.3417%	-4.63%
0.7204%	0.7575%	8.3900%	8.2996%	0.3025%	3.53%
0.7304%	0.7683%	0.1700%	0.1896%	-0.3383%	6.57%

0.7379%	0.7833%	-2.0700%	-2.1179%	-0.4233%	0.16%
0.7479%	0.7925%	5.1000%	5.0821%	2.3675%	7.33%
0.7354%	0.7767%	2.3100%	2.2746%	-0.8067%	12.49%
0.7338%	0.7733%	-0.9700%	-1.0538%	-1.3333%	11.95%
0.7483%	0.7883%	-9.4500%	-9.4683%	-7.6283%	6.34%
0.7613%	0.8067%	1.4400%	1.3888%	2.7533%	5.30%
0.7704%	0.8083%	1.2800%	1.1896%	-2.2983%	6.56%
0.7804%	0.8250%	3.6400%	3.6496%	6.0950%	18.06%
0.7817%	0.8200%	-3.8600%	-3.9917%	-2.9400%	16.63%
0.7908%	0.8367%	5.2200%	5.1692%	1.1233%	20.06%
0.7929%	0.8417%	-0.1300%	-0.1629%	-3.3317%	10.82%
0.8067%	0.8583%	-2.9400%	-2.9767%	0.6417%	7.42%
0.7896%	0.8450%	3.6400%	3.5604%	3.0150%	13.67%
0.7788%	0.8317%	0.5800%	0.5613%	2.5883%	8.84%
0.7817%	0.8450%	5.0400%	4.9883%	0.1750%	11.76%
0.7975%	0.8633%	-0.2500%	-0.3675%	-2.6333%	12.60%
0.8579%	0.9500%	-7.2200%	-7.2579%	-6.0000%	15.46%
0.9158%	0.9908%	3.9200%	3.8342%	5.0792%	18.40%
0.9121%	1.0125%	1.3100%	1.2279%	-0.7925%	18.61%
0.9438%	1.0177%	5.3900%	5.2763%	-1.2477%	20.64%
1.0463%	1.1028%	-0.8500%	-1.0563%	-3.5728%	24.63%
1.1029%	1.2158%	-10.7100%	-10.8229%	-6.5058%	6.19%
1.0458%	1.1908%	3.6200%	3.5742%	10.6692%	10.40%
0.9542%	1.0613%	4.2800%	4.1958%	2.1687%	18.66%
0.9154%	1.0331%	2.3000%	2.2446%	2.3369%	17.31%
0.9375%	1.0127%	6.1200%	6.0225%	-1.4227%	23.81%
0.9888%	1.0550%	0.2000%	0.0212%	-2.4450%	18.24%
1.0225%	1.1077%	1.9700%	1.9175%	-2.2477%	21.20%
1.0413%	1.1280%	1.0500%	0.9788%	1.6120%	32.10%
1.0963%	1.1677%	9.7400%	9.5538%	3.8423%	39.54%
1.1246%	1.2217%	-4.1000%	-4.1446%	-1.3617%	32.49%
1.0971%	1.1895%	-5.1200%	-5.2771%	-3.0495%	19.52%
1.1350%	1.2233%	0.8600%	0.6050%	-3.4633%	21.61%
1.1346%	1.2604%	2.8900%	2.8654%	2.9396%	40.09%
1.1779%	1.2708%	-2.9400%	-3.1079%	-2.2308%	31.32%
1.2167%	1.3430%	-0.7800%	-0.9567%	1.5670%	25.21%
1.1733%	1.3160%	-1.7200%	-1.8033%	1.4040%	20.61%
1.2154%	1.3393%	-0.8800%	-1.0054%	2.0707%	13.00%
1.2629%	1.3706%	-6.8700%	-7.0329%	-1.6106%	5.42%
1.3100%	1.4192%	-6.0700%	-6.2400%	-5.5092%	-2.64%
1.3008%	1.4379%	4.2300%	4.0992%	4.7321%	0.58%
1.2163%	1.3679%	3.0000%	2.9138%	3.4421%	-5.35%
1.2179%	1.3468%	-3.5600%	-3.7779%	-4.3968%	-4.90%
1.2888%	1.4000%	-2.3900%	-2.5988%	-1.0300%	-2.05%
1.2913%	1.4096%	-6.6200%	-6.8813%	-1.7596%	-9.10%
1.2413%	1.3740%	-1.7600%	-1.7613%	0.3060%	-13.06%
1.2233%	1.3665%	3.4000%	3.2967%	4.1135%	-7.34%
1.2096%	1.3400%	-4.4200%	-4.6196%	-3.2100%	-10.73%
1.2529%	1.3617%	-2.7000%	-2.7529%	-2.9717%	-11.51%

1.2425%	1.3717%	-2.9200%	-3.0225%	-3.3517%	-13.27%
1.1746%	1.3267%	11.0200%	10.9654%	10.7833%	3.22%
1.1108%	1.2875%	0.2500%	0.1392%	-0.7675%	9.93%
1.0454%	1.2487%	10.6000%	10.4646%	5.3413%	16.30%
1.0079%	1.2052%	3.0900%	3.0321%	-1.0352%	16.20%
1.0113%	1.2021%	1.0000%	0.9188%	2.3979%	21.55%
1.0058%	1.1868%	2.8500%	2.7142%	2.5333%	27.75%
1.0246%	1.1898%	1.4800%	1.2654%	-1.2398%	38.41%
1.0021%	1.1690%	2.8000%	2.6879%	-0.9990%	44.27%
0.9821%	1.1365%	7.0300%	6.8979%	4.5735%	48.91%
0.9754%	1.1243%	-1.7800%	-1.8454%	0.1157%	52.82%
0.9954%	1.1373%	2.9900%	2.8946%	-2.3673%	61.18%
1.0225%	1.1310%	-3.8300%	-3.9725%	2.2590%	59.26%
1.0513%	1.1306%	0.4700%	0.4488%	-0.7306%	44.15%
1.0413%	1.1197%	0.4200%	0.3388%	3.3303%	44.34%
1.0308%	1.1044%	-2.1100%	-2.1908%	4.2156%	27.94%
1.0425%	1.1153%	1.1700%	1.0675%	-3.1553%	25.57%
1.0554%	1.1264%	-1.4600%	-1.5754%	-3.3864%	22.55%
1.0379%	1.1167%	-1.5900%	-1.5979%	3.7033%	17.49%
1.0325%	1.1164%	-4.4400%	-4.5525%	-5.2264%	10.82%
1.0746%	1.1477%	0.7500%	0.6554%	-1.6977%	8.72%
1.0954%	1.1774%	-0.0900%	-0.1454%	0.4126%	1.74%
1.1408%	1.2400%	-6.5700%	-6.6808%	-3.5400%	-3.05%
1.1617%	1.2581%	1.1100%	1.0083%	-0.5681%	-4.66%
1.1483%	1.2384%	-2.4000%	-2.3883%	3.0916%	-2.98%
1.0975%	1.2024%	9.9800%	9.9425%	5.2576%	6.14%
1.0804%	1.1823%	-0.9200%	-1.0604%	3.1977%	4.72%
1.0725%	1.1525%	-0.6900%	-0.6825%	1.5675%	6.36%
1.0396%	1.1039%	-2.0300%	-2.1596%	1.5961%	2.99%
1.0263%	1.0891%	1.6500%	1.6038%	2.0709%	6.25%
1.0213%	1.0822%	6.8300%	6.7688%	1.2678%	15.18%
1.0258%	1.0862%	0.4000%	0.1942%	0.8438%	20.83%
1.0613%	1.1501%	-0.8700%	-0.9913%	2.4699%	18.86%
1.0383%	1.1322%	-1.1100%	-1.1283%	0.9378%	17.64%
1.0008%	1.0978%	4.8100%	4.7792%	4.9622%	31.74%
0.9333%	1.0120%	0.7700%	0.6367%	1.7780%	30.96%
0.9329%	1.0054%	-1.0900%	-1.0829%	-5.2754%	32.41%
0.9383%	1.0114%	-1.7000%	-1.7883%	0.7986%	18.23%
0.9388%	1.0110%	-4.0100%	-4.0688%	-6.2210%	14.51%
0.9363%	1.0012%	3.7300%	3.6838%	5.3788%	19.33%
0.9008%	0.9595%	6.0500%	5.9592%	4.2605%	28.96%
0.8663%	0.9173%	3.9800%	3.9738%	6.0227%	31.74%
0.8546%	0.8999%	-0.2300%	-0.2946%	2.0301%	22.90%
0.8250%	0.8597%	6.7400%	6.6450%	5.3703%	30.49%
0.7704%	0.7928%	4.8700%	4.8096%	4.3473%	37.68%
0.7500%	0.7609%	-1.7600%	-1.8800%	-4.0909%	36.24%
0.7717%	0.7972%	4.7000%	4.5483%	4.4528%	35.65%
0.7758%	0.8046%	0.9900%	0.9142%	5.1654%	35.81%
0.7567%	0.7795%	-6.2500%	-6.3467%	2.0505%	28.41%

0.7475%	0.7756%	6.7900%	6.6725%	8.0644%	39.12%
0.7604%	0.7919%	-8.9200%	-9.0304%	-12.1619%	31.74%
0.7579%	0.7940%	5.0800%	5.0121%	4.2561%	33.19%
0.7450%	0.7745%	1.8400%	1.6850%	1.3355%	27.67%
0.7296%	0.7600%	-3.2500%	-3.2796%	-3.3000%	18.67%
0.7175%	0.7454%	12.8300%	12.7525%	9.0946%	33.90%
0.7192%	0.7503%	3.3600%	3.2308%	-3.7603%	29.52%
0.7167%	0.7441%	2.2300%	2.1733%	-2.6341%	26.22%
0.7500%	0.7794%	-1.5400%	-1.6400%	-4.9194%	26.52%
0.7883%	0.8221%	0.2100%	0.0817%	-1.4621%	21.18%
0.7904%	0.8349%	4.3000%	4.2596%	3.5552%	25.18%
0.7946%	0.8446%	4.3400%	4.2754%	-1.0946%	39.32%
0.8138%	0.8703%	2.9800%	2.9163%	4.3997%	34.53%
0.8554%	0.9314%	-2.9400%	-3.0454%	-0.7214%	43.45%
0.8858%	0.9466%	-22.3300%	-22.4258%	-7.9966%	6.41%
0.8450%	0.9020%	-8.9900%	-9.0850%	-6.4520%	-4.68%
0.8517%	0.9114%	6.8300%	6.7583%	0.1686%	5.26%
0.8321%	0.8998%	3.4900%	3.3779%	10.6302%	-3.33%
0.7917%	0.8430%	3.9500%	3.8683%	-2.5930%	-2.67%
0.7908%	0.8396%	-3.8100%	-3.8808%	-6.1096%	-8.32%
0.8138%	0.8768%	0.4100%	0.2963%	-0.6868%	-6.47%
0.8333%	0.8993%	0.0800%	0.0267%	3.7007%	-6.48%
0.8329%	0.9005%	3.8300%	3.7571%	2.2495%	-6.89%
0.8425%	0.9187%	-1.0900%	-1.2225%	-0.7487%	-11.72%
0.8533%	0.9308%	-4.2200%	-4.2433%	-2.3008%	-17.78%
0.8283%	0.8889%	3.5000%	3.4317%	3.2412%	-12.36%
0.8000%	0.8318%	2.0200%	1.9800%	1.7882%	14.81%
0.7988%	0.8242%	-2.1300%	-2.2288%	-1.6142%	23.33%
0.8075%	0.8377%	0.9900%	0.9325%	-0.2077%	16.60%
0.8096%	0.8404%	6.5200%	6.5104%	4.8696%	20.08%
0.8113%	0.8383%	-3.1800%	-3.3013%	-2.9883%	11.88%
0.8242%	0.8535%	1.5400%	1.5058%	1.8366%	18.13%
0.8221%	0.8492%	4.4900%	4.3679%	5.4908%	22.90%
0.8050%	0.8334%	3.2500%	3.2450%	4.9666%	26.79%
0.7663%	0.8049%	-1.2700%	-1.3363%	0.8052%	20.53%
0.7529%	0.7920%	8.3500%	8.2771%	7.2480%	31.92%
0.7542%	0.7929%	1.2900%	1.1958%	-1.3629%	39.21%
0.7600%	0.7987%	-1.0600%	-1.1700%	0.9013%	32.97%
0.7546%	0.7949%	-3.0400%	-3.0746%	-0.3449%	26.37%
0.7513%	0.7930%	1.4000%	1.2888%	2.5670%	30.82%
0.7488%	0.7861%	1.7600%	1.6513%	6.5239%	31.67%
0.7608%	0.7956%	-7.4400%	-7.4708%	-8.8856%	14.46%
0.7775%	0.8130%	0.6300%	0.5125%	-1.9030%	18.90%
0.7867%	0.8205%	1.9400%	1.8633%	1.0495%	19.27%
0.7958%	0.8259%	-3.2400%	-3.2858%	-4.6759%	10.56%
0.7988%	0.8338%	9.0000%	8.9513%	5.9862%	16.62%
0.7813%	0.8175%	-1.3500%	-1.4513%	-2.9275%	16.50%
0.7796%	0.8132%	-1.0600%	-1.0996%	-1.1332%	6.51%
0.7933%	0.8246%	-9.7500%	-9.8333%	-8.7446%	-4.97%

0.8054%	0.8431%	-5.5600%	-5.6754%	3.2669%	-9.23%
0.8042%	0.8386%	-1.2400%	-1.2342%	5.6915%	-7.47%
0.7871%	0.8260%	5.7500%	5.6729%	1.1040%	-3.46%
0.7683%	0.8109%	2.0700%	2.0217%	0.0491%	-3.10%
0.7671%	0.8094%	3.6500%	3.5929%	-3.8194%	8.40%
0.7496%	0.7898%	6.5100%	6.4004%	2.7002%	14.67%
0.7558%	0.7961%	1.7800%	1.6642%	1.1839%	14.42%
0.7492%	0.7887%	-0.5200%	-0.5092%	-2.4087%	17.62%
0.7504%	0.7860%	3.6300%	3.5596%	-2.0860%	11.79%
0.7621%	0.7986%	-5.2100%	-5.3421%	-2.1886%	7.39%
0.7604%	0.7956%	3.9000%	3.8996%	2.2744%	12.75%
0.7392%	0.7754%	1.6900%	1.6308%	1.8046%	26.90%
0.7279%	0.7638%	-2.3500%	-2.3979%	1.2562%	31.17%
0.7242%	0.7601%	0.6900%	0.6158%	1.2399%	33.50%
0.7192%	0.7545%	-4.6300%	-4.7492%	-1.7345%	20.34%
0.7050%	0.7416%	10.7600%	10.7350%	6.5884%	30.47%
0.6963%	0.7360%	-2.4700%	-2.5563%	-6.0960%	22.69%
0.7067%	0.7442%	0.7100%	0.5933%	-3.4742%	16.00%
0.7117%	0.7473%	-2.6100%	-2.6517%	-2.1773%	11.06%
0.7092%	0.7438%	2.2900%	2.2308%	5.7062%	14.05%
0.7046%	0.7400%	-0.1200%	-0.2146%	-0.8900%	9.87%
0.6992%	0.7323%	-2.1600%	-2.1892%	0.6777%	13.43%
0.6850%	0.7149%	3.4600%	3.4050%	7.1851%	12.81%
0.6733%	0.7031%	-2.6500%	-2.7233%	-1.4431%	7.94%
0.6704%	0.7006%	0.6000%	0.5096%	0.0294%	11.07%
0.6796%	0.7106%	-0.2200%	-0.3296%	-1.6506%	9.99%
0.6875%	0.7193%	2.8000%	2.7225%	-0.8693%	18.51%
0.6758%	0.7042%	0.6000%	0.5542%	2.8758%	7.65%
0.6675%	0.6901%	0.2500%	0.1725%	0.8799%	10.62%
0.6504%	0.6704%	0.8100%	0.7096%	6.5396%	10.68%
0.6375%	0.6586%	1.4800%	1.4725%	1.1415%	15.25%
0.6283%	0.6515%	-2.9900%	-3.0483%	-0.9215%	9.25%
0.6267%	0.6549%	2.1600%	2.0533%	-2.5649%	11.63%
0.6183%	0.6469%	-0.3300%	-0.3283%	3.9831%	13.65%
0.6050%	0.6285%	-0.9400%	-1.0050%	1.6316%	8.75%
0.5796%	0.6059%	3.2300%	3.2104%	4.2341%	15.23%
0.5629%	0.5864%	-1.2700%	-1.3329%	-0.7864%	13.01%
0.5642%	0.5857%	1.5800%	1.5058%	-0.7957%	14.95%
0.5854%	0.6067%	-1.4800%	-1.5354%	-5.6767%	10.10%
0.5854%	0.6113%	0.6600%	0.6246%	-1.1413%	10.08%
0.5850%	0.6110%	2.8500%	2.8150%	0.1090%	12.87%
0.5988%	0.6205%	-3.2000%	-3.3088%	-6.2905%	8.34%
0.5988%	0.6528%	-4.9400%	-4.9588%	-4.0328%	1.48%
0.6321%	0.6851%	0.7100%	0.6479%	1.7749%	5.32%
0.6742%	0.6939%	1.0100%	0.9658%	-3.3739%	4.26%
0.6725%	0.6923%	-3.0600%	-3.1225%	-0.4823%	1.41%
0.6842%	0.7063%	2.6800%	2.5958%	2.6537%	5.16%
0.6800%	0.7006%	3.4400%	3.4200%	-0.9806%	5.47%
0.7013%	0.7187%	-3.0600%	-3.1513%	-3.2587%	3.68%

0.7200%	0.7377%	1.5900%	1.5300%	0.1223%	3.87%
0.7296%	0.7486%	-4.2800%	-4.3696%	-2.2086%	1.05%
0.7117%	0.7307%	0.8200%	0.7683%	-0.2107%	1.32%
0.7108%	0.7288%	1.8900%	1.8792%	7.0612%	0.52%
0.6938%	0.7108%	3.3100%	3.2063%	-0.8608%	7.35%
0.6817%	0.6979%	2.3100%	2.2683%	-1.2979%	15.56%
0.6729%	0.6898%	2.3600%	2.2671%	2.9602%	17.45%
0.6413%	0.6610%	3.3500%	3.3588%	2.4990%	20.18%
0.6138%	0.6336%	1.7800%	1.7063%	-0.1636%	26.05%
0.6229%	0.6408%	2.7600%	2.6971%	1.9092%	26.10%
0.6358%	0.6532%	-0.3200%	-0.3858%	1.3668%	21.44%
0.6154%	0.6350%	3.7000%	3.6046%	5.7450%	29.74%
0.5996%	0.6224%	-0.9300%	-0.9596%	1.7576%	26.43%
0.5917%	0.6200%	3.8800%	3.7983%	0.7400%	36.97%
0.5754%	0.6045%	1.4400%	1.3546%	6.4755%	37.57%
0.5750%	0.6006%	2.8600%	2.8250%	0.6894%	38.66%
0.5896%	0.6125%	0.4500%	0.3404%	-4.5625%	34.70%
0.6196%	0.6435%	0.4400%	0.3404%	-2.6735%	32.09%
0.6325%	0.6570%	0.8800%	0.8375%	0.4430%	30.21%
0.6413%	0.6650%	2.0000%	1.9388%	-0.9150%	28.43%
0.6492%	0.6720%	-0.1600%	-0.2692%	3.4880%	25.99%
0.6446%	0.6688%	-5.0400%	-5.0646%	-6.9488%	16.56%
0.6288%	0.6532%	1.5400%	1.4813%	1.4768%	18.72%
0.6450%	0.6681%	5.0300%	4.9850%	0.2819%	20.32%
0.6238%	0.6482%	2.1800%	2.1363%	4.4318%	24.09%
0.6004%	0.6253%	7.0400%	6.9596%	1.4847%	27.86%
0.6088%	0.6309%	-2.5400%	-2.5888%	-1.2309%	22.96%
0.6271%	0.6472%	5.6900%	5.6229%	0.0128%	26.35%
0.6188%	0.6369%	0.2700%	0.1613%	-1.5869%	26.16%
0.6383%	0.6555%	-4.7000%	-4.7483%	-3.6655%	19.82%
0.6525%	0.6697%	5.3800%	5.3175%	-2.1697%	25.14%
0.6408%	0.6575%	5.5100%	5.4492%	3.5725%	29.42%
0.6263%	0.6437%	3.8900%	3.8538%	2.4963%	34.70%
0.6042%	0.6241%	7.3800%	7.3558%	1.6759%	52.15%
0.6092%	0.6248%	-6.0900%	-6.2092%	-2.4548%	40.66%
0.6033%	0.6229%	4.9000%	4.8767%	3.7071%	40.46%
0.5917%	0.6130%	-3.8800%	-3.9317%	0.3670%	32.12%
0.5808%	0.6039%	4.1600%	4.0492%	6.4661%	28.53%
0.5729%	0.5970%	1.1800%	1.1471%	6.9230%	33.38%
0.5596%	0.5878%	0.6300%	0.5504%	-4.5378%	26.92%
0.5646%	0.5932%	6.7700%	6.6454%	2.8168%	35.02%
0.5683%	0.5968%	4.6000%	4.5517%	5.8232%	48.02%
0.5663%	0.5968%	0.5200%	0.4438%	-2.5268%	41.09%
0.5667%	0.5969%	-2.2000%	-2.2867%	-1.0969%	30.70%
0.5546%	0.5864%	3.5400%	3.5054%	3.1036%	30.18%
0.5554%	0.5853%	-1.5500%	-1.6154%	-5.5153%	19.30%
0.5538%	0.5835%	-14.9400%	-15.0138%	1.0265%	8.11%
0.5450%	0.5780%	5.9700%	5.8650%	7.7720%	9.06%
0.5446%	0.5796%	7.7100%	7.5854%	-2.2396%	22.00%

0.5500%	0.5864%	5.6100%	5.5100%	0.7536%	23.67%
0.5363%	0.5757%	5.3100%	5.2238%	2.3743%	28.58%
0.5383%	0.5808%	3.7600%	3.6417%	-5.0908%	32.48%
0.5496%	0.5897%	-3.5100%	-3.6596%	-4.2297%	19.73%
0.5667%	0.6046%	3.4700%	3.4333%	-2.0846%	18.45%
0.5667%	0.6012%	3.3900%	3.3033%	8.2388%	21.81%
0.5900%	0.6214%	-2.8100%	-2.9500%	5.4686%	21.02%
0.6146%	0.6445%	5.0000%	4.9354%	-3.9645%	22.75%
0.6113%	0.6418%	-3.6300%	-3.7313%	-1.7818%	20.19%
0.6283%	0.6589%	-1.0300%	-1.1183%	0.5111%	39.82%
0.6279%	0.6610%	-3.2600%	-3.3679%	-5.4610%	27.80%
0.6392%	0.6721%	5.8300%	5.6908%	0.8979%	25.67%
0.6242%	0.6610%	1.4700%	1.4058%	-8.3910%	20.90%
0.6388%	0.6766%	5.3400%	5.2513%	0.2534%	21.04%
0.6558%	0.6956%	-5.5900%	-5.6758%	10.1544%	10.36%
0.6458%	0.6874%	-2.4000%	-2.5358%	-6.4674%	11.75%
0.6463%	0.6906%	9.2400%	9.1338%	2.7994%	17.96%
0.6442%	0.6898%	-3.4800%	-3.6542%	7.2502%	10.14%
0.6763%	0.7244%	-2.6100%	-2.7263%	4.1356%	10.49%
0.6475%	0.6980%	1.9500%	1.8225%	-6.4480%	7.27%
0.6442%	0.6882%	-2.0800%	-2.2042%	6.0818%	9.00%
0.6354%	0.6774%	5.7100%	5.5746%	13.0426%	16.33%
0.6438%	0.6853%	-5.7400%	-5.9238%	8.4647%	13.30%
0.6400%	0.6787%	-0.9500%	-1.0600%	-4.2487%	6.10%
0.6333%	0.6772%	-8.3600%	-8.5133%	-1.9972%	-4.20%
0.6121%	0.6547%	0.0400%	-0.1221%	9.1654%	-9.09%
0.6054%	0.6499%	3.0600%	2.9446%	-10.3199%	-0.88%
0.6008%	0.6449%	-9.5400%	-9.7208%	2.8851%	-8.19%
0.5917%	0.6394%	-6.7900%	-6.9317%	-1.2694%	-21.67%
0.6096%	0.6603%	7.3000%	7.1604%	5.3897%	-12.96%
0.6163%	0.6663%	0.1700%	0.0538%	-4.0963%	-10.55%
0.6050%	0.6546%	-2.9000%	-3.0350%	-8.5646%	-14.82%
0.6000%	0.6494%	-1.5000%	-1.5800%	-5.1294%	-14.32%
0.5963%	0.6329%	-6.7200%	-6.8563%	-3.5329%	-24.38%
0.6017%	0.6423%	-8.4900%	-8.6817%	-12.1623%	-26.62%
0.5900%	0.6373%	1.4300%	1.3200%	-0.8073%	-24.90%
0.5825%	0.6287%	7.2600%	7.0875%	-6.1487%	-12.22%
0.5813%	0.6526%	0.4200%	0.2988%	1.9474%	-11.88%
0.5658%	0.6387%	-1.9400%	-2.0258%	-6.2887%	-16.15%
0.5608%	0.6283%	-2.3600%	-2.4908%	-2.9783%	-9.51%
0.5846%	0.6453%	3.3300%	3.1754%	11.5847%	0.25%
0.5800%	0.6316%	-6.6000%	-6.6400%	-2.3416%	-12.62%
0.5813%	0.6272%	-1.2300%	-1.3213%	-9.6472%	-13.84%
0.5717%	0.6180%	-7.5600%	-7.6917%	-7.7180%	-17.98%
0.5629%	0.6101%	-8.3100%	-8.3629%	-14.4101%	-23.63%
0.5504%	0.5979%	0.2200%	0.1096%	2.9021%	-18.00%
0.5325%	0.5906%	-11.2900%	-11.4025%	-13.4206%	-20.48%
0.5446%	0.6016%	8.4000%	8.2554%	-2.3316%	-15.11%
0.5425%	0.5952%	5.4900%	5.3475%	1.8948%	-16.51%

0.5350%	0.5896%	-6.3200%	-6.4050%	3.5704%	-22.10%
0.5317%	0.5887%	-3.0300%	-3.1517%	-3.5087%	-23.01%
0.5121%	0.5778%	-1.8800%	-2.0121%	-5.4778%	-22.68%
0.5071%	0.5663%	0.5700%	0.4629%	4.4837%	-24.76%
0.4983%	0.5540%	7.8400%	7.7417%	8.2960%	-13.30%
0.4613%	0.5310%	4.8800%	4.8088%	9.6790%	-8.05%
0.4454%	0.5173%	0.9200%	0.8346%	0.6727%	0.26%
0.4817%	0.5457%	1.3800%	1.2783%	-7.0457%	10.66%
0.5075%	0.5659%	1.5300%	1.4425%	1.1841%	12.08%
0.4938%	0.5487%	-1.5200%	-1.5538%	4.0213%	24.41%
0.4921%	0.5350%	5.2500%	5.1679%	0.5850%	20.82%
0.4888%	0.5309%	0.4900%	0.3913%	-0.5809%	15.11%
0.4863%	0.5233%	4.7700%	4.7538%	6.2268%	28.69%
0.4771%	0.5128%	1.4200%	1.3629%	1.6472%	34.58%
0.4738%	0.5125%	1.0100%	0.9163%	1.2975%	38.53%
0.4596%	0.4975%	-1.9400%	-1.9696%	0.5425%	35.13%
0.4929%	0.5271%	-1.9600%	-2.0629%	-4.1471%	22.88%
0.5183%	0.5517%	0.9700%	0.8517%	0.2383%	18.33%
0.5092%	0.5388%	1.4600%	1.4308%	1.0112%	19.10%
0.4933%	0.5227%	-3.7400%	-3.8033%	1.2073%	13.17%
0.4800%	0.5124%	-0.0500%	-0.0800%	3.4177%	11.45%
0.4663%	0.4985%	0.6800%	0.6138%	0.4115%	13.86%
0.4650%	0.4992%	1.1500%	1.0650%	4.4508%	9.41%
0.4683%	0.4963%	3.6400%	3.5817%	3.5737%	12.85%
0.4650%	0.4939%	2.9700%	2.9350%	2.1561%	10.87%
0.4558%	0.4828%	-2.8500%	-2.8958%	1.7272%	6.21%
0.4433%	0.4679%	1.7500%	1.6567%	1.5022%	6.96%
0.4600%	0.4855%	-2.1800%	-2.2300%	0.5945%	6.67%
0.4488%	0.4708%	-2.2900%	-2.3488%	2.7392%	6.32%
0.4350%	0.4616%	2.7800%	2.7450%	-0.3816%	8.22%
0.4158%	0.4502%	-0.2200%	-0.2758%	5.3098%	6.30%
0.4250%	0.4583%	3.3800%	3.2950%	1.8717%	14.03%
0.4288%	0.4591%	-1.3100%	-1.3388%	0.2709%	12.55%
0.4321%	0.4585%	0.4600%	0.3779%	3.5615%	12.24%
0.4500%	0.4812%	-2.0600%	-2.1200%	-6.6512%	8.71%
0.4573%	0.4899%	3.3900%	3.3227%	-0.8799%	8.43%
0.4538%	0.4848%	-0.3600%	-0.4238%	0.6152%	4.89%
0.4475%	0.4792%	2.2500%	2.2025%	2.1556%	10.36%
0.4525%	0.4850%	-0.0900%	-0.1825%	0.4677%	8.39%
0.4663%	0.4983%	0.8500%	0.7738%	-5.1328%	11.71%
0.4933%	0.5242%	0.9500%	0.8467%	1.1925%	15.40%
0.5033%	0.5350%	-3.3600%	-3.3833%	0.8931%	8.62%
0.5000%	0.5333%	-0.3000%	-0.3600%	1.8825%	8.62%
0.4971%	0.5308%	0.1700%	0.1229%	4.5801%	5.37%
0.4829%	0.5167%	1.9500%	1.8971%	2.1955%	8.87%
0.4692%	0.5000%	2.1900%	2.1108%	-2.2362%	10.78%
0.4688%	0.4983%	2.8400%	2.7913%	5.1043%	16.34%
0.4542%	0.4833%	1.5100%	1.4458%	1.6572%	14.23%
0.4529%	0.4842%	1.0400%	0.9471%	0.6975%	15.79%

0.4646%	0.4967%	1.0800%	1.0454%	-0.6101%	14.51%
0.4629%	0.4917%	-2.3400%	-2.4229%	4.5424%	11.96%
0.4567%	0.4875%	0.7300%	0.6633%	3.6498%	11.83%
0.4708%	0.4975%	4.0100%	3.9592%	3.8784%	15.24%
0.4717%	0.4992%	3.0800%	3.0183%	0.0153%	22.80%
0.2812%	0.5250%	-2.0600%	-1.9412%	-5.5871%	20.59%
0.4925%	0.5208%	-3.5600%	-3.5925%	-4.0874%	16.13%
0.4938%	0.5200%	1.0800%	1.0063%	1.5756%	15.13%
0.4900%	0.5150%	3.3700%	3.2500%	3.0277%	16.43%
0.4833%	0.5092%	1.1600%	1.1067%	6.3549%	14.55%
0.4675%	0.4975%	-4.5700%	-4.6475%	-0.1570%	7.72%
0.4750%	0.5133%	-1.0600%	-1.1650%	-0.2379%	5.50%
0.4629%	0.5017%	-6.4000%	-6.4629%	-7.3150%	-2.31%
0.4792%	0.5175%	-3.5900%	-3.7292%	-5.5131%	-3.59%
0.4754%	0.5175%	-0.8000%	-0.9054%	1.1881%	-5.07%
0.4783%	0.5242%	4.5200%	4.3917%	4.9921%	-4.67%
0.4821%	0.5225%	0.9300%	0.8179%	2.6762%	-6.69%
0.4913%	0.5317%	-8.8300%	-8.9213%	-1.3985%	-13.11%
0.4883%	0.5333%	-1.2300%	-1.3283%	-6.6441%	-11.09%
0.4854%	0.5308%	1.0900%	0.9646%	-2.1910%	-11.13%
0.4867%	0.5408%	-9.3000%	-9.3967%	-12.0231%	-21.97%
0.5446%	0.6300%	-17.1600%	-17.3346%	-12.2428%	-36.08%
0.5354%	0.6333%	-7.5400%	-7.7154%	2.1561%	-38.09%
0.4529%	0.5450%	0.7300%	0.6071%	-2.2247%	-36.99%
0.4538%	0.5325%	-8.6700%	-8.8838%	-0.9866%	-38.62%
0.4704%	0.5250%	-10.9500%	-11.1204%	-13.0958%	-43.32%
0.4838%	0.5350%	8.4100%	8.2763%	1.9905%	-38.09%
0.4817%	0.5400%	9.2800%	9.0883%	0.3062%	-35.31%
0.4908%	0.5408%	5.2600%	5.0992%	2.9879%	-32.57%
0.4888%	0.5167%	-0.1800%	-0.2888%	5.0035%	-26.22%
0.4633%	0.4975%	7.2000%	7.0967%	3.5780%	-19.97%
0.4463%	0.4758%	3.2500%	3.1638%	0.0702%	-18.26%
0.4308%	0.4608%	3.3900%	3.2992%	0.9676%	-6.92%
0.4329%	0.4625%	-2.1900%	-2.2929%	-3.3052%	9.78%
0.4367%	0.4700%	5.6500%	5.5633%	4.0886%	25.37%
0.4458%	0.4825%	1.5900%	1.4842%	5.0988%	26.45%
0.4483%	0.4808%	-3.9600%	-4.0483%	-5.2301%	33.12%
0.4571%	0.4892%	2.7700%	2.6429%	-1.9788%	53.60%
0.4517%	0.4867%	5.6300%	5.5783%	2.3111%	49.75%
0.4525%	0.4842%	1.2000%	1.1275%	2.3216%	38.83%
0.4254%	0.4583%	-8.3300%	-8.4154%	-6.2183%	20.97%
0.4183%	0.4550%	-5.6000%	-5.6483%	-1.0910%	14.42%
0.4033%	0.4383%	6.7000%	6.6067%	7.3030%	13.83%
0.3838%	0.4175%	-4.8300%	-4.8938%	0.8321%	4.91%
0.3854%	0.4175%	8.6600%	8.5346%	2.5400%	10.16%
0.3963%	0.4250%	3.5300%	3.4038%	0.8619%	16.51%
0.4142%	0.4475%	-0.3100%	-0.4042%	-3.6798%	9.93%
0.4283%	0.4633%	6.3600%	6.2517%	2.6518%	15.05%
0.4292%	0.4642%	2.0200%	1.9408%	0.9599%	22.18%

0.4413%	0.4733%	3.1100%	2.9888%	0.6502%	22.57%
0.4338%	0.4633%	-0.3200%	-0.3938%	-0.3159%	15.64%
0.4354%	0.4625%	2.6200%	2.5246%	3.7253%	17.21%
0.4175%	0.4433%	-1.4900%	-1.5475%	1.5321%	25.95%
0.4179%	0.4383%	-1.9900%	-2.0879%	-0.5666%	30.68%
0.4150%	0.4392%	-2.3500%	-2.4450%	-1.1930%	19.64%
0.3683%	0.3908%	-5.7700%	-5.7983%	1.6480%	18.49%
0.3467%	0.3733%	-7.2900%	-7.3767%	-0.1462%	1.14%
0.3392%	0.3767%	10.7100%	10.5908%	3.4980%	8.09%
0.3267%	0.3542%	-0.4600%	-0.5467%	0.4472%	7.84%
0.3317%	0.3608%	0.8000%	0.6883%	3.0159%	2.12%
0.3342%	0.3617%	4.2700%	4.1458%	-3.6854%	4.22%
0.3325%	0.3633%	4.1200%	3.9875%	-0.0182%	5.12%
0.3388%	0.3733%	3.0700%	2.9513%	0.9987%	8.53%
0.3350%	0.3667%	-0.8800%	-0.9650%	1.7570%	4.75%
0.3213%	0.3500%	-6.2400%	-6.3313%	-0.1339%	-0.42%
0.3092%	0.3400%	3.9400%	3.8108%	3.7604%	5.44%
0.2892%	0.3275%	1.1900%	1.1008%	2.5164%	9.12%
0.2954%	0.3333%	2.0700%	1.9546%	-4.8054%	17.99%
0.2988%	0.3350%	2.4100%	2.2813%	0.8931%	30.18%
0.2958%	0.3258%	-2.0600%	-2.1458%	1.3982%	15.18%
0.2946%	0.3200%	0.3900%	0.2854%	-4.9628%	16.11%
0.3063%	0.3333%	0.7200%	0.6038%	-0.2225%	15.98%
0.3196%	0.3458%	4.9600%	4.8604%	3.1642%	16.76%
0.3271%	0.3483%	1.1400%	1.0329%	3.0417%	13.45%
0.3196%	0.3458%	3.5400%	3.4304%	5.0542%	13.95%
0.3125%	0.3333%	1.6700%	1.6175%	5.5667%	16.89%
0.3263%	0.3475%	2.1100%	2.0138%	-9.3075%	27.27%
0.3579%	0.3775%	-1.5800%	-1.6979%	0.7625%	20.60%
0.3667%	0.3900%	4.7900%	4.7233%	3.4600%	25.00%
0.3821%	0.3942%	-3.1800%	-3.2821%	-5.3942%	18.70%
0.3888%	0.4000%	2.8500%	2.7513%	0.6800%	19.35%
0.3800%	0.3917%	4.3100%	4.2200%	3.3783%	27.19%
0.3875%	0.3975%	2.7800%	2.6625%	-2.3875%	30.32%
0.3875%	0.4008%	2.2200%	2.1425%	0.3592%	32.41%
0.3758%	0.3858%	-3.7800%	-3.8358%	2.4242%	21.53%
0.3713%	0.3775%	4.3100%	4.1988%	2.9725%	25.38%
0.3675%	0.3758%	0.5500%	0.4725%	2.9942%	21.86%
0.3571%	0.3675%	0.4600%	0.3829%	3.8925%	20.44%
0.3483%	0.3550%	2.0700%	2.0017%	-1.4050%	20.45%
0.3546%	0.3575%	1.8200%	1.7154%	4.1225%	24.62%
0.3483%	0.3525%	-1.6500%	-1.7283%	-7.1525%	16.94%
0.3408%	0.3442%	3.7400%	3.6592%	4.6058%	25.25%
0.3458%	0.3533%	-1.6300%	-1.7458%	-2.2133%	19.74%
0.3296%	0.3383%	2.1900%	2.1104%	7.6817%	17.27%
0.3317%	0.3408%	2.4600%	2.3583%	0.8592%	16.86%
0.3200%	0.3292%	-0.4700%	-0.5700%	3.1708%	13.69%
0.2917%	0.2983%	-3.2000%	-3.2917%	2.0317%	14.23%
0.3021%	0.3058%	5.6000%	5.4479%	-6.6358%	15.52%

0.3058%	0.3117%	-1.7900%	-1.8858%	-0.8017%	12.75%
0.2983%	0.3125%	0.7700%	0.6617%	-1.6025%	12.99%
0.3358%	0.3475%	1.0900%	0.9542%	0.3025%	11.82%
0.3525%	0.3658%	-2.1700%	-2.2925%	-6.3658%	7.43%
0.3500%	0.3667%	1.8600%	1.7500%	4.4433%	11.22%
0.3404%	0.3542%	-6.2500%	-6.3704%	-4.3242%	0.50%
0.3450%	0.3658%	-2.6800%	-2.8150%	2.5342%	-0.60%
0.3358%	0.3575%	8.2300%	8.1042%	0.7225%	5.23%
0.3446%	0.3667%	0.0800%	-0.0446%	-2.4967%	2.78%
0.3388%	0.3625%	-1.8000%	-1.9188%	1.7975%	1.41%
0.3383%	0.3558%	-5.1700%	-5.2983%	4.5665%	-0.64%
0.3308%	0.3425%	-0.3300%	-0.4608%	1.5983%	-6.17%
0.3221%	0.3467%	6.6000%	6.4579%	7.7933%	1.80%
0.3221%	0.3467%	0.2200%	0.0679%	-2.7567%	1.23%
0.3063%	0.3275%	1.6000%	1.4938%	1.1825%	1.74%
0.2958%	0.3150%	0.0800%	-0.0358%	7.4750%	4.02%
0.2779%	0.2975%	3.5500%	3.4121%	-1.0975%	5.64%
0.2808%	0.2992%	-0.0200%	-0.1408%	-5.8092%	12.58%
0.2879%	0.3050%	-0.1300%	-0.2679%	0.0950%	15.45%
0.2879%	0.3050%	-1.9800%	-2.1079%	0.5550%	4.53%
0.3246%	0.3400%	3.5200%	3.3754%	-5.7300%	8.07%
0.3408%	0.3558%	1.7600%	1.6392%	4.5842%	11.98%
0.3292%	0.3300%	1.6600%	1.5708%	0.9300%	20.06%
0.3317%	0.3325%	3.7600%	3.6383%	4.9275%	24.99%
0.3317%	0.3325%	-0.1100%	-0.2117%	2.6475%	17.20%
0.3250%	0.3275%	0.8200%	0.7050%	0.4525%	17.94%
0.3242%	0.3275%	1.1700%	1.0858%	3.8925%	17.49%
0.3104%	0.3142%	0.4100%	0.3096%	-3.0142%	17.91%
0.3188%	0.3233%	1.8400%	1.7413%	2.1167%	16.06%
0.3125%	0.3183%	0.0900%	-0.0025%	2.9217%	16.26%
0.3063%	0.3058%	1.8700%	1.7538%	-3.0358%	18.63%
0.3058%	0.3117%	2.1100%	2.0242%	3.5883%	23.64%
0.3058%	0.3117%	2.8600%	2.7642%	2.4383%	22.89%
0.2967%	0.3017%	0.9100%	0.8133%	-6.4317%	21.84%
0.2967%	0.3158%	5.4900%	5.4333%	-3.3858%	26.42%
0.3013%	0.3217%	-3.9100%	-3.9913%	-4.1617%	17.11%
0.3275%	0.3442%	-2.7800%	-2.8675%	3.4258%	14.00%
0.3275%	0.3475%	0.1300%	0.0525%	1.7525%	13.26%
0.3379%	0.3567%	2.1600%	2.0721%	-1.4967%	14.38%
0.3363%	0.3558%	0.3900%	0.2838%	2.3742%	14.38%
0.3308%	0.3558%	3.4700%	3.3892%	1.5042%	16.24%
0.3304%	0.3550%	3.0100%	2.9296%	0.7750%	19.66%
0.3304%	0.3550%	0.3500%	0.2396%	-0.9550%	17.91%
0.3508%	0.3708%	-7.1400%	-7.1908%	1.5792%	7.35%
0.3600%	0.3775%	1.7600%	1.6800%	3.1725%	6.27%
0.3579%	0.3775%	-9.3000%	-9.3879%	-4.3875%	-4.38%
0.3363%	0.3625%	7.7600%	7.6738%	4.4775%	-2.32%
0.3242%	0.3542%	2.9900%	2.8858%	3.7558%	4.68%
0.3242%	0.3542%	1.7100%	1.6158%	2.5258%	9.49%

0.3142%	0.3400%	3.8200%	3.7358%	0.5900%	13.49%
0.3113%	0.3317%	-6.5800%	-6.6613%	-1.1117%	3.78%
0.3113%	0.3317%	6.8700%	6.7388%	2.8883%	10.42%
0.2813%	0.3075%	1.2300%	1.1588%	-0.5775%	7.99%
0.2813%	0.3075%	-1.7700%	-1.8613%	4.8225%	2.93%
0.2525%	0.2742%	1.7200%	1.6175%	3.9758%	4.26%
0.2567%	0.2808%	2.0100%	1.9133%	-1.0508%	14.34%
0.2600%	0.2858%	3.4700%	3.3700%	-2.1458%	16.12%
0.2550%	0.2833%	2.8400%	2.7650%	3.1467%	31.50%
0.2479%	0.2733%	-0.2400%	-0.2879%	6.3804%	21.70%
0.2346%	0.2592%	-8.3800%	-8.4646%	-10.1045%	8.21%
0.2542%	0.2917%	-12.4800%	-12.6042%	-10.2769%	-6.96%
0.2158%	0.2658%	12.7300%	12.6042%	2.9628%	0.89%
0.2171%	0.2617%	4.6700%	4.5429%	4.0921%	12.85%
0.2100%	0.2558%	1.9000%	1.7800%	-4.9074%	7.52%
0.1858%	0.2283%	5.5400%	5.4542%	7.5872%	11.97%
0.1925%	0.2275%	7.1100%	6.9975%	-2.8771%	21.95%
0.1992%	0.2367%	-3.8000%	-3.9992%	0.8842%	15.16%
0.2042%	0.2458%	-2.7500%	-2.8642%	4.7958%	9.72%
0.1988%	0.2375%	10.8400%	10.7513%	0.4977%	17.47%
0.1958%	0.2308%	3.7300%	3.6442%	0.4724%	18.40%
0.2108%	0.2425%	-1.1200%	-1.2208%	-1.1574%	17.25%
0.2304%	0.2575%	2.6400%	2.5296%	-6.3525%	31.29%
0.2588%	0.2867%	4.2000%	4.1213%	10.2122%	56.36%
0.2471%	0.2750%	5.1500%	5.0929%	4.0021%	45.99%
0.2513%	0.2775%	0.5200%	0.4488%	-2.6503%	40.33%
0.2375%	0.2633%	2.1600%	2.0925%	-2.4263%	40.80%
0.2200%	0.2458%	2.2200%	2.1600%	3.6122%	36.45%
0.2200%	0.2458%	2.8900%	2.8200%	3.7297%	31.17%
0.2192%	0.2467%	-4.7900%	-4.8692%	-6.4161%	30.01%
0.2308%	0.2575%	6.8600%	6.7792%	4.4763%	42.93%
0.2246%	0.2517%	-0.8600%	-0.9146%	-1.8911%	27.93%
0.2254%	0.2533%	4.3300%	4.2546%	9.3683%	28.72%
0.2479%	0.2775%	-5.3400%	-5.4179%	-3.5524%	23.31%
0.2754%	0.3067%	-3.1600%	-3.2654%	-3.7159%	16.41%
0.2938%	0.3317%	3.5100%	3.4163%	10.0085%	15.66%
0.3196%	0.3583%	-8.9300%	-9.0396%	-4.6085%	0.23%
0.3538%	0.3958%	-0.1000%	-0.1738%	3.9083%	-0.29%
0.3638%	0.4050%	-8.5300%	-8.6138%	-5.3776%	-10.60%
0.3513%	0.3983%	8.9500%	8.8688%	5.1003%	-4.63%
0.3513%	0.3967%	-4.3700%	-4.4313%	0.1133%	-11.22%
0.3929%	0.4383%	-9.5000%	-9.6029%	-11.7548%	-15.46%
0.4375%	0.4900%	7.7500%	7.6625%	1.1854%	-14.60%
0.4221%	0.4792%	5.2300%	5.1679%	6.5087%	-9.20%
0.3817%	0.4392%	-6.0900%	-6.1417%	-0.9292%	-18.10%
0.3800%	0.4333%	5.9784%	5.9034%	-2.4387%	-8.21%
0.3917%	0.4408%	-2.7566%	-2.8316%	-6.2924%	-7.69%
0.3975%	0.4492%	3.3573%	3.2739%	4.4397%	-7.72%
0.3871%	0.4275%	0.4121%	0.3317%	1.4625%	1.82%

0.4054%	0.4467%	0.1130%	0.0293%	-6.2554%	2.08%
0.4029%	0.4483%	6.2851%	6.2046%	1.2088%	18.61%
0.4054%	0.4508%	2.8825%	2.8070%	2.0170%	12.08%
0.4304%	0.4767%	-1.9488%	-2.0225%	-6.6174%	14.99%
0.4433%	0.4883%	-5.1403%	-5.2112%	-6.0821%	20.62%
0.4825%	0.5283%	-3.1516%	-3.2216%	0.7655%	8.52%
0.4563%	0.5042%	8.3002%	8.2323%	4.6555%	11.71%
0.4083%	0.4525%	4.1981%	4.1347%	1.4610%	23.92%

RF Annualized Yield	AAAAA Annualized Yield	MRP RP	AAAAA RP
3.60%		8.01%	
3.60%		5.85%	
3.24%		16.71%	
3.48%		24.89%	
3.24%		24.48%	
3.36%		29.73%	
3.24%		23.18%	
3.24%		25.49%	
3.48%		28.60%	
3.24%		31.39%	
3.36%		28.25%	
3.24%		33.13%	
3.24%		34.24%	
3.24%		36.38%	
3.00%		27.85%	
3.24%		40.77%	
3.12%		42.92%	
3.24%		37.15%	
3.24%		32.66%	
3.24%		25.92%	
3.48%		29.22%	
3.24%		27.03%	
3.60%		35.86%	
3.24%		43.65%	
3.48%	4.69%	40.13%	38.92%
3.48%	4.71%	49.11%	47.88%
3.24%	4.76%	50.99%	49.47%
3.36%	4.81%	35.40%	33.95%
4.08%	4.80%	32.42%	31.70%
3.60%	4.81%	25.41%	24.21%
3.48%	4.88%	46.00%	44.60%

3.84%	4.87%	50.50%	49.47%
3.60%	4.89%	53.95%	52.66%
3.84%	4.91%	42.43%	41.36%
3.72%	4.89%	11.75%	10.58%
3.12%	4.85%	-13.60%	-15.33%
3.72%	4.76%	-12.13%	-13.16%
3.48%	4.76%	-11.40%	-12.68%
3.12%	4.79%	-8.48%	-10.15%
3.48%	4.71%	-1.03%	-2.26%
3.24%	4.69%	-3.37%	-4.82%
3.24%	4.69%	-0.61%	-2.06%
3.48%	4.67%	-26.33%	-27.51%
3.36%	4.63%	-26.83%	-28.10%
3.12%	4.58%	-32.75%	-34.20%
3.48%	4.54%	-39.06%	-40.12%
3.24%	4.55%	-29.85%	-31.16%
3.12%	4.61%	-20.03%	-21.52%
3.36%	4.69%	-28.26%	-29.58%
3.36%	4.56%	-29.22%	-30.42%
3.12%	4.57%	-22.23%	-23.68%
3.48%	4.53%	-33.72%	-34.77%
3.24%	4.58%	-39.49%	-40.83%
3.12%	4.57%	-46.98%	-48.43%
3.36%	4.59%	-26.81%	-28.03%
3.24%	4.59%	-34.85%	-36.20%
3.24%	4.63%	-34.58%	-35.96%
3.24%	4.82%	-47.90%	-49.47%
3.48%	5.28%	-37.54%	-39.34%
3.72%	5.28%	-42.50%	-44.05%
3.84%	5.79%	-47.19%	-49.14%
3.84%	5.64%	-51.36%	-53.16%
3.84%	5.68%	-54.28%	-56.12%
3.72%	5.42%	-56.73%	-58.42%
3.60%	5.64%	-62.11%	-64.15%
3.36%	5.87%	-66.23%	-68.74%
3.36%	6.01%	-70.93%	-73.57%
3.36%	5.89%	-55.06%	-57.59%
3.36%	5.37%	-37.58%	-39.59%
3.12%	5.12%	-12.74%	-14.74%
3.24%	5.08%	-31.48%	-33.32%
3.12%	5.10%	-28.39%	-30.37%
3.24%	5.10%	-11.44%	-13.29%
3.24%	4.87%	-8.06%	-9.69%
2.76%	4.92%	-28.67%	-30.82%
3.24%	5.15%	-16.49%	-18.39%
3.00%	5.30%	51.53%	49.24%
3.36%	5.02%	127.98%	126.33%
3.00%	4.78%	159.88%	158.10%

3.12%	4.60%	70.76%	69.29%
3.12%	4.54%	37.37%	35.96%
3.00%	4.66%	26.26%	24.60%
3.12%	4.66%	33.52%	31.99%
3.00%	4.95%	55.66%	53.71%
3.36%	4.89%	50.61%	49.09%
3.48%	4.68%	65.48%	64.28%
2.88%	4.45%	95.85%	94.28%
3.24%	4.34%	88.72%	87.62%
3.00%	4.25%	28.27%	27.02%
3.00%	4.19%	1.09%	-0.10%
2.88%	4.12%	-8.97%	-10.21%
2.88%	4.09%	-11.74%	-12.95%
2.88%	4.14%	-16.58%	-17.84%
2.76%	4.19%	-5.92%	-7.35%
3.24%	4.13%	-0.38%	-1.27%
3.00%	4.07%	-1.85%	-2.92%
3.00%	4.04%	-4.44%	-5.48%
3.00%	3.99%	-17.62%	-18.61%
2.52%	3.91%	-17.31%	-18.70%
2.64%	3.89%	-19.86%	-21.11%
2.76%	3.87%	-9.53%	-10.64%
2.76%	3.84%	1.99%	0.91%
2.64%	3.80%	6.92%	5.76%
2.88%	3.73%	31.17%	30.33%
2.76%	3.74%	27.11%	26.13%
2.76%	3.72%	30.87%	29.91%
2.76%	3.67%	45.50%	44.59%
2.88%	3.60%	39.04%	38.32%
2.88%	3.55%	44.78%	44.11%
2.88%	3.47%	61.42%	60.83%
2.76%	3.44%	71.15%	70.48%
2.88%	3.42%	80.95%	80.41%
2.64%	3.43%	52.21%	51.42%
2.64%	3.40%	54.23%	53.47%
2.88%	3.38%	48.63%	48.13%
2.76%	3.36%	46.67%	46.07%
2.76%	3.33%	44.79%	44.23%
2.52%	3.30%	41.79%	41.02%
2.76%	3.28%	41.53%	41.01%
2.64%	3.23%	36.96%	36.37%
2.64%	3.19%	31.28%	30.73%
2.52%	3.20%	27.89%	27.21%
2.40%	3.31%	27.59%	26.68%
2.64%	3.41%	22.98%	22.21%
2.76%	3.50%	22.07%	21.34%
2.64%	3.41%	15.46%	14.69%
3.00%	3.36%	5.53%	5.17%
2.88%	3.33%	9.14%	8.69%

2.76%	3.33%	2.26%	1.70%
2.76%	3.37%	-12.75%	-13.36%
2.76%	3.40%	-27.42%	-28.06%
2.88%	3.39%	-34.97%	-35.48%
2.76%	3.36%	-37.78%	-38.38%
2.76%	3.34%	-39.27%	-39.85%
2.52%	3.36%	-36.02%	-36.86%
2.76%	3.39%	-52.41%	-53.04%
2.64%	3.52%	-39.93%	-40.81%
2.64%	3.39%	-41.86%	-42.61%
2.52%	3.47%	-22.49%	-23.44%
2.52%	3.42%	-24.67%	-25.57%
2.64%	3.38%	-22.69%	-23.42%
2.52%	3.41%	-7.98%	-8.86%
2.64%	3.34%	10.32%	9.62%
2.52%	3.28%	17.77%	17.01%
2.64%	3.25%	28.50%	27.89%
2.52%	3.17%	17.95%	17.30%
2.28%	3.13%	14.98%	14.13%
2.52%	3.11%	32.66%	32.07%
2.28%	3.12%	15.49%	14.65%
2.40%	3.07%	28.32%	27.65%
2.16%	3.03%	-4.01%	-4.87%
2.28%	2.99%	-0.83%	-1.54%
2.16%	3.02%	-5.09%	-5.95%
2.28%	3.37%	9.18%	8.09%
2.76%	3.25%	-0.60%	-1.09%
2.40%	3.08%	-1.55%	-2.23%
2.28%	3.04%	-2.70%	-3.46%
2.40%	2.98%	0.79%	0.21%
2.16%	2.96%	-1.53%	-2.32%
2.28%	2.94%	15.35%	14.69%
2.16%	2.91%	15.51%	14.76%
2.28%	3.01%	-17.74%	-18.47%
2.28%	3.03%	-4.95%	-5.70%
2.40%	2.95%	-11.76%	-12.31%
2.28%	2.94%	-1.97%	-2.63%
2.16%	2.92%	-15.17%	-15.93%
2.16%	2.90%	-10.37%	-11.11%
2.16%	2.86%	-9.59%	-10.28%
2.04%	2.82%	-11.82%	-12.59%
1.92%	2.85%	-12.88%	-13.81%
1.92%	2.89%	-14.58%	-15.55%
2.16%	2.91%	-15.28%	-16.02%
2.04%	2.93%	-20.28%	-21.17%
2.04%	2.90%	5.93%	5.07%
1.92%	2.86%	3.75%	2.81%
1.92%	2.82%	6.18%	5.28%
1.92%	2.82%	2.63%	1.73%

1.92%	2.83%	0.65%	-0.26%
1.92%	2.80%	-9.97%	-10.85%
1.68%	2.79%	-9.42%	-10.53%
1.92%	2.88%	-13.50%	-14.45%
2.52%	2.90%	-8.31%	-8.69%
2.28%	2.92%	-9.01%	-9.64%
2.52%	2.93%	-15.95%	-16.36%
2.40%	2.91%	-13.87%	-14.38%
2.28%	2.93%	-8.42%	-9.07%
2.52%	2.93%	-11.83%	-12.24%
2.52%	2.91%	-13.90%	-14.29%
2.52%	2.90%	-12.54%	-12.92%
2.40%	2.89%	-9.18%	-9.67%
2.52%	2.88%	4.02%	3.67%
2.40%	2.87%	7.03%	6.56%
2.52%	2.89%	17.81%	17.45%
2.40%	2.86%	24.75%	24.29%
2.28%	2.83%	34.46%	33.91%
2.52%	2.82%	51.73%	51.43%
2.40%	2.82%	58.84%	58.42%
2.28%	2.81%	55.32%	54.79%
2.52%	2.79%	55.11%	54.84%
2.52%	2.76%	41.95%	41.71%
2.52%	2.75%	42.05%	41.82%
2.40%	2.76%	41.79%	41.43%
2.40%	2.77%	31.17%	30.81%
2.52%	2.78%	22.58%	22.33%
2.52%	2.81%	23.39%	23.10%
2.52%	2.78%	16.75%	16.50%
2.40%	2.79%	10.77%	10.39%
2.52%	2.78%	6.90%	6.64%
2.40%	2.78%	5.54%	5.16%
2.64%	2.77%	4.82%	4.69%
2.40%	2.77%	8.43%	8.06%
2.52%	2.76%	12.20%	11.96%
2.52%	2.75%	12.05%	11.82%
2.40%	2.76%	9.14%	8.79%
2.52%	2.77%	10.50%	10.25%
2.40%	2.76%	20.13%	19.77%
2.40%	2.73%	17.33%	17.00%
2.52%	2.73%	17.06%	16.85%
2.16%	2.69%	25.05%	24.52%
2.40%	2.67%	16.87%	16.60%
2.28%	2.67%	29.07%	28.68%
2.28%	2.67%	25.19%	24.80%
2.28%	2.65%	18.54%	18.17%
2.16%	2.64%	18.82%	18.34%
2.28%	2.66%	24.47%	24.09%
2.16%	2.66%	30.24%	29.74%

2.28%	2.66%	34.07%	33.69%
2.16%	2.65%	37.73%	37.24%
2.16%	2.65%	34.25%	33.77%
2.04%	2.58%	41.84%	41.30%
1.80%	2.52%	24.25%	23.53%
1.92%	2.51%	36.27%	35.69%
2.04%	2.51%	29.70%	29.23%
2.16%	2.55%	30.78%	30.40%
1.92%	2.54%	26.19%	25.57%
2.28%	2.54%	25.06%	24.81%
2.04%	2.57%	9.57%	9.04%
2.16%	2.63%	-5.90%	-6.37%
2.28%	2.65%	-9.58%	-9.95%
2.16%	2.64%	-13.23%	-13.71%
2.28%	2.65%	-10.35%	-10.72%
2.16%	2.61%	-14.17%	-14.62%
1.92%	2.60%	-8.63%	-9.31%
2.16%	2.60%	-14.47%	-14.90%
2.04%	2.58%	-20.73%	-21.27%
2.04%	2.58%	-22.89%	-23.43%
2.28%	2.60%	-15.54%	-15.85%
2.16%	2.60%	-9.91%	-10.34%
2.04%	2.60%	-5.13%	-5.69%
2.16%	2.65%	4.29%	3.80%
2.16%	2.75%	7.48%	6.89%
2.04%	2.81%	5.97%	5.20%
2.52%	2.90%	3.18%	2.80%
2.40%	2.90%	-3.24%	-3.74%
2.28%	2.89%	-6.23%	-6.84%
2.64%	2.87%	2.60%	2.37%
2.40%	2.83%	9.99%	9.57%
2.16%	2.81%	19.94%	19.29%
2.52%	2.81%	13.80%	13.51%
2.28%	2.85%	4.07%	3.50%
2.52%	2.89%	7.75%	7.38%
2.40%	2.89%	6.03%	5.55%
2.28%	2.89%	11.15%	10.54%
2.52%	2.88%	1.84%	1.48%
2.40%	2.84%	3.11%	2.68%
2.40%	2.76%	7.69%	7.33%
2.16%	2.76%	8.99%	8.39%
2.28%	2.75%	4.08%	3.61%
2.16%	2.75%	-0.67%	-1.25%
2.40%	2.75%	-11.51%	-11.86%
2.28%	2.75%	-11.76%	-12.22%
2.04%	2.71%	-0.47%	-1.14%
2.28%	2.67%	-0.10%	-0.49%
2.04%	2.65%	5.80%	5.20%
2.16%	2.66%	1.96%	1.46%

2.04%	2.64%	15.16%	14.56%
2.04%	2.63%	16.75%	16.16%
2.16%	2.61%	18.50%	18.05%
1.92%	2.62%	24.89%	24.20%
2.16%	2.62%	21.48%	21.02%
1.92%	2.63%	30.09%	29.38%
2.28%	2.65%	40.13%	39.76%
2.04%	2.66%	32.38%	31.76%
2.16%	2.69%	25.55%	25.03%
2.16%	2.64%	28.35%	27.87%
2.04%	2.68%	32.66%	32.02%
2.28%	2.70%	29.20%	28.79%
2.16%	2.70%	29.24%	28.71%
2.16%	2.70%	29.58%	29.05%
2.40%	2.69%	35.03%	34.74%
2.04%	2.69%	34.82%	34.17%
2.28%	2.80%	31.51%	30.99%
2.40%	2.90%	31.68%	31.18%
2.52%	2.91%	21.25%	20.86%
2.40%	2.97%	25.56%	25.00%
2.76%	2.97%	32.69%	32.48%
2.52%	2.90%	33.38%	33.00%
2.28%	2.86%	26.19%	25.61%
2.76%	2.91%	23.22%	23.07%
2.52%	2.99%	22.55%	22.08%
2.64%	3.04%	21.38%	20.98%
2.76%	3.02%	15.94%	15.68%
2.52%	2.97%	11.05%	10.60%
2.76%	3.00%	18.41%	18.18%
2.64%	2.97%	8.03%	7.70%
2.40%	2.97%	15.59%	15.03%
2.64%	2.99%	24.02%	23.68%
2.64%	3.00%	17.93%	17.58%
2.52%	3.00%	11.73%	11.25%
2.76%	3.01%	9.34%	9.09%
2.76%	3.05%	10.73%	10.45%
2.52%	3.02%	16.31%	15.81%
2.88%	3.01%	15.47%	15.34%
2.76%	3.06%	12.92%	12.62%
2.52%	3.11%	15.25%	14.67%
3.00%	3.15%	6.75%	6.60%
2.88%	3.26%	8.76%	8.38%
2.88%	3.38%	5.89%	5.40%
3.24%	3.45%	-0.94%	-1.15%
3.00%	3.35%	0.07%	-0.28%
3.00%	3.32%	-4.39%	-4.71%
3.00%	3.36%	-2.28%	-2.64%
2.76%	3.25%	3.18%	2.70%
2.88%	3.19%	-0.61%	-0.92%

2.88%	3.21%	-3.86%	-4.18%
2.76%	3.14%	2.09%	1.71%
2.64%	3.04%	4.51%	4.11%
3.00%	2.95%	10.02%	10.08%
2.64%	2.93%	19.10%	18.82%
2.40%	2.96%	23.46%	22.91%
3.00%	2.98%	24.97%	24.99%
2.64%	2.97%	29.26%	28.94%
2.76%	2.95%	32.28%	32.09%
2.64%	2.97%	43.40%	43.07%
2.52%	2.96%	33.72%	33.29%
2.76%	2.97%	42.89%	42.69%
2.76%	2.97%	49.86%	49.65%
2.64%	3.00%	45.07%	44.72%
2.64%	3.02%	44.88%	44.51%
2.88%	3.08%	39.57%	39.37%
2.64%	3.07%	38.18%	37.75%
3.00%	3.10%	32.92%	32.82%
2.76%	3.10%	44.13%	43.80%
2.76%	3.10%	44.59%	44.25%
3.24%	3.16%	47.90%	47.98%
2.88%	3.18%	38.22%	37.92%
3.00%	3.15%	36.42%	36.27%
2.88%	3.14%	35.49%	35.23%
2.88%	3.19%	28.67%	28.37%
3.00%	3.15%	21.53%	21.38%
2.76%	3.12%	25.66%	25.30%
2.76%	3.14%	35.19%	34.81%
3.12%	3.27%	29.52%	29.37%
3.12%	3.31%	20.97%	20.78%
2.76%	3.31%	16.39%	15.84%
3.12%	3.34%	15.00%	14.78%
3.12%	3.47%	11.41%	11.06%
3.00%	3.60%	5.08%	4.49%
3.48%	3.64%	8.50%	8.34%
3.24%	3.73%	-0.33%	-0.82%
3.36%	3.80%	3.20%	2.76%
3.48%	3.83%	2.48%	2.13%
3.00%	3.75%	-3.93%	-4.68%
3.12%	3.73%	-8.63%	-9.24%
3.48%	3.73%	-5.28%	-5.53%
3.48%	3.79%	5.47%	5.16%
3.00%	3.95%	1.71%	0.76%
3.96%	4.05%	-3.22%	-3.30%
3.60%	4.16%	-4.70%	-5.26%
3.72%	4.19%	-6.50%	-6.97%
3.72%	4.19%	-10.05%	-10.52%
3.48%	4.19%	-7.17%	-7.87%
3.48%	3.95%	-14.27%	-14.74%

3.24%	3.71%	-6.17%	-6.63%
3.00%	3.68%	-4.70%	-5.38%
3.24%	3.71%	-3.86%	-4.32%
3.12%	3.69%	-4.22%	-4.79%
2.88%	3.68%	-6.12%	-6.91%
3.24%	3.68%	-3.82%	-4.25%
3.24%	3.75%	-0.69%	-1.20%
3.24%	3.92%	6.66%	5.99%
3.84%	4.15%	18.96%	18.65%
3.84%	4.16%	26.20%	25.88%
3.36%	4.15%	27.36%	26.57%
3.96%	4.13%	39.41%	39.24%
3.72%	4.17%	34.27%	33.82%
3.72%	4.19%	36.93%	36.46%
4.20%	4.18%	32.26%	32.28%
3.96%	4.28%	33.35%	33.04%
3.96%	4.42%	33.73%	33.28%
4.32%	4.51%	29.34%	29.15%
4.20%	4.53%	28.36%	28.03%
4.20%	4.51%	24.74%	24.43%
4.08%	4.61%	13.27%	12.74%
4.20%	4.67%	11.52%	11.06%
4.20%	4.63%	10.42%	9.99%
4.32%	4.66%	7.66%	7.32%
4.20%	4.69%	-0.61%	-1.10%
4.44%	4.64%	0.16%	-0.04%
4.32%	4.56%	-1.21%	-1.45%
3.84%	4.52%	-6.31%	-6.99%
4.44%	4.54%	-6.09%	-6.19%
4.08%	4.53%	-3.44%	-3.88%
3.84%	4.49%	-9.00%	-9.64%
4.08%	4.36%	-5.22%	-5.50%
3.84%	4.33%	-6.50%	-6.99%
3.96%	4.37%	-7.92%	-8.33%
3.84%	4.39%	-5.17%	-5.72%
3.96%	4.43%	-3.50%	-3.96%
3.96%	4.40%	11.03%	10.59%
3.60%	4.34%	13.34%	12.61%
3.72%	4.28%	17.88%	17.32%
3.72%	4.31%	20.50%	19.91%
4.08%	4.34%	19.09%	18.83%
3.84%	4.39%	13.47%	12.92%
3.96%	4.47%	20.27%	19.76%
3.96%	4.51%	19.38%	18.83%
3.84%	4.52%	24.82%	24.14%
4.08%	4.49%	28.50%	28.09%
3.84%	4.47%	28.52%	27.89%
3.72%	4.49%	23.17%	22.40%
4.44%	4.49%	10.40%	10.35%

3.84%	4.49%	9.77%	9.12%
3.96%	4.46%	6.16%	5.66%
3.96%	4.41%	-1.05%	-1.50%
3.84%	4.36%	-11.49%	-12.00%
3.60%	4.36%	-16.26%	-17.02%
4.08%	4.42%	-14.12%	-14.46%
4.08%	4.42%	-14.43%	-14.77%
3.60%	4.39%	-16.52%	-17.31%
4.20%	4.35%	-19.10%	-19.24%
3.72%	4.33%	-13.41%	-14.01%
3.84%	4.31%	-12.57%	-13.04%
3.84%	4.29%	-4.31%	-4.76%
3.48%	4.28%	-8.31%	-9.11%
3.72%	4.27%	-4.58%	-5.12%
4.08%	4.28%	6.75%	6.55%
3.96%	4.29%	18.98%	18.65%
3.60%	4.30%	27.56%	26.86%
4.32%	4.33%	18.54%	18.53%
3.96%	4.35%	22.83%	22.45%
4.08%	4.36%	27.61%	27.33%
4.08%	4.38%	31.21%	30.91%
3.84%	4.39%	17.63%	17.09%
4.32%	4.41%	18.46%	18.37%
4.20%	4.43%	15.97%	15.74%
3.84%	4.41%	21.08%	20.51%
4.44%	4.43%	18.01%	18.03%
4.20%	4.45%	13.30%	13.05%
3.84%	4.46%	13.30%	12.68%
4.56%	4.46%	16.95%	17.05%
4.20%	4.45%	19.95%	19.70%
4.20%	4.45%	12.26%	12.01%
4.08%	4.45%	17.06%	16.69%
4.08%	4.46%	14.21%	13.83%
4.20%	4.46%	14.69%	14.43%
4.20%	4.47%	12.31%	12.04%
3.96%	4.46%	13.25%	12.76%
3.84%	4.44%	12.03%	11.44%
4.56%	4.45%	7.91%	8.02%
3.96%	4.46%	11.65%	11.16%
3.96%	4.47%	9.47%	8.96%
4.56%	4.49%	1.61%	1.68%
4.08%	4.52%	1.59%	1.15%
4.44%	4.54%	5.40%	5.30%
4.20%	4.58%	5.99%	5.62%
4.08%	4.61%	8.22%	7.69%
4.44%	4.65%	7.46%	7.25%
4.44%	4.74%	8.01%	7.71%
4.56%	4.79%	4.82%	4.59%
4.08%	4.84%	3.53%	2.77%

4.80%	4.99%	2.02%	1.84%
4.32%	5.02%	1.10%	0.41%
4.92%	5.04%	-4.38%	-4.50%
4.68%	5.12%	-0.69%	-1.13%
4.56%	5.21%	-3.31%	-3.95%
5.16%	5.35%	-13.74%	-13.92%
4.92%	5.54%	-16.92%	-17.54%
4.80%	5.46%	-15.05%	-15.70%
4.56%	5.41%	-13.67%	-14.52%
4.68%	5.44%	-14.73%	-15.48%
4.80%	5.25%	-8.27%	-8.72%
4.08%	5.11%	-5.56%	-6.59%
4.68%	5.18%	0.01%	-0.49%
4.20%	5.19%	2.72%	1.73%
5.16%	5.33%	1.92%	1.75%
4.68%	5.54%	6.06%	5.20%
5.16%	5.65%	12.17%	11.68%
5.04%	5.69%	20.57%	19.92%
4.80%	5.76%	25.80%	24.84%
5.40%	5.92%	15.62%	15.10%
5.40%	6.15%	15.26%	14.51%
5.28%	6.27%	18.71%	17.72%
6.00%	6.23%	3.94%	3.71%
5.04%	6.19%	1.27%	0.12%
5.16%	6.20%	-1.90%	-2.94%
5.88%	6.30%	1.30%	0.89%
5.52%	6.38%	8.84%	7.99%
5.04%	6.39%	8.37%	7.02%
5.76%	6.35%	0.72%	0.13%
5.04%	6.14%	3.95%	2.85%
5.28%	6.10%	4.32%	3.50%
5.40%	6.21%	8.29%	7.48%
5.16%	6.32%	13.79%	12.63%
5.88%	6.56%	5.20%	4.53%
6.00%	6.66%	9.22%	8.56%
5.52%	6.72%	7.75%	6.56%
5.64%	6.90%	10.42%	9.16%
6.60%	6.96%	2.98%	2.62%
5.64%	6.88%	2.48%	1.25%
6.60%	7.05%	-5.40%	-5.85%
6.24%	7.16%	-9.31%	-10.23%
5.76%	7.10%	-6.07%	-7.41%
6.60%	7.25%	-13.00%	-13.65%
6.84%	7.43%	-9.79%	-10.38%
5.88%	7.47%	-16.46%	-18.05%
7.20%	7.83%	-15.69%	-16.31%
6.72%	8.03%	-21.43%	-22.74%
6.24%	8.03%	-12.18%	-13.97%
6.72%	7.95%	-15.52%	-16.75%

6.48%	7.93%	-25.12%	-26.57%
6.60%	8.18%	-30.14%	-31.72%
7.68%	8.53%	-30.61%	-31.46%
7.08%	8.54%	-18.91%	-20.37%
6.84%	8.31%	-18.46%	-19.93%
6.72%	8.28%	-12.93%	-14.49%
6.60%	8.24%	-17.67%	-19.31%
6.96%	8.24%	-10.67%	-11.95%
6.36%	7.89%	-2.49%	-4.01%
6.12%	7.63%	10.94%	9.43%
5.52%	7.38%	6.65%	4.79%
6.72%	7.47%	9.36%	8.61%
5.76%	7.50%	26.40%	24.66%
5.64%	7.69%	29.14%	27.10%
6.72%	7.80%	35.11%	34.03%
6.24%	7.80%	20.37%	18.81%
6.60%	7.76%	18.92%	17.76%
6.00%	7.63%	14.60%	12.98%
5.64%	7.54%	11.21%	9.31%
6.12%	7.41%	5.12%	3.83%
6.00%	7.41%	8.30%	6.89%
6.00%	7.36%	5.82%	4.46%
5.64%	7.40%	7.95%	6.19%
5.88%	7.39%	4.31%	2.80%
5.76%	7.44%	1.02%	-0.65%
6.60%	7.43%	6.72%	5.89%
5.88%	7.37%	4.87%	3.38%
6.12%	7.36%	9.65%	8.41%
5.88%	7.31%	9.67%	8.24%
5.64%	7.32%	10.14%	8.46%
6.24%	7.33%	15.68%	14.59%
5.76%	7.26%	22.00%	20.50%
5.40%	7.22%	13.61%	11.79%
6.48%	7.26%	8.39%	7.61%
6.12%	7.35%	1.72%	0.49%
6.72%	7.39%	0.31%	-0.36%
6.84%	7.38%	-4.60%	-5.14%
6.96%	7.39%	-8.33%	-8.76%
6.60%	7.46%	-6.42%	-7.28%
7.32%	7.55%	-3.56%	-3.79%
7.44%	7.76%	-10.79%	-11.11%
6.60%	7.75%	-5.57%	-6.71%
7.56%	7.72%	-7.54%	-7.70%
6.72%	7.79%	-21.87%	-22.93%
7.20%	7.80%	-21.88%	-22.48%
7.32%	7.92%	-21.33%	-21.93%
6.60%	7.95%	-17.54%	-18.89%
7.08%	8.10%	-19.91%	-20.93%
8.16%	8.34%	-20.78%	-20.96%

8.16%	8.48%	-22.01%	-22.33%
7.32%	8.61%	-21.80%	-23.09%
8.64%	8.87%	-32.56%	-32.79%
7.80%	9.14%	-35.84%	-37.18%
8.52%	9.45%	-47.46%	-48.39%
8.40%	9.46%	-37.20%	-38.25%
7.44%	9.12%	-31.27%	-32.95%
8.04%	9.05%	-34.52%	-35.52%
8.16%	8.98%	-24.68%	-25.50%
7.20%	8.77%	-18.34%	-19.90%
7.92%	8.80%	-14.89%	-15.77%
8.04%	9.07%	-6.63%	-7.66%
8.04%	9.07%	1.51%	0.48%
8.40%	8.95%	7.69%	7.14%
8.16%	8.99%	9.16%	8.33%
7.80%	9.09%	18.35%	17.06%
8.76%	9.15%	29.37%	28.98%
8.64%	9.09%	17.33%	16.88%
7.32%	9.01%	28.86%	27.18%
9.00%	9.02%	28.22%	28.20%
7.80%	8.87%	28.75%	27.69%
7.32%	8.79%	19.96%	18.50%
8.52%	8.77%	19.79%	19.55%
7.68%	8.65%	13.45%	12.49%
7.08%	8.75%	7.27%	5.60%
8.76%	8.76%	5.22%	5.22%
7.80%	8.69%	13.44%	12.55%
8.28%	8.56%	14.91%	14.63%
7.68%	8.46%	22.75%	21.97%
7.32%	8.40%	12.84%	11.76%
7.92%	8.36%	8.47%	8.03%
7.56%	8.11%	16.36%	15.81%
7.08%	8.06%	-1.83%	-2.81%
6.84%	8.15%	-2.63%	-3.94%
7.80%	8.19%	-8.05%	-8.44%
7.32%	8.16%	-6.36%	-7.20%
8.04%	8.17%	-7.95%	-8.07%
7.44%	8.07%	-6.86%	-7.49%
7.08%	8.03%	-7.27%	-8.22%
8.04%	8.08%	-9.77%	-9.80%
7.32%	8.04%	-11.37%	-12.08%
7.56%	8.15%	-13.60%	-14.19%
7.56%	8.21%	-10.23%	-10.88%
7.44%	8.30%	-14.59%	-15.45%
8.28%	8.50%	-16.41%	-16.63%
7.20%	8.56%	-15.53%	-16.89%
8.28%	8.57%	-12.91%	-13.20%
7.56%	8.65%	-4.03%	-5.11%
9.00%	8.77%	-2.43%	-2.19%

8.28%	8.86%	-8.12%	-8.70%
8.76%	8.98%	-1.43%	-1.65%
8.40%	8.83%	4.09%	3.67%
7.80%	8.81%	4.15%	3.15%
8.76%	8.98%	-2.42%	-2.64%
8.52%	9.14%	-3.22%	-3.84%
8.16%	9.25%	-1.60%	-2.69%
9.48%	9.37%	8.58%	8.69%
7.80%	9.38%	8.83%	7.25%
8.88%	9.49%	11.18%	10.57%
9.12%	9.52%	1.70%	1.30%
9.24%	9.68%	-1.82%	-2.26%
8.52%	9.48%	5.15%	4.19%
9.12%	9.35%	-0.28%	-0.50%
8.76%	9.38%	3.00%	2.38%
8.16%	9.57%	4.44%	3.03%
9.84%	10.30%	5.62%	5.17%
9.96%	10.99%	8.44%	7.41%
9.96%	10.95%	8.65%	7.67%
9.96%	11.33%	10.68%	9.32%
10.08%	12.56%	14.55%	12.08%
11.88%	13.24%	-5.69%	-7.05%
12.00%	12.55%	-1.60%	-2.15%
10.44%	11.45%	8.22%	7.21%
10.32%	10.99%	6.99%	6.32%
10.08%	11.25%	13.73%	12.56%
9.72%	11.87%	8.52%	6.38%
11.64%	12.27%	9.56%	8.93%
11.64%	12.50%	20.46%	19.60%
10.92%	13.16%	28.62%	26.38%
12.96%	13.50%	19.53%	18.99%
11.28%	13.17%	8.24%	6.35%
10.56%	13.62%	11.05%	7.99%
13.32%	13.62%	26.77%	26.47%
12.12%	14.14%	19.20%	17.18%
12.48%	14.60%	12.73%	10.61%
13.08%	14.08%	7.53%	6.53%
13.08%	14.59%	-0.08%	-1.58%
13.20%	15.16%	-7.78%	-9.74%
13.68%	15.72%	-16.32%	-18.36%
14.04%	15.61%	-13.46%	-15.03%
13.56%	14.60%	-18.91%	-19.94%
12.00%	14.62%	-16.90%	-19.51%
12.96%	15.47%	-15.01%	-17.51%
12.36%	15.50%	-21.46%	-24.60%
14.88%	14.90%	-27.94%	-27.95%
13.44%	14.68%	-20.78%	-22.02%
12.12%	14.52%	-22.85%	-25.24%
14.40%	15.04%	-25.91%	-26.55%

13.68%	14.91%	-26.95%	-28.18%
13.44%	14.10%	-10.22%	-10.88%
12.00%	13.33%	-2.07%	-3.40%
10.92%	12.55%	5.38%	3.75%
11.40%	12.10%	4.80%	4.10%
11.16%	12.14%	10.39%	9.42%
10.44%	12.07%	17.31%	15.68%
9.72%	12.30%	28.69%	26.12%
10.68%	12.03%	33.59%	32.24%
10.20%	11.79%	38.71%	37.12%
10.92%	11.71%	41.90%	41.12%
10.80%	11.95%	50.38%	49.24%
10.56%	12.27%	48.70%	46.99%
12.36%	12.62%	31.79%	31.54%
11.52%	12.50%	32.82%	31.84%
11.40%	12.37%	16.54%	15.57%
11.28%	12.51%	14.29%	13.06%
11.28%	12.67%	11.27%	9.88%
12.36%	12.46%	5.13%	5.04%
11.04%	12.39%	-0.22%	-1.57%
11.76%	12.90%	-3.04%	-4.17%
12.48%	13.15%	-10.74%	-11.41%
12.36%	13.69%	-15.41%	-16.74%
12.72%	13.94%	-17.38%	-18.60%
13.92%	13.78%	-16.90%	-16.76%
12.72%	13.17%	-6.58%	-7.03%
11.28%	12.97%	-6.56%	-8.25%
12.96%	12.87%	-6.60%	-6.51%
10.92%	12.48%	-7.93%	-9.48%
11.76%	12.32%	-5.51%	-6.06%
11.52%	12.26%	3.66%	2.92%
9.84%	12.31%	10.99%	8.52%
11.28%	12.74%	7.58%	6.13%
12.24%	12.46%	5.40%	5.18%
11.64%	12.01%	20.10%	19.73%
9.60%	11.20%	21.36%	19.76%
11.28%	11.20%	21.13%	21.21%
10.20%	11.26%	8.03%	6.97%
10.56%	11.27%	3.95%	3.24%
10.68%	11.24%	8.65%	8.10%
9.72%	10.81%	19.24%	18.15%
10.32%	10.40%	21.42%	21.34%
9.48%	10.26%	13.42%	12.65%
8.76%	9.90%	21.73%	20.59%
8.52%	9.25%	29.16%	28.43%
7.56%	9.00%	28.68%	27.24%
7.44%	9.26%	28.21%	26.39%
8.40%	9.31%	27.41%	26.50%
7.92%	9.08%	20.49%	19.33%

7.56%	8.97%	31.56%	30.15%
7.80%	9.13%	23.94%	22.62%
8.28%	9.10%	24.91%	24.09%
7.08%	8.94%	20.59%	18.73%
8.40%	8.76%	10.27%	9.91%
7.68%	8.61%	26.22%	25.29%
7.08%	8.63%	22.44%	20.89%
7.92%	8.60%	18.30%	17.62%
7.80%	9.00%	18.72%	17.52%
7.92%	9.46%	13.26%	11.72%
9.00%	9.49%	16.18%	15.70%
8.76%	9.54%	30.56%	29.78%
9.00%	9.77%	25.53%	24.77%
9.00%	10.27%	34.45%	33.18%
9.48%	10.63%	-3.07%	-4.22%
9.00%	10.14%	-13.68%	-14.82%
9.36%	10.22%	-4.10%	-4.96%
8.64%	9.99%	-11.97%	-13.31%
8.52%	9.50%	-11.19%	-12.17%
8.64%	9.49%	-16.96%	-17.81%
8.40%	9.77%	-14.87%	-16.24%
9.36%	10.00%	-15.84%	-16.48%
9.12%	10.00%	-16.01%	-16.89%
8.52%	10.11%	-20.24%	-21.83%
9.96%	10.24%	-27.74%	-28.02%
9.12%	9.94%	-21.48%	-22.30%
9.12%	9.60%	5.69%	5.21%
8.40%	9.59%	14.93%	13.74%
9.00%	9.69%	7.60%	6.91%
9.60%	9.72%	10.48%	10.36%
8.28%	9.74%	3.60%	2.14%
9.48%	9.89%	8.65%	8.24%
8.40%	9.87%	14.50%	13.03%
9.60%	9.66%	17.19%	17.13%
8.40%	9.20%	12.13%	11.34%
8.16%	9.04%	23.76%	22.88%
7.92%	9.05%	31.29%	30.16%
7.80%	9.12%	25.17%	23.85%
8.64%	9.06%	17.73%	17.32%
7.68%	9.02%	23.14%	21.81%
7.68%	8.99%	23.99%	22.69%
8.76%	9.13%	5.70%	5.33%
7.92%	9.33%	10.98%	9.57%
8.52%	9.44%	10.75%	9.83%
9.00%	9.55%	1.56%	1.01%
9.00%	9.59%	7.62%	7.03%
8.16%	9.38%	8.34%	7.12%
8.88%	9.36%	-2.37%	-2.85%
8.52%	9.52%	-13.49%	-14.49%

8.28%	9.67%	-17.51%	-18.89%
9.72%	9.65%	-17.19%	-17.12%
8.52%	9.45%	-11.98%	-12.91%
8.64%	9.22%	-11.74%	-12.32%
8.52%	9.21%	-0.12%	-0.80%
7.68%	9.00%	6.99%	5.68%
7.68%	9.07%	6.74%	5.35%
9.12%	8.99%	8.50%	8.63%
8.16%	9.01%	3.63%	2.78%
7.56%	9.15%	-0.17%	-1.76%
9.12%	9.13%	3.63%	3.63%
8.16%	8.87%	18.74%	18.03%
8.16%	8.74%	23.01%	22.43%
7.80%	8.69%	25.70%	24.81%
7.20%	8.63%	13.14%	11.71%
8.16%	8.46%	22.31%	22.01%
7.32%	8.36%	15.37%	14.34%
7.08%	8.48%	8.92%	7.52%
8.04%	8.54%	3.02%	2.52%
7.80%	8.51%	6.25%	5.54%
7.32%	8.46%	2.55%	1.42%
8.04%	8.39%	5.39%	5.04%
7.56%	8.22%	5.25%	4.59%
7.20%	8.08%	0.74%	-0.14%
6.96%	8.05%	4.11%	3.03%
6.84%	8.16%	3.15%	1.83%
7.32%	8.25%	11.19%	10.26%
7.56%	8.11%	0.09%	-0.46%
7.08%	8.01%	3.54%	2.61%
6.60%	7.81%	4.08%	2.88%
7.56%	7.65%	7.69%	7.60%
6.84%	7.54%	2.41%	1.71%
6.24%	7.52%	5.39%	4.11%
7.44%	7.42%	6.21%	6.23%
6.48%	7.26%	2.27%	1.49%
6.72%	6.96%	8.51%	8.28%
6.00%	6.76%	7.01%	6.26%
5.88%	6.77%	9.07%	8.18%
6.36%	7.03%	3.74%	3.08%
6.60%	7.03%	3.48%	3.05%
6.60%	7.02%	6.27%	5.85%
5.88%	7.19%	2.46%	1.16%
6.96%	7.19%	-5.48%	-5.71%
6.84%	7.59%	-1.52%	-2.26%
7.56%	8.09%	-3.30%	-3.83%
7.32%	8.07%	-5.91%	-6.66%
7.20%	8.21%	-2.04%	-3.05%
7.92%	8.16%	-2.45%	-2.69%
7.32%	8.42%	-3.64%	-4.73%

7.92%	8.64%	-4.05%	-4.77%
7.68%	8.76%	-6.63%	-7.71%
7.92%	8.54%	-6.60%	-7.22%
8.40%	8.53%	-7.88%	-8.01%
7.08%	8.33%	0.27%	-0.97%
7.68%	8.18%	7.88%	7.38%
6.96%	8.08%	10.49%	9.38%
7.80%	7.70%	12.38%	12.48%
6.48%	7.37%	19.57%	18.69%
6.72%	7.48%	19.38%	18.63%
6.84%	7.63%	14.60%	13.81%
6.24%	7.39%	23.50%	22.36%
6.84%	7.20%	19.59%	19.24%
6.12%	7.10%	30.85%	29.87%
5.88%	6.91%	31.69%	30.67%
6.48%	6.90%	32.18%	31.76%
5.76%	7.08%	28.94%	27.62%
6.24%	7.44%	25.85%	24.66%
7.08%	7.59%	23.13%	22.62%
6.96%	7.70%	21.47%	20.73%
6.48%	7.79%	19.51%	18.20%
7.44%	7.74%	9.12%	8.82%
6.84%	7.55%	11.88%	11.17%
7.20%	7.74%	13.12%	12.58%
6.96%	7.49%	17.13%	16.61%
6.24%	7.21%	21.62%	20.66%
6.72%	7.31%	16.24%	15.65%
6.72%	7.53%	19.63%	18.82%
6.12%	7.43%	20.04%	18.73%
7.08%	7.66%	12.74%	12.16%
7.08%	7.83%	18.06%	17.31%
6.96%	7.69%	22.46%	21.73%
7.08%	7.52%	27.62%	27.19%
6.96%	7.25%	45.19%	44.90%
5.88%	7.31%	34.78%	33.35%
6.96%	7.24%	33.50%	33.22%
6.48%	7.10%	25.64%	25.02%
5.64%	6.97%	22.89%	21.56%
6.48%	6.88%	26.90%	26.50%
5.76%	6.72%	21.16%	20.21%
5.28%	6.78%	29.74%	28.25%
6.24%	6.82%	41.78%	41.20%
5.88%	6.80%	35.21%	34.30%
5.76%	6.80%	24.94%	23.90%
6.24%	6.66%	23.94%	23.52%
5.88%	6.67%	13.42%	12.64%
5.76%	6.65%	2.35%	1.46%
5.28%	6.54%	3.78%	2.52%
5.04%	6.54%	16.96%	15.47%

5.40%	6.60%	18.27%	17.07%
5.40%	6.44%	23.18%	22.14%
5.04%	6.46%	27.44%	26.02%
4.80%	6.60%	14.93%	13.14%
6.36%	6.80%	12.09%	11.65%
5.76%	6.80%	16.05%	15.01%
5.40%	7.08%	15.62%	13.94%
6.60%	7.38%	16.15%	15.37%
6.12%	7.34%	14.07%	12.86%
6.48%	7.54%	33.34%	32.28%
6.24%	7.54%	21.56%	20.26%
6.00%	7.67%	19.67%	18.00%
6.72%	7.49%	14.18%	13.41%
6.60%	7.67%	14.44%	13.38%
6.84%	7.87%	3.52%	2.49%
6.12%	7.75%	5.63%	4.00%
6.48%	7.76%	11.48%	10.20%
5.64%	7.73%	4.50%	2.41%
6.72%	8.12%	3.77%	2.38%
6.24%	7.77%	1.03%	-0.50%
6.24%	7.73%	2.76%	1.27%
6.00%	7.63%	10.33%	8.71%
5.52%	7.73%	7.78%	5.57%
6.36%	7.68%	-0.26%	-1.58%
5.76%	7.60%	-9.96%	-11.80%
5.40%	7.35%	-14.49%	-16.43%
5.88%	7.27%	-6.76%	-8.15%
5.04%	7.21%	-13.23%	-15.40%
5.40%	7.10%	-27.07%	-28.77%
5.64%	7.32%	-18.60%	-20.28%
6.00%	7.40%	-16.55%	-17.94%
5.64%	7.26%	-20.46%	-22.08%
6.24%	7.20%	-20.56%	-21.52%
5.52%	7.16%	-29.90%	-31.54%
4.92%	7.22%	-31.54%	-33.84%
5.76%	7.08%	-30.66%	-31.98%
4.92%	6.99%	-17.14%	-19.21%
5.52%	6.98%	-17.40%	-18.86%
5.76%	6.79%	-21.91%	-22.94%
5.16%	6.73%	-14.67%	-16.24%
5.16%	7.02%	-4.91%	-6.77%
6.48%	6.96%	-19.10%	-19.58%
5.88%	6.98%	-19.72%	-20.82%
5.28%	6.86%	-23.26%	-24.84%
6.12%	6.76%	-29.75%	-30.39%
5.28%	6.61%	-23.28%	-24.60%
5.04%	6.39%	-25.52%	-26.87%
4.80%	6.54%	-19.91%	-21.64%
4.80%	6.51%	-21.31%	-23.02%

5.40%	6.42%	-27.50%	-28.52%
4.92%	6.38%	-27.93%	-29.39%
4.56%	6.15%	-27.24%	-28.82%
4.80%	6.09%	-29.56%	-30.84%
4.80%	5.98%	-18.10%	-19.28%
4.68%	5.54%	-12.73%	-13.59%
4.32%	5.35%	-4.06%	-5.08%
4.56%	5.78%	6.10%	4.88%
5.04%	6.09%	7.04%	5.99%
5.52%	5.93%	18.89%	18.49%
4.92%	5.91%	15.90%	14.92%
4.68%	5.87%	10.43%	9.24%
5.64%	5.84%	23.05%	22.86%
5.04%	5.73%	29.54%	28.86%
4.56%	5.69%	33.97%	32.85%
5.16%	5.52%	29.97%	29.62%
4.68%	5.92%	18.20%	16.97%
4.80%	6.22%	13.53%	12.11%
5.76%	6.11%	13.34%	12.99%
5.16%	5.92%	8.01%	7.25%
5.40%	5.76%	6.05%	5.69%
4.80%	5.60%	9.06%	8.26%
4.56%	5.58%	4.85%	3.83%
4.92%	5.62%	7.93%	7.23%
5.16%	5.58%	5.71%	5.29%
4.92%	5.47%	1.29%	0.74%
4.20%	5.32%	2.76%	1.64%
4.92%	5.52%	1.75%	1.15%
4.68%	5.39%	1.64%	0.93%
4.80%	5.22%	3.42%	3.00%
4.32%	4.99%	1.98%	1.31%
4.08%	5.10%	9.95%	8.93%
4.80%	5.15%	7.75%	7.40%
4.20%	5.19%	8.04%	7.06%
4.68%	5.40%	4.03%	3.31%
4.68%	5.49%	3.75%	2.94%
4.68%	5.45%	0.21%	-0.55%
4.80%	5.37%	5.56%	4.99%
4.32%	5.43%	4.07%	2.96%
4.68%	5.60%	7.03%	6.11%
4.68%	5.92%	10.72%	9.48%
5.76%	6.04%	2.86%	2.58%
5.28%	6.00%	3.34%	2.62%
5.40%	5.97%	-0.03%	-0.59%
5.16%	5.80%	3.71%	3.08%
4.68%	5.63%	6.10%	5.15%
5.04%	5.63%	11.30%	10.71%
4.68%	5.45%	9.55%	8.78%
4.32%	5.44%	11.47%	10.36%

5.16%	5.58%	9.35%	8.93%
4.56%	5.56%	7.40%	6.41%
4.68%	5.48%	7.15%	6.35%
5.04%	5.65%	10.20%	9.59%
4.92%	5.66%	17.88%	17.14%
4.80%	3.37%	15.79%	17.21%
5.52%	5.91%	10.61%	10.22%
5.04%	5.93%	10.09%	9.21%
4.44%	5.88%	11.99%	10.55%
5.16%	5.80%	9.39%	8.75%
4.68%	5.61%	3.04%	2.11%
4.44%	5.70%	1.06%	-0.20%
4.80%	5.56%	-7.11%	-7.86%
4.08%	5.75%	-7.67%	-9.34%
4.44%	5.71%	-9.51%	-10.78%
4.20%	5.74%	-8.87%	-10.41%
4.44%	5.79%	-11.13%	-12.47%
4.80%	5.90%	-17.91%	-19.01%
4.68%	5.86%	-15.77%	-16.95%
4.32%	5.83%	-15.45%	-16.95%
4.68%	5.84%	-26.65%	-27.81%
4.44%	6.54%	-40.52%	-42.62%
4.32%	6.43%	-42.41%	-44.51%
3.96%	5.44%	-40.95%	-42.43%
2.88%	5.45%	-41.50%	-44.07%
3.60%	5.65%	-46.92%	-48.96%
4.20%	5.81%	-42.29%	-43.89%
3.48%	5.78%	-38.79%	-41.09%
3.96%	5.89%	-36.53%	-38.46%
4.56%	5.87%	-30.78%	-32.08%
4.32%	5.56%	-24.29%	-25.53%
4.32%	5.36%	-22.58%	-23.62%
4.08%	5.17%	-11.00%	-12.09%
3.96%	5.20%	5.82%	4.58%
4.20%	5.24%	21.17%	20.13%
4.08%	5.35%	22.37%	21.10%
4.32%	5.38%	28.80%	27.74%
3.96%	5.49%	49.64%	48.12%
4.80%	5.42%	44.95%	44.33%
4.56%	5.43%	34.27%	33.40%
4.08%	5.11%	16.89%	15.87%
4.44%	5.02%	9.98%	9.40%
3.72%	4.84%	10.11%	8.99%
3.84%	4.61%	1.07%	0.31%
3.12%	4.63%	7.04%	5.53%
3.24%	4.76%	13.27%	11.76%
3.84%	4.97%	6.09%	4.96%
3.84%	5.14%	11.21%	9.91%
4.20%	5.15%	17.98%	17.03%

3.84%	5.30%	18.73%	17.27%
4.32%	5.21%	11.32%	10.44%
4.08%	5.23%	13.13%	11.99%
4.32%	5.01%	21.63%	20.94%
3.84%	5.02%	26.84%	25.67%
3.84%	4.98%	15.80%	14.66%
4.08%	4.42%	14.41%	14.07%
3.12%	4.16%	-1.98%	-3.02%
2.64%	4.07%	5.45%	4.02%
2.88%	3.92%	4.96%	3.92%
2.64%	3.98%	-0.52%	-1.86%
2.52%	4.01%	1.70%	0.21%
2.40%	3.99%	2.72%	1.13%
2.64%	4.07%	5.89%	4.47%
3.00%	4.02%	1.75%	0.73%
2.76%	3.86%	-3.18%	-4.28%
2.16%	3.71%	3.28%	1.73%
2.40%	3.47%	6.72%	5.65%
2.16%	3.55%	15.83%	14.44%
2.04%	3.59%	28.14%	26.60%
2.52%	3.55%	12.66%	11.63%
2.28%	3.54%	13.83%	12.57%
2.28%	3.68%	13.70%	12.31%
2.64%	3.84%	14.12%	12.92%
2.64%	3.93%	10.81%	9.52%
2.52%	3.84%	11.43%	10.12%
3.12%	3.75%	13.77%	13.14%
2.76%	3.92%	24.51%	23.36%
2.88%	4.30%	17.72%	16.30%
3.60%	4.40%	21.40%	20.60%
3.36%	4.59%	15.34%	14.12%
3.48%	4.67%	15.87%	14.68%
3.48%	4.56%	23.71%	22.63%
3.24%	4.65%	27.08%	25.67%
3.72%	4.65%	28.69%	27.76%
3.84%	4.51%	17.69%	17.02%
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3.36%	4.18%	17.09%	16.27%
3.00%	4.26%	21.62%	20.36%
3.24%	4.18%	13.70%	12.76%
3.12%	4.09%	22.13%	21.16%
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2.76%	3.98%	14.10%	12.88%
2.64%	3.84%	11.05%	9.85%
2.40%	3.50%	11.83%	10.73%
1.80%	3.63%	13.72%	11.90%

2.52%	3.67%	10.23%	9.08%
2.28%	3.58%	10.71%	9.41%
2.40%	4.03%	9.42%	7.79%
2.76%	4.23%	4.67%	3.20%
2.88%	4.20%	8.34%	7.02%
2.64%	4.09%	-2.14%	-3.59%
2.52%	4.14%	-3.12%	-4.74%
2.52%	4.03%	2.71%	1.20%
2.64%	4.14%	0.14%	-1.36%
2.64%	4.07%	-1.23%	-2.66%
2.52%	4.06%	-3.16%	-4.70%
2.40%	3.97%	-8.57%	-10.14%
2.16%	3.87%	-0.36%	-2.06%
2.04%	3.87%	-0.81%	-2.64%
2.40%	3.68%	-0.66%	-1.94%
2.16%	3.55%	1.86%	0.47%
1.68%	3.34%	3.96%	2.31%
1.92%	3.37%	10.66%	9.21%
1.80%	3.46%	13.65%	12.00%
1.92%	3.46%	2.61%	1.07%
2.16%	3.90%	5.91%	4.18%
2.64%	4.09%	9.34%	7.89%
2.88%	3.95%	17.18%	16.11%
2.52%	3.98%	22.47%	21.01%
2.76%	3.98%	14.44%	13.22%
2.52%	3.90%	15.42%	14.04%
2.88%	3.89%	14.61%	13.60%
2.52%	3.73%	15.39%	14.19%
2.64%	3.83%	13.42%	12.24%
2.64%	3.75%	13.62%	12.51%
2.28%	3.68%	16.35%	14.95%
2.64%	3.67%	21.00%	19.97%
2.52%	3.67%	20.37%	19.22%
2.40%	3.56%	19.44%	18.28%
2.88%	3.56%	23.54%	22.86%
2.64%	3.62%	14.47%	13.49%
2.88%	3.93%	11.12%	10.07%
3.00%	3.93%	10.26%	9.33%
3.00%	4.06%	11.38%	10.33%
2.76%	4.04%	11.62%	10.35%
3.00%	3.97%	13.24%	12.27%
3.00%	3.97%	16.66%	15.70%
2.64%	3.97%	15.27%	13.95%
3.60%	4.21%	3.75%	3.14%
3.36%	4.32%	2.91%	1.95%
3.24%	4.30%	-7.62%	-8.68%
3.00%	4.04%	-5.32%	-6.36%
2.64%	3.89%	2.04%	0.79%
2.76%	3.89%	6.73%	5.60%

2.76%	3.77%	10.73%	9.72%
2.76%	3.74%	1.02%	0.05%
2.16%	3.74%	8.26%	6.68%
2.52%	3.38%	5.47%	4.61%
2.28%	3.38%	0.65%	-0.45%
1.80%	3.03%	2.46%	1.23%
1.92%	3.08%	12.42%	11.26%
1.92%	3.12%	14.20%	13.00%
2.16%	3.06%	29.34%	28.44%
2.40%	2.98%	19.30%	18.73%
1.80%	2.82%	6.41%	5.40%
1.56%	3.05%	-8.52%	-10.01%
1.08%	2.59%	-0.19%	-1.70%
1.08%	2.61%	11.77%	10.25%
1.08%	2.52%	6.44%	5.00%
1.20%	2.23%	10.77%	9.74%
0.96%	2.31%	20.99%	19.64%
0.00%	2.39%	15.16%	12.77%
1.08%	2.45%	8.64%	7.27%
1.32%	2.39%	16.15%	15.08%
1.32%	2.35%	17.08%	16.05%
1.32%	2.53%	15.93%	14.72%
1.44%	2.77%	29.85%	28.53%
2.16%	3.11%	54.20%	53.25%
2.28%	2.97%	43.71%	43.02%
2.16%	3.02%	38.17%	37.32%
2.04%	2.85%	38.76%	37.95%
1.92%	2.64%	34.53%	33.81%
1.80%	2.64%	29.37%	28.53%
1.68%	2.63%	28.33%	27.38%
1.80%	2.77%	41.13%	40.16%
2.04%	2.70%	25.89%	25.24%
1.80%	2.71%	26.92%	26.02%
2.04%	2.98%	21.27%	20.34%
2.04%	3.31%	14.37%	13.11%
2.40%	3.53%	13.26%	12.14%
2.52%	3.84%	-2.29%	-3.61%
3.36%	4.25%	-3.65%	-4.54%
3.36%	4.37%	-13.96%	-14.96%
3.24%	4.22%	-7.87%	-8.84%
3.48%	4.22%	-14.70%	-15.43%
3.48%	4.72%	-18.94%	-20.18%
4.20%	5.25%	-18.80%	-19.85%
4.32%	5.07%	-13.52%	-14.27%
3.96%	4.58%	-22.06%	-22.68%
3.66%	4.56%	-11.87%	-12.77%
3.80%	4.70%	-11.49%	-12.39%
3.77%	4.77%	-11.49%	-12.49%
3.68%	4.65%	-1.86%	-2.83%

3.86%	4.87%	-1.78%	-2.79%
3.87%	4.84%	14.74%	13.77%
3.96%	4.87%	8.12%	7.22%
4.28%	5.17%	10.71%	9.83%
4.47%	5.32%	16.15%	15.30%
4.95%	5.79%	3.57%	2.73%
4.66%	5.48%	7.05%	6.23%
4.14%	4.90%	19.78%	19.02%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.1368538
R Square	0.018729
Adjusted R S	0.0178852
Standard Er	0.209317
Observatior	1165

ANOVA

	df
Regression	1
Residual	1163
Total	1164

	Coefficients
Intercept	0.1264036
X Variable 1	-1.067061

S&P U Annulized Yield	A Annualized Yield	SPA RP
57.48%	5.05%	52.43%
71.90%	5.05%	66.85%
69.27%	5.10%	64.17%
56.12%	5.14%	50.98%
47.04%	5.14%	41.90%
50.81%	5.14%	45.67%
91.33%	5.23%	86.10%

110.24%	5.24%	105.00%
117.15%	5.30%	111.85%
111.18%	5.38%	105.80%
48.73%	5.34%	43.39%
5.00%	5.29%	-0.29%
11.03%	5.23%	5.80%
5.30%	5.26%	0.04%
17.34%	5.29%	12.05%
29.22%	5.18%	24.04%
29.14%	5.15%	23.99%
20.43%	5.04%	15.39%
-19.93%	5.01%	-24.94%
-25.28%	4.99%	-30.27%
-31.76%	4.95%	-36.71%
-39.34%	4.86%	-44.20%
-20.19%	4.88%	-25.07%
-13.73%	4.96%	-18.69%
-21.96%	5.11%	-27.07%
-23.41%	5.01%	-28.42%
-18.92%	5.01%	-23.93%
-27.33%	4.98%	-32.31%
-37.13%	4.86%	-41.99%
-42.24%	4.84%	-47.08%
-18.87%	4.87%	-23.74%
-25.23%	4.83%	-30.06%
-23.90%	4.81%	-28.71%
-41.36%	5.05%	-46.41%
-29.82%	5.54%	-35.36%
-28.94%	5.51%	-34.45%
-35.88%	6.24%	-42.12%
-40.38%	6.17%	-46.55%
-44.14%	6.41%	-50.55%
-48.82%	6.06%	-54.88%
-51.57%	6.83%	-58.40%
-61.17%	7.36%	-68.53%
-65.55%	7.57%	-73.12%
-51.07%	7.28%	-58.35%
-33.07%	6.35%	-39.42%
-4.94%	5.91%	-10.85%
-22.56%	5.81%	-28.37%
-20.42%	5.88%	-26.30%
-0.55%	5.85%	-6.40%
-1.68%	5.39%	-7.07%
-27.02%	5.77%	-32.79%
-27.19%	6.34%	-33.53%
8.67%	6.89%	1.78%
77.22%	6.50%	70.72%
100.69%	6.11%	94.58%

32.54%	5.91%	26.63%
-6.06%	5.98%	-12.04%
-20.43%	6.36%	-26.79%
-17.46%	6.36%	-23.82%
-15.97%	7.06%	-23.03%
-21.88%	7.22%	-29.10%
-5.30%	6.56%	-11.86%
15.28%	5.78%	9.50%
27.80%	5.66%	22.14%
-2.40%	5.44%	-7.84%
-23.17%	5.39%	-28.56%
-29.55%	5.40%	-34.95%
-32.74%	5.29%	-38.03%
-30.54%	5.43%	-35.97%
-14.92%	5.56%	-20.48%
-14.50%	5.40%	-19.90%
-13.35%	5.38%	-18.73%
-20.43%	5.36%	-25.79%
-33.82%	5.18%	-39.00%
-39.88%	4.96%	-44.84%
-32.87%	4.88%	-37.75%
-22.23%	4.79%	-27.02%
-6.47%	4.61%	-11.08%
-1.49%	4.53%	-6.02%
27.52%	4.42%	23.10%
31.17%	4.44%	26.73%
28.35%	4.43%	23.92%
54.34%	4.40%	49.94%
56.76%	4.35%	52.41%
76.65%	4.29%	72.36%
100.77%	4.21%	96.56%
118.76%	4.17%	114.59%
98.75%	4.17%	94.58%
63.33%	4.17%	59.16%
58.26%	4.14%	54.12%
48.42%	4.12%	44.30%
50.32%	4.07%	46.25%
42.05%	4.06%	37.99%
40.57%	4.05%	36.52%
32.33%	4.04%	28.29%
28.70%	3.95%	24.75%
20.68%	3.83%	16.85%
10.81%	3.82%	6.99%
10.69%	3.89%	6.80%
4.00%	4.00%	0.00%
4.88%	4.07%	0.81%
-7.56%	4.00%	-11.56%
-14.86%	3.99%	-18.85%
-9.74%	3.94%	-13.68%

-17.74%	3.89%	-21.63%
-25.73%	3.96%	-29.69%
-33.33%	4.09%	-37.42%
-31.64%	4.08%	-35.72%
-37.05%	4.03%	-41.08%
-40.53%	4.01%	-44.54%
-36.25%	4.03%	-40.28%
-45.79%	3.99%	-49.78%
-32.48%	4.08%	-36.56%
-27.52%	3.95%	-31.47%
-11.64%	3.95%	-15.59%
-23.17%	3.86%	-27.03%
-20.25%	3.84%	-24.09%
-7.91%	3.88%	-11.79%
14.58%	3.79%	10.79%
6.63%	3.73%	2.90%
22.44%	3.74%	18.70%
29.22%	3.68%	25.54%
34.96%	3.59%	31.37%
45.17%	3.54%	41.63%
29.40%	3.55%	25.85%
35.55%	3.50%	32.05%
11.70%	3.47%	8.23%
23.37%	3.43%	19.94%
22.19%	3.41%	18.78%
24.95%	3.71%	21.24%
7.26%	3.58%	3.68%
12.55%	3.41%	9.14%
11.26%	3.38%	7.88%
10.21%	3.34%	6.87%
1.00%	3.35%	-2.35%
18.24%	3.34%	14.90%
13.91%	3.25%	10.66%
-14.17%	3.30%	-17.47%
3.12%	3.34%	-0.22%
-7.40%	3.23%	-10.63%
-1.92%	3.21%	-5.13%
-7.87%	3.18%	-11.05%
-6.17%	3.15%	-9.32%
-16.18%	3.11%	-19.29%
-17.14%	3.10%	-20.24%
-18.40%	3.15%	-21.55%
-19.48%	3.20%	-22.68%
-22.47%	3.16%	-25.63%
-28.35%	3.14%	-31.49%
-13.84%	3.08%	-16.92%
-23.20%	3.03%	-26.23%
-19.59%	3.00%	-22.59%
-20.38%	2.98%	-23.36%

-20.96%	3.00%	-23.96%
-29.89%	3.00%	-32.89%
-25.46%	2.98%	-28.44%
-31.57%	3.06%	-34.63%
-29.25%	3.09%	-32.34%
-30.02%	3.09%	-33.11%
-35.53%	3.12%	-38.65%
-32.63%	3.09%	-35.72%
-23.62%	3.10%	-26.72%
-25.11%	3.12%	-28.23%
-28.65%	3.10%	-31.75%
-27.06%	3.10%	-30.16%
-21.44%	3.08%	-24.52%
-2.48%	3.08%	-5.56%
4.17%	3.07%	1.10%
15.41%	3.06%	12.35%
26.28%	3.05%	23.23%
40.10%	3.02%	37.08%
62.92%	3.01%	59.91%
76.86%	3.00%	73.86%
67.03%	3.00%	64.03%
75.02%	2.98%	72.04%
74.99%	2.96%	72.03%
76.36%	2.96%	73.40%
73.95%	2.96%	70.99%
54.36%	2.97%	51.39%
42.61%	2.98%	39.63%
46.06%	2.99%	43.07%
31.59%	2.99%	28.60%
24.96%	2.99%	21.97%
21.27%	2.97%	18.30%
15.69%	2.99%	12.70%
15.17%	2.99%	12.18%
15.04%	2.99%	12.05%
14.94%	2.96%	11.98%
17.81%	2.94%	14.87%
12.41%	2.93%	9.48%
13.04%	2.94%	10.10%
20.95%	2.96%	17.99%
18.04%	2.97%	15.07%
22.61%	2.99%	19.62%
28.82%	2.98%	25.84%
22.95%	2.97%	19.98%
37.30%	2.95%	34.35%
35.57%	2.92%	32.65%
37.32%	2.87%	34.45%
36.23%	2.83%	33.40%
31.94%	2.80%	29.14%
43.85%	2.79%	41.06%

50.97%	2.79%	48.18%
60.16%	2.77%	57.39%
53.32%	2.75%	50.57%
63.57%	2.69%	60.88%
43.16%	2.67%	40.49%
57.82%	2.66%	55.16%
47.44%	2.65%	44.79%
49.32%	2.69%	46.63%
36.19%	2.70%	33.49%
31.48%	2.69%	28.79%
21.58%	2.71%	18.87%
1.32%	2.75%	-1.43%
-2.69%	2.76%	-5.45%
-6.53%	2.76%	-9.29%
1.25%	2.76%	-1.51%
-9.60%	2.72%	-12.32%
-4.28%	2.72%	-7.00%
-13.24%	2.72%	-15.96%
-18.76%	2.70%	-21.46%
-23.34%	2.70%	-26.04%
-17.79%	2.71%	-20.50%
-12.58%	2.73%	-15.31%
-5.96%	2.73%	-8.69%
3.59%	2.80%	0.79%
0.02%	2.88%	-2.86%
-8.76%	2.93%	-11.69%
-13.16%	3.05%	-16.21%
-12.54%	3.05%	-15.59%
-15.03%	3.05%	-18.08%
-6.38%	3.02%	-9.40%
-1.74%	2.97%	-4.71%
6.97%	2.94%	4.03%
4.76%	2.94%	1.82%
-1.98%	2.99%	-4.97%
-1.41%	3.03%	-4.44%
-0.70%	3.05%	-3.75%
4.69%	3.03%	1.66%
3.68%	3.07%	0.61%
4.00%	3.06%	0.94%
8.48%	2.99%	5.49%
12.73%	2.99%	9.74%
10.05%	2.97%	7.08%
8.94%	2.96%	5.98%
3.29%	2.95%	0.34%
-0.21%	2.94%	-3.15%
10.36%	2.90%	7.46%
13.77%	2.86%	10.91%
18.85%	2.85%	16.00%
15.53%	2.83%	12.70%

29.16%	2.81%	26.35%
31.37%	2.78%	28.59%
29.48%	2.76%	26.72%
30.71%	2.76%	27.95%
27.18%	2.76%	24.42%
28.78%	2.77%	26.01%
30.81%	2.79%	28.02%
22.37%	2.79%	19.58%
10.73%	2.79%	7.94%
8.68%	2.76%	5.92%
9.15%	2.80%	6.35%
7.65%	2.83%	4.82%
4.10%	2.86%	1.24%
3.26%	2.86%	0.40%
4.10%	2.83%	1.27%
5.83%	2.84%	2.99%
3.13%	2.95%	0.18%
1.30%	3.09%	-1.79%
0.05%	3.13%	-3.08%
7.98%	3.21%	4.77%
17.86%	3.26%	14.60%
17.83%	3.19%	14.64%
14.08%	3.14%	10.94%
14.72%	3.17%	11.55%
18.17%	3.24%	14.93%
18.63%	3.29%	15.34%
17.12%	3.29%	13.83%
14.74%	3.23%	11.51%
18.82%	3.25%	15.57%
16.94%	3.23%	13.71%
18.38%	3.22%	15.16%
19.43%	3.22%	16.21%
16.77%	3.22%	13.55%
17.35%	3.24%	14.11%
16.53%	3.24%	13.29%
17.37%	3.26%	14.11%
20.88%	3.24%	17.64%
19.26%	3.22%	16.04%
16.92%	3.25%	13.67%
15.45%	3.30%	12.15%
12.97%	3.36%	9.61%
12.53%	3.47%	9.06%
10.70%	3.63%	7.07%
7.15%	3.71%	3.44%
8.61%	3.66%	4.95%
6.62%	3.61%	3.01%
7.73%	3.62%	4.11%
11.04%	3.49%	7.55%
9.45%	3.40%	6.05%

7.85%	3.38%	4.47%
10.24%	3.32%	6.92%
12.28%	3.23%	9.05%
15.81%	3.16%	12.65%
19.51%	3.16%	16.35%
22.29%	3.14%	19.15%
26.93%	3.16%	23.77%
28.77%	3.14%	25.63%
26.88%	3.13%	23.75%
27.62%	3.12%	24.50%
18.07%	3.12%	14.95%
21.41%	3.11%	18.30%
24.75%	3.11%	21.64%
22.53%	3.13%	19.40%
25.28%	3.14%	22.14%
20.65%	3.15%	17.50%
21.61%	3.15%	18.46%
17.88%	3.19%	14.69%
19.22%	3.21%	16.01%
18.89%	3.21%	15.68%
21.09%	3.24%	17.85%
15.53%	3.27%	12.26%
18.92%	3.30%	15.62%
15.85%	3.32%	12.53%
11.28%	3.35%	7.93%
10.04%	3.31%	6.73%
8.27%	3.29%	4.98%
13.79%	3.29%	10.50%
8.33%	3.40%	4.93%
7.46%	3.48%	3.98%
7.46%	3.49%	3.97%
8.07%	3.55%	4.52%
4.73%	3.63%	1.10%
4.41%	3.72%	0.69%
5.97%	3.79%	2.18%
3.25%	3.82%	-0.57%
5.03%	3.91%	1.12%
8.11%	3.96%	4.15%
5.57%	4.05%	1.52%
2.36%	4.05%	-1.69%
9.62%	4.01%	5.61%
13.16%	4.01%	9.15%
6.19%	4.09%	2.10%
1.24%	4.20%	-2.96%
0.88%	4.37%	-3.49%
2.76%	4.55%	-1.79%
1.37%	4.61%	-3.24%
5.41%	4.62%	0.79%
6.36%	4.36%	2.00%

9.22%	3.93%	5.29%
11.40%	3.96%	7.44%
12.75%	4.13%	8.62%
13.98%	3.95%	10.03%
13.80%	4.01%	9.79%
20.81%	3.99%	16.82%
21.70%	4.04%	17.66%
24.55%	4.29%	20.26%
30.48%	4.55%	25.93%
36.79%	4.56%	32.23%
34.63%	4.47%	30.16%
40.70%	4.49%	36.21%
34.49%	4.52%	29.97%
35.41%	4.50%	30.91%
34.11%	4.47%	29.64%
27.17%	4.56%	22.61%
23.62%	4.77%	18.85%
20.46%	4.86%	15.60%
23.58%	4.88%	18.70%
26.59%	4.89%	21.70%
17.71%	5.03%	12.68%
14.89%	4.96%	9.93%
11.96%	4.90%	7.06%
7.49%	4.96%	2.53%
4.92%	5.02%	-0.10%
4.67%	5.00%	-0.33%
5.07%	4.91%	0.16%
6.16%	4.79%	1.37%
9.95%	4.86%	5.09%
15.45%	4.84%	10.61%
10.21%	4.79%	5.42%
13.75%	4.64%	9.11%
12.32%	4.57%	7.75%
10.45%	4.61%	5.84%
14.70%	4.62%	10.08%
20.24%	4.65%	15.59%
29.08%	4.64%	24.44%
31.31%	4.59%	26.72%
33.61%	4.48%	29.13%
34.06%	4.48%	29.58%
32.75%	4.52%	28.23%
24.65%	4.57%	20.08%
31.25%	4.65%	26.60%
30.65%	4.73%	25.92%
36.81%	4.73%	32.08%
43.55%	4.71%	38.84%
42.84%	4.68%	38.16%
29.31%	4.65%	24.66%
17.31%	4.65%	12.66%

16.67%	4.66%	12.01%
13.98%	4.64%	9.34%
8.77%	4.59%	4.18%
-2.45%	4.51%	-6.96%
-5.65%	4.48%	-10.13%
-3.25%	4.50%	-7.75%
-4.95%	4.53%	-9.48%
-7.50%	4.51%	-12.01%
-11.86%	4.49%	-16.35%
-8.17%	4.45%	-12.62%
-2.46%	4.44%	-6.90%
6.90%	4.39%	2.51%
1.65%	4.37%	-2.72%
2.71%	4.37%	-1.66%
8.93%	4.37%	4.56%
20.70%	4.37%	16.33%
26.13%	4.37%	21.76%
19.45%	4.39%	15.06%
21.24%	4.38%	16.86%
22.20%	4.40%	17.80%
21.97%	4.41%	17.56%
12.34%	4.42%	7.92%
12.39%	4.46%	7.93%
7.80%	4.49%	3.31%
10.42%	4.50%	5.92%
8.03%	4.51%	3.52%
6.29%	4.52%	1.77%
5.88%	4.53%	1.35%
9.71%	4.55%	5.16%
13.48%	4.54%	8.94%
9.19%	4.54%	4.65%
13.99%	4.53%	9.46%
16.26%	4.51%	11.75%
18.55%	4.53%	14.02%
15.90%	4.54%	11.36%
18.69%	4.53%	14.16%
18.42%	4.51%	13.91%
18.92%	4.50%	14.42%
19.42%	4.49%	14.93%
18.03%	4.50%	13.53%
11.41%	4.52%	6.89%
7.52%	4.54%	2.98%
8.23%	4.58%	3.65%
8.48%	4.63%	3.85%
8.10%	4.66%	3.44%
5.64%	4.71%	0.93%
4.66%	4.83%	-0.17%
-2.09%	4.86%	-6.95%
-6.22%	4.92%	-11.14%

-6.71%	5.14%	-11.85%
-6.13%	5.25%	-11.38%
-8.14%	5.25%	-13.39%
-6.62%	5.40%	-12.02%
-7.51%	5.45%	-12.96%
-16.41%	5.58%	-21.99%
-14.11%	5.81%	-19.92%
-6.98%	5.74%	-12.72%
-6.60%	5.63%	-12.23%
-4.46%	5.67%	-10.13%
1.13%	5.46%	-4.33%
3.84%	5.28%	-1.44%
6.37%	5.44%	0.93%
6.68%	5.42%	1.26%
4.37%	5.66%	-1.29%
4.90%	5.84%	-0.94%
6.95%	5.94%	1.01%
16.44%	5.96%	10.48%
10.75%	6.05%	4.70%
-4.82%	6.18%	-11.00%
-1.28%	6.48%	-7.76%
-0.65%	6.67%	-7.32%
-2.48%	6.54%	-9.02%
-3.23%	6.37%	-9.60%
-8.89%	6.41%	-15.30%
-8.24%	6.58%	-14.82%
-3.95%	6.62%	-10.57%
5.18%	6.62%	-1.44%
2.36%	6.53%	-4.17%
3.07%	6.27%	-3.20%
4.49%	6.27%	-1.78%
11.78%	6.40%	5.38%
17.08%	6.59%	10.49%
10.31%	6.87%	3.44%
11.26%	7.04%	4.22%
7.85%	7.13%	0.72%
11.26%	7.27%	3.99%
9.78%	7.30%	2.48%
10.40%	7.16%	3.24%
-3.11%	7.41%	-10.52%
-5.97%	7.52%	-13.49%
-7.08%	7.44%	-14.52%
-11.42%	7.63%	-19.05%
-5.17%	8.02%	-13.19%
-17.21%	8.00%	-25.21%
-15.40%	8.59%	-23.99%
-20.58%	8.69%	-29.27%
-7.28%	8.51%	-15.79%
-4.21%	8.31%	-12.52%

-14.30%	8.31%	-22.61%
-18.66%	8.67%	-27.33%
-19.23%	9.04%	-28.27%
-8.03%	9.06%	-17.09%
-1.57%	8.88%	-10.45%
1.07%	8.82%	-7.75%
-7.79%	8.76%	-16.55%
7.52%	8.79%	-1.27%
16.55%	8.48%	8.07%
25.22%	8.15%	17.07%
10.15%	7.89%	2.26%
11.22%	8.05%	3.17%
18.33%	8.07%	10.26%
20.37%	8.34%	12.03%
32.90%	8.45%	24.45%
18.39%	8.45%	9.94%
9.13%	8.40%	0.73%
8.77%	8.18%	0.59%
12.30%	8.10%	4.20%
1.76%	7.96%	-6.20%
2.43%	7.90%	-5.47%
-0.88%	7.79%	-8.67%
-0.50%	7.78%	-8.28%
-4.03%	7.77%	-11.80%
-3.32%	7.82%	-11.14%
0.03%	7.84%	-7.81%
-5.82%	7.77%	-13.59%
-3.79%	7.82%	-11.61%
4.31%	7.64%	-3.33%
6.14%	7.61%	-1.47%
11.16%	7.66%	3.50%
18.92%	7.60%	11.32%
8.14%	7.48%	0.66%
4.16%	7.52%	-3.36%
4.22%	7.62%	-3.40%
3.19%	7.66%	-4.47%
5.61%	7.63%	-2.02%
6.50%	7.63%	-1.13%
6.96%	7.71%	-0.75%
4.98%	7.82%	-2.84%
-3.54%	8.04%	-11.58%
3.62%	8.04%	-4.42%
-6.49%	8.02%	-14.51%
-22.40%	8.15%	-30.55%
-18.07%	8.24%	-26.31%
-10.73%	8.36%	-19.09%
-8.04%	8.42%	-16.46%
-10.41%	8.46%	-18.87%
-21.63%	8.77%	-30.40%

-25.92%	9.00%	-34.92%
-28.96%	9.32%	-38.28%
-28.16%	9.66%	-37.82%
-32.50%	10.03%	-42.53%
-37.87%	10.45%	-48.32%
-27.61%	10.78%	-38.39%
-18.98%	10.46%	-29.44%
-21.56%	10.27%	-31.83%
-10.43%	10.37%	-20.80%
-9.69%	9.99%	-19.68%
-8.06%	9.72%	-17.78%
4.15%	10.06%	-5.91%
18.92%	10.23%	8.69%
39.56%	10.10%	29.46%
33.64%	10.01%	23.63%
43.28%	10.12%	33.16%
43.82%	10.19%	33.63%
37.51%	10.16%	27.35%
44.04%	10.04%	34.00%
44.51%	10.11%	34.40%
32.33%	9.90%	22.43%
25.82%	9.71%	16.11%
29.88%	9.67%	20.21%
32.21%	9.53%	22.68%
19.99%	9.55%	10.44%
12.07%	9.54%	2.53%
22.12%	9.37%	12.75%
29.54%	9.13%	20.41%
35.14%	8.90%	26.24%
25.94%	8.79%	17.15%
24.94%	8.76%	16.18%
31.81%	8.62%	23.19%
21.42%	8.61%	12.81%
21.22%	8.65%	12.57%
21.24%	8.70%	12.54%
23.32%	8.71%	14.61%
27.70%	8.71%	18.99%
30.09%	8.58%	21.51%
27.87%	8.51%	19.36%
18.80%	8.49%	10.31%
17.27%	8.46%	8.81%
14.04%	8.61%	5.43%
15.29%	8.64%	6.65%
8.66%	8.64%	0.02%
2.50%	8.92%	-6.42%
5.81%	8.97%	-3.16%
7.97%	8.98%	-1.01%
6.88%	9.09%	-2.21%
5.13%	9.22%	-4.09%

0.18%	9.40%	-9.22%
1.68%	9.51%	-7.83%
5.37%	9.32%	-3.95%
2.26%	9.28%	-7.02%
-1.83%	9.46%	-11.29%
-2.07%	9.68%	-11.75%
-3.71%	9.70%	-13.41%
8.75%	9.90%	-1.15%
7.11%	9.84%	-2.73%
5.93%	10.04%	-4.11%
2.21%	10.10%	-7.89%
3.30%	10.30%	-7.00%
6.90%	10.14%	-3.24%
7.17%	9.98%	-2.81%
8.30%	10.14%	-1.84%
6.98%	10.36%	-3.38%
9.04%	11.40%	-2.36%
11.68%	11.89%	-0.21%
13.62%	12.15%	1.47%
6.02%	12.21%	-6.19%
5.64%	13.23%	-7.59%
-1.87%	14.59%	-16.46%
12.57%	14.29%	-1.72%
14.49%	12.74%	1.75%
13.95%	12.40%	1.55%
9.73%	12.15%	-2.42%
7.11%	12.66%	-5.55%
7.80%	13.29%	-5.50%
16.64%	13.54%	3.11%
15.48%	14.01%	1.46%
15.06%	14.66%	0.40%
13.18%	14.27%	-1.09%
13.45%	14.68%	-1.23%
24.82%	15.13%	9.69%
10.51%	15.25%	-4.74%
10.17%	16.12%	-5.95%
9.48%	15.79%	-6.32%
13.67%	16.07%	-2.40%
15.00%	16.45%	-1.45%
11.57%	17.03%	-5.46%
15.29%	17.26%	-1.96%
15.07%	16.42%	-1.34%
11.72%	16.16%	-4.44%
14.26%	16.80%	-2.54%
16.47%	16.92%	-0.45%
13.65%	16.49%	-2.84%
21.04%	16.40%	4.64%
15.42%	16.08%	-0.66%
10.55%	16.34%	-5.79%

4.79%	16.46%	-11.67%
17.76%	15.92%	1.84%
23.43%	15.45%	7.98%
23.91%	14.98%	8.93%
18.43%	14.46%	3.97%
26.55%	14.43%	12.13%
30.77%	14.24%	16.53%
31.17%	14.28%	16.89%
29.22%	14.03%	15.19%
29.50%	13.64%	15.86%
33.61%	13.49%	20.12%
34.12%	13.65%	20.48%
41.47%	13.57%	27.90%
26.69%	13.57%	13.13%
31.65%	13.44%	18.21%
30.08%	13.25%	16.83%
27.21%	13.38%	13.83%
20.01%	13.52%	6.50%
21.29%	13.40%	7.89%
16.36%	13.40%	2.96%
15.52%	13.77%	1.75%
11.02%	14.13%	-3.11%
7.14%	14.88%	-7.74%
9.22%	15.10%	-5.88%
10.21%	14.86%	-4.65%
16.87%	14.43%	2.44%
16.79%	14.19%	2.60%
13.91%	13.83%	0.08%
19.42%	13.25%	6.17%
26.04%	13.07%	12.97%
23.07%	12.99%	10.08%
30.82%	13.03%	17.79%
36.31%	13.80%	22.50%
36.95%	13.59%	23.36%
48.67%	13.17%	35.49%
51.77%	12.14%	39.63%
39.26%	12.06%	27.19%
33.18%	12.14%	21.04%
20.94%	12.13%	8.81%
25.25%	12.01%	13.24%
28.32%	11.51%	16.81%
33.03%	11.01%	22.02%
33.78%	10.80%	22.98%
39.42%	10.32%	29.11%
41.47%	9.51%	31.95%
33.98%	9.13%	24.85%
32.96%	9.57%	23.39%
37.07%	9.65%	27.42%
47.24%	9.35%	37.89%

57.41%	9.31%	48.10%
47.18%	9.50%	37.67%
45.34%	9.53%	35.81%
41.04%	9.29%	31.75%
28.54%	9.12%	19.42%
37.17%	8.94%	28.22%
25.24%	9.00%	16.23%
16.86%	8.93%	7.93%
15.88%	9.35%	6.53%
9.40%	9.87%	-0.47%
7.77%	10.02%	-2.25%
4.54%	10.14%	-5.60%
1.11%	10.44%	-9.33%
14.32%	11.18%	3.15%
1.15%	11.36%	-10.21%
-6.43%	10.82%	-17.26%
-2.96%	10.94%	-13.90%
-1.47%	10.80%	-12.26%
-0.19%	10.12%	-10.30%
-3.62%	10.07%	-13.70%
0.73%	10.52%	-9.79%
6.04%	10.79%	-4.75%
4.78%	10.81%	-6.02%
5.22%	11.02%	-5.80%
-1.41%	11.17%	-12.58%
2.44%	10.67%	-8.22%
13.10%	9.98%	3.12%
18.80%	9.89%	8.91%
18.27%	10.05%	8.22%
12.10%	10.08%	2.01%
11.64%	10.06%	1.58%
21.02%	10.24%	10.78%
28.45%	10.19%	18.26%
29.93%	10.00%	19.92%
27.99%	9.66%	18.33%
38.04%	9.50%	28.54%
39.16%	9.51%	29.65%
35.91%	9.58%	26.33%
33.04%	9.54%	23.50%
38.60%	9.52%	29.09%
47.81%	9.43%	38.37%
28.51%	9.55%	18.96%
29.90%	9.76%	20.15%
28.86%	9.85%	19.02%
16.52%	9.91%	6.61%
17.64%	10.01%	7.63%
13.33%	9.81%	3.52%
4.56%	9.76%	-5.19%
-3.17%	9.90%	-13.06%

-0.87%	10.12%	-10.99%
5.13%	10.06%	-4.93%
3.67%	9.91%	-6.24%
-2.56%	9.73%	-12.29%
2.83%	9.71%	-6.88%
7.59%	9.48%	-1.89%
7.71%	9.55%	-1.85%
10.20%	9.46%	0.74%
1.83%	9.43%	-7.61%
2.58%	9.58%	-7.01%
6.06%	9.55%	-3.48%
18.16%	9.31%	8.85%
15.79%	9.17%	6.62%
10.86%	9.12%	1.74%
7.70%	9.05%	-1.36%
14.61%	8.90%	5.71%
11.83%	8.83%	3.00%
5.11%	8.93%	-3.82%
1.59%	8.97%	-7.37%
9.93%	8.93%	1.00%
11.21%	8.88%	2.33%
14.37%	8.79%	5.58%
19.73%	8.58%	11.15%
15.85%	8.44%	7.41%
14.39%	8.41%	5.98%
11.09%	8.53%	2.56%
12.02%	8.63%	3.39%
8.11%	8.45%	-0.34%
16.02%	8.28%	7.74%
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18.85%	7.54%	11.31%
25.54%	7.27%	18.27%
24.38%	7.04%	17.34%
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19.12%	7.28%	11.84%
14.39%	7.34%	7.06%
13.44%	7.33%	6.10%
-0.19%	7.45%	-7.64%
-5.27%	7.83%	-13.10%
-2.68%	8.22%	-10.90%
-3.44%	8.33%	-11.77%
-7.52%	8.31%	-15.83%
-6.53%	8.48%	-15.00%
-11.09%	8.41%	-19.50%
-13.18%	8.62%	-21.80%

-12.24%	8.85%	-21.10%
-8.91%	8.98%	-17.89%
-7.95%	8.77%	-16.71%
-1.48%	8.75%	-10.23%
4.28%	8.53%	-4.25%
7.28%	8.37%	-1.09%
8.53%	8.28%	0.25%
15.04%	7.93%	7.11%
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26.63%	7.72%	18.91%
23.52%	7.88%	15.63%
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23.82%	8.06%	15.76%
13.16%	8.03%	5.13%
13.28%	7.84%	5.44%
7.50%	8.02%	-0.52%
10.33%	7.78%	2.56%
11.15%	7.50%	3.65%
3.18%	7.57%	-4.39%
2.54%	7.77%	-5.23%
5.74%	7.64%	-1.90%
4.68%	7.87%	-3.18%
1.99%	8.04%	-6.05%
6.57%	7.89%	-1.32%
5.53%	7.72%	-2.20%
15.19%	7.49%	7.70%
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14.43%	7.47%	6.95%
9.96%	7.36%	2.61%
15.30%	7.25%	8.06%
24.72%	7.16%	17.56%
19.01%	7.05%	11.96%
24.25%	7.12%	17.13%
36.33%	7.16%	29.17%
35.74%	7.16%	28.57%
29.58%	7.16%	22.41%
30.27%	7.04%	23.23%
21.06%	7.02%	14.04%
25.30%	7.00%	18.30%
30.13%	6.94%	23.19%
26.73%	6.96%	19.77%

19.95%	7.04%	12.91%
14.85%	6.91%	7.94%
14.18%	6.97%	7.21%
6.39%	7.08%	-0.68%
-1.50%	7.26%	-8.76%
9.31%	7.21%	2.10%
16.55%	7.46%	9.10%
8.67%	7.73%	0.94%
13.01%	7.70%	5.30%
12.52%	7.91%	4.61%
-1.14%	7.93%	-9.07%
2.11%	8.06%	-5.96%
-7.03%	7.93%	-14.96%
-8.85%	8.12%	-16.97%
5.81%	8.35%	-2.54%
3.46%	8.25%	-4.79%
8.68%	8.29%	0.39%
7.78%	8.28%	-0.50%
6.53%	8.69%	-2.16%
3.85%	8.38%	-4.53%
12.16%	8.26%	3.90%
26.07%	8.13%	17.94%
44.55%	8.22%	36.32%
37.23%	8.14%	29.09%
46.76%	8.13%	38.64%
59.69%	7.86%	51.84%
30.13%	7.80%	22.33%
42.99%	7.74%	35.25%
37.30%	7.67%	29.62%
34.89%	7.92%	26.97%
24.23%	8.00%	16.23%
21.38%	7.86%	13.53%
8.59%	7.79%	0.80%
-7.28%	7.59%	-14.87%
-24.84%	7.71%	-32.54%
-22.19%	7.65%	-29.83%
-25.50%	7.54%	-33.04%
-30.40%	7.83%	-38.23%
-27.30%	7.66%	-34.96%
-31.43%	7.54%	-38.97%
-22.55%	7.74%	-30.30%
-28.22%	7.58%	-35.80%
-32.38%	7.53%	-39.90%
-31.78%	7.42%	-39.20%
-38.44%	7.32%	-45.76%
-34.38%	7.17%	-41.55%
-35.35%	7.09%	-42.44%
-36.36%	7.22%	-43.58%
-30.97%	7.14%	-38.11%

-29.92%	7.08%	-36.99%
-27.89%	7.06%	-34.95%
-29.77%	6.93%	-36.71%
-34.27%	6.80%	-41.06%
-27.20%	6.65%	-33.85%
-11.82%	6.37%	-18.19%
-3.95%	6.21%	-10.15%
4.19%	6.55%	-2.36%
2.43%	6.79%	-4.37%
22.87%	6.58%	16.29%
26.43%	6.42%	20.01%
23.30%	6.37%	16.93%
26.37%	6.28%	20.09%
32.98%	6.15%	26.83%
42.36%	6.15%	36.21%
36.93%	5.97%	30.96%
21.24%	6.33%	14.92%
10.88%	6.62%	4.26%
11.27%	6.47%	4.81%
21.07%	6.27%	14.80%
23.66%	6.15%	17.51%
19.33%	5.98%	13.35%
23.85%	5.99%	17.86%
28.96%	5.96%	23.00%
24.01%	5.93%	18.08%
24.07%	5.79%	18.27%
24.26%	5.61%	18.65%
24.31%	5.83%	18.48%
33.12%	5.65%	27.47%
32.18%	5.54%	26.64%
37.66%	5.40%	32.26%
38.47%	5.50%	32.97%
34.21%	5.51%	28.70%
38.35%	5.50%	32.84%
23.69%	5.77%	17.91%
18.39%	5.88%	12.51%
16.60%	5.82%	10.78%
17.08%	5.75%	11.33%
15.92%	5.82%	10.10%
9.36%	5.98%	3.38%
7.78%	6.29%	1.49%
9.23%	6.42%	2.81%
5.78%	6.40%	-0.62%
8.65%	6.37%	2.28%
10.79%	6.20%	4.59%
4.66%	6.00%	-1.34%
17.79%	5.98%	11.81%
20.78%	5.80%	14.98%
20.88%	5.81%	15.07%

17.64%	5.96%	11.68%
22.40%	5.90%	16.50%
33.66%	5.85%	27.81%
37.15%	5.97%	31.18%
35.92%	5.99%	29.93%
25.99%	6.30%	19.69%
15.59%	6.25%	9.34%
14.90%	6.24%	8.66%
21.07%	6.18%	14.89%
22.52%	6.11%	16.41%
20.36%	5.97%	14.39%
19.28%	6.16%	13.12%
11.28%	6.02%	5.26%
0.65%	6.21%	-5.56%
-1.70%	6.21%	-7.91%
-0.62%	6.29%	-6.91%
2.03%	6.27%	-4.24%
6.54%	6.38%	0.16%
3.73%	6.40%	-2.67%
-0.09%	6.37%	-6.46%
-14.59%	6.49%	-21.08%
-29.35%	7.56%	-36.91%
-27.63%	7.60%	-35.23%
-29.04%	6.54%	-35.58%
-24.20%	6.39%	-30.59%
-30.24%	6.30%	-36.54%
-29.68%	6.42%	-36.10%
-32.79%	6.48%	-39.27%
-32.58%	6.49%	-39.07%
-28.23%	6.20%	-34.43%
-20.45%	5.97%	-26.42%
-18.66%	5.71%	-24.37%
-6.80%	5.53%	-12.33%
2.45%	5.55%	-3.10%
4.21%	5.64%	-1.43%
11.91%	5.79%	6.12%
7.08%	5.77%	1.31%
20.65%	5.87%	14.78%
20.97%	5.84%	15.13%
23.32%	5.81%	17.51%
12.26%	5.50%	6.76%
5.71%	5.46%	0.25%
9.43%	5.26%	4.17%
10.20%	5.01%	5.19%
11.86%	5.01%	6.85%
16.61%	5.10%	11.51%
7.92%	5.37%	2.55%
5.40%	5.56%	-0.16%
12.24%	5.57%	6.67%

15.21%	5.68%	9.53%
12.24%	5.56%	6.68%
13.75%	5.55%	8.20%
23.09%	5.32%	17.77%
23.72%	5.26%	18.46%
13.96%	5.27%	8.69%
14.85%	4.69%	10.16%
11.80%	4.48%	7.32%
14.66%	4.52%	10.14%
19.44%	4.25%	15.19%
19.74%	4.33%	15.41%
14.14%	4.34%	9.80%
13.26%	4.36%	8.90%
14.64%	4.48%	10.16%
12.37%	4.40%	7.97%
10.43%	4.20%	6.23%
15.11%	4.08%	11.03%
19.28%	3.93%	15.35%
11.67%	4.00%	7.67%
12.79%	4.02%	8.77%
10.45%	3.91%	6.54%
4.49%	3.84%	0.65%
1.19%	4.00%	-2.81%
8.34%	4.15%	4.19%
11.63%	4.18%	7.45%
16.06%	4.15%	11.91%
20.35%	4.00%	16.35%
9.33%	4.17%	5.16%
6.22%	4.53%	1.69%
7.26%	4.68%	2.58%
6.67%	4.73%	1.94%
6.51%	4.80%	1.71%
8.66%	4.70%	3.96%
11.68%	4.77%	6.91%
12.40%	4.81%	7.59%
11.64%	4.63%	7.01%
11.60%	4.53%	7.07%
9.45%	4.51%	4.94%
7.76%	4.41%	3.35%
17.12%	4.26%	12.86%
20.99%	4.29%	16.70%
8.58%	4.23%	4.35%
19.95%	4.13%	15.82%
16.46%	4.24%	12.22%
21.23%	4.06%	17.17%
25.18%	4.09%	21.09%
28.58%	3.95%	24.63%
27.98%	3.58%	24.40%
15.99%	3.67%	12.32%

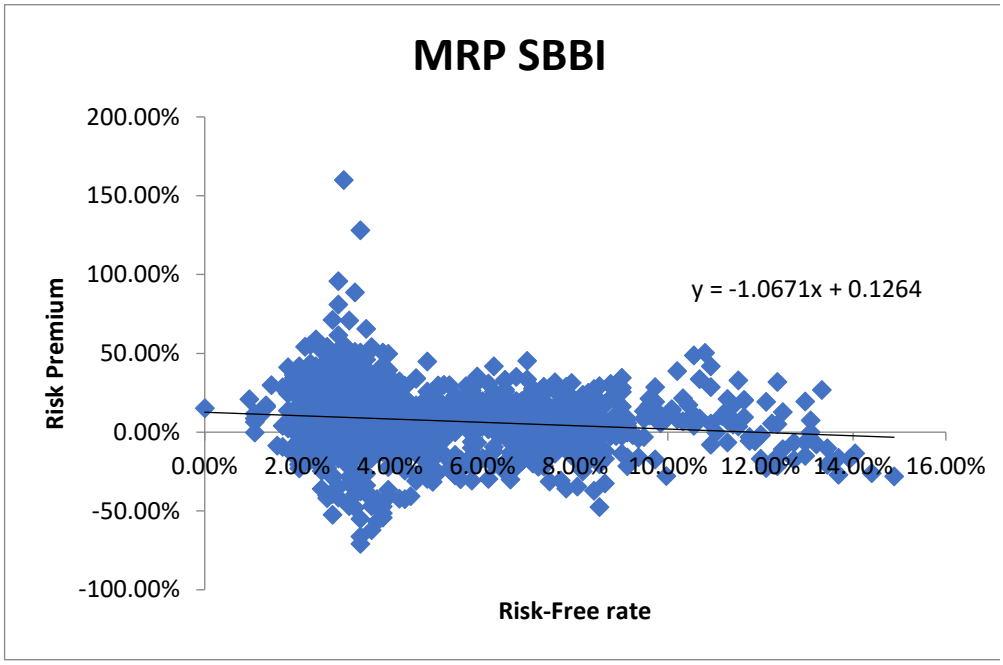
11.66%	3.74%	7.92%
5.72%	3.75%	1.97%
7.53%	4.17%	3.36%
-3.25%	4.39%	-7.64%
8.80%	4.40%	4.40%
-0.45%	4.25%	-4.70%
4.38%	4.39%	-0.01%
-2.32%	4.29%	-6.61%
-5.54%	4.40%	-9.94%
-6.76%	4.35%	-11.11%
-4.40%	4.27%	-8.67%
4.04%	4.11%	-0.07%
13.06%	4.16%	8.90%
11.78%	4.16%	7.62%
12.74%	3.93%	8.81%
29.28%	3.78%	25.50%
22.36%	3.57%	18.79%
20.39%	3.59%	16.80%
17.47%	3.66%	13.81%
17.21%	3.66%	13.55%
13.31%	4.08%	9.23%
16.39%	4.27%	12.12%
12.33%	3.96%	8.37%
15.99%	3.99%	12.00%
10.45%	3.99%	6.46%
14.06%	3.93%	10.13%
17.11%	3.93%	13.18%
5.71%	3.77%	1.94%
9.16%	3.88%	5.28%
19.27%	3.82%	15.45%
15.55%	3.67%	11.88%
19.04%	3.74%	15.30%
29.28%	3.74%	25.54%
15.64%	3.62%	12.02%
10.70%	3.79%	6.91%
1.13%	3.86%	-2.73%
1.90%	4.13%	-2.23%
3.24%	4.17%	-0.93%
-2.07%	4.28%	-6.35%
3.39%	4.27%	-0.88%
2.81%	4.27%	-1.46%
0.71%	4.26%	-3.55%
2.91%	4.26%	-1.35%
0.98%	4.45%	-3.47%
1.77%	4.53%	-2.76%
4.06%	4.53%	-0.47%
12.56%	4.35%	8.21%
21.86%	4.25%	17.61%
20.82%	4.25%	16.57%

19.43%	4.08%	15.35%
19.87%	3.98%	15.89%
20.44%	3.98%	16.46%
17.92%	3.69%	14.23%
22.58%	3.69%	18.89%
28.57%	3.29%	25.28%
25.14%	3.37%	21.77%
18.60%	3.43%	15.17%
27.79%	3.40%	24.39%
30.00%	3.28%	26.72%
12.58%	3.11%	9.47%
-1.50%	3.50%	-5.00%
0.74%	3.19%	-2.45%
5.95%	3.14%	2.81%
-2.13%	3.07%	-5.20%
5.81%	2.74%	3.07%
-2.02%	2.73%	-4.75%
-4.96%	2.84%	-7.80%
0.60%	2.95%	-2.35%
3.26%	2.85%	0.41%
0.54%	2.77%	-2.23%
-6.59%	2.91%	-9.50%
-2.71%	3.09%	-5.80%
19.43%	3.44%	15.99%
20.65%	3.30%	17.35%
12.87%	3.33%	9.54%
15.81%	3.16%	12.65%
11.56%	2.95%	8.61%
19.16%	2.95%	16.21%
10.57%	2.96%	7.61%
10.24%	3.09%	7.15%
7.64%	3.02%	4.62%
17.18%	3.04%	14.14%
14.38%	3.33%	11.05%
17.66%	3.68%	13.98%
17.49%	3.98%	13.51%
7.88%	4.30%	3.58%
15.26%	4.75%	10.51%
11.95%	4.86%	7.09%
13.72%	4.78%	8.94%
9.93%	4.76%	5.17%
3.90%	5.26%	-1.36%
0.86%	5.88%	-5.02%
9.71%	5.75%	3.96%
-0.41%	5.27%	-5.68%
0.90%	5.20%	-4.30%
-1.65%	5.29%	-6.94%
-6.51%	5.39%	-11.90%
-0.52%	5.13%	-5.65%

-10.16%	5.36%	-15.52%
-3.90%	5.38%	-9.28%
-6.66%	5.41%	-12.07%
-12.83%	5.72%	-18.55%
-7.21%	5.86%	-13.07%
-7.56%	6.34%	-13.90%
-9.14%	6.05%	-15.19%
-6.94%	5.43%	-12.37%

SS	*MS*	*F*	*Significance F*
0.972553528	0.9725535	22.19751623	2.75664E-06
50.95523941	0.0438136		
51.92779294			

Standard Error	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
0.012665178	9.9804032	1.45598E-22	0.101554431	0.1512527	0.1015544	0.1512527
0.226483675	-4.711424	2.75664E-06	-1.511422921	-0.622698	-1.511423	-0.622698



	Risk-Free Rate	RP
Projected Rates	4.31%	8.04%

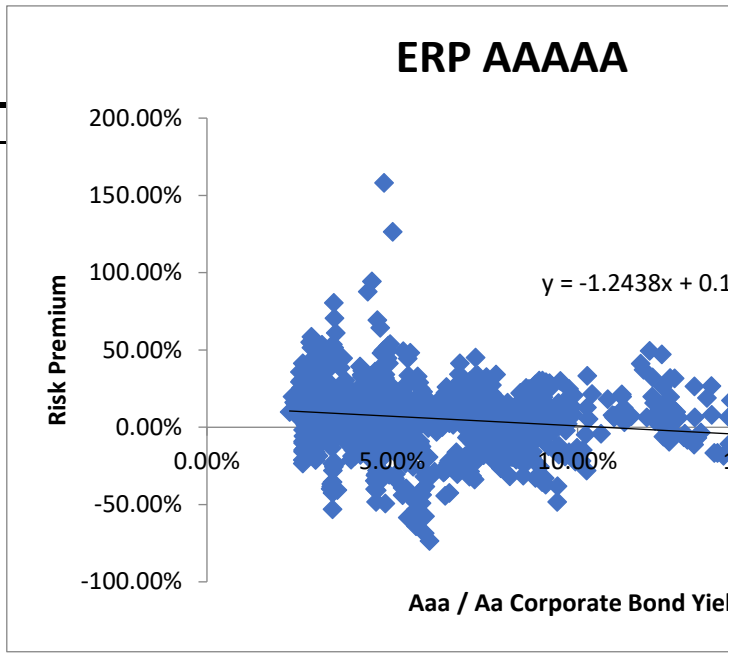
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.166116533
R Square	0.027594702
Adjusted R S	0.026740966
Standard Er	0.208969202
Observatior	1141

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1.4114539	1.4114539	32.32229002	1.65847E-08
Residual	1139	49.737997	0.0436681		
Total	1140	51.149451			

	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.133104431	0.0141359	9.4160415	2.50844E-20	0.10536906	0.1608398
X Variable 1	-1.24383072	0.2187813	-5.68527	1.65847E-08	-1.673090348	-0.814571



	AAA Bond	RP
Projected Rates	5.05%	7.03%

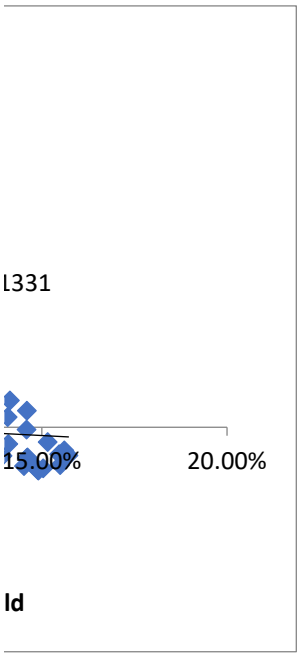
SUMMARY OUTPUT

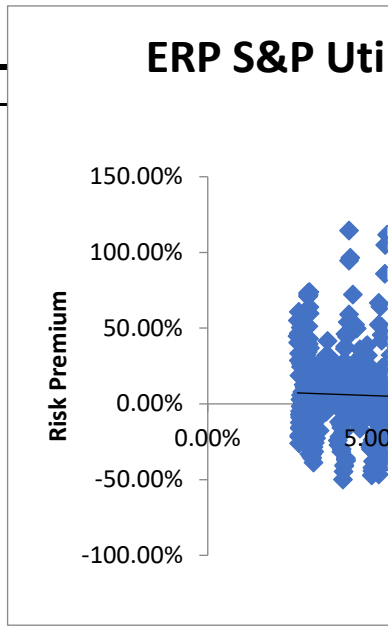
Regression Statistics	
Multiple R	0.114407786
R Square	0.013089141
Adjusted R S	0.01222267
Standard Er	0.2166605
Observatior	1141

ANOVA

	df	*SS*	*MS*	*F*
Regression	1	0.7091146	0.7091146	15.10626004
Residual	1139	53.466679	0.0469418	
Total	1140	54.175793		

	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95.0%*	*Jpper 95.0%*
Intercept	0.094187723	0.0146268	6.4394153	1.76466E-10	0.1053691	0.1608398
X Variable 1	-0.81617891	0.209994	-3.886677	0.000107489	-1.67309	-0.814571



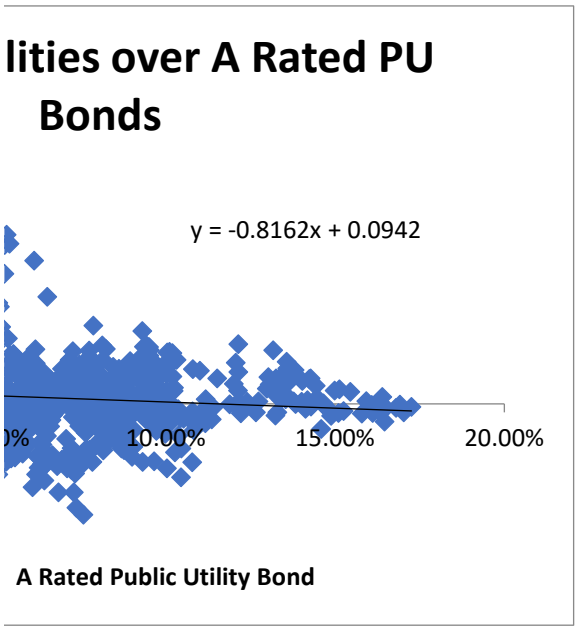


A PU Bond

Projected Rates 5.57%

Significance F
0.0001075

Lower 95%	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
0.0654893	0.1228861	0.0654893	0.1228861
-1.228197	-0.40416	-1.228197	-0.40416



RP

4.87%

	MKTRP	SPRP	MKTAAAAA
	Last updated: 02	Last updated: (	Last updated: 02/2
	Modified: 1 1177	Modified: 1 11'	Modified: 1 1177 //
1926M01	0.13%		
1926M02	0.12%		
1926M03	0.13%		
1926M04	0.18%		
1926M05	0.16%		
1926M06	0.14%		
1926M07	0.15%		
1926M08	0.16%		
1926M09	0.14%		
1926M10	0.13%		
1926M11	0.14%		
1926M12	0.14%		
1927M01	0.13%		
1927M02	0.12%		
1927M03	0.14%		
1927M04	0.13%		
1927M05	0.12%		
1927M06	0.15%		
1927M07	0.14%		
1927M08	0.17%		
1927M09	0.18%		
1927M10	0.17%		
1927M11	0.20%		
1927M12	0.23%		
1928M01	0.20%	0.27%	0.23%
1928M02	0.18%	0.25%	0.20%
1928M03	0.17%	0.23%	0.18%
1928M04	0.28%	0.25%	0.30%
1928M05	0.25%	0.31%	0.26%
1928M06	0.22%	0.28%	0.23%
1928M07	0.22%	0.27%	0.23%
1928M08	0.19%	0.25%	0.20%
1928M09	0.24%	0.26%	0.24%
1928M10	0.21%	0.23%	0.21%
1928M11	0.19%	0.21%	0.19%
1928M12	0.35%	0.65%	0.35%
1929M01	0.30%	0.57%	0.30%
1929M02	0.29%	0.66%	0.29%
1929M03	0.25%	0.59%	0.25%
1929M04	0.22%	0.53%	0.22%
1929M05	0.19%	0.47%	0.19%
1929M06	0.20%	0.43%	0.20%
1929M07	0.32%	0.84%	0.32%
1929M08	0.29%	0.79%	0.29%
1929M09	0.35%	0.78%	0.36%
1929M10	0.35%	0.69%	0.35%
1929M11	0.88%	1.67%	0.88%
1929M12	1.04%	1.78%	1.05%
1930M01	0.87%	1.57%	0.87%
1930M02	0.74%	1.40%	0.75%
1930M03	0.62%	1.27%	0.63%
1930M04	0.57%	1.16%	0.58%
1930M05	0.49%	1.02%	0.50%
1930M06	0.42%	0.91%	0.43%
1930M07	0.77%	1.26%	0.78%
1930M08	0.65%	1.11%	0.66%
1930M09	0.54%	0.97%	0.55%
1930M10	0.74%	1.03%	0.75%
1930M11	0.78%	1.01%	0.79%
1930M12	0.67%	0.98%	0.68%
1931M01	0.68%	0.89%	0.68%
1931M02	0.58%	0.80%	0.59%
1931M03	0.61%	0.90%	0.62%
1931M04	0.62%	0.81%	0.63%
1931M05	0.69%	0.87%	0.70%
1931M06	0.88%	0.91%	0.89%
1931M07	0.89%	0.95%	0.91%
1931M08	0.88%	0.91%	0.90%
1931M09	0.74%	0.80%	0.75%
1931M10	1.96%	1.87%	1.98%
1931M11	1.63%	1.68%	1.66%
1931M12	1.59%	1.56%	1.60%
1932M01	1.79%	1.63%	1.80%
1932M02	1.58%	1.45%	1.58%
1932M03	1.31%	1.30%	1.32%
1932M04	1.42%	1.32%	1.42%
1932M05	1.96%	1.50%	1.95%
1932M06	2.66%	2.33%	2.63%
1932M07	2.30%	2.05%	2.27%
1932M08	3.11%	2.72%	3.17%
1932M09	3.63%	3.73%	3.76%
1932M10	3.29%	3.34%	3.38%
1932M11	3.46%	3.19%	3.50%
1932M12	3.15%	2.87%	3.17%
1933M01	2.63%	2.53%	2.64%
1933M02	2.25%	2.27%	2.25%
1933M03	2.66%	2.58%	2.64%
1933M04	2.23%	2.50%	2.21%
1933M05	3.45%	2.71%	3.53%
1933M06	2.90%	2.54%	2.98%
1933M07	2.41%	2.33%	2.50%
1933M08	2.34%	2.31%	2.40%
1933M09	1.96%	2.04%	2.03%
1933M10	2.02%	2.26%	2.07%
1933M11	1.97%	2.11%	2.00%
1933M12	1.66%	1.88%	1.70%
1934M01	1.39%	1.65%	1.42%
1934M02	1.20%	1.66%	1.24%
1934M03	1.07%	1.49%	1.09%
1934M04	0.91%	1.32%	0.93%
1934M05	0.80%	1.19%	0.82%
1934M06	0.80%	1.15%	0.81%
1934M07	0.67%	1.02%	0.68%
1934M08	0.80%	1.24%	0.81%
1934M09	0.68%	1.08%	0.70%
1934M10	0.58%	0.95%	0.60%
1934M11	0.52%	0.91%	0.53%
1934M12	0.52%	0.81%	0.53%
1935M01	0.44%	0.79%	0.45%
1935M02	0.42%	0.71%	0.43%
1935M03	0.39%	0.80%	0.39%
1935M04	0.35%	0.79%	0.36%
1935M05	0.39%	0.80%	0.40%
1935M06	0.34%	0.80%	0.35%
1935M07	0.34%	0.79%	0.34%
1935M08	0.36%	0.75%	0.36%
1935M09	0.31%	0.67%	0.31%
1935M10	0.27%	0.60%	0.27%
1935M11	0.29%	0.66%	0.29%
1935M12	0.27%	0.58%	0.27%
1936M01	0.24%	0.52%	0.25%
1936M02	0.25%	0.57%	0.26%
1936M03	0.22%	0.52%	0.22%
1936M04	0.20%	0.46%	0.20%
1936M05	0.26%	0.50%	0.27%
1936M06	0.25%	0.48%	0.26%
1936M07	0.23%	0.43%	0.23%
1936M08	0.25%	0.47%	0.25%

1936M09	0.22%	0.42%	0.22%
1936M10	0.19%	0.38%	0.19%
1936M11	0.23%	0.36%	0.23%
1936M12	0.20%	0.33%	0.20%
1937M01	0.18%	0.30%	0.18%
1937M02	0.17%	0.27%	0.17%
1937M03	0.15%	0.26%	0.15%
1937M04	0.14%	0.27%	0.14%
1937M05	0.23%	0.31%	0.23%
1937M06	0.20%	0.32%	0.20%
1937M07	0.22%	0.31%	0.22%
1937M08	0.31%	0.55%	0.31%
1937M09	0.31%	0.59%	0.32%
1937M10	0.57%	0.70%	0.57%
1937M11	0.66%	0.66%	0.66%
1937M12	0.71%	0.58%	0.71%
1938M01	0.66%	0.64%	0.66%
1938M02	0.55%	0.59%	0.55%
1938M03	0.50%	0.52%	0.50%
1938M04	1.33%	0.93%	1.34%
1938M05	1.24%	1.01%	1.26%
1938M06	1.10%	0.89%	1.12%
1938M07	1.51%	1.01%	1.54%
1938M08	1.26%	0.88%	1.29%
1938M09	1.10%	0.83%	1.13%
1938M10	0.92%	0.73%	0.95%
1938M11	0.80%	0.94%	0.82%
1938M12	0.70%	0.89%	0.73%
1939M01	0.59%	0.79%	0.61%
1939M02	0.60%	0.69%	0.62%
1939M03	0.51%	0.66%	0.52%
1939M04	0.73%	0.82%	0.74%
1939M05	0.62%	0.72%	0.63%
1939M06	0.56%	0.66%	0.57%
1939M07	0.55%	0.62%	0.56%
1939M08	0.57%	0.67%	0.59%
1939M09	0.58%	0.65%	0.59%
1939M10	0.76%	0.58%	0.78%
1939M11	0.66%	0.52%	0.67%
1939M12	0.60%	0.46%	0.62%
1940M01	0.51%	0.41%	0.52%
1940M02	0.46%	0.36%	0.47%
1940M03	0.39%	0.33%	0.40%
1940M04	0.34%	0.29%	0.34%
1940M05	0.29%	0.26%	0.30%
1940M06	0.99%	0.67%	1.00%
1940M07	0.86%	0.79%	0.87%
1940M08	0.72%	0.70%	0.73%
1940M09	0.60%	0.62%	0.62%
1940M10	0.51%	0.56%	0.52%
1940M11	0.44%	0.50%	0.45%
1940M12	0.40%	0.62%	0.41%
1941M01	0.34%	0.55%	0.35%
1941M02	0.34%	0.49%	0.35%
1941M03	0.29%	0.44%	0.30%
1941M04	0.25%	0.40%	0.26%
1941M05	0.29%	0.45%	0.29%
1941M06	0.25%	0.42%	0.25%
1941M07	0.25%	0.37%	0.25%
1941M08	0.24%	0.35%	0.25%
1941M09	0.21%	0.32%	0.22%
1941M10	0.19%	0.30%	0.19%
1941M11	0.24%	0.36%	0.24%
1941M12	0.22%	0.37%	0.23%
1942M01	0.23%	0.39%	0.23%
1942M02	0.20%	0.35%	0.20%
1942M03	0.18%	0.33%	0.19%
1942M04	0.23%	0.43%	0.23%
1942M05	0.23%	0.41%	0.23%
1942M06	0.27%	0.44%	0.27%
1942M07	0.23%	0.39%	0.24%
1942M08	0.21%	0.35%	0.21%
1942M09	0.19%	0.31%	0.19%
1942M10	0.17%	0.29%	0.17%
1942M11	0.20%	0.44%	0.20%
1942M12	0.18%	0.39%	0.18%
1943M01	0.19%	0.35%	0.19%
1943M02	0.22%	0.45%	0.22%
1943M03	0.23%	0.44%	0.23%
1943M04	0.22%	0.40%	0.23%
1943M05	0.20%	0.36%	0.20%
1943M06	0.20%	0.33%	0.20%
1943M07	0.18%	0.32%	0.18%
1943M08	0.21%	0.28%	0.21%
1943M09	0.18%	0.25%	0.18%
1943M10	0.17%	0.23%	0.17%
1943M11	0.15%	0.21%	0.15%
1943M12	0.21%	0.26%	0.20%
1944M01	0.22%	0.26%	0.22%
1944M02	0.19%	0.23%	0.19%
1944M03	0.17%	0.21%	0.17%
1944M04	0.15%	0.19%	0.15%
1944M05	0.14%	0.17%	0.14%
1944M06	0.15%	0.16%	0.15%
1944M07	0.17%	0.17%	0.17%
1944M08	0.16%	0.15%	0.16%
1944M09	0.14%	0.15%	0.14%
1944M10	0.13%	0.14%	0.13%
1944M11	0.12%	0.13%	0.12%
1944M12	0.11%	0.12%	0.11%
1945M01	0.12%	0.12%	0.11%
1945M02	0.11%	0.13%	0.11%
1945M03	0.15%	0.16%	0.15%
1945M04	0.17%	0.17%	0.17%
1945M05	0.24%	0.26%	0.24%
1945M06	0.21%	0.23%	0.21%
1945M07	0.19%	0.25%	0.19%
1945M08	0.17%	0.22%	0.17%
1945M09	0.20%	0.20%	0.20%
1945M10	0.19%	0.23%	0.19%
1945M11	0.18%	0.24%	0.18%
1945M12	0.17%	0.23%	0.17%
1946M01	0.15%	0.21%	0.15%
1946M02	0.19%	0.33%	0.19%
1946M03	0.23%	0.35%	0.24%
1946M04	0.22%	0.34%	0.23%
1946M05	0.21%	0.31%	0.21%
1946M06	0.19%	0.28%	0.19%
1946M07	0.19%	0.26%	0.19%
1946M08	0.18%	0.26%	0.18%
1946M09	0.23%	0.30%	0.23%
1946M10	0.36%	0.40%	0.36%
1946M11	0.31%	0.35%	0.31%
1946M12	0.27%	0.31%	0.27%
1947M01	0.25%	0.32%	0.25%
1947M02	0.22%	0.29%	0.22%
1947M03	0.20%	0.26%	0.20%
1947M04	0.18%	0.25%	0.18%
1947M05	0.18%	0.24%	0.18%
1947M06	0.16%	0.23%	0.16%
1947M07	0.18%	0.22%	0.18%
1947M08	0.17%	0.20%	0.17%

1947M09	0.16%	0.18%	0.16%
1947M10	0.15%	0.16%	0.15%
1947M11	0.14%	0.15%	0.14%
1947M12	0.13%	0.22%	0.13%
1948M01	0.12%	0.20%	0.12%
1948M02	0.14%	0.18%	0.14%
1948M03	0.15%	0.18%	0.15%
1948M04	0.20%	0.20%	0.20%
1948M05	0.19%	0.18%	0.19%
1948M06	0.25%	0.19%	0.25%
1948M07	0.22%	0.17%	0.22%
1948M08	0.23%	0.18%	0.24%
1948M09	0.21%	0.17%	0.21%
1948M10	0.20%	0.15%	0.20%
1948M11	0.23%	0.15%	0.23%
1948M12	0.34%	0.23%	0.34%
1949M01	0.30%	0.21%	0.30%
1949M02	0.26%	0.21%	0.26%
1949M03	0.24%	0.19%	0.24%
1949M04	0.22%	0.18%	0.22%
1949M05	0.20%	0.16%	0.20%
1949M06	0.19%	0.15%	0.19%
1949M07	0.17%	0.14%	0.17%
1949M08	0.20%	0.16%	0.20%
1949M09	0.18%	0.15%	0.17%
1949M10	0.16%	0.15%	0.16%
1949M11	0.15%	0.13%	0.15%
1949M12	0.14%	0.12%	0.14%
1950M01	0.15%	0.13%	0.15%
1950M02	0.14%	0.13%	0.14%
1950M03	0.13%	0.12%	0.13%
1950M04	0.12%	0.11%	0.12%
1950M05	0.13%	0.10%	0.13%
1950M06	0.15%	0.10%	0.15%
1950M07	0.18%	0.16%	0.18%
1950M08	0.16%	0.17%	0.16%
1950M09	0.16%	0.15%	0.16%
1950M10	0.18%	0.15%	0.18%
1950M11	0.16%	0.14%	0.16%
1950M12	0.15%	0.13%	0.14%
1951M01	0.16%	0.13%	0.16%
1951M02	0.18%	0.13%	0.18%
1951M03	0.16%	0.13%	0.16%
1951M04	0.15%	0.12%	0.15%
1951M05	0.16%	0.11%	0.16%
1951M06	0.16%	0.10%	0.16%
1951M07	0.16%	0.10%	0.16%
1951M08	0.19%	0.11%	0.19%
1951M09	0.19%	0.10%	0.19%
1951M10	0.17%	0.09%	0.17%
1951M11	0.16%	0.09%	0.16%
1951M12	0.14%	0.08%	0.14%
1952M01	0.14%	0.09%	0.14%
1952M02	0.13%	0.09%	0.13%
1952M03	0.14%	0.08%	0.13%
1952M04	0.15%	0.08%	0.15%
1952M05	0.16%	0.08%	0.16%
1952M06	0.15%	0.08%	0.15%
1952M07	0.16%	0.07%	0.16%
1952M08	0.15%	0.07%	0.15%
1952M09	0.14%	0.07%	0.13%
1952M10	0.13%	0.07%	0.13%
1952M11	0.12%	0.06%	0.12%
1952M12	0.14%	0.08%	0.14%
1953M01	0.14%	0.08%	0.14%
1953M02	0.13%	0.07%	0.13%
1953M03	0.12%	0.07%	0.12%
1953M04	0.12%	0.07%	0.12%
1953M05	0.12%	0.07%	0.12%
1953M06	0.11%	0.07%	0.11%
1953M07	0.11%	0.07%	0.11%
1953M08	0.11%	0.08%	0.11%
1953M09	0.14%	0.07%	0.14%
1953M10	0.13%	0.07%	0.13%
1953M11	0.15%	0.08%	0.15%
1953M12	0.14%	0.08%	0.13%
1954M01	0.12%	0.08%	0.12%
1954M02	0.14%	0.08%	0.14%
1954M03	0.13%	0.08%	0.13%
1954M04	0.13%	0.08%	0.13%
1954M05	0.14%	0.07%	0.14%
1954M06	0.15%	0.08%	0.14%
1954M07	0.13%	0.07%	0.13%
1954M08	0.16%	0.09%	0.15%
1954M09	0.16%	0.09%	0.15%
1954M10	0.22%	0.08%	0.22%
1954M11	0.20%	0.10%	0.20%
1954M12	0.26%	0.12%	0.27%
1955M01	0.25%	0.12%	0.25%
1955M02	0.22%	0.11%	0.22%
1955M03	0.19%	0.11%	0.19%
1955M04	0.17%	0.10%	0.17%
1955M05	0.17%	0.10%	0.17%
1955M06	0.15%	0.09%	0.15%
1955M07	0.21%	0.09%	0.21%
1955M08	0.22%	0.10%	0.22%
1955M09	0.20%	0.09%	0.20%
1955M10	0.17%	0.10%	0.17%
1955M11	0.17%	0.09%	0.17%
1955M12	0.23%	0.09%	0.23%
1956M01	0.20%	0.09%	0.20%
1956M02	0.20%	0.08%	0.20%
1956M03	0.19%	0.08%	0.19%
1956M04	0.22%	0.09%	0.22%
1956M05	0.19%	0.09%	0.19%
1956M06	0.23%	0.09%	0.23%
1956M07	0.21%	0.09%	0.21%
1956M08	0.21%	0.11%	0.21%
1956M09	0.21%	0.11%	0.21%
1956M10	0.22%	0.11%	0.22%
1956M11	0.19%	0.10%	0.19%
1956M12	0.17%	0.10%	0.17%
1957M01	0.16%	0.09%	0.16%
1957M02	0.18%	0.09%	0.18%
1957M03	0.17%	0.09%	0.17%
1957M04	0.16%	0.08%	0.16%
1957M05	0.15%	0.09%	0.15%
1957M06	0.15%	0.09%	0.15%
1957M07	0.14%	0.10%	0.14%
1957M08	0.13%	0.10%	0.13%
1957M09	0.16%	0.10%	0.16%
1957M10	0.20%	0.10%	0.20%
1957M11	0.20%	0.09%	0.20%
1957M12	0.18%	0.10%	0.18%
1958M01	0.19%	0.10%	0.19%
1958M02	0.18%	0.12%	0.18%
1958M03	0.17%	0.11%	0.17%
1958M04	0.16%	0.11%	0.16%
1958M05	0.15%	0.12%	0.15%
1958M06	0.14%	0.11%	0.14%
1958M07	0.13%	0.10%	0.13%
1958M08	0.14%	0.10%	0.14%

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1959M01	0.14%	0.13%	0.14%
1959M02	0.13%	0.12%	0.13%
1959M03	0.12%	0.11%	0.12%
1959M04	0.11%	0.10%	0.11%
1959M05	0.12%	0.10%	0.12%
1959M06	0.11%	0.09%	0.11%
1959M07	0.10%	0.09%	0.10%
1959M08	0.11%	0.09%	0.11%
1959M09	0.11%	0.09%	0.10%
1959M10	0.13%	0.10%	0.13%
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1960M01	0.11%	0.09%	0.11%
1960M02	0.18%	0.08%	0.18%
1960M03	0.16%	0.08%	0.16%
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1960M05	0.14%	0.07%	0.14%
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1960M07	0.13%	0.08%	0.12%
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1960M09	0.12%	0.10%	0.12%
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1961M02	0.19%	0.17%	0.18%
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1962M04	0.12%	0.12%	0.11%
1962M05	0.17%	0.13%	0.16%
1962M06	0.25%	0.22%	0.25%
1962M07	0.33%	0.24%	0.32%
1962M08	0.31%	0.25%	0.32%
1962M09	0.27%	0.23%	0.27%
1962M10	0.28%	0.22%	0.28%
1962M11	0.24%	0.20%	0.24%
1962M12	0.33%	0.23%	0.34%
1963M01	0.29%	0.21%	0.29%
1963M02	0.27%	0.22%	0.27%
1963M03	0.25%	0.20%	0.25%
1963M04	0.22%	0.18%	0.23%
1963M05	0.22%	0.17%	0.22%
1963M06	0.19%	0.15%	0.19%
1963M07	0.18%	0.14%	0.18%
1963M08	0.16%	0.13%	0.16%
1963M09	0.17%	0.13%	0.17%
1963M10	0.16%	0.13%	0.16%
1963M11	0.15%	0.12%	0.15%
1963M12	0.14%	0.11%	0.14%
1964M01	0.13%	0.11%	0.13%
1964M02	0.12%	0.10%	0.12%
1964M03	0.11%	0.10%	0.11%
1964M04	0.11%	0.09%	0.11%
1964M05	0.10%	0.08%	0.10%
1964M06	0.10%	0.08%	0.09%
1964M07	0.09%	0.08%	0.09%
1964M08	0.09%	0.09%	0.09%
1964M09	0.09%	0.09%	0.09%
1964M10	0.09%	0.08%	0.09%
1964M11	0.09%	0.08%	0.09%
1964M12	0.09%	0.07%	0.08%
1965M01	0.08%	0.07%	0.08%
1965M02	0.09%	0.08%	0.09%
1965M03	0.09%	0.07%	0.08%
1965M04	0.09%	0.07%	0.08%
1965M05	0.10%	0.07%	0.09%
1965M06	0.09%	0.06%	0.09%
1965M07	0.12%	0.08%	0.12%
1965M08	0.11%	0.07%	0.11%
1965M09	0.11%	0.07%	0.11%
1965M10	0.11%	0.07%	0.11%
1965M11	0.11%	0.07%	0.11%
1965M12	0.10%	0.07%	0.10%
1966M01	0.10%	0.06%	0.10%
1966M02	0.09%	0.07%	0.09%
1966M03	0.09%	0.09%	0.09%
1966M04	0.10%	0.09%	0.09%
1966M05	0.10%	0.08%	0.09%
1966M06	0.13%	0.09%	0.13%
1966M07	0.13%	0.09%	0.12%
1966M08	0.12%	0.08%	0.12%
1966M09	0.19%	0.17%	0.19%
1966M10	0.18%	0.17%	0.17%
1966M11	0.18%	0.24%	0.17%
1966M12	0.16%	0.22%	0.16%
1967M01	0.14%	0.20%	0.14%
1967M02	0.19%	0.18%	0.19%
1967M03	0.17%	0.17%	0.17%
1967M04	0.17%	0.16%	0.17%
1967M05	0.16%	0.14%	0.16%
1967M06	0.19%	0.16%	0.19%
1967M07	0.17%	0.15%	0.17%
1967M08	0.17%	0.14%	0.17%
1967M09	0.15%	0.13%	0.15%
1967M10	0.15%	0.12%	0.15%
1967M11	0.15%	0.15%	0.15%
1967M12	0.14%	0.14%	0.13%
1968M01	0.13%	0.14%	0.13%
1968M02	0.15%	0.12%	0.15%
1968M03	0.15%	0.12%	0.15%
1968M04	0.14%	0.14%	0.14%
1968M05	0.20%	0.13%	0.19%
1968M06	0.17%	0.12%	0.17%
1968M07	0.15%	0.17%	0.15%
1968M08	0.15%	0.15%	0.15%
1968M09	0.13%	0.14%	0.13%
1968M10	0.14%	0.13%	0.13%
1968M11	0.12%	0.12%	0.12%
1968M12	0.14%	0.16%	0.14%
1969M01	0.16%	0.16%	0.16%
1969M02	0.15%	0.15%	0.14%
1969M03	0.17%	0.17%	0.16%
1969M04	0.16%	0.16%	0.16%
1969M05	0.14%	0.15%	0.14%
1969M06	0.13%	0.13%	0.13%
1969M07	0.17%	0.16%	0.17%
1969M08	0.21%	0.17%	0.21%

1969M09	0.20%	0.15%	0.20%
1969M10	0.19%	0.16%	0.19%
1969M11	0.19%	0.20%	0.19%
1969M12	0.19%	0.23%	0.19%
1970M01	0.18%	0.21%	0.18%
1970M02	0.25%	0.22%	0.25%
1970M03	0.25%	0.29%	0.25%
1970M04	0.21%	0.26%	0.22%
1970M05	0.32%	0.35%	0.32%
1970M06	0.34%	0.35%	0.34%
1970M07	0.34%	0.37%	0.35%
1970M08	0.34%	0.40%	0.34%
1970M09	0.31%	0.38%	0.31%
1970M10	0.27%	0.34%	0.27%
1970M11	0.24%	0.31%	0.24%
1970M12	0.23%	0.35%	0.23%
1971M01	0.23%	0.35%	0.23%
1971M02	0.21%	0.32%	0.21%
1971M03	0.19%	0.30%	0.19%
1971M04	0.17%	0.27%	0.17%
1971M05	0.16%	0.26%	0.16%
1971M06	0.18%	0.26%	0.18%
1971M07	0.16%	0.24%	0.16%
1971M08	0.17%	0.23%	0.17%
1971M09	0.17%	0.21%	0.17%
1971M10	0.15%	0.20%	0.15%
1971M11	0.17%	0.18%	0.17%
1971M12	0.15%	0.16%	0.15%
1972M01	0.21%	0.20%	0.21%
1972M02	0.19%	0.19%	0.19%
1972M03	0.17%	0.18%	0.17%
1972M04	0.15%	0.16%	0.15%
1972M05	0.14%	0.16%	0.14%
1972M06	0.13%	0.15%	0.13%
1972M07	0.13%	0.14%	0.13%
1972M08	0.12%	0.13%	0.12%
1972M09	0.12%	0.15%	0.12%
1972M10	0.11%	0.13%	0.11%
1972M11	0.10%	0.16%	0.10%
1972M12	0.12%	0.17%	0.12%
1973M01	0.11%	0.16%	0.11%
1973M02	0.11%	0.18%	0.11%
1973M03	0.13%	0.17%	0.12%
1973M04	0.12%	0.16%	0.12%
1973M05	0.14%	0.15%	0.14%
1973M06	0.13%	0.13%	0.13%
1973M07	0.12%	0.13%	0.12%
1973M08	0.13%	0.13%	0.12%
1973M09	0.14%	0.13%	0.14%
1973M10	0.14%	0.17%	0.14%
1973M11	0.13%	0.18%	0.12%
1973M12	0.29%	0.33%	0.30%
1974M01	0.25%	0.30%	0.26%
1974M02	0.23%	0.28%	0.23%
1974M03	0.20%	0.25%	0.20%
1974M04	0.19%	0.25%	0.19%
1974M05	0.20%	0.43%	0.20%
1974M06	0.20%	0.42%	0.20%
1974M07	0.18%	0.43%	0.18%
1974M08	0.26%	0.38%	0.26%
1974M09	0.35%	0.45%	0.35%
1974M10	0.54%	0.40%	0.54%
1974M11	0.71%	0.47%	0.72%
1974M12	0.67%	0.43%	0.67%
1975M01	0.59%	0.38%	0.59%
1975M02	0.62%	0.66%	0.63%
1975M03	0.55%	0.58%	0.56%
1975M04	0.46%	0.53%	0.47%
1975M05	0.40%	0.48%	0.41%
1975M06	0.35%	0.48%	0.36%
1975M07	0.31%	0.51%	0.32%
1975M08	0.36%	0.50%	0.36%
1975M09	0.32%	0.45%	0.33%
1975M10	0.31%	0.41%	0.31%
1975M11	0.29%	0.39%	0.30%
1975M12	0.26%	0.35%	0.26%
1976M01	0.23%	0.31%	0.23%
1976M02	0.35%	0.34%	0.35%
1976M03	0.30%	0.33%	0.31%
1976M04	0.26%	0.29%	0.27%
1976M05	0.24%	0.26%	0.24%
1976M06	0.21%	0.24%	0.21%
1976M07	0.20%	0.22%	0.20%
1976M08	0.18%	0.20%	0.18%
1976M09	0.16%	0.19%	0.16%
1976M10	0.15%	0.18%	0.15%
1976M11	0.14%	0.16%	0.15%
1976M12	0.13%	0.15%	0.13%
1977M01	0.15%	0.17%	0.15%
1977M02	0.18%	0.15%	0.18%
1977M03	0.17%	0.16%	0.17%
1977M04	0.16%	0.15%	0.16%
1977M05	0.14%	0.13%	0.14%
1977M06	0.14%	0.12%	0.14%
1977M07	0.14%	0.13%	0.14%
1977M08	0.14%	0.12%	0.14%
1977M09	0.13%	0.13%	0.13%
1977M10	0.12%	0.12%	0.12%
1977M11	0.15%	0.13%	0.15%
1977M12	0.14%	0.13%	0.14%
1978M01	0.13%	0.12%	0.13%
1978M02	0.18%	0.15%	0.18%
1978M03	0.17%	0.14%	0.17%
1978M04	0.16%	0.13%	0.15%
1978M05	0.21%	0.12%	0.21%
1978M06	0.19%	0.11%	0.19%
1978M07	0.18%	0.10%	0.18%
1978M08	0.18%	0.10%	0.18%
1978M09	0.17%	0.09%	0.17%
1978M10	0.15%	0.09%	0.15%
1978M11	0.27%	0.15%	0.27%
1978M12	0.23%	0.14%	0.23%
1979M01	0.20%	0.13%	0.20%
1979M02	0.19%	0.16%	0.19%
1979M03	0.19%	0.16%	0.19%
1979M04	0.19%	0.14%	0.19%
1979M05	0.17%	0.14%	0.17%
1979M06	0.16%	0.13%	0.16%
1979M07	0.16%	0.13%	0.16%
1979M08	0.14%	0.12%	0.14%
1979M09	0.16%	0.11%	0.16%
1979M10	0.14%	0.11%	0.14%
1979M11	0.21%	0.14%	0.21%
1979M12	0.20%	0.16%	0.20%
1980M01	0.18%	0.14%	0.18%
1980M02	0.19%	0.13%	0.19%
1980M03	0.17%	0.13%	0.17%
1980M04	0.32%	0.17%	0.32%
1980M05	0.28%	0.27%	0.28%
1980M06	0.26%	0.24%	0.26%
1980M07	0.23%	0.22%	0.23%
1980M08	0.23%	0.20%	0.24%

1980M09	0.20%	0.19%	0.21%
1980M10	0.18%	0.18%	0.18%
1980M11	0.16%	0.16%	0.16%
1980M12	0.26%	0.16%	0.26%
1981M01	0.26%	0.15%	0.26%
1981M02	0.27%	0.15%	0.27%
1981M03	0.24%	0.15%	0.24%
1981M04	0.21%	0.14%	0.21%
1981M05	0.20%	0.14%	0.21%
1981M06	0.18%	0.13%	0.18%
1981M07	0.17%	0.12%	0.17%
1981M08	0.15%	0.11%	0.15%
1981M09	0.20%	0.11%	0.21%
1981M10	0.24%	0.13%	0.24%
1981M11	0.22%	0.14%	0.23%
1981M12	0.20%	0.14%	0.21%
1982M01	0.20%	0.15%	0.21%
1982M02	0.19%	0.14%	0.20%
1982M03	0.23%	0.13%	0.24%
1982M04	0.21%	0.12%	0.22%
1982M05	0.19%	0.13%	0.20%
1982M06	0.19%	0.13%	0.20%
1982M07	0.19%	0.13%	0.19%
1982M08	0.19%	0.13%	0.19%
1982M09	0.32%	0.24%	0.32%
1982M10	0.28%	0.21%	0.28%
1982M11	0.35%	0.22%	0.36%
1982M12	0.31%	0.20%	0.31%
1983M01	0.27%	0.18%	0.27%
1983M02	0.24%	0.17%	0.24%
1983M03	0.21%	0.16%	0.21%
1983M04	0.19%	0.14%	0.19%
1983M05	0.22%	0.15%	0.21%
1983M06	0.19%	0.14%	0.19%
1983M07	0.18%	0.13%	0.18%
1983M08	0.19%	0.12%	0.19%
1983M09	0.16%	0.11%	0.16%
1983M10	0.15%	0.12%	0.15%
1983M11	0.14%	0.12%	0.14%
1983M12	0.13%	0.13%	0.13%
1984M01	0.12%	0.13%	0.12%
1984M02	0.12%	0.13%	0.12%
1984M03	0.14%	0.15%	0.14%
1984M04	0.12%	0.14%	0.12%
1984M05	0.12%	0.13%	0.11%
1984M06	0.16%	0.13%	0.17%
1984M07	0.15%	0.12%	0.15%
1984M08	0.15%	0.12%	0.14%
1984M09	0.25%	0.14%	0.25%
1984M10	0.22%	0.13%	0.23%
1984M11	0.20%	0.12%	0.20%
1984M12	0.18%	0.12%	0.18%
1985M01	0.16%	0.11%	0.16%
1985M02	0.20%	0.10%	0.20%
1985M03	0.17%	0.10%	0.17%
1985M04	0.16%	0.09%	0.16%
1985M05	0.15%	0.09%	0.14%
1985M06	0.16%	0.11%	0.16%
1985M07	0.14%	0.10%	0.14%
1985M08	0.13%	0.13%	0.13%
1985M09	0.13%	0.12%	0.13%
1985M10	0.14%	0.15%	0.14%
1985M11	0.14%	0.16%	0.14%
1985M12	0.17%	0.17%	0.17%
1986M01	0.17%	0.19%	0.17%
1986M02	0.15%	0.17%	0.15%
1986M03	0.19%	0.18%	0.19%
1986M04	0.19%	0.18%	0.19%
1986M05	0.18%	0.18%	0.18%
1986M06	0.18%	0.18%	0.18%
1986M07	0.16%	0.19%	0.16%
1986M08	0.20%	0.18%	0.20%
1986M09	0.23%	0.22%	0.23%
1986M10	0.32%	0.37%	0.32%
1986M11	0.29%	0.34%	0.30%
1986M12	0.25%	0.30%	0.26%
1987M01	0.24%	0.28%	0.24%
1987M02	0.40%	0.33%	0.40%
1987M03	0.35%	0.32%	0.35%
1987M04	0.30%	0.29%	0.30%
1987M05	0.26%	0.29%	0.27%
1987M06	0.23%	0.26%	0.23%
1987M07	0.22%	0.24%	0.22%
1987M08	0.21%	0.22%	0.21%
1987M09	0.19%	0.22%	0.19%
1987M10	0.18%	0.19%	0.19%
1987M11	0.84%	0.25%	0.85%
1987M12	0.87%	0.27%	0.88%
1988M01	0.75%	0.24%	0.76%
1988M02	0.63%	0.33%	0.64%
1988M03	0.53%	0.30%	0.54%
1988M04	0.49%	0.31%	0.50%
1988M05	0.42%	0.28%	0.42%
1988M06	0.36%	0.26%	0.36%
1988M07	0.31%	0.24%	0.32%
1988M08	0.28%	0.21%	0.28%
1988M09	0.27%	0.20%	0.28%
1988M10	0.24%	0.19%	0.25%
1988M11	0.21%	0.17%	0.22%
1988M12	0.20%	0.16%	0.20%
1989M01	0.17%	0.14%	0.18%
1989M02	0.20%	0.15%	0.20%
1989M03	0.20%	0.15%	0.20%
1989M04	0.17%	0.14%	0.18%
1989M05	0.17%	0.16%	0.18%
1989M06	0.16%	0.17%	0.17%
1989M07	0.15%	0.15%	0.15%
1989M08	0.22%	0.19%	0.22%
1989M09	0.19%	0.17%	0.19%
1989M10	0.17%	0.16%	0.17%
1989M11	0.17%	0.14%	0.17%
1989M12	0.15%	0.14%	0.15%
1990M01	0.14%	0.17%	0.14%
1990M02	0.21%	0.24%	0.21%
1990M03	0.18%	0.22%	0.18%
1990M04	0.16%	0.20%	0.16%
1990M05	0.16%	0.20%	0.16%
1990M06	0.24%	0.22%	0.24%
1990M07	0.21%	0.21%	0.21%
1990M08	0.19%	0.19%	0.19%
1990M09	0.31%	0.26%	0.31%
1990M10	0.32%	0.24%	0.32%
1990M11	0.28%	0.24%	0.28%
1990M12	0.27%	0.22%	0.28%
1991M01	0.24%	0.20%	0.24%
1991M02	0.22%	0.19%	0.22%
1991M03	0.24%	0.18%	0.24%
1991M04	0.21%	0.16%	0.21%
1991M05	0.18%	0.16%	0.18%
1991M06	0.18%	0.15%	0.17%
1991M07	0.20%	0.14%	0.20%
1991M08	0.19%	0.13%	0.19%

1991M09	0.17%	0.12%	0.17%
1991M10	0.16%	0.11%	0.16%
1991M11	0.14%	0.11%	0.14%
1991M12	0.16%	0.10%	0.16%
1992M01	0.28%	0.14%	0.28%
1992M02	0.26%	0.17%	0.26%
1992M03	0.22%	0.17%	0.23%
1992M04	0.21%	0.16%	0.21%
1992M05	0.19%	0.17%	0.19%
1992M06	0.17%	0.16%	0.17%
1992M07	0.16%	0.14%	0.16%
1992M08	0.15%	0.18%	0.15%
1992M09	0.15%	0.17%	0.15%
1992M10	0.14%	0.15%	0.13%
1992M11	0.12%	0.14%	0.12%
1992M12	0.12%	0.13%	0.12%
1993M01	0.11%	0.13%	0.11%
1993M02	0.10%	0.12%	0.10%
1993M03	0.10%	0.15%	0.10%
1993M04	0.09%	0.14%	0.09%
1993M05	0.10%	0.13%	0.10%
1993M06	0.10%	0.12%	0.10%
1993M07	0.10%	0.13%	0.09%
1993M08	0.09%	0.12%	0.09%
1993M09	0.10%	0.13%	0.10%
1993M10	0.10%	0.12%	0.09%
1993M11	0.09%	0.11%	0.09%
1993M12	0.09%	0.14%	0.09%
1994M01	0.09%	0.13%	0.09%
1994M02	0.09%	0.12%	0.09%
1994M03	0.10%	0.15%	0.10%
1994M04	0.13%	0.16%	0.13%
1994M05	0.12%	0.14%	0.12%
1994M06	0.11%	0.14%	0.11%
1994M07	0.12%	0.13%	0.12%
1994M08	0.12%	0.13%	0.11%
1994M09	0.12%	0.12%	0.12%
1994M10	0.13%	0.12%	0.12%
1994M11	0.12%	0.11%	0.12%
1994M12	0.14%	0.11%	0.14%
1995M01	0.12%	0.10%	0.12%
1995M02	0.12%	0.14%	0.12%
1995M03	0.12%	0.13%	0.12%
1995M04	0.11%	0.12%	0.11%
1995M05	0.11%	0.12%	0.11%
1995M06	0.11%	0.12%	0.11%
1995M07	0.11%	0.11%	0.11%
1995M08	0.11%	0.10%	0.11%
1995M09	0.10%	0.10%	0.10%
1995M10	0.11%	0.12%	0.11%
1995M11	0.10%	0.11%	0.10%
1995M12	0.11%	0.11%	0.11%
1996M01	0.11%	0.14%	0.10%
1996M02	0.11%	0.13%	0.11%
1996M03	0.10%	0.14%	0.10%
1996M04	0.10%	0.14%	0.09%
1996M05	0.09%	0.12%	0.09%
1996M06	0.09%	0.12%	0.09%
1996M07	0.09%	0.12%	0.08%
1996M08	0.12%	0.16%	0.12%
1996M09	0.11%	0.15%	0.11%
1996M10	0.13%	0.13%	0.13%
1996M11	0.12%	0.14%	0.12%
1996M12	0.17%	0.13%	0.17%
1997M01	0.17%	0.12%	0.16%
1997M02	0.18%	0.11%	0.18%
1997M03	0.16%	0.11%	0.16%
1997M04	0.18%	0.11%	0.18%
1997M05	0.19%	0.11%	0.19%
1997M06	0.20%	0.11%	0.20%
1997M07	0.19%	0.11%	0.19%
1997M08	0.23%	0.10%	0.23%
1997M09	0.26%	0.10%	0.26%
1997M10	0.24%	0.11%	0.25%
1997M11	0.24%	0.10%	0.24%
1997M12	0.23%	0.14%	0.23%
1998M01	0.20%	0.17%	0.20%
1998M02	0.17%	0.18%	0.17%
1998M03	0.21%	0.17%	0.20%
1998M04	0.20%	0.19%	0.20%
1998M05	0.18%	0.18%	0.18%
1998M06	0.17%	0.16%	0.17%
1998M07	0.16%	0.15%	0.16%
1998M08	0.15%	0.17%	0.15%
1998M09	0.44%	0.16%	0.44%
1998M10	0.40%	0.20%	0.41%
1998M11	0.40%	0.19%	0.40%
1998M12	0.36%	0.17%	0.37%
1999M01	0.33%	0.16%	0.34%
1999M02	0.29%	0.17%	0.30%
1999M03	0.28%	0.18%	0.28%
1999M04	0.25%	0.17%	0.25%
1999M05	0.23%	0.22%	0.23%
1999M06	0.21%	0.22%	0.22%
1999M07	0.21%	0.22%	0.21%
1999M08	0.21%	0.20%	0.21%
1999M09	0.19%	0.18%	0.19%
1999M10	0.19%	0.20%	0.19%
1999M11	0.20%	0.18%	0.20%
1999M12	0.18%	0.24%	0.18%
2000M01	0.19%	0.22%	0.19%
2000M02	0.21%	0.30%	0.22%
2000M03	0.20%	0.32%	0.20%
2000M04	0.27%	0.29%	0.27%
2000M05	0.26%	0.30%	0.26%
2000M06	0.24%	0.29%	0.24%
2000M07	0.21%	0.30%	0.21%
2000M08	0.20%	0.30%	0.20%
2000M09	0.21%	0.44%	0.21%
2000M10	0.23%	0.45%	0.24%
2000M11	0.21%	0.43%	0.21%
2000M12	0.29%	0.39%	0.29%
2001M01	0.25%	0.42%	0.25%
2001M02	0.22%	0.50%	0.23%
2001M03	0.33%	0.45%	0.34%
2001M04	0.36%	0.40%	0.37%
2001M05	0.36%	0.38%	0.37%
2001M06	0.31%	0.36%	0.31%
2001M07	0.28%	0.41%	0.29%
2001M08	0.25%	0.39%	0.26%
2001M09	0.29%	0.37%	0.30%
2001M10	0.37%	0.50%	0.38%
2001M11	0.31%	0.44%	0.32%
2001M12	0.32%	0.44%	0.33%
2002M01	0.28%	0.39%	0.28%
2002M02	0.25%	0.40%	0.25%
2002M03	0.23%	0.36%	0.23%
2002M04	0.21%	0.45%	0.21%
2002M05	0.25%	0.41%	0.25%
2002M06	0.22%	0.48%	0.23%
2002M07	0.28%	0.50%	0.29%
2002M08	0.35%	0.68%	0.36%

2002M09	0.30%	0.60%	0.31%
2002M10	0.45%	0.75%	0.46%
2002M11	0.45%	0.67%	0.45%
2002M12	0.40%	0.59%	0.41%
2003M01	0.42%	0.53%	0.42%
2003M02	0.38%	0.49%	0.38%
2003M03	0.34%	0.47%	0.34%
2003M04	0.29%	0.43%	0.29%
2003M05	0.31%	0.44%	0.31%
2003M06	0.29%	0.48%	0.29%
2003M07	0.25%	0.42%	0.25%
2003M08	0.22%	0.44%	0.22%
2003M09	0.19%	0.39%	0.19%
2003M10	0.17%	0.36%	0.18%
2003M11	0.18%	0.32%	0.18%
2003M12	0.16%	0.28%	0.16%
2004M01	0.17%	0.29%	0.17%
2004M02	0.15%	0.26%	0.15%
2004M03	0.14%	0.23%	0.14%
2004M04	0.13%	0.21%	0.13%
2004M05	0.13%	0.21%	0.13%
2004M06	0.12%	0.19%	0.12%
2004M07	0.11%	0.17%	0.11%
2004M08	0.12%	0.15%	0.12%
2004M09	0.11%	0.15%	0.11%
2004M10	0.11%	0.14%	0.10%
2004M11	0.10%	0.14%	0.10%
2004M12	0.11%	0.14%	0.11%
2005M01	0.11%	0.13%	0.11%
2005M02	0.12%	0.12%	0.11%
2005M03	0.11%	0.12%	0.11%
2005M04	0.11%	0.11%	0.11%
2005M05	0.11%	0.11%	0.11%
2005M06	0.11%	0.10%	0.11%
2005M07	0.10%	0.12%	0.10%
2005M08	0.11%	0.11%	0.11%
2005M09	0.11%	0.10%	0.10%
2005M10	0.10%	0.11%	0.10%
2005M11	0.10%	0.15%	0.10%
2005M12	0.11%	0.14%	0.10%
2006M01	0.10%	0.12%	0.10%
2006M02	0.10%	0.12%	0.10%
2006M03	0.09%	0.11%	0.09%
2006M04	0.09%	0.13%	0.09%
2006M05	0.09%	0.12%	0.08%
2006M06	0.10%	0.11%	0.10%
2006M07	0.09%	0.10%	0.09%
2006M08	0.09%	0.12%	0.09%
2006M09	0.09%	0.11%	0.09%
2006M10	0.09%	0.11%	0.09%
2006M11	0.09%	0.13%	0.09%
2006M12	0.09%	0.12%	0.09%
2007M01	0.09%	0.11%	0.08%
2007M02	0.08%	0.10%	0.08%
2007M03	0.09%	0.11%	0.09%
2007M04	0.09%	0.12%	0.08%
2007M05	0.10%	0.12%	0.10%
2007M06	0.10%	0.11%	0.10%
2007M07	0.11%	0.14%	0.10%
2007M08	0.12%	0.15%	0.11%
2007M09	0.11%	0.13%	0.11%
2007M10	0.11%	0.13%	0.11%
2007M11	0.11%	0.16%	0.10%
2007M12	0.13%	0.15%	0.13%
2008M01	0.12%	0.13%	0.12%
2008M02	0.17%	0.18%	0.17%
2008M03	0.18%	0.20%	0.18%
2008M04	0.16%	0.18%	0.16%
2008M05	0.16%	0.19%	0.16%
2008M06	0.15%	0.17%	0.15%
2008M07	0.24%	0.16%	0.24%
2008M08	0.22%	0.19%	0.22%
2008M09	0.19%	0.18%	0.19%
2008M10	0.29%	0.32%	0.30%
2008M11	0.67%	0.46%	0.69%
2008M12	0.69%	0.41%	0.70%
2009M01	0.58%	0.37%	0.59%
2009M02	0.63%	0.33%	0.64%
2009M03	0.74%	0.49%	0.76%
2009M04	0.67%	0.44%	0.69%
2009M05	0.63%	0.39%	0.64%
2009M06	0.54%	0.35%	0.56%
2009M07	0.46%	0.33%	0.47%
2009M08	0.44%	0.30%	0.45%
2009M09	0.37%	0.27%	0.38%
2009M10	0.33%	0.24%	0.33%
2009M11	0.29%	0.23%	0.30%
2009M12	0.28%	0.22%	0.29%
2010M01	0.24%	0.22%	0.25%
2010M02	0.24%	0.23%	0.25%
2010M03	0.22%	0.21%	0.22%
2010M04	0.22%	0.20%	0.22%
2010M05	0.19%	0.18%	0.20%
2010M06	0.27%	0.21%	0.28%
2010M07	0.29%	0.19%	0.29%
2010M08	0.30%	0.22%	0.30%
2010M09	0.30%	0.20%	0.30%
2010M10	0.33%	0.18%	0.34%
2010M11	0.29%	0.17%	0.30%
2010M12	0.26%	0.17%	0.26%
2011M01	0.26%	0.16%	0.26%
2011M02	0.23%	0.14%	0.23%
2011M03	0.21%	0.13%	0.21%
2011M04	0.18%	0.12%	0.18%
2011M05	0.17%	0.12%	0.17%
2011M06	0.16%	0.11%	0.16%
2011M07	0.15%	0.11%	0.15%
2011M08	0.14%	0.10%	0.14%
2011M09	0.18%	0.09%	0.18%
2011M10	0.24%	0.09%	0.24%
2011M11	0.33%	0.09%	0.34%
2011M12	0.29%	0.09%	0.29%
2012M01	0.25%	0.09%	0.25%
2012M02	0.23%	0.10%	0.23%
2012M03	0.22%	0.09%	0.22%
2012M04	0.20%	0.09%	0.20%
2012M05	0.18%	0.08%	0.18%
2012M06	0.22%	0.08%	0.22%
2012M07	0.20%	0.09%	0.21%
2012M08	0.18%	0.09%	0.18%
2012M09	0.16%	0.11%	0.16%
2012M10	0.15%	0.10%	0.15%
2012M11	0.14%	0.09%	0.14%
2012M12	0.13%	0.12%	0.13%
2013M01	0.12%	0.11%	0.12%
2013M02	0.14%	0.11%	0.14%
2013M03	0.13%	0.11%	0.12%
2013M04	0.13%	0.12%	0.13%
2013M05	0.12%	0.15%	0.12%
2013M06	0.11%	0.23%	0.11%
2013M07	0.11%	0.20%	0.11%
2013M08	0.13%	0.19%	0.13%

2013M09	0.13%	0.21%	0.13%
2013M10	0.13%	0.19%	0.13%
2013M11	0.14%	0.18%	0.14%
2013M12	0.13%	0.17%	0.13%
2014M01	0.13%	0.15%	0.12%
2014M02	0.14%	0.14%	0.13%

2014M03	0.14%	0.14%	0.14%
2014M04	0.13%	0.14%	0.13%
2014M05	0.12%	0.14%	0.12%
2014M06	0.11%	0.13%	0.11%
2014M07	0.11%	0.13%	0.11%
2014M08	0.11%	0.18%	0.10%
2014M09	0.11%	0.18%	0.11%
2014M10	0.11%	0.17%	0.11%
2014M11	0.11%	0.21%	0.10%
2014M12	0.11%	0.19%	0.10%
2015M01	0.10%	0.18%	0.10%
2015M02	0.11%	0.17%	0.11%
2015M03	0.14%	0.20%	0.13%
2015M04	0.13%	0.18%	0.13%
2015M05	0.12%	0.17%	0.12%
2015M06	0.11%	0.15%	0.11%
2015M07	0.11%	0.18%	0.11%
2015M08	0.11%	0.18%	0.10%
2015M09	0.16%	0.19%	0.15%
2015M10	0.15%	0.18%	0.15%
2015M11	0.21%	0.16%	0.21%
2015M12	0.19%	0.15%	0.19%
2016M01	0.17%	0.14%	0.17%
2016M02	0.20%	0.15%	0.20%
2016M03	0.18%	0.14%	0.18%
2016M04	0.20%	0.19%	0.20%
2016M05	0.18%	0.18%	0.18%
2016M06	0.16%	0.16%	0.16%
2016M07	0.14%	0.20%	0.14%
2016M08	0.14%	0.18%	0.14%
2016M09	0.13%	0.20%	0.13%
2016M10	0.12%	0.18%	0.12%
2016M11	0.12%	0.17%	0.12%
2016M12	0.12%	0.19%	0.12%
2017M01	0.11%	0.19%	0.11%
2017M02	0.11%	0.17%	0.10%
2017M03	0.12%	0.18%	0.11%
2017M04	0.11%	0.17%	0.10%
2017M05	0.10%	0.15%	0.10%
2017M06	0.10%	0.15%	0.09%
2017M07	0.09%	0.15%	0.09%
2017M08	0.09%	0.14%	0.09%
2017M09	0.09%	0.13%	0.08%
2017M10	0.09%	0.13%	0.08%
2017M11	0.09%	0.13%	0.08%
2017M12	0.09%	0.13%	0.09%
2018M01	0.09%	0.16%	0.08%
2018M02	0.12%	0.16%	0.12%
2018M03	0.13%	0.17%	0.13%
2018M04	0.13%	0.16%	0.13%
2018M05	0.12%	0.15%	0.12%
2018M06	0.12%	0.14%	0.11%
2018M07	0.11%	0.13%	0.11%
2018M08	0.11%	0.12%	0.11%
2018M09	0.11%	0.11%	0.11%
2018M10	0.11%	0.10%	0.10%
2018M11	0.17%	0.10%	0.17%
2018M12	0.15%	0.10%	0.15%
2019M01	0.26%	0.11%	0.26%
2019M02	0.29%	0.13%	0.29%
2019M03	0.26%	0.13%	0.25%
2019M04	0.22%	0.12%	0.22%
2019M05	0.21%	0.11%	0.21%
2019M06	0.25%	0.11%	0.25%
2019M07	0.27%	0.11%	0.27%
2019M08	0.23%	0.10%	0.23%
2019M09	0.21%	0.11%	0.21%
2019M10	0.19%	0.12%	0.18%
2019M11	0.17%	0.11%	0.17%
2019M12	0.16%	0.11%	0.16%
2020M01	0.15%	0.11%	0.15%
2020M02	0.14%	0.14%	0.14%
2020M03	0.22%	0.24%	0.22%
2020M04	0.42%	0.34%	0.42%
2020M05	0.52%	0.31%	0.53%
2020M06	0.45%	0.29%	0.46%
2020M07	0.39%	0.29%	0.39%
2020M08	0.35%	0.31%	0.36%
2020M09	0.35%	0.29%	0.35%
2020M10	0.33%	0.26%	0.34%
2020M11	0.30%	0.25%	0.31%
2020M12	0.39%	0.22%	0.39%
2021M01	0.34%	0.20%	0.34%
2021M02	0.30%	0.18%	0.30%
2021M03	0.26%	0.21%	0.26%
2021M04	0.24%	0.29%	0.24%
2021M05	0.23%	0.27%	0.24%
2021M06	0.20%	0.25%	0.21%
2021M07	0.18%	0.24%	0.18%
2021M08	0.17%	0.22%	0.17%
2021M09	0.16%	0.21%	0.16%
2021M10	0.18%	0.24%	0.18%
2021M11	0.21%	0.23%	0.21%
2021M12	0.19%	0.21%	0.19%
2022M01	0.18%	0.28%	0.18%
2022M02	0.21%	0.26%	0.21%
2022M03	0.20%	0.25%	0.20%
2022M04	0.19%	0.33%	0.19%
2022M05	0.28%	0.32%	0.29%
2022M06	0.25%	0.29%	0.25%
2022M07	0.32%	0.30%	0.33%
2022M08	0.36%	0.29%	0.36%
2022M09	0.35%	0.26%	0.35%
2022M10	0.44%	0.39%	0.45%
2022M11	0.43%	0.34%	0.43%
2022M12	0.38%	0.34%	0.39%
2023M01	0.39%	0.31%	0.40%
2023M02	0.37%	0.28%	0.37%
2023M03	0.33%	0.30%	0.34%
2023M04	0.29%	0.28%	0.30%
2023M05	0.25%	0.25%	0.26%
2023M06	0.22%	0.27%	0.22%
2023M07	0.23%	0.24%	0.24%
2023M08	0.21%	0.22%	0.21%
2023M09	0.19%	0.25%	0.19%
2023M10	0.21%	0.27%	0.21%
2023M11	0.21%	0.24%	0.21%
2023M12	0.26%	0.23%	0.26%
2024M01	0.24%	0.21%	0.24%
2024M02	0.21%	0.20%	0.22%
2024M03	0.21%	0.18%	0.21%
2024M04	0.19%	0.20%	0.19%
Avg Pred. Variance	0.28%	0.30%	0.28%
Spot Variance	0.19%	0.20%	0.19%
GARCH Coefficient	3.112622	1.48993	2.76639
Predicted RP Based on Avg	10.96%	5.40%	9.86%

Predicted RP Based on Spot	7.42%	3.64%	6.61%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Jan-26	0.0000%		0.3100%							
Feb-26	-3.8500%		0.2800%					-4.1300%		
Mar-26	-5.7500%		0.3200%					-6.0700%		
Apr-26	2.5300%		0.3000%					2.2300%		
May-26	1.7900%		0.2800%					1.5100%		
Jun-26	4.5700%		0.3300%					4.2400%		
Jul-26	4.7900%		0.3100%					4.4800%		
Aug-26	2.4800%		0.3100%					2.1700%		
Sep-26	2.5200%		0.3000%					2.2200%		
Oct-26	-2.8400%		0.3000%					-3.1400%		
Nov-26	3.4700%		0.3100%					3.1600%		
Dec-26	1.9600%		0.3000%					1.6600%		
Jan-27	-1.9300%		0.3000%					-2.2300%		
Feb-27	5.3700%		0.2700%					5.1000%		
Mar-27	0.8700%		0.2900%					0.5800%		
Apr-27	2.0100%		0.2700%					1.7400%		
May-27	6.0700%		0.2800%					5.7900%		
Jun-27	-0.6700%		0.2700%					-0.9400%		
Jul-27	6.7000%		0.2700%					6.4300%		
Aug-27	5.1500%		0.2900%					4.8600%		
Sep-27	4.5000%		0.2700%					4.2300%		
Oct-27	-5.0200%		0.2800%					-5.3000%		
Nov-27	7.2100%		0.2700%					6.9400%		
Dec-27	2.7900%		0.2700%					2.5200%		
Jan-28	-0.4000%	3.7500%	0.2700%	0.3717%	0.3842%	0.3779%	0.4042%	-0.6700%	-0.8042%	3.3458%
Feb-28	-1.2500%	-0.8000%	0.2500%	0.3717%	0.3842%	0.3779%	0.4042%	-1.5000%	-1.6542%	-1.2042%
Mar-28	11.0100%	7.2300%	0.2700%	0.3717%	0.3825%	0.3771%	0.4017%	10.7400%	10.6083%	6.8283%
Apr-28	3.4500%	9.8600%	0.2600%	0.3717%	0.3833%	0.3775%	0.4017%	3.1900%	3.0483%	9.4583%
May-28	1.9700%	2.0800%	0.2700%	0.3742%	0.3867%	0.3804%	0.4058%	1.7000%	1.5642%	1.6742%
Jun-28	-3.8500%	-4.0100%	0.2700%	0.3808%	0.3958%	0.3883%	0.4158%	-4.1200%	-4.2658%	-4.4258%
Jul-28	1.4100%	-0.7600%	0.2700%	0.3842%	0.3992%	0.3917%	0.4200%	1.1400%	0.9900%	-1.1800%
Aug-28	8.0300%	6.8200%	0.2900%	0.3867%	0.4017%	0.3942%	0.4233%	7.7400%	7.6067%	6.3967%
Sep-28	2.5900%	2.8700%	0.2700%	0.3842%	0.3992%	0.3917%	0.4208%	2.3200%	2.1692%	2.4492%
Oct-28	1.6800%	-0.9200%	0.3000%	0.3842%	0.3983%	0.3913%	0.4158%	1.3800%	1.2642%	-1.3358%
Nov-28	12.9200%	21.4700%	0.2700%	0.3817%	0.3933%	0.3875%	0.4150%	12.6500%	12.5050%	21.0550%
Dec-28	0.4900%	1.0000%	0.2900%	0.3842%	0.3975%	0.3908%	0.4208%	0.2000%	0.0692%	0.5792%
Jan-29	5.8300%	13.2500%	0.2900%	0.3850%	0.3992%	0.3921%	0.4208%	5.5400%	5.4092%	12.8292%
Feb-29	-0.1900%	-2.3200%	0.2700%	0.3883%	0.4050%	0.3967%	0.4250%	-0.4600%	-0.6150%	-2.7450%
Mar-29	-0.1200%	-1.1000%	0.2800%	0.3917%	0.4100%	0.4008%	0.4283%	-0.4000%	-0.5483%	-1.5283%
Apr-29	1.7600%	3.4700%	0.3400%	0.3908%	0.4092%	0.4000%	0.4283%	1.4200%	1.3317%	3.0417%
May-29	-3.6200%	4.7000%	0.3000%	0.3917%	0.4092%	0.4004%	0.4283%	-3.9200%	-4.0483%	4.2717%
Jun-29	11.4000%	21.7800%	0.2900%	0.3975%	0.4150%	0.4063%	0.4358%	11.1100%	10.9642%	21.3442%
Jul-29	4.7100%	9.0500%	0.3200%	0.3975%	0.4142%	0.4058%	0.4367%	4.3900%	4.2733%	8.6133%
Aug-29	10.2800%	10.3300%	0.3000%	0.3992%	0.4158%	0.4075%	0.4417%	9.9800%	9.8383%	9.8883%
Sep-29	-4.7600%	0.0400%	0.3200%	0.4000%	0.4175%	0.4088%	0.4483%	-5.0800%	-5.2083%	-0.4083%
Oct-29	-19.7300%	-30.2200%	0.3100%	0.3975%	0.4175%	0.4075%	0.4450%	-20.0400%	-20.1750%	-30.6650%
Nov-29	-12.4600%	-14.2400%	0.2600%	0.3967%	0.4117%	0.4042%	0.4408%	-12.7200%	-12.9008%	-14.6808%
Dec-29	2.8200%	6.8000%	0.3100%	0.3892%	0.4033%	0.3963%	0.4358%	2.5100%	2.3842%	6.3642%
Jan-30	6.3900%	7.4000%	0.2900%	0.3883%	0.4050%	0.3967%	0.4383%	6.1000%	5.9517%	6.9617%
Feb-30	2.5900%	8.8500%	0.2600%	0.3908%	0.4075%	0.3992%	0.4408%	2.3300%	2.1492%	8.4092%
Mar-30	8.1200%	8.9100%	0.2900%	0.3850%	0.4000%	0.3925%	0.4317%	7.8300%	7.6883%	8.4783%
Apr-30	-0.8000%	3.4100%	0.2700%	0.3833%	0.3983%	0.3908%	0.4292%	-1.0700%	-1.2292%	2.9808%
May-30	-0.9600%	-2.3600%	0.2700%	0.3833%	0.3975%	0.3904%	0.4200%	-1.2300%	-1.3800%	-2.7800%
Jun-30	-16.2500%	-19.0300%	0.2900%	0.3808%	0.3967%	0.3888%	0.4175%	-16.5400%	-16.6675%	-19.4475%
Jul-30	3.8600%	1.7600%	0.2800%	0.3767%	0.3950%	0.3858%	0.4158%	3.5800%	3.4442%	1.3442%
Aug-30	1.4100%	0.7600%	0.2600%	0.3725%	0.3900%	0.3813%	0.4125%	1.1500%	0.9975%	0.3475%
Sep-30	-12.8200%	-11.0800%	0.2900%	0.3683%	0.3875%	0.3779%	0.4050%	-13.1100%	-13.2250%	-11.4850%
Oct-30	-8.5500%	-8.1800%	0.2700%	0.3683%	0.3892%	0.3788%	0.4067%	-8.8200%	-8.9567%	-8.5867%
Nov-30	-0.8900%	-7.3000%	0.2600%	0.3725%	0.3958%	0.3842%	0.4133%	-1.1500%	-1.3033%	-7.7133%
Dec-30	-7.0600%	-3.3900%	0.2800%	0.3767%	0.4042%	0.3904%	0.4258%	-7.3400%	-7.4858%	-3.8158%
Jan-31	5.0200%	5.4000%	0.2800%	0.3683%	0.3917%	0.3800%	0.4175%	4.7400%	4.6025%	4.9825%
Feb-31	11.9300%	15.2400%	0.2600%	0.3692%	0.3917%	0.3804%	0.4175%	11.6700%	11.5125%	14.8225%
Mar-31	-6.7500%	-2.3900%	0.2900%	0.3658%	0.3892%	0.3775%	0.4150%	-7.0400%	-7.1650%	-2.8050%
Apr-31	-9.3500%	-10.5400%	0.2700%	0.3667%	0.3967%	0.3817%	0.4050%	-9.6200%	-9.7550%	-10.9450%
May-31	-12.7900%	-10.2900%	0.2600%	0.3642%	0.3967%	0.3804%	0.4033%	-13.0500%	-13.1933%	-10.6933%
Jun-31	14.2100%	13.7300%	0.2800%	0.3633%	0.4008%	0.3821%	0.4058%	13.9300%	13.8042%	13.3242%
Jul-31	-7.2200%	-6.2200%	0.2700%	0.3633%	0.4008%	0.3821%	0.4025%	-7.4900%	-7.6225%	-6.6225%
Aug-31	1.8200%	2.5600%	0.2700%	0.3667%	0.4042%	0.3854%	0.4008%	1.5500%	1.4192%	2.1592%
Sep-31	-29.7300%	-31.4900%	0.2700%	0.3792%	0.4233%	0.4013%	0.4208%	-30.0000%	-30.1508%	-31.9108%
Oct-31	8.9600%	9.9000%	0.2900%	0.4158%	0.4642%	0.4400%	0.4617%	8.6700%	8.4983%	9.4383%
Nov-31	-7.9800%	-6.1400%	0.3100%	0.4117%	0.4675%	0.4396%	0.4592%	-8.2900%	-8.4392%	-6.5992%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-31	-14.0000%	-12.8300%	0.3200%	0.4433%	0.5217%	0.4825%	0.5200%	-14.3200%	-14.5200%	-13.3500%
Jan-32	-2.7100%	-2.0000%	0.3200%	0.4333%	0.5067%	0.4700%	0.5142%	-3.0300%	-3.2242%	-2.5142%
Feb-32	5.7000%	7.9900%	0.3200%	0.4358%	0.5108%	0.4733%	0.5342%	5.3800%	5.1658%	7.4558%
Mar-32	-11.5800%	-10.5800%	0.3100%	0.4150%	0.4875%	0.4513%	0.5050%	-11.8900%	-12.0850%	-11.0850%
Apr-32	-19.9700%	-15.3500%	0.3000%	0.4308%	0.5092%	0.4700%	0.5692%	-20.2700%	-20.5392%	-15.9192%
May-32	-21.9600%	-28.0600%	0.2800%	0.4467%	0.5317%	0.4892%	0.6133%	-22.2400%	-22.5733%	-28.6733%
Jun-32	-0.2200%	0.9000%	0.2800%	0.4508%	0.5500%	0.5004%	0.6308%	-0.5000%	-0.8508%	0.2692%
Jul-32	38.1500%	33.1800%	0.2800%	0.4383%	0.5425%	0.4904%	0.6067%	37.8700%	37.5433%	32.5733%
Aug-32	38.6900%	40.3000%	0.2800%	0.4092%	0.4858%	0.4475%	0.5292%	38.4100%	38.1608%	39.7708%
Sep-32	-3.4600%	-2.7000%	0.2600%	0.3917%	0.4617%	0.4267%	0.4925%	-3.7200%	-3.9525%	-3.1925%
Oct-32	-13.4900%	-10.4700%	0.2700%	0.3867%	0.4592%	0.4229%	0.4842%	-13.7600%	-13.9742%	-10.9542%
Nov-32	-4.1700%	-3.5400%	0.2600%	0.3858%	0.4642%	0.4250%	0.4900%	-4.4300%	-4.6600%	-4.0300%
Dec-32	5.6500%	8.9300%	0.2700%	0.3825%	0.4667%	0.4246%	0.4875%	5.3800%	5.1625%	8.4425%
Jan-33	0.8700%	-3.1100%	0.2700%	0.3700%	0.4417%	0.4058%	0.4492%	0.6000%	0.4208%	-3.5592%
Feb-33	-17.7200%	-19.8400%	0.2300%	0.3733%	0.4458%	0.4096%	0.4808%	-17.9500%	-18.2008%	-20.3208%
Mar-33	3.5300%	-10.8000%	0.2700%	0.3900%	0.4675%	0.4288%	0.5283%	3.2600%	3.0017%	-11.3283%
Apr-33	42.5600%	26.3500%	0.2500%	0.3983%	0.4842%	0.4413%	0.5742%	42.3100%	41.9858%	25.7758%
May-33	16.8300%	17.3200%	0.2800%	0.3858%	0.4500%	0.4179%	0.5417%	16.5500%	16.2883%	16.7783%
Jun-33	13.3800%	14.2600%	0.2500%	0.3717%	0.4242%	0.3979%	0.5092%	13.1300%	12.8708%	13.7508%
Jul-33	-8.6200%	-12.0400%	0.2600%	0.3633%	0.4025%	0.3829%	0.4925%	-8.8800%	-9.1125%	-12.5325%
Aug-33	12.0600%	-0.5600%	0.2600%	0.3583%	0.3975%	0.3779%	0.4983%	11.8000%	11.5617%	-1.0583%
Sep-33	-11.1800%	-17.5900%	0.2500%	0.3633%	0.4133%	0.3883%	0.5300%	-11.4300%	-11.7100%	-18.1200%
Oct-33	-8.5500%	-7.1200%	0.2600%	0.3617%	0.4142%	0.3879%	0.5300%	-8.8100%	-9.0800%	-7.6500%
Nov-33	11.2700%	-1.8000%	0.2500%	0.3783%	0.4458%	0.4121%	0.5883%	11.0200%	10.6817%	-2.3883%
Dec-33	2.5300%	1.2600%	0.2800%	0.3750%	0.4392%	0.4071%	0.6017%	2.2500%	1.9283%	0.6583%
Jan-34	10.6900%	17.4600%	0.2900%	0.3625%	0.4167%	0.3896%	0.5467%	10.4000%	10.1433%	16.9133%
Feb-34	-3.2200%	-2.4200%	0.2400%	0.3500%	0.3917%	0.3708%	0.4817%	-3.4600%	-3.7017%	-2.9017%
Mar-34	0.0000%	-1.1100%	0.2700%	0.3442%	0.3792%	0.3617%	0.4717%	-0.2700%	-0.4717%	-1.5817%
Apr-34	-2.5100%	-3.5100%	0.2500%	0.3392%	0.3692%	0.3542%	0.4533%	-2.7600%	-2.9633%	-3.9633%
May-34	-7.3600%	-7.6500%	0.2500%	0.3342%	0.3642%	0.3492%	0.4492%	-7.6100%	-7.8092%	-8.0992%
Jun-34	2.2900%	4.7800%	0.2400%	0.3275%	0.3583%	0.3429%	0.4500%	2.0500%	1.8400%	4.3300%
Jul-34	-11.3200%	-16.0300%	0.2400%	0.3242%	0.3567%	0.3404%	0.4408%	-11.5600%	-11.7608%	-16.4708%
Aug-34	6.1100%	2.6900%	0.2400%	0.3275%	0.3617%	0.3446%	0.4525%	5.8700%	5.6575%	2.2375%
Sep-34	-0.3300%	0.9500%	0.2300%	0.3300%	0.3683%	0.3492%	0.4633%	-0.5600%	-0.7933%	0.4867%
Oct-34	-2.8600%	-6.6600%	0.2700%	0.3250%	0.3633%	0.3442%	0.4500%	-3.1300%	-3.3100%	-7.1100%
Nov-34	9.4200%	-0.4800%	0.2500%	0.3217%	0.3567%	0.3392%	0.4483%	9.1700%	8.9717%	-0.9283%
Dec-34	-0.1000%	-7.0100%	0.2500%	0.3175%	0.3558%	0.3367%	0.4467%	-0.3500%	-0.5467%	-7.4567%
Jan-35	-4.1100%	-2.3100%	0.2500%	0.3142%	0.3508%	0.3325%	0.4317%	-4.3600%	-4.5417%	-2.7417%
Feb-35	-3.4100%	-11.3600%	0.2100%	0.3075%	0.3442%	0.3258%	0.4133%	-3.6200%	-3.8233%	-11.7733%
Mar-35	-2.8600%	10.4300%	0.2200%	0.3058%	0.3425%	0.3242%	0.4067%	-3.0800%	-3.2667%	10.0233%
Apr-35	9.8000%	11.7800%	0.2300%	0.3050%	0.3400%	0.3225%	0.3992%	9.5700%	9.4008%	11.3808%
May-35	4.0900%	11.0600%	0.2300%	0.3042%	0.3358%	0.3200%	0.3842%	3.8600%	3.7058%	10.6758%
Jun-35	6.9900%	10.3600%	0.2200%	0.3008%	0.3325%	0.3167%	0.3775%	6.7700%	6.6125%	9.9825%
Jul-35	8.5000%	8.7000%	0.2400%	0.2967%	0.3242%	0.3104%	0.3683%	8.2600%	8.1317%	8.3317%
Aug-35	2.8000%	5.6300%	0.2300%	0.3000%	0.3225%	0.3113%	0.3700%	2.5700%	2.4300%	5.2600%
Sep-35	2.5600%	-1.2200%	0.2300%	0.2992%	0.3208%	0.3100%	0.3692%	2.3300%	2.1908%	-1.5892%
Oct-35	7.7700%	12.2400%	0.2300%	0.2933%	0.3183%	0.3058%	0.3667%	7.5400%	7.4033%	11.8733%
Nov-35	4.7400%	1.0800%	0.2400%	0.2892%	0.3108%	0.3000%	0.3625%	4.5000%	4.3775%	0.7175%
Dec-35	3.9400%	4.7900%	0.2400%	0.2867%	0.3042%	0.2954%	0.3575%	3.7000%	3.5825%	4.4325%
Jan-36	6.7000%	11.0300%	0.2400%	0.2808%	0.2975%	0.2892%	0.3508%	6.4600%	6.3492%	10.6792%
Feb-36	2.2400%	-3.4200%	0.2300%	0.2767%	0.2958%	0.2863%	0.3475%	2.0100%	1.8925%	-3.7675%
Mar-36	2.6800%	0.3300%	0.2400%	0.2742%	0.2958%	0.2850%	0.3475%	2.4400%	2.3325%	-0.0175%
Apr-36	-7.5100%	-8.1400%	0.2200%	0.2742%	0.2975%	0.2858%	0.3475%	-7.7300%	-7.8575%	-8.4875%
May-36	5.4500%	7.6100%	0.2200%	0.2725%	0.2942%	0.2833%	0.3450%	5.2300%	5.1050%	7.2650%
Jun-36	3.3300%	3.5000%	0.2400%	0.2700%	0.2925%	0.2813%	0.3433%	3.0900%	2.9867%	3.1567%
Jul-36	7.0100%	10.0900%	0.2300%	0.2692%	0.2900%	0.2796%	0.3392%	6.7800%	6.6708%	9.7508%
Aug-36	1.5100%	-0.1800%	0.2300%	0.2675%	0.2867%	0.2771%	0.3383%	1.2800%	1.1717%	-0.5183%
Sep-36	0.3100%	-2.2500%	0.2100%	0.2650%	0.2842%	0.2746%	0.3375%	0.1000%	-0.0275%	-2.5875%
Oct-36	7.7500%	5.6600%	0.2300%	0.2650%	0.2808%	0.2729%	0.3367%	7.5200%	7.4133%	5.3233%
Nov-36	1.3400%	-1.6900%	0.2200%	0.2625%	0.2758%	0.2692%	0.3292%	1.1200%	1.0108%	-2.0192%
Dec-36	-0.2900%	-1.7400%	0.2200%	0.2583%	0.2733%	0.2658%	0.3192%	-0.5100%	-0.6092%	-2.0592%
Jan-37	3.9000%	1.9500%	0.2100%	0.2583%	0.2750%	0.2667%	0.3183%	3.6900%	3.5817%	1.6317%
Feb-37	1.9100%	-3.5300%	0.2000%	0.2683%	0.2833%	0.2758%	0.3242%	1.7100%	1.5858%	-3.8542%
Mar-37	-0.7700%	-5.7300%	0.2200%	0.2767%	0.2917%	0.2842%	0.3333%	-0.9900%	-1.1033%	-6.0633%
Apr-37	-8.0900%	-7.3600%	0.2300%	0.2850%	0.2975%	0.2913%	0.3392%	-8.3200%	-8.4292%	-7.6992%
May-37	-0.2400%	-5.1600%	0.2200%	0.2775%	0.2900%	0.2838%	0.3333%	-0.4600%	-0.5733%	-5.4933%
Jun-37	-5.0400%	-4.6700%	0.2500%	0.2733%	0.2858%	0.2796%	0.3325%	-5.2900%	-5.3725%	-5.0025%
Jul-37	10.4500%	16.7100%	0.2400%	0.2708%	0.2842%	0.2775%	0.3283%	10.2100%	10.1217%	16.3817%
Aug-37	-4.8300%	-9.0300%	0.2300%	0.2700%	0.2842%	0.2771%	0.3242%	-5.0600%	-5.1542%	-9.3542%
Sep-37	-14.0300%	-11.7400%	0.2300%	0.2733%	0.2883%	0.2808%	0.3300%	-14.2600%	-14.3600%	-12.0700%
Oct-37	-9.8100%	-5.1600%	0.2300%	0.2725%	0.2942%	0.2833%	0.3408%	-10.0400%	-10.1508%	-5.5008%
Nov-37	-8.6600%	0.8000%	0.2400%	0.2700%	0.2950%	0.2825%	0.3400%	-8.9000%	-9.0000%	0.4600%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-37	-4.5900%	-9.5100%	0.2300%	0.2675%	0.2917%	0.2796%	0.3358%	-4.8200%	-4.9258%	-9.8458%
Jan-38	1.5200%	-3.6800%	0.2300%	0.2642%	0.2917%	0.2779%	0.3342%	1.2900%	1.1858%	-4.0142%
Feb-38	6.7400%	3.4100%	0.2100%	0.2667%	0.2925%	0.2796%	0.3358%	6.5300%	6.4042%	3.0742%
Mar-38	-24.8700%	-19.8400%	0.2300%	0.2683%	0.2967%	0.2825%	0.3325%	-25.1000%	-25.2025%	-20.1725%
Apr-38	14.4700%	15.3800%	0.2200%	0.2750%	0.3108%	0.2929%	0.3400%	14.2500%	14.1300%	15.0400%
May-38	-3.3000%	1.8100%	0.2200%	0.2683%	0.2967%	0.2825%	0.3292%	-3.5200%	-3.6292%	1.4808%
Jun-38	25.0300%	16.2200%	0.2100%	0.2717%	0.3067%	0.2892%	0.3292%	24.8200%	24.7008%	15.8908%
Jul-38	7.4400%	1.4800%	0.2100%	0.2683%	0.3017%	0.2850%	0.3217%	7.2300%	7.1183%	1.1583%
Aug-38	-2.2600%	-5.5700%	0.2200%	0.2650%	0.2975%	0.2813%	0.3200%	-2.4800%	-2.5800%	-5.8900%
Sep-38	1.6600%	1.9100%	0.2100%	0.2675%	0.3000%	0.2838%	0.3233%	1.4500%	1.3367%	1.5867%
Oct-38	7.7600%	18.0100%	0.2200%	0.2625%	0.2942%	0.2783%	0.3158%	7.5400%	7.4442%	17.6942%
Nov-38	-2.7300%	-6.2000%	0.2100%	0.2583%	0.2883%	0.2733%	0.3108%	-2.9400%	-3.0408%	-6.5108%
Dec-38	4.0100%	3.9100%	0.2200%	0.2567%	0.2850%	0.2708%	0.3117%	3.7900%	3.6983%	3.5983%
Jan-39	-6.7400%	1.6500%	0.2100%	0.2508%	0.2767%	0.2638%	0.3067%	-6.9500%	-7.0467%	1.3433%
Feb-39	3.9000%	8.0100%	0.1900%	0.2500%	0.2717%	0.2608%	0.2992%	3.7100%	3.6008%	7.7108%
Mar-39	-13.3900%	-13.7800%	0.2100%	0.2492%	0.2683%	0.2588%	0.2950%	-13.6000%	-13.6850%	-14.0750%
Apr-39	-0.2700%	2.8500%	0.1900%	0.2517%	0.2683%	0.2600%	0.2958%	-0.4600%	-0.5658%	2.5542%
May-39	7.3300%	6.6500%	0.2000%	0.2475%	0.2633%	0.2554%	0.2917%	7.1300%	7.0383%	6.3583%
Jun-39	-6.1200%	-4.2300%	0.1800%	0.2433%	0.2608%	0.2521%	0.2892%	-6.3000%	-6.4092%	-4.5192%
Jul-39	11.0500%	12.0800%	0.1900%	0.2408%	0.2567%	0.2488%	0.2858%	10.8600%	10.7642%	11.7942%
Aug-39	-6.4800%	-6.4700%	0.1800%	0.2442%	0.2592%	0.2517%	0.2842%	-6.6600%	-6.7642%	-6.7542%
Sep-39	16.7300%	4.2100%	0.1900%	0.2708%	0.2908%	0.2808%	0.3092%	16.5400%	16.4208%	3.9008%
Oct-39	-1.2300%	1.3000%	0.2300%	0.2625%	0.2792%	0.2708%	0.2983%	-1.4600%	-1.5283%	1.0017%
Nov-39	-3.9800%	-1.5700%	0.2000%	0.2500%	0.2633%	0.2567%	0.2842%	-4.1800%	-4.2642%	-1.8542%
Dec-39	2.7000%	2.7200%	0.1900%	0.2450%	0.2617%	0.2533%	0.2817%	2.5100%	2.4183%	2.4383%
Jan-40	-3.3600%	0.6900%	0.2000%	0.2400%	0.2567%	0.2483%	0.2783%	-3.5600%	-3.6383%	0.4117%
Feb-40	1.3300%	-1.0200%	0.1800%	0.2383%	0.2542%	0.2463%	0.2792%	1.1500%	1.0508%	-1.2992%
Mar-40	1.2400%	0.9400%	0.1900%	0.2367%	0.2533%	0.2450%	0.2783%	1.0500%	0.9617%	0.6617%
Apr-40	-0.2400%	-0.9200%	0.1800%	0.2350%	0.2492%	0.2421%	0.2708%	-0.4200%	-0.5108%	-1.1908%
May-40	-22.8900%	-19.6400%	0.1900%	0.2442%	0.2567%	0.2504%	0.2750%	-23.0800%	-23.1650%	-19.9150%
Jun-40	8.0900%	15.0600%	0.1900%	0.2467%	0.2583%	0.2525%	0.2783%	7.9000%	7.8117%	14.7817%
Jul-40	3.4100%	0.6500%	0.2000%	0.2400%	0.2508%	0.2454%	0.2692%	3.2100%	3.1408%	0.3808%
Aug-40	3.5000%	-0.9400%	0.1900%	0.2375%	0.2525%	0.2450%	0.2675%	3.3100%	3.2325%	-1.2075%
Sep-40	1.2300%	-2.1100%	0.1800%	0.2350%	0.2508%	0.2429%	0.2650%	1.0500%	0.9650%	-2.3750%
Oct-40	4.2200%	3.1700%	0.1800%	0.2325%	0.2508%	0.2417%	0.2625%	4.0400%	3.9575%	2.9075%
Nov-40	-3.1600%	-12.0700%	0.1800%	0.2292%	0.2467%	0.2379%	0.2592%	-3.3400%	-3.4192%	-12.3292%
Dec-40	0.0900%	1.5400%	0.1700%	0.2258%	0.2433%	0.2346%	0.2583%	-0.0800%	-0.1683%	1.2817%
Jan-41	-4.6300%	-0.8400%	0.1600%	0.2292%	0.2458%	0.2375%	0.2625%	-4.7900%	-4.8925%	-1.1025%
Feb-41	-0.6000%	-2.3300%	0.1600%	0.2317%	0.2500%	0.2408%	0.2667%	-0.7600%	-0.8667%	-2.5967%
Mar-41	0.7100%	-2.8000%	0.1800%	0.2333%	0.2508%	0.2421%	0.2633%	0.5300%	0.4467%	-3.0633%
Apr-41	-6.1200%	-8.4400%	0.1700%	0.2350%	0.2533%	0.2442%	0.2617%	-6.2900%	-6.3817%	-8.7017%
May-41	1.8300%	-3.3700%	0.1700%	0.2342%	0.2492%	0.2417%	0.2567%	1.6600%	1.5733%	-3.6267%
Jun-41	5.7800%	2.5700%	0.1600%	0.2308%	0.2458%	0.2383%	0.2525%	5.6200%	5.5275%	2.3175%
Jul-41	5.7900%	5.3800%	0.1600%	0.2283%	0.2417%	0.2350%	0.2500%	5.6300%	5.5400%	5.1300%
Aug-41	0.1000%	-1.9200%	0.1600%	0.2283%	0.2417%	0.2350%	0.2483%	-0.0600%	-0.1483%	-2.1683%
Sep-41	-0.6800%	-2.8200%	0.1600%	0.2292%	0.2425%	0.2358%	0.2500%	-0.8400%	-0.9300%	-3.0700%
Oct-41	-6.5700%	-8.4800%	0.1600%	0.2275%	0.2392%	0.2333%	0.2500%	-6.7300%	-6.8200%	-8.7300%
Nov-41	-2.8400%	-6.5200%	0.1400%	0.2267%	0.2383%	0.2325%	0.2483%	-2.9800%	-3.0883%	-6.7683%
Dec-41	-4.0700%	-6.7800%	0.1600%	0.2333%	0.2458%	0.2396%	0.2550%	-4.2300%	-4.3250%	-7.0350%
Jan-42	1.6100%	2.5200%	0.2100%	0.2358%	0.2467%	0.2413%	0.2575%	1.4000%	1.3525%	2.2625%
Feb-42	-1.5900%	-3.3900%	0.1900%	0.2375%	0.2483%	0.2429%	0.2575%	-1.7800%	-1.8475%	-3.6475%
Mar-42	-6.5200%	-10.4600%	0.2100%	0.2383%	0.2500%	0.2442%	0.2600%	-6.7300%	-6.7800%	-10.7200%
Apr-42	-4.0000%	-4.3200%	0.2000%	0.2358%	0.2483%	0.2421%	0.2575%	-4.2000%	-4.2575%	-4.5775%
May-42	7.9600%	9.5600%	0.1900%	0.2375%	0.2500%	0.2438%	0.2583%	7.7700%	7.7017%	9.3017%
Jun-42	2.2100%	0.5700%	0.2100%	0.2375%	0.2508%	0.2442%	0.2600%	2.0000%	1.9500%	0.3100%
Jul-42	3.3700%	0.4000%	0.2100%	0.2358%	0.2492%	0.2425%	0.2583%	3.1600%	3.1117%	0.1417%
Aug-42	1.6400%	0.2600%	0.2100%	0.2342%	0.2492%	0.2417%	0.2583%	1.4300%	1.3817%	0.0017%
Sep-42	2.9000%	4.6600%	0.2000%	0.2333%	0.2483%	0.2408%	0.2567%	2.7000%	2.6433%	4.4033%
Oct-42	6.7800%	13.6200%	0.2100%	0.2333%	0.2458%	0.2396%	0.2567%	6.5700%	6.5233%	13.3633%
Nov-42	-0.2100%	-0.1500%	0.2000%	0.2325%	0.2450%	0.2388%	0.2558%	-0.4100%	-0.4658%	-0.4058%
Dec-42	5.4900%	3.2800%	0.2100%	0.2342%	0.2467%	0.2404%	0.2550%	5.2800%	5.2350%	3.0250%
Jan-43	7.3700%	12.1700%	0.2000%	0.2325%	0.2442%	0.2383%	0.2542%	7.1700%	7.1158%	11.9158%
Feb-43	5.8300%	7.1900%	0.1900%	0.2308%	0.2408%	0.2358%	0.2517%	5.6400%	5.5783%	6.9383%
Mar-43	5.4500%	4.1200%	0.2100%	0.2300%	0.2400%	0.2350%	0.2508%	5.2400%	5.1992%	3.8692%
Apr-43	0.3500%	3.8700%	0.2000%	0.2300%	0.2400%	0.2350%	0.2500%	0.1500%	0.1000%	3.6200%
May-43	5.5200%	3.4700%	0.1900%	0.2283%	0.2392%	0.2338%	0.2500%	5.3300%	5.2700%	3.2200%
Jun-43	2.2300%	5.3800%	0.2100%	0.2267%	0.2375%	0.2321%	0.2483%	2.0200%	1.9817%	5.1317%
Jul-43	-5.2600%	0.3800%	0.2100%	0.2242%	0.2350%	0.2296%	0.2467%	-5.4700%	-5.5067%	0.1333%
Aug-43	1.7100%	1.0500%	0.2100%	0.2242%	0.2342%	0.2292%	0.2467%	1.5000%	1.4633%	0.8033%
Sep-43	2.6300%	3.2300%	0.2000%	0.2242%	0.2350%	0.2296%	0.2467%	2.4300%	2.3833%	2.9833%
Oct-43	-1.0800%	0.8200%	0.2000%	0.2250%	0.2358%	0.2304%	0.2475%	-1.2800%	-1.3275%	0.5725%
Nov-43	-6.5400%	-7.7500%	0.2100%	0.2258%	0.2367%	0.2313%	0.2483%	-6.7500%	-6.7883%	-7.9983%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-43	6.1700%	5.7800%	0.2100%	0.2283%	0.2392%	0.2338%	0.2492%	5.9600%	5.9208%	5.5308%
Jan-44	1.7100%	1.0600%	0.2100%	0.2267%	0.2358%	0.2313%	0.2492%	1.5000%	1.4608%	0.8108%
Feb-44	0.4200%	1.7900%	0.2000%	0.2283%	0.2358%	0.2321%	0.2492%	0.2200%	0.1708%	1.5408%
Mar-44	1.9500%	1.0400%	0.2100%	0.2283%	0.2350%	0.2317%	0.2475%	1.7400%	1.7025%	0.7925%
Apr-44	-1.0000%	-0.9100%	0.2000%	0.2283%	0.2350%	0.2317%	0.2492%	-1.2000%	-1.2492%	-1.1592%
May-44	5.0500%	3.0100%	0.2200%	0.2275%	0.2342%	0.2308%	0.2492%	4.8300%	4.8008%	2.7608%
Jun-44	5.4300%	5.2600%	0.2000%	0.2275%	0.2342%	0.2308%	0.2492%	5.2300%	5.1808%	5.0108%
Jul-44	-1.9300%	0.2900%	0.2100%	0.2267%	0.2333%	0.2300%	0.2467%	-2.1400%	-2.1767%	0.0433%
Aug-44	1.5700%	3.5700%	0.2100%	0.2258%	0.2325%	0.2292%	0.2450%	1.3600%	1.3250%	3.3250%
Sep-44	-0.0800%	-1.5000%	0.2000%	0.2267%	0.2325%	0.2296%	0.2442%	-0.2800%	-0.3242%	-1.7442%
Oct-44	0.2300%	1.3900%	0.2100%	0.2267%	0.2342%	0.2304%	0.2450%	0.0200%	-0.0150%	1.1450%
Nov-44	1.3300%	-1.3000%	0.2000%	0.2267%	0.2333%	0.2300%	0.2467%	1.1300%	1.0833%	-1.5467%
Dec-44	3.7400%	3.2400%	0.2000%	0.2250%	0.2300%	0.2275%	0.2475%	3.5400%	3.4925%	2.9925%
Jan-45	1.5800%	4.9700%	0.2100%	0.2242%	0.2300%	0.2271%	0.2492%	1.3700%	1.3308%	4.7208%
Feb-45	6.8300%	6.9500%	0.1800%	0.2208%	0.2275%	0.2242%	0.2483%	6.6500%	6.5817%	6.7017%
Mar-45	-4.4100%	-3.5700%	0.2000%	0.2183%	0.2267%	0.2225%	0.2475%	-4.6100%	-4.6575%	-3.8175%
Apr-45	9.0200%	10.6600%	0.1900%	0.2175%	0.2275%	0.2225%	0.2458%	8.8300%	8.7742%	10.4142%
May-45	1.9500%	1.7100%	0.1900%	0.2183%	0.2267%	0.2225%	0.2433%	1.7600%	1.7067%	1.4667%
Jun-45	-0.0700%	6.6200%	0.1900%	0.2175%	0.2242%	0.2208%	0.2392%	-0.2600%	-0.3092%	6.3808%
Jul-45	-1.8000%	-0.5100%	0.1800%	0.2167%	0.2233%	0.2200%	0.2358%	-1.9800%	-2.0358%	-0.7458%
Aug-45	6.4100%	0.3100%	0.1900%	0.2175%	0.2250%	0.2213%	0.2333%	6.2200%	6.1767%	0.0767%
Sep-45	4.3800%	7.3900%	0.1800%	0.2183%	0.2250%	0.2217%	0.2325%	4.2000%	4.1475%	7.1575%
Oct-45	3.2200%	6.4100%	0.1900%	0.2183%	0.2250%	0.2217%	0.2325%	3.0300%	2.9875%	6.1775%
Nov-45	3.9600%	4.7100%	0.1800%	0.2183%	0.2233%	0.2208%	0.2308%	3.7800%	3.7292%	4.4792%
Dec-45	1.1600%	-1.1700%	0.1800%	0.2175%	0.2233%	0.2204%	0.2292%	0.9800%	0.9308%	-1.3992%
Jan-46	7.1400%	11.9900%	0.1700%	0.2117%	0.2183%	0.2150%	0.2242%	6.9700%	6.9158%	11.7658%
Feb-46	-6.4100%	-6.4000%	0.1500%	0.2067%	0.2133%	0.2100%	0.2225%	-6.5600%	-6.6325%	-6.6225%
Mar-46	4.8000%	6.3100%	0.1600%	0.2058%	0.2117%	0.2088%	0.2217%	4.6400%	4.5783%	6.0883%
Apr-46	3.9300%	3.3800%	0.1700%	0.2050%	0.2133%	0.2092%	0.2208%	3.7600%	3.7092%	3.1592%
May-46	2.8800%	3.0100%	0.1800%	0.2092%	0.2150%	0.2121%	0.2242%	2.7000%	2.6558%	2.7858%
Jun-46	-3.7000%	-2.7600%	0.1600%	0.2075%	0.2158%	0.2117%	0.2250%	-3.8600%	-3.9250%	-2.9850%
Jul-46	-2.3900%	-3.9500%	0.1900%	0.2067%	0.2158%	0.2113%	0.2242%	-2.5800%	-2.6142%	-4.1742%
Aug-46	-6.7400%	-7.2400%	0.1700%	0.2092%	0.2183%	0.2138%	0.2258%	-6.9100%	-6.9658%	-7.4658%
Sep-46	-9.9700%	-10.5100%	0.1800%	0.2150%	0.2233%	0.2192%	0.2292%	-10.1500%	-10.1992%	-10.7392%
Oct-46	-0.6000%	2.2000%	0.1900%	0.2167%	0.2250%	0.2208%	0.2300%	-0.7900%	-0.8300%	1.9700%
Nov-46	-0.2700%	0.5800%	0.1800%	0.2158%	0.2242%	0.2200%	0.2300%	-0.4500%	-0.5000%	0.3500%
Dec-46	4.5700%	7.0600%	0.1900%	0.2175%	0.2242%	0.2208%	0.2300%	4.3800%	4.3400%	6.8300%
Jan-47	2.5500%	-0.0200%	0.1800%	0.2142%	0.2208%	0.2175%	0.2267%	2.3700%	2.3233%	-0.2467%
Feb-47	-0.7700%	-0.8900%	0.1600%	0.2125%	0.2200%	0.2163%	0.2267%	-0.9300%	-0.9967%	-1.1167%
Mar-47	-1.4900%	-3.6400%	0.1800%	0.2125%	0.2200%	0.2163%	0.2267%	-1.6700%	-1.7167%	-3.8667%
Apr-47	-3.6300%	-3.2000%	0.1700%	0.2108%	0.2192%	0.2150%	0.2250%	-3.8000%	-3.8550%	-3.4250%
May-47	0.1400%	-2.7900%	0.1700%	0.2108%	0.2192%	0.2150%	0.2250%	-0.0300%	-0.0850%	-3.0150%
Jun-47	5.5400%	4.2800%	0.1900%	0.2125%	0.2200%	0.2163%	0.2258%	5.3500%	5.3142%	4.0542%
Jul-47	3.8100%	2.1400%	0.1800%	0.2125%	0.2200%	0.2163%	0.2275%	3.6300%	3.5825%	1.9125%
Aug-47	-2.0300%	-0.2200%	0.1700%	0.2133%	0.2200%	0.2167%	0.2275%	-2.2000%	-2.2575%	-0.4475%
Sep-47	-1.1100%	-1.4200%	0.1800%	0.2175%	0.2242%	0.2208%	0.2333%	-1.2900%	-1.3433%	-1.6533%
Oct-47	2.3800%	-1.3300%	0.1800%	0.2250%	0.2325%	0.2288%	0.2400%	2.2000%	2.1400%	-1.5700%
Nov-47	-1.7500%	-8.2400%	0.1700%	0.2308%	0.2375%	0.2342%	0.2442%	-1.9200%	-1.9942%	-8.4842%
Dec-47	2.3300%	1.8900%	0.2100%	0.2383%	0.2450%	0.2417%	0.2542%	2.1200%	2.0758%	1.6358%
Jan-48	-3.7900%	0.7000%	0.2000%	0.2383%	0.2450%	0.2417%	0.2542%	-3.9900%	-4.0442%	0.4458%
Feb-48	-3.8800%	-3.7200%	0.1900%	0.2375%	0.2442%	0.2408%	0.2542%	-4.0700%	-4.1342%	-3.9742%
Mar-48	7.9300%	6.1700%	0.2200%	0.2358%	0.2417%	0.2388%	0.2517%	7.7100%	7.6783%	5.9183%
Apr-48	2.9200%	1.6000%	0.2000%	0.2317%	0.2392%	0.2354%	0.2475%	2.7200%	2.6725%	1.3525%
May-48	8.7900%	5.8300%	0.1800%	0.2300%	0.2383%	0.2342%	0.2450%	8.6100%	8.5450%	5.5850%
Jun-48	0.5400%	2.1200%	0.2100%	0.2300%	0.2375%	0.2338%	0.2450%	0.3300%	0.2950%	1.8750%
Jul-48	-5.0800%	-4.4300%	0.1900%	0.2342%	0.2408%	0.2375%	0.2492%	-5.2700%	-5.3292%	-4.6792%
Aug-48	1.5800%	0.3600%	0.2100%	0.2367%	0.2450%	0.2408%	0.2525%	1.3700%	1.3275%	0.1075%
Sep-48	-2.7600%	-0.7100%	0.2000%	0.2367%	0.2442%	0.2404%	0.2542%	-2.9600%	-3.0142%	-0.9642%
Oct-48	7.1000%	4.0300%	0.1900%	0.2367%	0.2450%	0.2408%	0.2525%	6.9100%	6.8475%	3.7775%
Nov-48	-9.6100%	-9.1300%	0.2100%	0.2367%	0.2433%	0.2400%	0.2558%	-9.8200%	-9.8658%	-9.3858%
Dec-48	3.4600%	2.2100%	0.2000%	0.2325%	0.2400%	0.2363%	0.2550%	3.2600%	3.2050%	1.9550%
Jan-49	0.3900%	5.0400%	0.2000%	0.2258%	0.2342%	0.2300%	0.2492%	0.1900%	0.1408%	4.7908%
Feb-49	-2.9600%	0.0500%	0.1800%	0.2258%	0.2333%	0.2296%	0.2492%	-3.1400%	-3.2092%	-0.1992%
Mar-49	3.2800%	3.6400%	0.1900%	0.2250%	0.2325%	0.2288%	0.2475%	3.0900%	3.0325%	3.3925%
Apr-49	-1.7900%	0.5800%	0.1800%	0.2250%	0.2325%	0.2288%	0.2467%	-1.9700%	-2.0367%	0.3333%
May-49	-2.5800%	0.3400%	0.2000%	0.2258%	0.2317%	0.2288%	0.2458%	-2.7800%	-2.8258%	0.0942%
Jun-49	0.1400%	-1.3400%	0.1900%	0.2258%	0.2317%	0.2288%	0.2450%	-0.0500%	-0.1050%	-1.5850%
Jul-49	6.5000%	5.6900%	0.1700%	0.2225%	0.2292%	0.2258%	0.2417%	6.3300%	6.2583%	5.4483%
Aug-49	2.1900%	3.4600%	0.1900%	0.2183%	0.2258%	0.2221%	0.2383%	2.0000%	1.9517%	3.2217%
Sep-49	2.6300%	3.7300%	0.1700%	0.2167%	0.2242%	0.2204%	0.2375%	2.4600%	2.3925%	3.4925%
Oct-49	3.4000%	1.1200%	0.1800%	0.2175%	0.2250%	0.2213%	0.2358%	3.2200%	3.1642%	0.8842%
Nov-49	1.7500%	1.5900%	0.1700%	0.2167%	0.2233%	0.2200%	0.2342%	1.5800%	1.5158%	1.3558%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-49	4.8600%	3.9600%	0.1700%	0.2150%	0.2225%	0.2188%	0.2317%	4.6900%	4.6283%	3.7283%
Jan-50	1.9700%	3.5300%	0.1800%	0.2142%	0.2208%	0.2175%	0.2300%	1.7900%	1.7400%	3.3000%
Feb-50	1.9900%	1.0000%	0.1600%	0.2150%	0.2208%	0.2179%	0.2300%	1.8300%	1.7600%	0.7700%
Mar-50	0.7000%	0.8400%	0.1800%	0.2150%	0.2217%	0.2183%	0.2300%	0.5200%	0.4700%	0.6100%
Apr-50	4.8600%	1.8500%	0.1600%	0.2167%	0.2217%	0.2192%	0.2308%	4.7000%	4.6292%	1.6192%
May-50	5.0900%	1.9200%	0.1900%	0.2175%	0.2242%	0.2208%	0.2325%	4.9000%	4.8575%	1.6875%
Jun-50	-5.4800%	-7.7100%	0.1700%	0.2183%	0.2242%	0.2213%	0.2325%	-5.6500%	-5.7125%	-7.9425%
Jul-50	1.1900%	-4.3600%	0.1800%	0.2208%	0.2267%	0.2238%	0.2325%	1.0100%	0.9575%	-4.5925%
Aug-50	4.4300%	1.5400%	0.1800%	0.2175%	0.2225%	0.2200%	0.2300%	4.2500%	4.2000%	1.3100%
Sep-50	5.9200%	4.1800%	0.1700%	0.2200%	0.2258%	0.2229%	0.2333%	5.7500%	5.6867%	3.9467%
Oct-50	0.9300%	-0.2700%	0.1900%	0.2225%	0.2267%	0.2246%	0.2358%	0.7400%	0.6942%	-0.5058%
Nov-50	1.6900%	-1.7600%	0.1800%	0.2225%	0.2267%	0.2246%	0.2383%	1.5100%	1.4517%	-1.9983%
Dec-50	5.1300%	3.1200%	0.1800%	0.2225%	0.2267%	0.2246%	0.2383%	4.9500%	4.8917%	2.8817%
Jan-51	6.3700%	4.3800%	0.2000%	0.2217%	0.2258%	0.2238%	0.2358%	6.1700%	6.1342%	4.1442%
Feb-51	1.5700%	2.6800%	0.1700%	0.2217%	0.2258%	0.2238%	0.2367%	1.4000%	1.3333%	2.4433%
Mar-51	-1.5600%	-1.7400%	0.1900%	0.2317%	0.2350%	0.2333%	0.2458%	-1.7500%	-1.8058%	-1.9858%
Apr-51	5.0900%	0.0500%	0.2000%	0.2392%	0.2442%	0.2417%	0.2575%	4.8900%	4.8325%	-0.2075%
May-51	-2.9900%	0.6600%	0.2100%	0.2408%	0.2442%	0.2425%	0.2608%	-3.2000%	-3.2508%	0.3992%
Jun-51	-2.2800%	-0.4000%	0.2000%	0.2450%	0.2492%	0.2471%	0.2675%	-2.4800%	-2.5475%	-0.6675%
Jul-51	7.1100%	4.3900%	0.2300%	0.2450%	0.2492%	0.2471%	0.2717%	6.8800%	6.8383%	4.1183%
Aug-51	4.7800%	1.5200%	0.2100%	0.2400%	0.2433%	0.2417%	0.2658%	4.5700%	4.5142%	1.2542%
Sep-51	0.1300%	0.8600%	0.1900%	0.2367%	0.2400%	0.2383%	0.2617%	-0.0600%	-0.1317%	0.5983%
Oct-51	-1.0300%	0.2900%	0.2300%	0.2408%	0.2442%	0.2425%	0.2642%	-1.2600%	-1.2942%	0.0258%
Nov-51	0.9600%	1.2000%	0.2100%	0.2467%	0.2517%	0.2492%	0.2700%	0.7500%	0.6900%	0.9300%
Dec-51	4.2400%	3.5200%	0.2200%	0.2508%	0.2550%	0.2529%	0.2742%	4.0200%	3.9658%	3.2458%
Jan-52	1.8100%	3.0500%	0.2300%	0.2483%	0.2542%	0.2513%	0.2742%	1.5800%	1.5358%	2.7758%
Feb-52	-2.8200%	0.5900%	0.2100%	0.2442%	0.2508%	0.2475%	0.2692%	-3.0300%	-3.0892%	0.3208%
Mar-52	5.0300%	1.7600%	0.2300%	0.2467%	0.2525%	0.2496%	0.2708%	4.8000%	4.7592%	1.4892%
Apr-52	-4.0200%	-1.5400%	0.2200%	0.2442%	0.2508%	0.2475%	0.2692%	-4.2400%	-4.2892%	-1.8092%
May-52	3.4300%	1.9000%	0.2000%	0.2442%	0.2500%	0.2471%	0.2683%	3.2300%	3.1617%	1.6317%
Jun-52	4.9000%	0.4900%	0.2200%	0.2450%	0.2525%	0.2488%	0.2683%	4.6800%	4.6317%	0.2217%
Jul-52	1.9600%	2.0600%	0.2200%	0.2458%	0.2533%	0.2496%	0.2683%	1.7400%	1.6917%	1.7917%
Aug-52	-0.7100%	2.0300%	0.2100%	0.2450%	0.2550%	0.2500%	0.2700%	-0.9200%	-0.9800%	1.7600%
Sep-52	-1.7600%	0.1500%	0.2300%	0.2458%	0.2558%	0.2508%	0.2700%	-1.9900%	-2.0300%	-0.1200%
Oct-52	0.2000%	1.0100%	0.2300%	0.2508%	0.2567%	0.2538%	0.2717%	-0.0300%	-0.0717%	0.7383%
Nov-52	5.7100%	4.2300%	0.2100%	0.2483%	0.2550%	0.2517%	0.2700%	5.5000%	5.4400%	3.9600%
Dec-52	3.8200%	2.1300%	0.2400%	0.2475%	0.2542%	0.2508%	0.2683%	3.5800%	3.5517%	1.8617%
Jan-53	-0.4900%	1.0300%	0.2300%	0.2517%	0.2575%	0.2546%	0.2708%	-0.7200%	-0.7608%	0.7592%
Feb-53	-1.0600%	-0.6700%	0.2100%	0.2558%	0.2617%	0.2588%	0.2750%	-1.2700%	-1.3350%	-0.9450%
Mar-53	-2.1200%	-0.4300%	0.2500%	0.2600%	0.2650%	0.2625%	0.2800%	-2.3700%	-2.4000%	-0.7100%
Apr-53	-2.3700%	-1.9200%	0.2400%	0.2692%	0.2742%	0.2717%	0.2892%	-2.6100%	-2.6592%	-2.2092%
May-53	0.7700%	0.2400%	0.2400%	0.2783%	0.2842%	0.2813%	0.3025%	0.5300%	0.4675%	-0.0625%
Jun-53	-1.3400%	-2.7300%	0.2700%	0.2833%	0.2917%	0.2875%	0.3092%	-1.6100%	-1.6492%	-3.0392%
Jul-53	2.7300%	3.4500%	0.2500%	0.2733%	0.2850%	0.2792%	0.3050%	2.4800%	2.4250%	3.1450%
Aug-53	-5.0100%	0.1600%	0.2500%	0.2700%	0.2825%	0.2763%	0.3008%	-5.2600%	-5.3108%	-0.1408%
Sep-53	0.3400%	1.1900%	0.2500%	0.2742%	0.2858%	0.2800%	0.3017%	0.0900%	0.0383%	0.8883%
Oct-53	5.4000%	4.1100%	0.2300%	0.2633%	0.2775%	0.2704%	0.2908%	5.1700%	5.1092%	3.8192%
Nov-53	2.0400%	2.7400%	0.2400%	0.2592%	0.2725%	0.2658%	0.2833%	1.8000%	1.7567%	2.4567%
Dec-53	0.5300%	0.6400%	0.2400%	0.2608%	0.2733%	0.2671%	0.2817%	0.2900%	0.2483%	0.3583%
Jan-54	5.3600%	3.2700%	0.2300%	0.2550%	0.2683%	0.2617%	0.2767%	5.1300%	5.0833%	2.9933%
Feb-54	1.1100%	1.1700%	0.2200%	0.2458%	0.2600%	0.2529%	0.2692%	0.8900%	0.8408%	0.9008%
Mar-54	3.2500%	2.7000%	0.2500%	0.2383%	0.2525%	0.2454%	0.2633%	3.0000%	2.9867%	2.4367%
Apr-54	5.1600%	1.2100%	0.2200%	0.2375%	0.2500%	0.2438%	0.2633%	4.9400%	4.8967%	0.9467%
May-54	4.1800%	2.5700%	0.2000%	0.2400%	0.2525%	0.2463%	0.2617%	3.9800%	3.9183%	2.3083%
Jun-54	0.3100%	0.9600%	0.2500%	0.2417%	0.2550%	0.2483%	0.2633%	0.0600%	0.0467%	0.6967%
Jul-54	5.8900%	4.9500%	0.2200%	0.2408%	0.2533%	0.2471%	0.2617%	5.6700%	5.6283%	4.6883%
Aug-54	-2.7500%	-1.3100%	0.2300%	0.2392%	0.2525%	0.2458%	0.2608%	-2.9800%	-3.0108%	-1.5708%
Sep-54	8.5100%	1.7800%	0.2200%	0.2408%	0.2533%	0.2471%	0.2600%	8.2900%	8.2500%	1.5200%
Oct-54	-1.6700%	-3.6800%	0.2100%	0.2392%	0.2533%	0.2463%	0.2600%	-1.8800%	-1.9300%	-3.9400%
Nov-54	9.0900%	5.6500%	0.2300%	0.2408%	0.2533%	0.2471%	0.2592%	8.8600%	8.8308%	5.3908%
Dec-54	5.3400%	3.4100%	0.2300%	0.2417%	0.2533%	0.2475%	0.2592%	5.1100%	5.0808%	3.1508%
Jan-55	1.9700%	1.4300%	0.2200%	0.2442%	0.2550%	0.2496%	0.2608%	1.7500%	1.7092%	1.1692%
Feb-55	0.9800%	3.4400%	0.2200%	0.2442%	0.2583%	0.2513%	0.2617%	0.7600%	0.7183%	3.1783%
Mar-55	-0.3000%	-1.1000%	0.2400%	0.2517%	0.2608%	0.2563%	0.2625%	-0.5400%	-0.5625%	-1.3625%
Apr-55	3.9600%	2.0200%	0.2200%	0.2508%	0.2608%	0.2558%	0.2625%	3.7400%	3.6975%	1.7575%
May-55	0.5500%	-0.5800%	0.2500%	0.2533%	0.2625%	0.2579%	0.2658%	0.3000%	0.2842%	-0.8458%
Jun-55	8.4100%	2.1100%	0.2300%	0.2542%	0.2617%	0.2579%	0.2675%	8.1800%	8.1425%	1.8425%
Jul-55	6.2200%	4.6600%	0.2300%	0.2550%	0.2617%	0.2583%	0.2675%	5.9900%	5.9525%	4.3925%
Aug-55	-0.2500%	0.5200%	0.2700%	0.2592%	0.2667%	0.2629%	0.2700%	-0.5200%	-0.5200%	0.2500%
Sep-55	1.3000%	-2.9000%	0.2400%	0.2608%	0.2683%	0.2646%	0.2725%	1.0600%	1.0275%	-3.1725%
Oct-55	-2.8400%	-0.8500%	0.2500%	0.2583%	0.2658%	0.2621%	0.2750%	-3.0900%	-3.1150%	-1.1250%
Nov-55	8.2700%	2.9200%	0.2400%	0.2583%	0.2650%	0.2617%	0.2767%	8.0300%	7.9933%	2.6433%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-55	0.1500%	-0.6700%	0.2400%	0.2625%	0.2683%	0.2654%	0.2792%	-0.0900%	-0.1292%	-0.9492%
Jan-56	-3.4700%	0.3000%	0.2500%	0.2592%	0.2658%	0.2625%	0.2758%	-3.7200%	-3.7458%	0.0242%
Feb-56	4.1300%	1.7800%	0.2300%	0.2567%	0.2633%	0.2600%	0.2742%	3.9000%	3.8558%	1.5058%
Mar-56	7.1000%	3.9400%	0.2300%	0.2583%	0.2650%	0.2617%	0.2742%	6.8700%	6.8258%	3.6658%
Apr-56	-0.0400%	-2.8700%	0.2600%	0.2700%	0.2750%	0.2725%	0.2833%	-0.3000%	-0.3233%	-3.1533%
May-56	-5.9300%	-1.3800%	0.2600%	0.2733%	0.2783%	0.2758%	0.2900%	-6.1900%	-6.2200%	-1.6700%
Jun-56	4.0900%	2.1100%	0.2300%	0.2717%	0.2792%	0.2754%	0.2908%	3.8600%	3.7992%	1.8192%
Jul-56	5.3000%	5.2500%	0.2600%	0.2733%	0.2825%	0.2779%	0.2958%	5.0400%	5.0042%	4.9542%
Aug-56	-3.2800%	-2.5900%	0.2600%	0.2858%	0.2917%	0.2888%	0.3025%	-3.5400%	-3.5825%	-2.8925%
Sep-56	-4.4000%	-3.1900%	0.2500%	0.2967%	0.3025%	0.2996%	0.3100%	-4.6500%	-4.7100%	-3.5000%
Oct-56	0.6600%	0.6300%	0.2900%	0.2992%	0.3075%	0.3033%	0.3158%	0.3700%	0.3442%	0.3142%
Nov-56	-0.5000%	0.2800%	0.2700%	0.3075%	0.3133%	0.3104%	0.3183%	-0.7700%	-0.8183%	-0.0383%
Dec-56	3.7000%	1.0400%	0.2800%	0.3125%	0.3208%	0.3167%	0.3258%	3.4200%	3.3742%	0.7142%
Jan-57	-4.0100%	3.2400%	0.2900%	0.3142%	0.3242%	0.3192%	0.3300%	-4.3000%	-4.3400%	2.9100%
Feb-57	-2.6400%	-0.6100%	0.2500%	0.3058%	0.3192%	0.3125%	0.3375%	-2.8900%	-2.9775%	-0.9475%
Mar-57	2.1500%	0.7800%	0.2600%	0.3050%	0.3167%	0.3108%	0.3375%	1.8900%	1.8125%	0.4425%
Apr-57	3.8800%	4.0200%	0.2900%	0.3058%	0.3158%	0.3108%	0.3342%	3.5900%	3.5458%	3.6858%
May-57	4.3700%	1.8000%	0.2900%	0.3117%	0.3192%	0.3154%	0.3342%	4.0800%	4.0358%	1.4658%
Jun-57	0.0400%	-4.1800%	0.2500%	0.3258%	0.3317%	0.3288%	0.3408%	-0.2100%	-0.3008%	-4.5208%
Jul-57	1.3100%	0.3500%	0.3300%	0.3325%	0.3417%	0.3371%	0.3500%	0.9800%	0.9600%	0.0000%
Aug-57	-5.0500%	-2.9400%	0.3000%	0.3417%	0.3508%	0.3463%	0.3642%	-5.3500%	-5.4142%	-3.3042%
Sep-57	-6.0200%	-1.3800%	0.3100%	0.3433%	0.3550%	0.3492%	0.3792%	-6.3300%	-6.3992%	-1.7592%
Oct-57	-3.0200%	-0.7400%	0.3100%	0.3417%	0.3567%	0.3492%	0.3842%	-3.3300%	-3.4042%	-1.1242%
Nov-57	2.3100%	4.2800%	0.2900%	0.3400%	0.3575%	0.3488%	0.3850%	2.0200%	1.9250%	3.8950%
Dec-57	-3.9500%	1.9500%	0.2900%	0.3175%	0.3400%	0.3288%	0.3633%	-4.2400%	-4.3133%	1.5867%
Jan-58	4.4500%	6.0200%	0.2700%	0.3000%	0.3175%	0.3088%	0.3275%	4.1800%	4.1225%	5.6925%
Feb-58	-1.4100%	1.3700%	0.2500%	0.2992%	0.3142%	0.3067%	0.3300%	-1.6600%	-1.7400%	1.0400%
Mar-58	3.2800%	2.0000%	0.2700%	0.3025%	0.3150%	0.3088%	0.3442%	3.0100%	2.9358%	1.6558%
Apr-58	3.3700%	5.1600%	0.2600%	0.3000%	0.3150%	0.3075%	0.3292%	3.1100%	3.0408%	4.8308%
May-58	2.1200%	1.6400%	0.2400%	0.2975%	0.3150%	0.3063%	0.3342%	1.8800%	1.7858%	1.3058%
Jun-58	2.7900%	1.7200%	0.2700%	0.2975%	0.3150%	0.3063%	0.3325%	2.5200%	2.4575%	1.3875%
Jul-58	4.4900%	1.0900%	0.2700%	0.3058%	0.3192%	0.3125%	0.3367%	4.2200%	4.1533%	0.7533%
Aug-58	1.7600%	-0.6700%	0.2700%	0.3208%	0.3317%	0.3263%	0.3575%	1.4900%	1.4025%	-1.0275%
Sep-58	5.0100%	3.3200%	0.3200%	0.3408%	0.3500%	0.3454%	0.3792%	4.6900%	4.6308%	2.9408%
Oct-58	2.7000%	4.0600%	0.3200%	0.3425%	0.3508%	0.3467%	0.3800%	2.3800%	2.3200%	3.6800%
Nov-58	2.8400%	2.6300%	0.2800%	0.3408%	0.3508%	0.3458%	0.3725%	2.5600%	2.4675%	2.2575%
Dec-58	5.3500%	6.5500%	0.3300%	0.3400%	0.3483%	0.3442%	0.3742%	5.0200%	4.9758%	6.1758%
Jan-59	0.5300%	1.3400%	0.3100%	0.3433%	0.3517%	0.3475%	0.3767%	0.2200%	0.1533%	0.9633%
Feb-59	0.4900%	2.0600%	0.3100%	0.3450%	0.3533%	0.3492%	0.3750%	0.1800%	0.1150%	1.6850%
Mar-59	0.2000%	1.0200%	0.3500%	0.3442%	0.3525%	0.3483%	0.3725%	-0.1500%	-0.1725%	0.6475%
Apr-59	4.0200%	-0.2800%	0.3300%	0.3525%	0.3600%	0.3563%	0.3800%	3.6900%	3.6400%	-0.6600%
May-59	2.4000%	-1.2000%	0.3300%	0.3642%	0.3717%	0.3679%	0.3975%	2.0700%	2.0025%	-1.5975%
Jun-59	-0.2200%	-0.8800%	0.3600%	0.3717%	0.3800%	0.3758%	0.4050%	-0.5800%	-0.6250%	-1.2850%
Jul-59	3.6300%	3.7100%	0.3500%	0.3725%	0.3817%	0.3771%	0.4067%	3.2800%	3.2233%	3.3033%
Aug-59	-1.0200%	1.7500%	0.3500%	0.3692%	0.3817%	0.3754%	0.4075%	-1.3700%	-1.4275%	1.3425%
Sep-59	-4.4300%	-3.9300%	0.3400%	0.3767%	0.3908%	0.3838%	0.4192%	-4.7700%	-4.8492%	-4.3492%
Oct-59	1.2800%	1.5700%	0.3500%	0.3808%	0.3967%	0.3888%	0.4133%	0.9300%	0.8667%	1.1567%
Nov-59	1.8600%	0.0100%	0.3500%	0.3800%	0.3917%	0.3858%	0.4083%	1.5100%	1.4517%	-0.3983%
Dec-59	2.9200%	2.3000%	0.3600%	0.3817%	0.3950%	0.3883%	0.4133%	2.5600%	2.5067%	1.8867%
Jan-60	-7.0000%	-1.0800%	0.3500%	0.3842%	0.3975%	0.3908%	0.4183%	-7.3500%	-7.4183%	-1.4983%
Feb-60	1.4700%	1.8100%	0.3700%	0.3800%	0.3925%	0.3863%	0.4167%	1.1000%	1.0533%	1.3933%
Mar-60	-1.2300%	1.4100%	0.3600%	0.3742%	0.3850%	0.3796%	0.4092%	-1.5900%	-1.6392%	1.0008%
Apr-60	-1.6100%	0.7500%	0.3200%	0.3708%	0.3817%	0.3763%	0.3992%	-1.9300%	-2.0092%	0.3508%
May-60	3.2600%	2.3300%	0.3700%	0.3717%	0.3842%	0.3779%	0.4050%	2.8900%	2.8550%	1.9250%
Jun-60	2.1100%	4.0800%	0.3400%	0.3708%	0.3833%	0.3771%	0.4033%	1.7700%	1.7067%	3.6767%
Jul-60	-2.3400%	-1.0000%	0.3200%	0.3675%	0.3800%	0.3738%	0.3992%	-2.6600%	-2.7392%	-1.3992%
Aug-60	3.1700%	5.0200%	0.3400%	0.3567%	0.3700%	0.3633%	0.3867%	2.8300%	2.7833%	4.6333%
Sep-60	-5.9000%	-5.1400%	0.3200%	0.3542%	0.3675%	0.3608%	0.3808%	-6.2200%	-6.2808%	-5.5208%
Oct-60	-0.0700%	-0.1200%	0.3300%	0.3583%	0.3700%	0.3642%	0.3842%	-0.4000%	-0.4542%	-0.5042%
Nov-60	4.6500%	3.8600%	0.3200%	0.3592%	0.3725%	0.3658%	0.3851%	4.3300%	4.2649%	3.4749%
Dec-60	4.7900%	7.2400%	0.3300%	0.3625%	0.3750%	0.3688%	0.3875%	4.4600%	4.4025%	6.8525%
Jan-61	6.4500%	6.1900%	0.3300%	0.3600%	0.3733%	0.3667%	0.3867%	6.1200%	6.0633%	5.8033%
Feb-61	3.1900%	3.5700%	0.3000%	0.3558%	0.3667%	0.3613%	0.3825%	2.8900%	2.8075%	3.1875%
Mar-61	2.7000%	3.1900%	0.3100%	0.3517%	0.3608%	0.3563%	0.3733%	2.3900%	2.3267%	2.8167%
Apr-61	0.5100%	1.0900%	0.3100%	0.3542%	0.3642%	0.3592%	0.3733%	0.2000%	0.1367%	0.7167%
May-61	2.3900%	1.3300%	0.3400%	0.3558%	0.3675%	0.3617%	0.3767%	2.0500%	2.0133%	0.9533%
Jun-61	-2.7500%	-2.2700%	0.3200%	0.3608%	0.3708%	0.3658%	0.3808%	-3.0700%	-3.1308%	-2.6508%
Jul-61	3.4200%	4.2400%	0.3300%	0.3675%	0.3775%	0.3725%	0.3875%	3.0900%	3.0325%	3.8525%
Aug-61	2.4300%	4.5400%	0.3300%	0.3708%	0.3808%	0.3758%	0.3942%	2.1000%	2.0358%	4.1458%
Sep-61	-1.8400%	-0.6700%	0.3200%	0.3708%	0.3825%	0.3767%	0.3942%	-2.1600%	-2.2342%	-1.0642%
Oct-61	2.9800%	4.8000%	0.3400%	0.3683%	0.3800%	0.3742%	0.3925%	2.6400%	2.5875%	4.4075%
Nov-61	4.4700%	3.3500%	0.3200%	0.3658%	0.3783%	0.3721%	0.3900%	4.1500%	4.0800%	2.9600%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-61	0.4600%	-2.9200%	0.3100%	0.3683%	0.3800%	0.3742%	0.3875%	0.1500%	0.0725%	-3.3075%
Jan-62	-3.6600%	-3.6600%	0.3700%	0.3683%	0.3792%	0.3738%	0.3875%	-4.0300%	-4.0475%	-4.0475%
Feb-62	2.0900%	3.0000%	0.3200%	0.3683%	0.3800%	0.3742%	0.3883%	1.7700%	1.7017%	2.6117%
Mar-62	-0.4600%	0.8100%	0.3300%	0.3658%	0.3775%	0.3717%	0.3867%	-0.7900%	-0.8467%	0.4233%
Apr-62	-6.0700%	-3.5300%	0.3300%	0.3608%	0.3742%	0.3675%	0.3825%	-6.4000%	-6.4525%	-3.9125%
May-62	-8.1100%	-9.1200%	0.3200%	0.3567%	0.3692%	0.3629%	0.3758%	-8.4300%	-8.4858%	-9.4958%
Jun-62	-8.0300%	-5.4800%	0.3000%	0.3567%	0.3700%	0.3633%	0.3733%	-8.3300%	-8.4033%	-5.8533%
Jul-62	6.5200%	6.8900%	0.3400%	0.3617%	0.3742%	0.3679%	0.3750%	6.1800%	6.1450%	6.5150%
Aug-62	2.0800%	2.7100%	0.3400%	0.3625%	0.3742%	0.3683%	0.3775%	1.7400%	1.7025%	2.3325%
Sep-62	-4.6500%	-3.3400%	0.3000%	0.3600%	0.3717%	0.3658%	0.3758%	-4.9500%	-5.0258%	-3.7158%
Oct-62	0.6400%	-0.1400%	0.3500%	0.3567%	0.3675%	0.3621%	0.3742%	0.2900%	0.2658%	-0.5142%
Nov-62	10.8600%	7.6800%	0.3100%	0.3542%	0.3667%	0.3604%	0.3708%	10.5500%	10.4892%	7.3092%
Dec-62	1.5300%	3.1200%	0.3200%	0.3533%	0.3650%	0.3592%	0.3700%	1.2100%	1.1600%	2.7500%
Jan-63	5.0600%	5.5800%	0.3200%	0.3508%	0.3642%	0.3575%	0.3658%	4.7400%	4.6942%	5.2142%
Feb-63	-2.3900%	-2.0600%	0.2900%	0.3492%	0.3633%	0.3563%	0.3642%	-2.6800%	-2.7542%	-2.4242%
Mar-63	3.7000%	1.8600%	0.3100%	0.3492%	0.3617%	0.3554%	0.3642%	3.3900%	3.3358%	1.4958%
Apr-63	5.0000%	2.3200%	0.3400%	0.3508%	0.3625%	0.3567%	0.3642%	4.6600%	4.6358%	1.9558%
May-63	1.9300%	0.7000%	0.3300%	0.3517%	0.3633%	0.3575%	0.3642%	1.6000%	1.5658%	0.3358%
Jun-63	-1.8800%	-1.2300%	0.3000%	0.3525%	0.3633%	0.3579%	0.3642%	-2.1800%	-2.2442%	-1.5942%
Jul-63	-0.2200%	1.2300%	0.3600%	0.3550%	0.3658%	0.3604%	0.3658%	-0.5800%	-0.5858%	0.8642%
Aug-63	5.3500%	4.2500%	0.3300%	0.3575%	0.3667%	0.3621%	0.3650%	5.0200%	4.9850%	3.8850%
Sep-63	-0.9700%	-2.5800%	0.3400%	0.3592%	0.3675%	0.3633%	0.3667%	-1.3100%	-1.3367%	-2.9467%
Oct-63	3.3900%	-0.3300%	0.3400%	0.3600%	0.3692%	0.3646%	0.3675%	3.0500%	3.0225%	-0.6975%
Nov-63	-0.4600%	-0.8200%	0.3200%	0.3608%	0.3700%	0.3654%	0.3683%	-0.7800%	-0.8283%	-1.1883%
Dec-63	2.6200%	3.1700%	0.3600%	0.3625%	0.3717%	0.3671%	0.3717%	2.2600%	2.2483%	2.7983%
Jan-64	2.8300%	1.2700%	0.3500%	0.3642%	0.3742%	0.3692%	0.3742%	2.4800%	2.4558%	0.8958%
Feb-64	1.4700%	0.3200%	0.3200%	0.3633%	0.3717%	0.3675%	0.3750%	1.1500%	1.0950%	-0.0550%
Mar-64	1.6500%	-0.3500%	0.3700%	0.3650%	0.3725%	0.3688%	0.3758%	1.2800%	1.2742%	-0.7258%
Apr-64	0.7500%	0.6700%	0.3500%	0.3667%	0.3742%	0.3704%	0.3767%	0.4000%	0.3733%	0.2933%
May-64	1.6200%	0.3200%	0.3200%	0.3675%	0.3750%	0.3713%	0.3775%	1.3000%	1.2425%	-0.0575%
Jun-64	1.7800%	2.3400%	0.3800%	0.3675%	0.3758%	0.3717%	0.3792%	1.4000%	1.4008%	1.9608%
Jul-64	1.9500%	4.7100%	0.3500%	0.3667%	0.3750%	0.3708%	0.3783%	1.6000%	1.5717%	4.3317%
Aug-64	-1.1800%	0.3100%	0.3500%	0.3675%	0.3742%	0.3708%	0.3783%	-1.5300%	-1.5583%	-0.0683%
Sep-64	3.0100%	1.7000%	0.3400%	0.3683%	0.3733%	0.3708%	0.3775%	2.6700%	2.6325%	1.3225%
Oct-64	0.9600%	1.6500%	0.3400%	0.3683%	0.3742%	0.3713%	0.3758%	0.6200%	0.5842%	1.2742%
Nov-64	0.0500%	1.1400%	0.3500%	0.3692%	0.3742%	0.3717%	0.3775%	-0.3000%	-0.3275%	0.7625%
Dec-64	0.5600%	0.8600%	0.3500%	0.3700%	0.3750%	0.3725%	0.3783%	0.2100%	0.1817%	0.4817%
Jan-65	3.4500%	3.7100%	0.3300%	0.3692%	0.3733%	0.3713%	0.3775%	3.1200%	3.0725%	3.3325%
Feb-65	0.3100%	0.0900%	0.3200%	0.3675%	0.3717%	0.3696%	0.3758%	-0.0100%	-0.0658%	-0.2858%
Mar-65	-1.3300%	0.0700%	0.3800%	0.3683%	0.3733%	0.3708%	0.3750%	-1.7100%	-1.7050%	-0.3050%
Apr-65	3.5600%	1.0900%	0.3300%	0.3692%	0.3733%	0.3713%	0.3742%	3.2300%	3.1858%	0.7158%
May-65	-0.3000%	-0.8400%	0.3300%	0.3700%	0.3742%	0.3721%	0.3750%	-0.6300%	-0.6750%	-1.2150%
Jun-65	-4.7300%	-3.4000%	0.3800%	0.3717%	0.3767%	0.3742%	0.3767%	-5.1100%	-5.1067%	-3.7767%
Jul-65	1.4700%	1.0500%	0.3400%	0.3733%	0.3800%	0.3767%	0.3783%	1.1300%	1.0917%	0.6717%
Aug-65	2.7200%	0.9700%	0.3700%	0.3742%	0.3825%	0.3783%	0.3817%	2.3500%	2.3383%	0.5883%
Sep-65	3.3400%	1.9400%	0.3500%	0.3767%	0.3858%	0.3813%	0.3858%	2.9900%	2.9542%	1.5542%
Oct-65	2.8900%	1.2900%	0.3400%	0.3800%	0.3883%	0.3842%	0.3883%	2.5500%	2.5017%	0.9017%
Nov-65	-0.3100%	-1.1600%	0.3700%	0.3833%	0.3908%	0.3871%	0.3925%	-0.6800%	-0.7025%	-1.5525%
Dec-65	1.0600%	-0.0800%	0.3700%	0.3900%	0.4000%	0.3950%	0.4025%	0.6900%	0.6575%	-0.4825%
Jan-66	0.6200%	-2.9700%	0.3800%	0.3950%	0.4025%	0.3988%	0.4050%	0.2400%	0.2150%	-3.3750%
Feb-66	-1.3100%	-4.1400%	0.3400%	0.3983%	0.4083%	0.4033%	0.4100%	-1.6500%	-1.7200%	-4.5500%
Mar-66	-2.0500%	-0.4500%	0.4000%	0.4100%	0.4208%	0.4154%	0.4283%	-2.4500%	-2.4783%	-0.8783%
Apr-66	2.2000%	1.7200%	0.3600%	0.4108%	0.4250%	0.4179%	0.4375%	1.8400%	1.7625%	1.2825%
May-66	-4.9200%	-2.9600%	0.4100%	0.4150%	0.4250%	0.4200%	0.4375%	-5.3300%	-5.3575%	-3.3975%
Jun-66	-1.4600%	-1.8100%	0.3900%	0.4225%	0.4300%	0.4263%	0.4500%	-1.8500%	-1.9100%	-2.2600%
Jul-66	-1.2000%	0.0900%	0.3800%	0.4300%	0.4375%	0.4338%	0.4542%	-1.5800%	-1.6542%	-0.3642%
Aug-66	-7.2500%	-8.7500%	0.4300%	0.4425%	0.4483%	0.4454%	0.4650%	-7.6800%	-7.7150%	-9.2150%
Sep-66	-0.5300%	4.7500%	0.4100%	0.4575%	0.4650%	0.4613%	0.4842%	-0.9400%	-1.0142%	4.2658%
Oct-66	4.9400%	9.7000%	0.4000%	0.4508%	0.4583%	0.4546%	0.4783%	4.5400%	4.4617%	9.2217%
Nov-66	0.9500%	-0.7600%	0.3800%	0.4458%	0.4550%	0.4504%	0.4692%	0.5700%	0.4808%	-1.2292%
Dec-66	0.0200%	2.2100%	0.3900%	0.4492%	0.4567%	0.4529%	0.4725%	-0.3700%	-0.4525%	1.7375%
Jan-67	7.9800%	2.7100%	0.4000%	0.4333%	0.4417%	0.4375%	0.4550%	7.5800%	7.5250%	2.2550%
Feb-67	0.7200%	-1.5700%	0.3400%	0.4192%	0.4317%	0.4254%	0.4400%	0.3800%	0.2800%	-2.0100%
Mar-67	4.0900%	1.9700%	0.3900%	0.4275%	0.4358%	0.4317%	0.4533%	3.7000%	3.6367%	1.5167%
Apr-67	4.3700%	2.0200%	0.3500%	0.4258%	0.4383%	0.4321%	0.4517%	4.0200%	3.9183%	1.5683%
May-67	-4.7700%	-5.0600%	0.4300%	0.4367%	0.4517%	0.4442%	0.4717%	-5.2000%	-5.2417%	-5.5317%
Jun-67	1.9000%	-1.3100%	0.3900%	0.4533%	0.4692%	0.4613%	0.4867%	1.5100%	1.4133%	-1.7967%
Jul-67	4.6800%	2.0400%	0.4300%	0.4650%	0.4767%	0.4708%	0.4950%	4.2500%	4.1850%	1.5450%
Aug-67	-0.7000%	-0.6500%	0.4200%	0.4683%	0.4800%	0.4742%	0.4967%	-1.1200%	-1.1967%	-1.1467%
Sep-67	3.4200%	-0.3700%	0.4000%	0.4708%	0.4892%	0.4800%	0.5042%	3.0200%	2.9158%	-0.8742%
Oct-67	-2.7600%	-5.7200%	0.4500%	0.4850%	0.5008%	0.4929%	0.5150%	-3.2100%	-3.2750%	-6.2350%
Nov-67	0.6500%	2.9300%	0.4500%	0.5058%	0.5192%	0.5125%	0.5400%	0.2000%	0.1100%	2.3900%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-67	2.7800%	2.8600%	0.4400%	0.5158%	0.5292%	0.5225%	0.5558%	2.3400%	2.2242%	2.3042%
Jan-68	-4.2500%	0.8200%	0.5000%	0.5142%	0.5242%	0.5192%	0.5450%	-4.7500%	-4.7950%	0.2750%
Feb-68	-2.6100%	-2.3300%	0.4200%	0.5083%	0.5225%	0.5154%	0.5308%	-3.0300%	-3.1408%	-2.8608%
Mar-68	1.1000%	-3.9900%	0.4300%	0.5092%	0.5233%	0.5163%	0.5342%	0.6700%	0.5658%	-4.5242%
Apr-68	8.3400%	2.7500%	0.4900%	0.5175%	0.5317%	0.5246%	0.5483%	7.8500%	7.7917%	2.2017%
May-68	1.6100%	-0.6200%	0.4600%	0.5225%	0.5400%	0.5313%	0.5517%	1.1500%	1.0583%	-1.1717%
Jun-68	1.0500%	8.0700%	0.4200%	0.5233%	0.5417%	0.5325%	0.5517%	0.6300%	0.4983%	7.5183%
Jul-68	-1.7200%	-0.7000%	0.4800%	0.5200%	0.5375%	0.5288%	0.5442%	-2.2000%	-2.2642%	-1.2442%
Aug-68	1.6400%	0.0400%	0.4200%	0.5017%	0.5208%	0.5113%	0.5225%	1.2200%	1.1175%	-0.4825%
Sep-68	4.0000%	1.0000%	0.4400%	0.4975%	0.5192%	0.5083%	0.5225%	3.5600%	3.4775%	0.4775%
Oct-68	0.8700%	0.8600%	0.4500%	0.5075%	0.5267%	0.5171%	0.5333%	0.4200%	0.3367%	0.3267%
Nov-68	5.3100%	7.8100%	0.4300%	0.5158%	0.5375%	0.5267%	0.5492%	4.8800%	4.7608%	7.2608%
Dec-68	-4.0200%	-3.0900%	0.4900%	0.5375%	0.5550%	0.5463%	0.5725%	-4.5100%	-4.5925%	-3.6625%
Jan-69	-0.6800%	1.6900%	0.5000%	0.5492%	0.5608%	0.5550%	0.5867%	-1.1800%	-1.2667%	1.1033%
Feb-69	-4.2600%	-5.3200%	0.4600%	0.5550%	0.5642%	0.5596%	0.5942%	-4.7200%	-4.8542%	-5.9142%
Mar-69	3.5900%	-0.9600%	0.4700%	0.5708%	0.5792%	0.5750%	0.6058%	3.1200%	2.9842%	-1.5658%
Apr-69	2.2900%	1.3900%	0.5500%	0.5742%	0.5850%	0.5796%	0.6083%	1.7400%	1.6817%	0.7817%
May-69	0.2600%	-0.0600%	0.4700%	0.5658%	0.5800%	0.5729%	0.5967%	-0.2100%	-0.3367%	-0.6567%
Jun-69	-5.4200%	-5.1600%	0.5500%	0.5817%	0.5933%	0.5875%	0.6175%	-5.9700%	-6.0375%	-5.7775%
Jul-69	-5.8700%	-3.6300%	0.5200%	0.5900%	0.6033%	0.5967%	0.6267%	-6.3900%	-6.4967%	-4.2567%
Aug-69	4.5400%	-1.1400%	0.4800%	0.5808%	0.6025%	0.5917%	0.6200%	4.0600%	3.9200%	-1.7600%
Sep-69	-2.3600%	-3.7200%	0.5500%	0.5950%	0.6133%	0.6042%	0.6358%	-2.9100%	-2.9958%	-4.3558%
Oct-69	4.5900%	7.9800%	0.5700%	0.6108%	0.6275%	0.6192%	0.6683%	4.0200%	3.9217%	7.3117%
Nov-69	-2.9700%	-5.8800%	0.4900%	0.6125%	0.6317%	0.6221%	0.6667%	-3.4600%	-3.6367%	-6.5467%
Dec-69	-1.7700%	-0.9700%	0.6000%	0.6433%	0.6608%	0.6521%	0.7158%	-2.3700%	-2.4858%	-1.6858%
Jan-70	-7.4300%	-4.5300%	0.5600%	0.6592%	0.6792%	0.6692%	0.7242%	-7.9900%	-8.1542%	-5.2542%
Feb-70	5.5800%	10.5300%	0.5200%	0.6608%	0.6775%	0.6692%	0.7092%	5.0600%	4.8708%	9.8208%
Mar-70	0.4400%	2.3200%	0.5600%	0.6533%	0.6717%	0.6625%	0.6925%	-0.1200%	-0.2525%	1.6275%
Apr-70	-8.7500%	-9.2900%	0.5400%	0.6525%	0.6692%	0.6608%	0.6925%	-9.2900%	-9.4425%	-9.9825%
May-70	-5.7800%	-5.1500%	0.5500%	0.6758%	0.6867%	0.6813%	0.7225%	-6.3300%	-6.5025%	-5.8725%
Jun-70	-4.6600%	-5.8200%	0.6400%	0.7067%	0.7150%	0.7108%	0.7533%	-5.3000%	-5.4133%	-6.5733%
Jul-70	7.6900%	9.7300%	0.5900%	0.7033%	0.7200%	0.7117%	0.7550%	7.1000%	6.9350%	8.9750%
Aug-70	4.7800%	5.8100%	0.5700%	0.6775%	0.7075%	0.6925%	0.7400%	4.2100%	4.0400%	5.0700%
Sep-70	3.6200%	-1.1400%	0.5600%	0.6742%	0.7058%	0.6900%	0.7350%	3.0600%	2.8850%	-1.8750%
Oct-70	-0.8300%	-1.4900%	0.5500%	0.6692%	0.7033%	0.6863%	0.7300%	-1.3800%	-1.5600%	-2.2200%
Nov-70	5.0600%	9.7500%	0.5800%	0.6708%	0.7017%	0.6863%	0.7325%	4.4800%	4.3275%	9.0175%
Dec-70	5.9700%	7.3500%	0.5300%	0.6367%	0.6775%	0.6571%	0.7067%	5.4400%	5.2633%	6.6433%
Jan-71	4.3200%	2.5700%	0.5100%	0.6133%	0.6583%	0.6358%	0.6792%	3.8100%	3.6408%	1.8908%
Feb-71	1.1700%	-2.7700%	0.4600%	0.5900%	0.6392%	0.6146%	0.6575%	0.7100%	0.5125%	-3.4275%
Mar-71	3.9400%	3.3100%	0.5600%	0.6008%	0.6442%	0.6225%	0.6708%	3.3800%	3.2692%	2.6392%
Apr-71	3.8900%	-3.4900%	0.4800%	0.6042%	0.6450%	0.6246%	0.6725%	3.4100%	3.2175%	-4.1625%
May-71	-3.9100%	-3.5100%	0.4700%	0.6275%	0.6533%	0.6404%	0.6950%	-4.3800%	-4.6050%	-4.2050%
Jun-71	0.3300%	3.9800%	0.5600%	0.6367%	0.6633%	0.6500%	0.7042%	-0.2300%	-0.3742%	3.2758%
Jul-71	-3.8700%	-2.2500%	0.5200%	0.6367%	0.6633%	0.6500%	0.7042%	-4.3900%	-4.5742%	-2.9542%
Aug-71	3.8800%	-2.4700%	0.5500%	0.6325%	0.6608%	0.6467%	0.7000%	3.3300%	3.1800%	-3.1700%
Sep-71	-0.4400%	-1.4600%	0.5000%	0.6200%	0.6508%	0.6354%	0.6817%	-0.9400%	-1.1217%	-2.1417%
Oct-71	-3.9200%	1.7000%	0.4700%	0.6158%	0.6408%	0.6283%	0.6750%	-4.3900%	-4.5950%	1.0250%
Nov-71	0.0200%	-0.5500%	0.5100%	0.6050%	0.6300%	0.6175%	0.6633%	-0.4900%	-0.6433%	-1.2133%
Dec-71	8.8800%	8.0600%	0.5000%	0.6042%	0.6308%	0.6175%	0.6583%	8.3800%	8.2217%	7.4017%
Jan-72	2.0600%	-0.7400%	0.5000%	0.5992%	0.6267%	0.6129%	0.6492%	1.5600%	1.4108%	-1.3892%
Feb-72	2.7700%	-2.4000%	0.4700%	0.6058%	0.6267%	0.6163%	0.6483%	2.3000%	2.1217%	-3.0483%
Mar-72	0.8300%	-0.3600%	0.4900%	0.6033%	0.6275%	0.6154%	0.6475%	0.3400%	0.1825%	-1.0075%
Apr-72	0.6800%	-2.7700%	0.4800%	0.6083%	0.6308%	0.6196%	0.6517%	0.2000%	0.0283%	-3.4217%
May-72	1.9700%	-0.1700%	0.5500%	0.6083%	0.6300%	0.6192%	0.6533%	1.4200%	1.3167%	-0.8233%
Jun-72	-1.9400%	-2.1000%	0.4900%	0.6025%	0.6258%	0.6142%	0.6475%	-2.4300%	-2.5875%	-2.7475%
Jul-72	0.4800%	-0.1400%	0.5100%	0.6008%	0.6250%	0.6129%	0.6517%	-0.0300%	-0.1717%	-0.7917%
Aug-72	3.6900%	5.7400%	0.4900%	0.5992%	0.6192%	0.6092%	0.6367%	3.2000%	3.0533%	5.1033%
Sep-72	-0.2500%	0.2700%	0.4700%	0.6017%	0.6175%	0.6096%	0.6342%	-0.7200%	-0.8842%	-0.3642%
Oct-72	1.1800%	6.5100%	0.5200%	0.6008%	0.6208%	0.6108%	0.6383%	0.6600%	0.5417%	5.8717%
Nov-72	4.8100%	6.3900%	0.4800%	0.5933%	0.6158%	0.6046%	0.6333%	4.3300%	4.1767%	5.7567%
Dec-72	1.4200%	-1.7400%	0.4500%	0.5900%	0.6133%	0.6017%	0.6233%	0.9700%	0.7967%	-2.3633%
Jan-73	-1.4900%	-4.3900%	0.5400%	0.5958%	0.6142%	0.6050%	0.6267%	-2.0300%	-2.1167%	-5.0167%
Feb-73	-3.5200%	-2.3400%	0.5100%	0.6017%	0.6225%	0.6121%	0.6350%	-4.0300%	-4.1550%	-2.9750%
Mar-73	0.0800%	-1.3500%	0.5600%	0.6075%	0.6242%	0.6158%	0.6383%	-0.4800%	-0.5583%	-1.9883%
Apr-73	-3.8300%	-0.4900%	0.5700%	0.6050%	0.6242%	0.6146%	0.6358%	-4.4000%	-4.4658%	-1.1258%
May-73	-1.6300%	0.6700%	0.5800%	0.6075%	0.6242%	0.6158%	0.6358%	-2.2100%	-2.2658%	0.0342%
Jun-73	-0.4000%	-1.6700%	0.5500%	0.6142%	0.6292%	0.6217%	0.6425%	-0.9500%	-1.0425%	-2.3125%
Jul-73	4.0700%	-1.9900%	0.6100%	0.6208%	0.6367%	0.6288%	0.6517%	3.4600%	3.4183%	-2.6417%
Aug-73	-3.4100%	-2.8400%	0.6200%	0.6400%	0.6533%	0.6467%	0.6700%	-4.0300%	-4.0800%	-3.5100%
Sep-73	4.2700%	7.7100%	0.5500%	0.6358%	0.6550%	0.6454%	0.6700%	3.7200%	3.6000%	7.0400%
Oct-73	0.1700%	-3.8800%	0.6300%	0.6333%	0.6533%	0.6433%	0.6683%	-0.4600%	-0.4983%	-4.5483%
Nov-73	-11.0900%	-11.7200%	0.5600%	0.6392%	0.6583%	0.6488%	0.6792%	-11.6500%	-11.7692%	-12.3992%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-73	1.9800%	3.7500%	0.6000%	0.6400%	0.6600%	0.6500%	0.6867%	1.3800%	1.2933%	3.0633%
Jan-74	-0.7200%	4.1800%	0.6100%	0.6525%	0.6667%	0.6596%	0.6967%	-1.3300%	-1.4167%	3.4833%
Feb-74	-0.0700%	0.6000%	0.5500%	0.6542%	0.6708%	0.6625%	0.7017%	-0.6200%	-0.7717%	-0.1017%
Mar-74	-2.0500%	-3.8900%	0.5900%	0.6675%	0.6817%	0.6746%	0.7050%	-2.6400%	-2.7550%	-4.5950%
Apr-74	-3.5900%	-12.9600%	0.6800%	0.6875%	0.7025%	0.6950%	0.7308%	-4.2700%	-4.3208%	-13.6908%
May-74	-3.0200%	-4.8400%	0.6800%	0.6975%	0.7150%	0.7063%	0.7500%	-3.7000%	-3.7700%	-5.5900%
Jun-74	-1.1300%	-5.7000%	0.6100%	0.7058%	0.7292%	0.7175%	0.7767%	-1.7400%	-1.9067%	-6.4767%
Jul-74	-7.4200%	-0.8900%	0.7200%	0.7267%	0.7508%	0.7388%	0.8050%	-8.1400%	-8.2250%	-1.6950%
Aug-74	-8.6400%	-8.7100%	0.6500%	0.7500%	0.7733%	0.7617%	0.8358%	-9.2900%	-9.4758%	-9.5458%
Sep-74	-11.5200%	-0.8600%	0.7100%	0.7700%	0.8050%	0.7875%	0.8708%	-12.2300%	-12.3908%	-1.7308%
Oct-74	16.8100%	11.9900%	0.7000%	0.7725%	0.8033%	0.7879%	0.8983%	16.1100%	15.9117%	11.0917%
Nov-74	-4.8900%	-1.1900%	0.6200%	0.7408%	0.7783%	0.7596%	0.8717%	-5.5100%	-5.7617%	-2.0617%
Dec-74	-1.5600%	0.4400%	0.6700%	0.7408%	0.7667%	0.7538%	0.8558%	-2.2300%	-2.4158%	-0.4158%
Jan-75	12.7200%	18.9700%	0.6800%	0.7358%	0.7608%	0.7483%	0.8642%	12.0400%	11.8558%	18.1058%
Feb-75	6.3800%	1.4300%	0.6000%	0.7183%	0.7425%	0.7304%	0.8325%	5.7800%	5.5475%	0.5975%
Mar-75	2.5400%	-2.1600%	0.6600%	0.7225%	0.7433%	0.7329%	0.8100%	1.8800%	1.7300%	-2.9700%
Apr-75	5.1000%	-1.4000%	0.6700%	0.7458%	0.7658%	0.7558%	0.8383%	4.4300%	4.2617%	-2.2383%
May-75	4.7600%	8.6600%	0.6700%	0.7417%	0.7700%	0.7558%	0.8525%	4.0900%	3.9075%	7.8075%
Jun-75	4.7700%	10.6700%	0.7000%	0.7308%	0.7608%	0.7458%	0.8417%	4.0700%	3.9283%	9.8283%
Jul-75	-6.4400%	-5.1000%	0.6800%	0.7367%	0.7608%	0.7488%	0.8342%	-7.1200%	-7.2742%	-5.9342%
Aug-75	-1.7600%	-2.1200%	0.6500%	0.7458%	0.7692%	0.7575%	0.8433%	-2.4100%	-2.6033%	-2.9633%
Sep-75	-3.1200%	-0.4900%	0.7300%	0.7458%	0.7792%	0.7625%	0.8492%	-3.8500%	-3.9692%	-1.3392%
Oct-75	6.5300%	7.0800%	0.7200%	0.7383%	0.7767%	0.7575%	0.8467%	5.8100%	5.6833%	6.2333%
Nov-75	2.8200%	3.5000%	0.6100%	0.7317%	0.7692%	0.7504%	0.8367%	2.2100%	1.9833%	2.6633%
Dec-75	-0.8100%	0.7700%	0.7500%	0.7325%	0.7713%	0.7519%	0.8425%	-1.5600%	-1.6525%	-0.0725%
Jan-76	12.1700%	8.9400%	0.6500%	0.7167%	0.7608%	0.7388%	0.8250%	11.5200%	11.3450%	8.1150%
Feb-76	-0.8400%	-3.5600%	0.6100%	0.7125%	0.7517%	0.7321%	0.8092%	-1.4500%	-1.6492%	-4.3692%
Mar-76	3.3700%	1.0000%	0.7100%	0.7100%	0.7508%	0.7304%	0.8058%	2.6600%	2.5642%	0.1942%
Apr-76	-0.7800%	0.3700%	0.6400%	0.7000%	0.7408%	0.7204%	0.7942%	-1.4200%	-1.5742%	-0.4242%
May-76	-1.1100%	-1.3900%	0.5900%	0.7150%	0.7433%	0.7292%	0.7958%	-1.7000%	-1.9058%	-2.1858%
Jun-76	4.4300%	3.3700%	0.7300%	0.7183%	0.7408%	0.7296%	0.7950%	3.7000%	3.6350%	2.5750%
Jul-76	-0.4800%	3.4100%	0.6500%	0.7133%	0.7342%	0.7238%	0.7808%	-1.1300%	-1.2608%	2.6292%
Aug-76	-0.1800%	3.8300%	0.6900%	0.7042%	0.7217%	0.7129%	0.7608%	-0.8700%	-0.9408%	3.0692%
Sep-76	2.5800%	3.8100%	0.6400%	0.6983%	0.7117%	0.7050%	0.7417%	1.9400%	1.8383%	3.0683%
Oct-76	-1.8600%	-0.2100%	0.6100%	0.6933%	0.7067%	0.7000%	0.7325%	-2.4700%	-2.5925%	-0.9425%
Nov-76	-0.4100%	2.6800%	0.6600%	0.6875%	0.7050%	0.6963%	0.7300%	-1.0700%	-1.1400%	1.9500%
Dec-76	5.6100%	6.3100%	0.6300%	0.6650%	0.6871%	0.6760%	0.7183%	4.9800%	4.8917%	5.5917%
Jan-77	-4.7300%	0.3500%	0.5900%	0.6633%	0.6800%	0.6717%	0.7175%	-5.3200%	-5.4475%	-0.3675%
Feb-77	-1.8200%	-3.7200%	0.5700%	0.6700%	0.6883%	0.6792%	0.7208%	-2.3900%	-2.5408%	-4.4408%
Mar-77	-1.0500%	1.0200%	0.6500%	0.6750%	0.6900%	0.6825%	0.7250%	-1.7000%	-1.7750%	0.2950%
Apr-77	0.4200%	2.0900%	0.6100%	0.6700%	0.6900%	0.6800%	0.7258%	-0.1900%	-0.3058%	1.3642%
May-77	-1.9600%	2.1100%	0.6700%	0.6708%	0.6900%	0.6804%	0.7258%	-2.6300%	-2.6858%	1.3842%
Jun-77	4.9400%	5.3100%	0.6200%	0.6625%	0.6825%	0.6725%	0.7150%	4.3200%	4.2250%	4.5950%
Jul-77	-1.2400%	1.6400%	0.5900%	0.6617%	0.6767%	0.6692%	0.7092%	-1.8300%	-1.9492%	0.9308%
Aug-77	-1.7200%	-3.5300%	0.6700%	0.6650%	0.6808%	0.6729%	0.7075%	-2.3900%	-2.4275%	-4.2375%
Sep-77	0.1600%	2.4700%	0.6100%	0.6600%	0.6792%	0.6696%	0.7050%	-0.4500%	-0.5450%	1.7650%
Oct-77	-3.9000%	-2.9600%	0.6300%	0.6700%	0.6883%	0.6792%	0.7175%	-4.5300%	-4.6175%	-3.6775%
Nov-77	3.1600%	3.8100%	0.6300%	0.6733%	0.6950%	0.6842%	0.7200%	2.5300%	2.4400%	3.0900%
Dec-77	0.7500%	0.1900%	0.6200%	0.6825%	0.7004%	0.6915%	0.7200%	0.1300%	0.0300%	-0.5300%
Jan-78	-5.7400%	-5.3300%	0.6900%	0.7008%	0.7158%	0.7083%	0.7433%	-6.4300%	-6.4833%	-6.0733%
Feb-78	-2.0300%	-0.6200%	0.6000%	0.7058%	0.7208%	0.7133%	0.7475%	-2.6300%	-2.7775%	-1.3675%
Mar-78	2.9400%	3.0900%	0.6900%	0.7058%	0.7217%	0.7138%	0.7483%	2.2500%	2.1917%	2.3417%
Apr-78	9.0200%	1.0600%	0.6300%	0.7133%	0.7275%	0.7204%	0.7575%	8.3900%	8.2625%	0.3025%
May-78	0.9200%	0.4300%	0.7500%	0.7242%	0.7367%	0.7304%	0.7683%	0.1700%	0.1517%	-0.3383%
Jun-78	-1.3800%	0.3600%	0.6900%	0.7300%	0.7458%	0.7379%	0.7833%	-2.0700%	-2.1633%	-0.4233%
Jul-78	5.8300%	3.1600%	0.7300%	0.7400%	0.7558%	0.7479%	0.7925%	5.1000%	5.0375%	2.3675%
Aug-78	3.0100%	-0.0300%	0.7000%	0.7242%	0.7467%	0.7354%	0.7767%	2.3100%	2.2333%	-0.8067%
Sep-78	-0.3200%	-0.5600%	0.6500%	0.7242%	0.7433%	0.7338%	0.7733%	-0.9700%	-1.0933%	-1.3333%
Oct-78	-8.7200%	-6.8400%	0.7300%	0.7408%	0.7558%	0.7483%	0.7883%	-9.4500%	-9.5083%	-7.6283%
Nov-78	2.1500%	3.5600%	0.7100%	0.7525%	0.7700%	0.7613%	0.8067%	1.4400%	1.3433%	2.7533%
Dec-78	1.9600%	-1.4900%	0.6800%	0.7633%	0.7775%	0.7704%	0.8083%	1.2800%	1.1517%	-2.2983%
Jan-79	4.4300%	6.9200%	0.7900%	0.7708%	0.7900%	0.7804%	0.8250%	3.6400%	3.6050%	6.0950%
Feb-79	-3.2100%	-2.1200%	0.6500%	0.7717%	0.7917%	0.7817%	0.8200%	-3.8600%	-4.0300%	-2.9400%
Mar-79	5.9600%	1.9600%	0.7400%	0.7808%	0.8008%	0.7908%	0.8367%	5.2200%	5.1233%	1.1233%
Apr-79	0.6300%	-2.4900%	0.7600%	0.7817%	0.8042%	0.7929%	0.8417%	-0.1300%	-0.2117%	-3.3317%
May-79	-2.1700%	1.5000%	0.7700%	0.7917%	0.8217%	0.8067%	0.8583%	-2.9400%	-3.0283%	0.6417%
Jun-79	4.3500%	3.8600%	0.7100%	0.7742%	0.8050%	0.7896%	0.8450%	3.6400%	3.5050%	3.0150%
Jul-79	1.3400%	3.4200%	0.7600%	0.7667%	0.7908%	0.7788%	0.8317%	0.5800%	0.5083%	2.5883%
Aug-79	5.7700%	1.0200%	0.7300%	0.7692%	0.7942%	0.7817%	0.8450%	5.0400%	4.9250%	0.1750%
Sep-79	0.4300%	-1.7700%	0.6800%	0.7867%	0.8083%	0.7975%	0.8633%	-0.2500%	-0.4333%	-2.6333%
Oct-79	-6.4000%	-5.0500%	0.8200%	0.8442%	0.8717%	0.8579%	0.9500%	-7.2200%	-7.3500%	-6.0000%
Nov-79	4.7500%	6.0700%	0.8300%	0.8967%	0.9350%	0.9158%	0.9908%	3.9200%	3.7592%	5.0792%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-79	2.1400%	0.2200%	0.8300%	0.8950%	0.9292%	0.9121%	1.0125%	1.3100%	1.1275%	-0.7925%
Jan-80	6.2200%	-0.2300%	0.8300%	0.9242%	0.9633%	0.9438%	1.0177%	5.3900%	5.2023%	-1.2477%
Feb-80	-0.0100%	-2.4700%	0.8400%	1.0317%	1.0608%	1.0463%	1.1028%	-0.8500%	-1.1128%	-3.5728%
Mar-80	-9.7200%	-5.2900%	0.9900%	1.0800%	1.1258%	1.1029%	1.2158%	-10.7100%	-10.9358%	-6.5058%
Apr-80	4.6200%	11.8600%	1.0000%	1.0033%	1.0883%	1.0458%	1.1908%	3.6200%	3.4292%	10.6692%
May-80	5.1500%	3.2300%	0.8700%	0.9158%	0.9925%	0.9542%	1.0613%	4.2800%	4.0887%	2.1687%
Jun-80	3.1600%	3.3700%	0.8600%	0.8817%	0.9492%	0.9154%	1.0331%	2.3000%	2.1269%	2.3369%
Jul-80	6.9600%	-0.4100%	0.8400%	0.9225%	0.9525%	0.9375%	1.0127%	6.1200%	5.9473%	-1.4227%
Aug-80	1.0100%	-1.3900%	0.8100%	0.9700%	1.0075%	0.9888%	1.0550%	0.2000%	-0.0450%	-2.4450%
Sep-80	2.9400%	-1.1400%	0.9700%	1.0017%	1.0433%	1.0225%	1.1077%	1.9700%	1.8323%	-2.2477%
Oct-80	2.0200%	2.7400%	0.9700%	1.0258%	1.0567%	1.0413%	1.1280%	1.0500%	0.8920%	1.6120%
Nov-80	10.6500%	5.0100%	0.9100%	1.0808%	1.1117%	1.0963%	1.1677%	9.7400%	9.4823%	3.8423%
Dec-80	-3.0200%	-0.1400%	1.0800%	1.1008%	1.1483%	1.1246%	1.2217%	-4.1000%	-4.2417%	-1.3617%
Jan-81	-4.1800%	-1.8600%	0.9400%	1.0675%	1.1267%	1.0971%	1.1895%	-5.1200%	-5.3695%	-3.0495%
Feb-81	1.7400%	-2.2400%	0.8800%	1.1125%	1.1575%	1.1350%	1.2233%	0.8600%	0.5167%	-3.4633%
Mar-81	4.0000%	4.2000%	1.1100%	1.1108%	1.1583%	1.1346%	1.2604%	2.8900%	2.7396%	2.9396%
Apr-81	-1.9300%	-0.9600%	1.0100%	1.1567%	1.1992%	1.1779%	1.2708%	-2.9400%	-3.2008%	-2.2308%
May-81	0.2600%	2.9100%	1.0400%	1.1933%	1.2400%	1.2167%	1.3430%	-0.7800%	-1.0830%	1.5670%
Jun-81	-0.6300%	2.7200%	1.0900%	1.1458%	1.2008%	1.1733%	1.3160%	-1.7200%	-1.9460%	1.4040%
Jul-81	0.2100%	3.4100%	1.0900%	1.1983%	1.2325%	1.2154%	1.3393%	-0.8800%	-1.1293%	2.0707%
Aug-81	-5.7700%	-0.2400%	1.1000%	1.2408%	1.2850%	1.2629%	1.3706%	-6.8700%	-7.1406%	-1.6106%
Sep-81	-4.9300%	-4.0900%	1.1400%	1.2908%	1.3292%	1.3100%	1.4192%	-6.0700%	-6.3492%	-5.5092%
Oct-81	5.4000%	6.1700%	1.1700%	1.2833%	1.3183%	1.3008%	1.4379%	4.2300%	3.9621%	4.7321%
Nov-81	4.1300%	4.8100%	1.1300%	1.1850%	1.2475%	1.2163%	1.3679%	3.0000%	2.7621%	3.4421%
Dec-81	-2.5600%	-3.0500%	1.0000%	1.1858%	1.2500%	1.2179%	1.3468%	-3.5600%	-3.9068%	-4.3968%
Jan-82	-1.3100%	0.3700%	1.0800%	1.2650%	1.3125%	1.2888%	1.4000%	-2.3900%	-2.7100%	-1.0300%
Feb-82	-5.5900%	-0.3500%	1.0300%	1.2725%	1.3100%	1.2913%	1.4096%	-6.6200%	-6.9996%	-1.7596%
Mar-82	-0.5200%	1.6800%	1.2400%	1.2150%	1.2675%	1.2413%	1.3740%	-1.7600%	-1.8940%	0.3060%
Apr-82	4.5200%	5.4800%	1.1200%	1.2050%	1.2417%	1.2233%	1.3665%	3.4000%	3.1535%	4.1135%
May-82	-3.4100%	-1.8700%	1.0100%	1.1883%	1.2308%	1.2096%	1.3400%	-4.4200%	-4.7500%	-3.2100%
Jun-82	-1.5000%	-1.6100%	1.2000%	1.2342%	1.2717%	1.2529%	1.3617%	-2.7000%	-2.8617%	-2.9717%
Jul-82	-1.7800%	-1.9800%	1.1400%	1.2175%	1.2675%	1.2425%	1.3717%	-2.9200%	-3.1517%	-3.3517%
Aug-82	12.1400%	12.1100%	1.1200%	1.1425%	1.2067%	1.1746%	1.3267%	11.0200%	10.8133%	10.7833%
Sep-82	1.2500%	0.5200%	1.0000%	1.0783%	1.1433%	1.1108%	1.2875%	0.2500%	-0.0375%	-0.7675%
Oct-82	11.5100%	6.5900%	0.9100%	1.0100%	1.0808%	1.0454%	1.2487%	10.6000%	10.2613%	5.3413%
Nov-82	4.0400%	0.1700%	0.9500%	0.9733%	1.0425%	1.0079%	1.2052%	3.0900%	2.8348%	-1.0352%
Dec-82	1.9300%	3.6000%	0.9300%	0.9858%	1.0367%	1.0113%	1.2021%	1.0000%	0.7279%	2.3979%
Jan-83	3.7200%	3.7200%	0.8700%	0.9825%	1.0292%	1.0058%	1.1868%	2.8500%	2.5333%	2.5333%
Feb-83	2.2900%	-0.0500%	0.8100%	1.0008%	1.0483%	1.0246%	1.1898%	1.4800%	1.1002%	-1.2398%
Mar-83	3.6900%	0.1700%	0.8900%	0.9775%	1.0267%	1.0021%	1.1690%	2.8000%	2.5211%	-0.9990%
Apr-83	7.8800%	5.7100%	0.8500%	0.9592%	1.0050%	0.9821%	1.1365%	7.0300%	6.7435%	4.5735%
May-83	-0.8700%	1.2400%	0.9100%	0.9550%	0.9958%	0.9754%	1.1243%	-1.7800%	-1.9943%	0.1157%
Jun-83	3.8900%	-1.2300%	0.9000%	0.9783%	1.0125%	0.9954%	1.1373%	2.9900%	2.7527%	-2.3673%
Jul-83	-2.9500%	3.3900%	0.8800%	1.0125%	1.0325%	1.0225%	1.1310%	-3.8300%	-4.0810%	2.2590%
Aug-83	1.5000%	0.4000%	1.0300%	1.0425%	1.0600%	1.0513%	1.1306%	0.4700%	0.3694%	-0.7306%
Sep-83	1.3800%	4.4500%	0.9600%	1.0308%	1.0517%	1.0413%	1.1197%	0.4200%	0.2603%	3.3303%
Oct-83	-1.1600%	5.3200%	0.9500%	1.0208%	1.0408%	1.0308%	1.1044%	-2.1100%	-2.2644%	4.2156%
Nov-83	2.1100%	-2.0400%	0.9400%	1.0342%	1.0508%	1.0425%	1.1153%	1.1700%	0.9947%	-3.1553%
Dec-83	-0.5200%	-2.2600%	0.9400%	1.0475%	1.0633%	1.0554%	1.1264%	-1.4600%	-1.6464%	-3.3864%
Jan-84	-0.5600%	4.8200%	1.0300%	1.0167%	1.0592%	1.0379%	1.1167%	-1.5900%	-1.6767%	3.7033%
Feb-84	-3.5200%	-4.1100%	0.9200%	1.0067%	1.0583%	1.0325%	1.1164%	-4.4400%	-4.6364%	-5.2264%
Mar-84	1.7300%	-0.5500%	0.9800%	1.0475%	1.1017%	1.0746%	1.1477%	0.7500%	0.5823%	-1.6977%
Apr-84	0.9500%	1.5900%	1.0400%	1.0675%	1.1233%	1.0954%	1.1774%	-0.0900%	-0.2274%	0.4126%
May-84	-5.5400%	-2.3000%	1.0300%	1.1067%	1.1750%	1.1408%	1.2400%	-6.5700%	-6.7800%	-3.5400%
Jun-84	2.1700%	0.6900%	1.0600%	1.1292%	1.1942%	1.1617%	1.2581%	1.1100%	0.9119%	-0.5681%
Jul-84	-1.2400%	4.3300%	1.1600%	1.1200%	1.1767%	1.1483%	1.2384%	-2.4000%	-2.4784%	3.0916%
Aug-84	11.0400%	6.4600%	1.0600%	1.0725%	1.1225%	1.0975%	1.2024%	9.9800%	9.8376%	5.2576%
Sep-84	0.0200%	4.3800%	0.9400%	1.0550%	1.1058%	1.0804%	1.1823%	-0.9200%	-1.1623%	3.1977%
Oct-84	0.3900%	2.7200%	1.0800%	1.0525%	1.0925%	1.0725%	1.1525%	-0.6900%	-0.7625%	1.5675%
Nov-84	-1.1200%	2.7000%	0.9100%	1.0242%	1.0550%	1.0396%	1.1039%	-2.0300%	-2.2239%	1.5961%
Dec-84	2.6300%	3.1600%	0.9800%	1.0108%	1.0417%	1.0263%	1.0891%	1.6500%	1.5409%	2.0709%
Jan-85	7.7900%	2.3500%	0.9600%	1.0067%	1.0358%	1.0213%	1.0822%	6.8300%	6.7078%	1.2678%
Feb-85	1.2200%	1.9300%	0.8200%	1.0108%	1.0408%	1.0258%	1.0862%	0.4000%	0.1338%	0.8438%
Mar-85	0.0700%	3.6200%	0.9400%	1.0467%	1.0758%	1.0613%	1.1501%	-0.8700%	-1.0801%	2.4699%
Apr-85	-0.0900%	2.0700%	1.0200%	1.0192%	1.0575%	1.0383%	1.1322%	-1.1100%	-1.2222%	0.9378%
May-85	5.7800%	6.0600%	0.9700%	0.9767%	1.0250%	1.0008%	1.0978%	4.8100%	4.6822%	4.9622%
Jun-85	1.5700%	2.7900%	0.8000%	0.9117%	0.9550%	0.9333%	1.0120%	0.7700%	0.5580%	1.7780%
Jul-85	-0.1500%	-4.2700%	0.9400%	0.9142%	0.9517%	0.9329%	1.0054%	-1.0900%	-1.1554%	-5.2754%
Aug-85	-0.8500%	1.8100%	0.8500%	0.9208%	0.9558%	0.9383%	1.0114%	-1.7000%	-1.8614%	0.7986%
Sep-85	-3.1300%	-5.2100%	0.8800%	0.9225%	0.9550%	0.9388%	1.0110%	-4.0100%	-4.1410%	-6.2210%
Oct-85	4.6200%	6.3800%	0.8900%	0.9183%	0.9542%	0.9363%	1.0012%	3.7300%	3.6188%	5.3788%
Nov-85	6.8600%	5.2200%	0.8100%	0.8792%	0.9225%	0.9008%	0.9595%	6.0500%	5.9005%	4.2605%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-85	4.8400%	6.9400%	0.8600%	0.8467%	0.8858%	0.8663%	0.9173%	3.9800%	3.9227%	6.0227%
Jan-86	0.5600%	2.9300%	0.7900%	0.8375%	0.8717%	0.8546%	0.8999%	-0.2300%	-0.3399%	2.0301%
Feb-86	7.4700%	6.2300%	0.7300%	0.8058%	0.8442%	0.8250%	0.8597%	6.7400%	6.6103%	5.3703%
Mar-86	5.5800%	5.1400%	0.7100%	0.7500%	0.7908%	0.7704%	0.7928%	4.8700%	4.7873%	4.3473%
Apr-86	-1.1300%	-3.3300%	0.6300%	0.7325%	0.7675%	0.7500%	0.7609%	-1.7600%	-1.8909%	-4.0909%
May-86	5.3200%	5.2500%	0.6200%	0.7575%	0.7858%	0.7717%	0.7972%	4.7000%	4.5228%	4.4528%
Jun-86	1.6900%	5.9700%	0.7000%	0.7608%	0.7908%	0.7758%	0.8046%	0.9900%	0.8854%	5.1654%
Jul-86	-5.5900%	2.8300%	0.6600%	0.7400%	0.7733%	0.7567%	0.7795%	-6.2500%	-6.3695%	2.0505%
Aug-86	7.4200%	8.8400%	0.6300%	0.7267%	0.7683%	0.7475%	0.7756%	6.7900%	6.6444%	8.0644%
Sep-86	-8.2700%	-11.3700%	0.6500%	0.7408%	0.7800%	0.7604%	0.7919%	-8.9200%	-9.0619%	-12.1619%
Oct-86	5.7700%	5.0500%	0.6900%	0.7383%	0.7775%	0.7579%	0.7940%	5.0800%	4.9761%	4.2561%
Nov-86	2.4300%	2.1100%	0.5900%	0.7233%	0.7667%	0.7450%	0.7745%	1.8400%	1.6555%	1.3355%
Dec-86	-2.5500%	-2.5400%	0.7000%	0.7075%	0.7517%	0.7296%	0.7600%	-3.2500%	-3.3100%	-3.3000%
Jan-87	13.4700%	9.8400%	0.6400%	0.6967%	0.7383%	0.7175%	0.7454%	12.8300%	12.7246%	9.0946%
Feb-87	3.9500%	-3.0100%	0.5900%	0.6983%	0.7400%	0.7192%	0.7503%	3.3600%	3.1997%	-3.7603%
Mar-87	2.8900%	-1.8900%	0.6600%	0.6967%	0.7367%	0.7167%	0.7441%	2.2300%	2.1459%	-2.6341%
Apr-87	-0.8900%	-4.1400%	0.6500%	0.7375%	0.7625%	0.7500%	0.7794%	-1.5400%	-1.6694%	-4.9194%
May-87	0.8700%	-0.6400%	0.6600%	0.7775%	0.7992%	0.7883%	0.8221%	0.2100%	0.0479%	-1.4621%
Jun-87	5.0500%	4.3900%	0.7500%	0.7767%	0.8042%	0.7904%	0.8349%	4.3000%	4.2152%	3.5552%
Jul-87	5.0700%	-0.2500%	0.7300%	0.7850%	0.8042%	0.7946%	0.8446%	4.3400%	4.2254%	-1.0946%
Aug-87	3.7300%	5.2700%	0.7500%	0.8058%	0.8217%	0.8138%	0.8703%	2.9800%	2.8597%	4.3997%
Sep-87	-2.1900%	0.2100%	0.7500%	0.8483%	0.8625%	0.8554%	0.9314%	-2.9400%	-3.1214%	-0.7214%
Oct-87	-21.5400%	-7.0500%	0.7900%	0.8767%	0.8950%	0.8858%	0.9466%	-22.3300%	-22.4866%	-7.9966%
Nov-87	-8.2400%	-5.5500%	0.7500%	0.8342%	0.8558%	0.8450%	0.9020%	-8.9900%	-9.1420%	-6.4520%
Dec-87	7.6100%	1.0800%	0.7800%	0.8425%	0.8608%	0.8517%	0.9114%	6.8300%	6.6986%	0.1686%
Jan-88	4.2100%	11.5300%	0.7200%	0.8233%	0.8408%	0.8321%	0.8998%	3.4900%	3.3102%	10.6302%
Feb-88	4.6600%	-1.7500%	0.7100%	0.7833%	0.8000%	0.7917%	0.8430%	3.9500%	3.8170%	-2.5930%
Mar-88	-3.0900%	-5.2700%	0.7200%	0.7825%	0.7992%	0.7908%	0.8396%	-3.8100%	-3.9296%	-6.1096%
Apr-88	1.1100%	0.1900%	0.7000%	0.8058%	0.8217%	0.8138%	0.8768%	0.4100%	0.2332%	-0.6868%
May-88	0.8600%	4.6000%	0.7800%	0.8250%	0.8417%	0.8333%	0.8993%	0.0800%	-0.0393%	3.7007%
Jun-88	4.5900%	3.1500%	0.7600%	0.8217%	0.8442%	0.8329%	0.9005%	3.8300%	3.6895%	2.2495%
Jul-88	-0.3800%	0.1700%	0.7100%	0.8300%	0.8550%	0.8425%	0.9187%	-1.0900%	-1.2987%	-0.7487%
Aug-88	-3.3900%	-1.3700%	0.8300%	0.8425%	0.8642%	0.8533%	0.9308%	-4.2200%	-4.3208%	-2.3008%
Sep-88	4.2600%	4.1300%	0.7600%	0.8183%	0.8383%	0.8283%	0.8889%	3.5000%	3.3712%	3.2412%
Oct-88	2.7800%	2.6200%	0.7600%	0.7917%	0.8083%	0.8000%	0.8318%	2.0200%	1.9482%	1.7882%
Nov-88	-1.4300%	-0.7900%	0.7000%	0.7875%	0.8100%	0.7988%	0.8242%	-2.1300%	-2.2542%	-1.6142%
Dec-88	1.7400%	0.6300%	0.7500%	0.7975%	0.8175%	0.8075%	0.8377%	0.9900%	0.9023%	-0.2077%
Jan-89	7.3200%	5.7100%	0.8000%	0.8017%	0.8175%	0.8096%	0.8404%	6.5200%	6.4796%	4.8696%
Feb-89	-2.4900%	-2.1500%	0.6900%	0.8033%	0.8192%	0.8113%	0.8383%	-3.1800%	-3.3283%	-2.9883%
Mar-89	2.3300%	2.6900%	0.7900%	0.8167%	0.8317%	0.8242%	0.8535%	1.5400%	1.4766%	1.8366%
Apr-89	5.1900%	6.3400%	0.7000%	0.8158%	0.8283%	0.8221%	0.8492%	4.4900%	4.3408%	5.4908%
May-89	4.0500%	5.8000%	0.8000%	0.7975%	0.8125%	0.8050%	0.8334%	3.2500%	3.2166%	4.9666%
Jun-89	-0.5700%	1.6100%	0.7000%	0.7583%	0.7742%	0.7663%	0.8049%	-1.2700%	-1.3749%	0.8052%
Jul-89	9.0300%	8.0400%	0.6800%	0.7442%	0.7617%	0.7529%	0.7920%	8.3500%	8.2380%	7.2480%
Aug-89	1.9500%	-0.5700%	0.6600%	0.7467%	0.7617%	0.7542%	0.7929%	1.2900%	1.1571%	-1.3629%
Sep-89	-0.4100%	1.7000%	0.6500%	0.7508%	0.7692%	0.7600%	0.7987%	-1.0600%	-1.2087%	0.9013%
Oct-89	-2.3200%	0.4500%	0.7200%	0.7433%	0.7658%	0.7546%	0.7949%	-3.0400%	-3.1149%	-0.3449%
Nov-89	2.0400%	3.3600%	0.6400%	0.7408%	0.7617%	0.7513%	0.7930%	1.4000%	1.2470%	2.5670%
Dec-89	2.4000%	7.3100%	0.6400%	0.7383%	0.7592%	0.7488%	0.7861%	1.7600%	1.6139%	6.5239%
Jan-90	-6.7100%	-8.0900%	0.7300%	0.7492%	0.7725%	0.7608%	0.7956%	-7.4400%	-7.5056%	-8.8856%
Feb-90	1.2900%	-1.0900%	0.6600%	0.7683%	0.7867%	0.7775%	0.8130%	0.6300%	0.4770%	-1.9030%
Mar-90	2.6500%	1.8700%	0.7100%	0.7808%	0.7925%	0.7867%	0.8205%	1.9400%	1.8295%	1.0495%
Apr-90	-2.4900%	-3.8500%	0.7500%	0.7883%	0.8033%	0.7958%	0.8259%	-3.2400%	-3.3159%	-4.6759%
May-90	9.7500%	6.8200%	0.7500%	0.7892%	0.8083%	0.7988%	0.8338%	9.0000%	8.9162%	5.9862%
Jun-90	-0.6700%	-2.1100%	0.6800%	0.7717%	0.7908%	0.7813%	0.8175%	-1.3500%	-1.4875%	-2.9275%
Jul-90	-0.3200%	-0.3200%	0.7400%	0.7700%	0.7892%	0.7796%	0.8132%	-1.0600%	-1.1332%	-1.1332%
Aug-90	-9.0400%	-7.9200%	0.7100%	0.7842%	0.8025%	0.7933%	0.8246%	-9.7500%	-9.8646%	-8.7446%
Sep-90	-4.8700%	4.1100%	0.6900%	0.7967%	0.8142%	0.8054%	0.8431%	-5.5600%	-5.7131%	3.2669%
Oct-90	-0.4300%	6.5300%	0.8100%	0.7942%	0.8142%	0.8042%	0.8386%	-1.2400%	-1.2686%	5.6915%
Nov-90	6.4600%	1.9300%	0.7100%	0.7750%	0.7992%	0.7871%	0.8260%	5.7500%	5.6340%	1.1040%
Dec-90	2.7900%	0.8600%	0.7200%	0.7542%	0.7825%	0.7683%	0.8109%	2.0700%	1.9791%	0.0491%
Jan-91	4.3600%	-3.0100%	0.7100%	0.7533%	0.7808%	0.7671%	0.8094%	3.6500%	3.5506%	-3.8194%
Feb-91	7.1500%	3.4900%	0.6400%	0.7358%	0.7633%	0.7496%	0.7898%	6.5100%	6.3602%	2.7002%
Mar-91	2.4200%	1.9800%	0.6400%	0.7442%	0.7675%	0.7558%	0.7961%	1.7800%	1.6239%	1.1839%
Apr-91	0.2400%	-1.6200%	0.7600%	0.7383%	0.7600%	0.7492%	0.7887%	-0.5200%	-0.5487%	-2.4087%
May-91	4.3100%	-1.3000%	0.6800%	0.7383%	0.7625%	0.7504%	0.7860%	3.6300%	3.5240%	-2.0860%
Jun-91	-4.5800%	-1.3900%	0.6300%	0.7508%	0.7733%	0.7621%	0.7986%	-5.2100%	-5.3786%	-2.1886%
Jul-91	4.6600%	3.0700%	0.7600%	0.7500%	0.7708%	0.7604%	0.7956%	3.9000%	3.8644%	2.2744%
Aug-91	2.3700%	2.5800%	0.6800%	0.7292%	0.7492%	0.7392%	0.7754%	1.6900%	1.5946%	1.8046%
Sep-91	-1.6700%	2.0200%	0.6800%	0.7175%	0.7383%	0.7279%	0.7638%	-2.3500%	-2.4338%	1.2562%
Oct-91	1.3400%	2.0000%	0.6500%	0.7125%	0.7358%	0.7242%	0.7601%	0.6900%	0.5799%	1.2399%
Nov-91	-4.0300%	-0.9800%	0.6000%	0.7067%	0.7317%	0.7192%	0.7545%	-4.6300%	-4.7845%	-1.7345%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-91	11.4400%	7.3300%	0.6800%	0.6925%	0.7175%	0.7050%	0.7416%	10.7600%	10.6984%	6.5884%
Jan-92	-1.8600%	-5.3600%	0.6100%	0.6833%	0.7092%	0.6963%	0.7360%	-2.4700%	-2.5960%	-6.0960%
Feb-92	1.3000%	-2.7300%	0.5900%	0.6908%	0.7225%	0.7067%	0.7442%	0.7100%	0.5558%	-3.4742%
Mar-92	-1.9400%	-1.4300%	0.6700%	0.6958%	0.7275%	0.7117%	0.7473%	-2.6100%	-2.6873%	-2.1773%
Apr-92	2.9400%	6.4500%	0.6500%	0.6942%	0.7242%	0.7092%	0.7438%	2.2900%	2.1962%	5.7062%
May-92	0.4900%	-0.1500%	0.6100%	0.6900%	0.7192%	0.7046%	0.7400%	-0.1200%	-0.2500%	-0.8900%
Jun-92	-1.4900%	1.4100%	0.6700%	0.6850%	0.7133%	0.6992%	0.7323%	-2.1600%	-2.2223%	0.6777%
Jul-92	4.0900%	7.9000%	0.6300%	0.6725%	0.6975%	0.6850%	0.7149%	3.4600%	3.3751%	7.1851%
Aug-92	-2.0500%	-0.7400%	0.6000%	0.6625%	0.6842%	0.6733%	0.7031%	-2.6500%	-2.7531%	-1.4431%
Sep-92	1.1800%	0.7300%	0.5800%	0.6600%	0.6808%	0.6704%	0.7006%	0.6000%	0.4794%	0.0294%
Oct-92	0.3500%	-0.9400%	0.5700%	0.6658%	0.6933%	0.6796%	0.7106%	-0.2200%	-0.3606%	-1.6506%
Nov-92	3.4100%	-0.1500%	0.6100%	0.6750%	0.7000%	0.6875%	0.7193%	2.8000%	2.6907%	-0.8693%
Dec-92	1.2300%	3.5800%	0.6300%	0.6650%	0.6867%	0.6758%	0.7042%	0.6000%	0.5258%	2.8758%
Jan-93	0.8400%	1.5700%	0.5900%	0.6592%	0.6758%	0.6675%	0.6901%	0.2500%	0.1499%	0.8799%
Feb-93	1.3600%	7.2100%	0.5500%	0.6425%	0.6583%	0.6504%	0.6704%	0.8100%	0.6896%	6.5396%
Mar-93	2.1100%	1.8000%	0.6300%	0.6317%	0.6433%	0.6375%	0.6586%	1.4800%	1.4515%	1.1415%
Apr-93	-2.4200%	-0.2700%	0.5700%	0.6217%	0.6350%	0.6283%	0.6515%	-2.9900%	-3.0715%	-0.9215%
May-93	2.6800%	-1.9100%	0.5200%	0.6192%	0.6342%	0.6267%	0.6549%	2.1600%	2.0251%	-2.5649%
Jun-93	0.2900%	4.6300%	0.6200%	0.6108%	0.6258%	0.6183%	0.6469%	-0.3300%	-0.3569%	3.9831%
Jul-93	-0.4000%	2.2600%	0.5400%	0.5975%	0.6125%	0.6050%	0.6285%	-0.9400%	-1.0285%	1.6316%
Aug-93	3.7900%	4.8400%	0.5600%	0.5708%	0.5883%	0.5796%	0.6059%	3.2300%	3.1841%	4.2341%
Sep-93	-0.7700%	-0.2000%	0.5000%	0.5550%	0.5708%	0.5629%	0.5864%	-1.2700%	-1.3564%	-0.7864%
Oct-93	2.0700%	-0.2100%	0.4900%	0.5558%	0.5725%	0.5642%	0.5857%	1.5800%	1.4843%	-0.7957%
Nov-93	-0.9500%	-5.0700%	0.5300%	0.5775%	0.5933%	0.5854%	0.6067%	-1.4800%	-1.5567%	-5.6767%
Dec-93	1.2100%	-0.5300%	0.5500%	0.5775%	0.5933%	0.5854%	0.6113%	0.6600%	0.5987%	-1.1413%
Jan-94	3.4000%	0.7200%	0.5500%	0.5767%	0.5933%	0.5850%	0.6110%	2.8500%	2.7890%	0.1090%
Feb-94	-2.7100%	-5.6700%	0.4900%	0.5900%	0.6075%	0.5988%	0.6205%	-3.2000%	-3.3305%	-6.2905%
Mar-94	-4.3600%	-3.3800%	0.5800%	0.5900%	0.6075%	0.5988%	0.6528%	-4.9400%	-5.0128%	-4.0328%
Apr-94	1.2800%	2.4600%	0.5700%	0.6233%	0.6408%	0.6321%	0.6851%	0.7100%	0.5949%	1.7749%
May-94	1.6400%	-2.6800%	0.6300%	0.6658%	0.6825%	0.6742%	0.6939%	1.0100%	0.9462%	-3.3739%
Jun-94	-2.4500%	0.2100%	0.6100%	0.6642%	0.6808%	0.6725%	0.6923%	-3.0600%	-3.1423%	-0.4823%
Jul-94	3.2800%	3.3600%	0.6000%	0.6758%	0.6925%	0.6842%	0.7063%	2.6800%	2.5737%	2.6537%
Aug-94	4.1000%	-0.2800%	0.6600%	0.6725%	0.6875%	0.6800%	0.7006%	3.4400%	3.3994%	-0.9806%
Sep-94	-2.4500%	-2.5400%	0.6100%	0.6950%	0.7075%	0.7013%	0.7187%	-3.0600%	-3.1687%	-3.2587%
Oct-94	2.2500%	0.8600%	0.6600%	0.7142%	0.7258%	0.7200%	0.7377%	1.5900%	1.5123%	0.1223%
Nov-94	-3.6400%	-1.4600%	0.6400%	0.7233%	0.7358%	0.7296%	0.7486%	-4.2800%	-4.3886%	-2.2086%
Dec-94	1.4800%	0.5200%	0.6600%	0.7050%	0.7183%	0.7117%	0.7307%	0.8200%	0.7493%	-0.2107%
Jan-95	2.5900%	7.7900%	0.7000%	0.7050%	0.7167%	0.7108%	0.7288%	1.8900%	1.8612%	7.0612%
Feb-95	3.9000%	-0.1500%	0.5900%	0.6883%	0.6992%	0.6938%	0.7108%	3.3100%	3.1892%	-0.8608%
Mar-95	2.9500%	-0.6000%	0.6400%	0.6767%	0.6867%	0.6817%	0.6979%	2.3100%	2.2521%	-1.2979%
Apr-95	2.9400%	3.6500%	0.5800%	0.6692%	0.6767%	0.6729%	0.6898%	2.3600%	2.2502%	2.9602%
May-95	4.0000%	3.1600%	0.6500%	0.6375%	0.6450%	0.6413%	0.6610%	3.3500%	3.3390%	2.4990%
Jun-95	2.3200%	0.4700%	0.5400%	0.6083%	0.6192%	0.6138%	0.6336%	1.7800%	1.6864%	-0.1636%
Jul-95	3.3200%	2.5500%	0.5600%	0.6175%	0.6283%	0.6229%	0.6408%	2.7600%	2.6792%	1.9092%
Aug-95	0.2500%	2.0200%	0.5700%	0.6308%	0.6408%	0.6358%	0.6532%	-0.3200%	-0.4032%	1.3668%
Sep-95	4.2200%	6.3800%	0.5200%	0.6100%	0.6208%	0.6154%	0.6350%	3.7000%	3.5850%	5.7450%
Oct-95	-0.3600%	2.3800%	0.5700%	0.5933%	0.6058%	0.5996%	0.6224%	-0.9300%	-0.9824%	1.7576%
Nov-95	4.3900%	1.3600%	0.5100%	0.5850%	0.5983%	0.5917%	0.6200%	3.8800%	3.7700%	0.7400%
Dec-95	1.9300%	7.0800%	0.4900%	0.5683%	0.5825%	0.5754%	0.6045%	1.4400%	1.3255%	6.4755%
Jan-96	3.4000%	1.2900%	0.5400%	0.5675%	0.5825%	0.5750%	0.6006%	2.8600%	2.7994%	0.6894%
Feb-96	0.9300%	-3.9500%	0.4800%	0.5825%	0.5967%	0.5896%	0.6125%	0.4500%	0.3175%	-4.5625%
Mar-96	0.9600%	-2.0300%	0.5200%	0.6125%	0.6267%	0.6196%	0.6435%	0.4400%	0.3165%	-2.6735%
Apr-96	1.4700%	1.1000%	0.5900%	0.6250%	0.6400%	0.6325%	0.6570%	0.8800%	0.8130%	0.4430%
May-96	2.5800%	-0.2500%	0.5800%	0.6350%	0.6475%	0.6413%	0.6650%	2.0000%	1.9150%	-0.9150%
Jun-96	0.3800%	4.1600%	0.5400%	0.6425%	0.6558%	0.6492%	0.6720%	-0.1600%	-0.2920%	3.4880%
Jul-96	-4.4200%	-6.2800%	0.6200%	0.6375%	0.6517%	0.6446%	0.6688%	-5.0400%	-5.0888%	-6.9488%
Aug-96	2.1100%	2.1300%	0.5700%	0.6217%	0.6358%	0.6288%	0.6532%	1.5400%	1.4568%	1.4768%
Sep-96	5.6300%	0.9500%	0.6000%	0.6383%	0.6517%	0.6450%	0.6681%	5.0300%	4.9619%	0.2819%
Oct-96	2.7600%	5.0800%	0.5800%	0.6158%	0.6317%	0.6238%	0.6482%	2.1800%	2.1118%	4.4318%
Nov-96	7.5600%	2.1100%	0.5200%	0.5917%	0.6092%	0.6004%	0.6253%	7.0400%	6.9347%	1.4847%
Dec-96	-1.9800%	-0.6000%	0.5600%	0.6000%	0.6175%	0.6088%	0.6309%	-2.5400%	-2.6109%	-1.2309%
Jan-97	6.2500%	0.6600%	0.5600%	0.6183%	0.6358%	0.6271%	0.6472%	5.6900%	5.6028%	0.0128%
Feb-97	0.7800%	-0.9500%	0.5100%	0.6092%	0.6283%	0.6188%	0.6369%	0.2700%	0.1431%	-1.5869%
Mar-97	-4.1100%	-3.0100%	0.5900%	0.6292%	0.6475%	0.6383%	0.6555%	-4.7000%	-4.7655%	-3.6655%
Apr-97	5.9700%	-1.5000%	0.5900%	0.6442%	0.6608%	0.6525%	0.6697%	5.3800%	5.3003%	-2.1697%
May-97	6.0900%	4.2300%	0.5800%	0.6317%	0.6500%	0.6408%	0.6575%	5.5100%	5.4325%	3.5725%
Jun-97	4.4800%	3.1400%	0.5900%	0.6175%	0.6350%	0.6263%	0.6437%	3.8900%	3.8363%	2.4963%
Jul-97	7.9600%	2.3000%	0.5800%	0.5950%	0.6133%	0.6042%	0.6241%	7.3800%	7.3359%	1.6759%
Aug-97	-5.6000%	-1.8300%	0.4900%	0.6017%	0.6167%	0.6092%	0.6248%	-6.0900%	-6.2248%	-2.4548%
Sep-97	5.4800%	4.3300%	0.5800%	0.5950%	0.6117%	0.6033%	0.6229%	4.9000%	4.8571%	3.7071%
Oct-97	-3.3400%	0.9800%	0.5400%	0.5833%	0.6000%	0.5917%	0.6130%	-3.8800%	-3.9530%	0.3670%
Nov-97	4.6300%	7.0700%	0.4700%	0.5725%	0.5892%	0.5808%	0.6039%	4.1600%	4.0261%	6.4661%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-97	1.7200%	7.5200%	0.5400%	0.5633%	0.5825%	0.5729%	0.5970%	1.1800%	1.1230%	6.9230%
Jan-98	1.1100%	-3.9500%	0.4800%	0.5508%	0.5683%	0.5596%	0.5878%	0.6300%	0.5222%	-4.5378%
Feb-98	7.2100%	3.4100%	0.4400%	0.5558%	0.5733%	0.5646%	0.5932%	6.7700%	6.6168%	2.8168%
Mar-98	5.1200%	6.4200%	0.5200%	0.5592%	0.5775%	0.5683%	0.5968%	4.6000%	4.5232%	5.8232%
Apr-98	1.0100%	-1.9300%	0.4900%	0.5575%	0.5750%	0.5663%	0.5968%	0.5200%	0.4132%	-2.5268%
May-98	-1.7200%	-0.5000%	0.4800%	0.5575%	0.5758%	0.5667%	0.5969%	-2.2000%	-2.3169%	-1.0969%
Jun-98	4.0600%	3.6900%	0.5200%	0.5442%	0.5650%	0.5546%	0.5864%	3.5400%	3.4736%	3.1036%
Jul-98	-1.0600%	-4.9300%	0.4900%	0.5458%	0.5650%	0.5554%	0.5853%	-1.5500%	-1.6453%	-5.5153%
Aug-98	-14.4600%	1.6100%	0.4800%	0.5433%	0.5642%	0.5538%	0.5835%	-14.9400%	-15.0435%	1.0265%
Sep-98	6.4100%	8.3500%	0.4400%	0.5333%	0.5567%	0.5450%	0.5780%	5.9700%	5.8320%	7.7720%
Oct-98	8.1300%	-1.6600%	0.4200%	0.5308%	0.5583%	0.5446%	0.5796%	7.7100%	7.5504%	-2.2396%
Nov-98	6.0600%	1.3400%	0.4500%	0.5342%	0.5658%	0.5500%	0.5864%	5.6100%	5.4736%	0.7536%
Dec-98	5.7600%	2.9500%	0.4500%	0.5183%	0.5542%	0.5363%	0.5757%	5.3100%	5.1843%	2.3743%
Jan-99	4.1800%	-4.5100%	0.4200%	0.5200%	0.5567%	0.5383%	0.5808%	3.7600%	3.5992%	-5.0908%
Feb-99	-3.1100%	-3.6400%	0.4000%	0.5333%	0.5658%	0.5496%	0.5897%	-3.5100%	-3.6997%	-4.2297%
Mar-99	4.0000%	-1.4800%	0.5300%	0.5517%	0.5817%	0.5667%	0.6046%	3.4700%	3.3954%	-2.0846%
Apr-99	3.8700%	8.8400%	0.4800%	0.5533%	0.5800%	0.5667%	0.6012%	3.3900%	3.2688%	8.2388%
May-99	-2.3600%	6.0900%	0.4500%	0.5775%	0.6025%	0.5900%	0.6214%	-2.8100%	-2.9814%	5.4686%
Jun-99	5.5500%	-3.3200%	0.5500%	0.6025%	0.6267%	0.6146%	0.6445%	5.0000%	4.9055%	-3.9645%
Jul-99	-3.1200%	-1.1400%	0.5100%	0.5992%	0.6233%	0.6113%	0.6418%	-3.6300%	-3.7618%	-1.7818%
Aug-99	-0.4900%	1.1700%	0.5400%	0.6167%	0.6400%	0.6283%	0.6589%	-1.0300%	-1.1489%	0.5111%
Sep-99	-2.7400%	-4.8000%	0.5200%	0.6158%	0.6400%	0.6279%	0.6610%	-3.2600%	-3.4010%	-5.4610%
Oct-99	6.3300%	1.5700%	0.5000%	0.6292%	0.6492%	0.6392%	0.6721%	5.8300%	5.6579%	0.8979%
Nov-99	2.0300%	-7.7300%	0.5600%	0.6133%	0.6350%	0.6242%	0.6610%	1.4700%	1.3690%	-8.3910%
Dec-99	5.8900%	0.9300%	0.5500%	0.6292%	0.6483%	0.6388%	0.6766%	5.3400%	5.2134%	0.2534%
Jan-00	-5.0200%	10.8500%	0.5700%	0.6483%	0.6633%	0.6558%	0.6956%	-5.5900%	-5.7156%	10.1544%
Feb-00	-1.8900%	-5.7800%	0.5100%	0.6400%	0.6517%	0.6458%	0.6874%	-2.4000%	-2.5774%	-6.4674%
Mar-00	9.7800%	3.4900%	0.5400%	0.6400%	0.6525%	0.6463%	0.6906%	9.2400%	9.0894%	2.7994%
Apr-00	-3.0100%	7.9400%	0.4700%	0.6367%	0.6517%	0.6442%	0.6898%	-3.4800%	-3.6998%	7.2502%
May-00	-2.0500%	4.8600%	0.5600%	0.6658%	0.6867%	0.6763%	0.7244%	-2.6100%	-2.7744%	4.1356%
Jun-00	2.4700%	-5.7500%	0.5200%	0.6392%	0.6558%	0.6475%	0.6980%	1.9500%	1.7720%	-6.4480%
Jul-00	-1.5600%	6.7700%	0.5200%	0.6375%	0.6508%	0.6442%	0.6882%	-2.0800%	-2.2482%	6.0818%
Aug-00	6.2100%	13.7200%	0.5000%	0.6292%	0.6417%	0.6354%	0.6774%	5.7100%	5.5326%	13.0426%
Sep-00	-5.2800%	9.1500%	0.4600%	0.6350%	0.6525%	0.6438%	0.6853%	-5.7400%	-5.9653%	8.4647%
Oct-00	-0.4200%	-3.5700%	0.5300%	0.6292%	0.6508%	0.6400%	0.6787%	-0.9500%	-1.0987%	-4.2487%
Nov-00	-7.8800%	-1.3200%	0.4800%	0.6208%	0.6458%	0.6333%	0.6772%	-8.3600%	-8.5572%	-1.9972%
Dec-00	0.4900%	9.8200%	0.4500%	0.6008%	0.6233%	0.6121%	0.6547%	0.0400%	-0.1647%	9.1654%
Jan-01	3.5500%	-9.6700%	0.4900%	0.5958%	0.6150%	0.6054%	0.6499%	3.0600%	2.9001%	-10.3199%
Feb-01	-9.1200%	3.5300%	0.4200%	0.5917%	0.6100%	0.6008%	0.6449%	-9.5400%	-9.7649%	2.8851%
Mar-01	-6.3400%	-0.6300%	0.4500%	0.5817%	0.6017%	0.5917%	0.6394%	-6.7900%	-6.9794%	-1.2694%
Apr-01	7.7700%	6.0500%	0.4700%	0.6000%	0.6192%	0.6096%	0.6603%	7.3000%	7.1097%	5.3897%
May-01	0.6700%	-3.4300%	0.5000%	0.6075%	0.6250%	0.6163%	0.6663%	0.1700%	0.0037%	-4.0963%
Jun-01	-2.4300%	-7.9100%	0.4700%	0.5983%	0.6117%	0.6050%	0.6546%	-2.9000%	-3.0846%	-8.5646%
Jul-01	-0.9800%	-4.4800%	0.5200%	0.5942%	0.6058%	0.6000%	0.6494%	-1.5000%	-1.6294%	-5.1294%
Aug-01	-6.2600%	-2.9000%	0.4600%	0.6000%	0.5925%	0.5963%	0.6329%	-6.7200%	-6.8929%	-3.5329%
Sep-01	-8.0800%	-11.5200%	0.4100%	0.5975%	0.6058%	0.6017%	0.6423%	-8.4900%	-8.7223%	-12.1623%
Oct-01	1.9100%	-0.1700%	0.4800%	0.5858%	0.5942%	0.5900%	0.6373%	1.4300%	1.2727%	-0.8073%
Nov-01	7.6700%	-5.5200%	0.4100%	0.5808%	0.5842%	0.5825%	0.6287%	7.2600%	7.0413%	-6.1487%
Dec-01	0.8800%	2.6000%	0.4600%	0.5633%	0.5992%	0.5813%	0.6526%	0.4200%	0.2274%	1.9474%
Jan-02	-1.4600%	-5.6500%	0.4800%	0.5458%	0.5858%	0.5658%	0.6387%	-1.9400%	-2.0987%	-6.2887%
Feb-02	-1.9300%	-2.3500%	0.4300%	0.5425%	0.5792%	0.5608%	0.6283%	-2.3600%	-2.5583%	-2.9783%
Mar-02	3.7600%	12.2300%	0.4300%	0.5675%	0.6017%	0.5846%	0.6453%	3.3300%	3.1147%	11.5847%
Apr-02	-6.0600%	-1.7100%	0.5400%	0.5633%	0.5967%	0.5800%	0.6316%	-6.6000%	-6.6916%	-2.3416%
May-02	-0.7400%	-9.0200%	0.4900%	0.5625%	0.6000%	0.5813%	0.6272%	-1.2300%	-1.3672%	-9.6472%
Jun-02	-7.1200%	-7.1000%	0.4400%	0.5533%	0.5900%	0.5717%	0.6180%	-7.5600%	-7.7380%	-7.7180%
Jul-02	-7.8000%	-13.8000%	0.5100%	0.5442%	0.5817%	0.5629%	0.6101%	-8.3100%	-8.4101%	-14.4101%
Aug-02	0.6600%	3.5000%	0.4400%	0.5308%	0.5700%	0.5504%	0.5979%	0.2200%	0.0621%	2.9021%
Sep-02	-10.8700%	-12.8300%	0.4200%	0.5125%	0.5525%	0.5325%	0.5906%	-11.2900%	-11.4606%	-13.4206%
Oct-02	8.8000%	-1.7300%	0.4000%	0.5275%	0.5617%	0.5446%	0.6016%	8.4000%	8.1984%	-2.3316%
Nov-02	5.8900%	2.4900%	0.4000%	0.5258%	0.5592%	0.5425%	0.5952%	5.4900%	5.2948%	1.8948%
Dec-02	-5.8700%	4.1600%	0.4500%	0.5175%	0.5525%	0.5350%	0.5896%	-6.3200%	-6.4596%	3.5704%
Jan-03	-2.6200%	-2.9200%	0.4100%	0.5142%	0.5492%	0.5317%	0.5887%	-3.0300%	-3.2087%	-3.5087%
Feb-03	-1.5000%	-4.9000%	0.3800%	0.4958%	0.5283%	0.5121%	0.5778%	-1.8800%	-2.0778%	-5.4778%
Mar-03	0.9700%	5.0500%	0.4000%	0.4908%	0.5233%	0.5071%	0.5663%	0.5700%	0.4037%	4.4837%
Apr-03	8.2400%	8.8500%	0.4000%	0.4783%	0.5183%	0.4983%	0.5540%	7.8400%	7.6860%	8.2960%
May-03	5.2700%	10.2100%	0.3900%	0.4350%	0.4875%	0.4613%	0.5310%	4.8800%	4.7390%	9.6790%
Jun-03	1.2800%	1.1900%	0.3600%	0.4142%	0.4767%	0.4454%	0.5173%	0.9200%	0.7627%	0.6727%
Jul-03	1.7600%	-6.5000%	0.3800%	0.4575%	0.5058%	0.4817%	0.5457%	1.3800%	1.2143%	-7.0457%
Aug-03	1.9500%	1.7500%	0.4200%	0.4892%	0.5258%	0.5075%	0.5659%	1.5300%	1.3841%	1.1841%
Sep-03	-1.0600%	4.5700%	0.4600%	0.4767%	0.5108%	0.4938%	0.5487%	-1.5200%	-1.6087%	4.0213%
Oct-03	5.6600%	1.1200%	0.4100%	0.4750%	0.5092%	0.4921%	0.5350%	5.2500%	5.1250%	0.5850%
Nov-03	0.8800%	-0.0500%	0.3900%	0.4708%	0.5067%	0.4888%	0.5309%	0.4900%	0.3491%	-0.5809%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-03	5.2400%	6.7500%	0.4700%	0.4708%	0.5017%	0.4863%	0.5233%	4.7700%	4.7168%	6.2268%
Jan-04	1.8400%	2.1600%	0.4200%	0.4617%	0.4925%	0.4771%	0.5128%	1.4200%	1.3272%	1.6472%
Feb-04	1.3900%	1.8100%	0.3800%	0.4583%	0.4892%	0.4738%	0.5125%	1.0100%	0.8775%	1.2975%
Mar-04	-1.5100%	1.0400%	0.4300%	0.4442%	0.4750%	0.4596%	0.4975%	-1.9400%	-2.0075%	0.5425%
Apr-04	-1.5700%	-3.6200%	0.3900%	0.4775%	0.5083%	0.4929%	0.5271%	-1.9600%	-2.0971%	-4.1471%
May-04	1.3700%	0.7900%	0.4000%	0.5033%	0.5333%	0.5183%	0.5517%	0.9700%	0.8183%	0.2383%
Jun-04	1.9400%	1.5500%	0.4800%	0.5008%	0.5175%	0.5092%	0.5388%	1.4600%	1.4012%	1.0112%
Jul-04	-3.3100%	1.7300%	0.4300%	0.4850%	0.5017%	0.4933%	0.5227%	-3.7400%	-3.8327%	1.2073%
Aug-04	0.4000%	3.9300%	0.4500%	0.4708%	0.4892%	0.4800%	0.5124%	-0.0500%	-0.1124%	3.4177%
Sep-04	1.0800%	0.9100%	0.4000%	0.4550%	0.4775%	0.4663%	0.4985%	0.6800%	0.5815%	0.4115%
Oct-04	1.5300%	4.9500%	0.3800%	0.4558%	0.4742%	0.4650%	0.4992%	1.1500%	1.0308%	4.4508%
Nov-04	4.0500%	4.0700%	0.4100%	0.4600%	0.4767%	0.4683%	0.4963%	3.6400%	3.5537%	3.5737%
Dec-04	3.4000%	2.6500%	0.4300%	0.4558%	0.4742%	0.4650%	0.4939%	2.9700%	2.9061%	2.1561%
Jan-05	-2.4400%	2.2100%	0.4100%	0.4467%	0.4650%	0.4558%	0.4828%	-2.8500%	-2.9228%	1.7272%
Feb-05	2.1000%	1.9700%	0.3500%	0.4333%	0.4533%	0.4433%	0.4679%	1.7500%	1.6322%	1.5022%
Mar-05	-1.7700%	1.0800%	0.4100%	0.4500%	0.4700%	0.4600%	0.4855%	-2.1800%	-2.2555%	0.5945%
Apr-05	-1.9000%	3.2100%	0.3900%	0.4442%	0.4533%	0.4488%	0.4708%	-2.2900%	-2.3708%	2.7392%
May-05	3.1800%	0.0800%	0.4000%	0.4292%	0.4408%	0.4350%	0.4616%	2.7800%	2.7184%	-0.3816%
Jun-05	0.1400%	5.7600%	0.3600%	0.4133%	0.4183%	0.4158%	0.4502%	-0.2200%	-0.3102%	5.3098%
Jul-05	3.7200%	2.3300%	0.3400%	0.4217%	0.4283%	0.4250%	0.4583%	3.3800%	3.2617%	1.8717%
Aug-05	-0.9100%	0.7300%	0.4000%	0.4242%	0.4333%	0.4288%	0.4591%	-1.3100%	-1.3691%	0.2709%
Sep-05	0.8100%	4.0200%	0.3500%	0.4275%	0.4367%	0.4321%	0.4585%	0.4600%	0.3515%	3.5615%
Oct-05	-1.6700%	-6.1700%	0.3900%	0.4450%	0.4550%	0.4500%	0.4812%	-2.0600%	-2.1512%	-6.6512%
Nov-05	3.7800%	-0.3900%	0.3900%	0.4521%	0.4625%	0.4573%	0.4899%	3.3900%	3.2901%	-0.8799%
Dec-05	0.0300%	1.1000%	0.3900%	0.4483%	0.4592%	0.4538%	0.4848%	-0.3600%	-0.4548%	0.6152%
Jan-06	2.6500%	2.6348%	0.4000%	0.4408%	0.4542%	0.4475%	0.4792%	2.2500%	2.1708%	2.1556%
Feb-06	0.2700%	0.9527%	0.3600%	0.4458%	0.4592%	0.4525%	0.4850%	-0.0900%	-0.2150%	0.4677%
Mar-06	1.2400%	-4.6345%	0.3900%	0.4600%	0.4725%	0.4663%	0.4983%	0.8500%	0.7417%	-5.1328%
Apr-06	1.3400%	1.7167%	0.3900%	0.4867%	0.5000%	0.4933%	0.5242%	0.9500%	0.8158%	1.1925%
May-06	-2.8800%	1.4281%	0.4800%	0.4958%	0.5108%	0.5033%	0.5350%	-3.3600%	-3.4150%	0.8931%
Jun-06	0.1400%	2.4158%	0.4400%	0.4908%	0.5092%	0.5000%	0.5333%	-0.3000%	-0.3933%	1.8825%
Jul-06	0.6200%	5.1109%	0.4500%	0.4875%	0.5067%	0.4971%	0.5308%	0.1700%	0.0892%	4.5801%
Aug-06	2.3800%	2.7122%	0.4300%	0.4733%	0.4925%	0.4829%	0.5167%	1.9500%	1.8633%	2.1955%
Sep-06	2.5800%	-1.7362%	0.3900%	0.4592%	0.4792%	0.4692%	0.5000%	2.1900%	2.0800%	-2.2362%
Oct-06	3.2600%	5.6026%	0.4200%	0.4592%	0.4783%	0.4688%	0.4983%	2.8400%	2.7617%	5.1043%
Nov-06	1.9000%	2.1405%	0.3900%	0.4442%	0.4642%	0.4542%	0.4833%	1.5100%	1.4167%	1.6572%
Dec-06	1.4000%	1.1817%	0.3600%	0.4408%	0.4650%	0.4529%	0.4842%	1.0400%	0.9158%	0.6975%
Jan-07	1.5100%	-0.1134%	0.4300%	0.4500%	0.4792%	0.4646%	0.4967%	1.0800%	1.0133%	-0.6101%
Feb-07	-1.9600%	5.0341%	0.3800%	0.4492%	0.4767%	0.4629%	0.4917%	-2.3400%	-2.4517%	4.5424%
Mar-07	1.1200%	4.1373%	0.3900%	0.4417%	0.4717%	0.4567%	0.4875%	0.7300%	0.6325%	3.6498%
Apr-07	4.4300%	4.3759%	0.4200%	0.4558%	0.4858%	0.4708%	0.4975%	4.0100%	3.9325%	3.8784%
May-07	3.4900%	0.5145%	0.4100%	0.4558%	0.4875%	0.4717%	0.4992%	3.0800%	2.9908%	0.0153%
Jun-07	-1.6600%	-5.0621%	0.4000%	0.0483%	0.5142%	0.2812%	0.5250%	-2.0600%	-2.1850%	-5.5871%
Jul-07	-3.1000%	-3.5666%	0.4600%	0.4775%	0.5075%	0.4925%	0.5208%	-3.5600%	-3.6208%	-4.0874%
Aug-07	1.5000%	2.0956%	0.4200%	0.4825%	0.5050%	0.4938%	0.5200%	1.0800%	0.9800%	1.5756%
Sep-07	3.7400%	3.5427%	0.3700%	0.4783%	0.5017%	0.4900%	0.5150%	3.3700%	3.2250%	3.0277%
Oct-07	1.5900%	6.8641%	0.4300%	0.4717%	0.4950%	0.4833%	0.5092%	1.1600%	1.0808%	6.3549%
Nov-07	-4.1800%	0.3405%	0.3900%	0.4533%	0.4817%	0.4675%	0.4975%	-4.5700%	-4.6775%	-0.1570%
Dec-07	-0.6900%	0.2754%	0.3700%	0.4575%	0.4925%	0.4750%	0.5133%	-1.0600%	-1.2033%	-0.2379%
Jan-08	-6.0000%	-6.8133%	0.4000%	0.4442%	0.4817%	0.4629%	0.5017%	-6.4000%	-6.5017%	-7.3150%
Feb-08	-3.2500%	-4.9956%	0.3400%	0.4608%	0.4975%	0.4792%	0.5175%	-3.5900%	-3.7675%	-5.5131%
Mar-08	-0.4300%	1.7056%	0.3700%	0.4592%	0.4917%	0.4754%	0.5175%	-0.8000%	-0.9475%	1.1881%
Apr-08	4.8700%	5.5163%	0.3500%	0.4625%	0.4942%	0.4783%	0.5242%	4.5200%	4.3458%	4.9921%
May-08	1.3000%	3.1987%	0.3700%	0.4642%	0.5000%	0.4821%	0.5225%	0.9300%	0.7775%	2.6762%
Jun-08	-8.4300%	-0.8668%	0.4000%	0.4733%	0.5092%	0.4913%	0.5317%	-8.8300%	-8.9617%	-1.3985%
Jul-08	-0.8400%	-6.1108%	0.3900%	0.4725%	0.5042%	0.4883%	0.5333%	-1.2300%	-1.3733%	-6.6441%
Aug-08	1.4500%	-1.6602%	0.3600%	0.4700%	0.5008%	0.4854%	0.5308%	1.0900%	0.9192%	-2.1910%
Sep-08	-8.9100%	-11.4823%	0.3900%	0.4708%	0.5025%	0.4867%	0.5408%	-9.3000%	-9.4508%	-12.0231%
Oct-08	-16.7900%	-11.6128%	0.3700%	0.5233%	0.5658%	0.5446%	0.6300%	-17.1600%	-17.4200%	-12.2428%
Nov-08	-7.1800%	2.7894%	0.3600%	0.5100%	0.5608%	0.5354%	0.6333%	-7.5400%	-7.8133%	2.1561%
Dec-08	1.0600%	-1.6797%	0.3300%	0.4217%	0.4842%	0.4529%	0.5450%	0.7300%	0.5150%	-2.2247%
Jan-09	-8.4300%	-0.4541%	0.2400%	0.4208%	0.4867%	0.4538%	0.5325%	-8.6700%	-8.9625%	-0.9866%
Feb-09	-10.6500%	-12.5708%	0.3000%	0.4392%	0.5017%	0.4704%	0.5250%	-10.9500%	-11.1750%	-13.0958%
Mar-09	8.7600%	2.5255%	0.3500%	0.4583%	0.5092%	0.4838%	0.5350%	8.4100%	8.2250%	1.9905%
Apr-09	9.5700%	0.8462%	0.2900%	0.4492%	0.5142%	0.4817%	0.5400%	9.2800%	9.0300%	0.3062%
May-09	5.5900%	3.5287%	0.3300%	0.4617%	0.5200%	0.4908%	0.5408%	5.2600%	5.0492%	2.9879%
Jun-09	0.2000%	5.5202%	0.3800%	0.4675%	0.5100%	0.4888%	0.5167%	-0.1800%	-0.3167%	5.0035%
Jul-09	7.5600%	4.0755%	0.3600%	0.4508%	0.4758%	0.4633%	0.4975%	7.2000%	7.0625%	3.5780%
Aug-09	3.6100%	0.5460%	0.3600%	0.4383%	0.4542%	0.4463%	0.4758%	3.2500%	3.1342%	0.0702%
Sep-09	3.7300%	1.4284%	0.3400%	0.4275%	0.4342%	0.4308%	0.4608%	3.3900%	3.2692%	0.9676%
Oct-09	-1.8600%	-2.8427%	0.3300%	0.4292%	0.4367%	0.4329%	0.4625%	-2.1900%	-2.3225%	-3.3052%
Nov-09	6.0000%	4.5586%	0.3500%	0.4325%	0.4408%	0.4367%	0.4700%	5.6500%	5.5300%	4.0886%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-09	1.9300%	5.5813%	0.3400%	0.4383%	0.4533%	0.4458%	0.4825%	1.5900%	1.4475%	5.0988%
Jan-10	-3.6000%	-4.7493%	0.3600%	0.4383%	0.4583%	0.4483%	0.4808%	-3.9600%	-4.0808%	-5.2301%
Feb-10	3.1000%	-1.4896%	0.3300%	0.4458%	0.4683%	0.4571%	0.4892%	2.7700%	2.6108%	-1.9788%
Mar-10	6.0300%	2.7978%	0.4000%	0.4392%	0.4642%	0.4517%	0.4867%	5.6300%	5.5433%	2.3111%
Apr-10	1.5800%	2.8058%	0.3800%	0.4408%	0.4642%	0.4525%	0.4842%	1.2000%	1.0958%	2.3216%
May-10	-7.9900%	-5.7600%	0.3400%	0.4133%	0.4375%	0.4254%	0.4583%	-8.3300%	-8.4483%	-6.2183%
Jun-10	-5.2300%	-0.6360%	0.3700%	0.4067%	0.4300%	0.4183%	0.4550%	-5.6000%	-5.6850%	-1.0910%
Jul-10	7.0100%	7.7413%	0.3100%	0.3933%	0.4133%	0.4033%	0.4383%	6.7000%	6.5717%	7.3030%
Aug-10	-4.5100%	1.2496%	0.3200%	0.3742%	0.3933%	0.3838%	0.4175%	-4.8300%	-4.9275%	0.8321%
Sep-10	8.9200%	2.9575%	0.2600%	0.3775%	0.3933%	0.3854%	0.4175%	8.6600%	8.5025%	2.5400%
Oct-10	3.8000%	1.2869%	0.2700%	0.3900%	0.4025%	0.3963%	0.4250%	3.5300%	3.3750%	0.8619%
Nov-10	0.0100%	-3.2323%	0.3200%	0.4058%	0.4225%	0.4142%	0.4475%	-0.3100%	-0.4375%	-3.6798%
Dec-10	6.6800%	3.1151%	0.3200%	0.4183%	0.4383%	0.4283%	0.4633%	6.3600%	6.2167%	2.6518%
Jan-11	2.3700%	1.4241%	0.3500%	0.4200%	0.4383%	0.4292%	0.4642%	2.0200%	1.9058%	0.9599%
Feb-11	3.4300%	1.1235%	0.3200%	0.4350%	0.4475%	0.4413%	0.4733%	3.1100%	2.9567%	0.6502%
Mar-11	0.0400%	0.1474%	0.3600%	0.4275%	0.4400%	0.4338%	0.4633%	-0.3200%	-0.4233%	-0.3159%
Apr-11	2.9600%	4.1878%	0.3400%	0.4300%	0.4408%	0.4354%	0.4625%	2.6200%	2.4975%	3.7253%
May-11	-1.1300%	1.9754%	0.3600%	0.4133%	0.4217%	0.4175%	0.4433%	-1.4900%	-1.5733%	1.5321%
Jun-11	-1.6700%	-0.1283%	0.3200%	0.4158%	0.4200%	0.4179%	0.4383%	-1.9900%	-2.1083%	-0.5666%
Jul-11	-2.0300%	-0.7538%	0.3200%	0.4108%	0.4192%	0.4150%	0.4392%	-2.3500%	-2.4692%	-1.1930%
Aug-11	-5.4300%	2.0388%	0.3400%	0.3642%	0.3725%	0.3683%	0.3908%	-5.7700%	-5.8208%	1.6480%
Sep-11	-7.0300%	0.2271%	0.2600%	0.3408%	0.3525%	0.3467%	0.3733%	-7.2900%	-7.4033%	-0.1462%
Oct-11	10.9300%	3.8747%	0.2200%	0.3317%	0.3467%	0.3392%	0.3767%	10.7100%	10.5533%	3.4980%
Nov-11	-0.2200%	0.8014%	0.2400%	0.3225%	0.3308%	0.3267%	0.3542%	-0.4600%	-0.5742%	0.4472%
Dec-11	1.0200%	3.3767%	0.2200%	0.3275%	0.3358%	0.3317%	0.3608%	0.8000%	0.6592%	3.0159%
Jan-12	4.4800%	-3.3237%	0.2100%	0.3342%	0.3342%	0.3342%	0.3617%	4.2700%	4.1183%	-3.6854%
Feb-12	4.3200%	0.3451%	0.2000%	0.3325%	0.3325%	0.3325%	0.3633%	4.1200%	3.9567%	-0.0182%
Mar-12	3.2900%	1.3720%	0.2200%	0.3325%	0.3450%	0.3388%	0.3733%	3.0700%	2.9167%	0.9987%
Apr-12	-0.6300%	2.1237%	0.2500%	0.3300%	0.3400%	0.3350%	0.3667%	-0.8800%	-0.9967%	1.7570%
May-12	-6.0100%	0.2161%	0.2300%	0.3167%	0.3258%	0.3213%	0.3500%	-6.2400%	-6.3600%	-0.1339%
Jun-12	4.1200%	4.1004%	0.1800%	0.3033%	0.3150%	0.3092%	0.3400%	3.9400%	3.7800%	3.7604%
Jul-12	1.3900%	2.8439%	0.2000%	0.2833%	0.2950%	0.2892%	0.3275%	1.1900%	1.0625%	2.5164%
Aug-12	2.2500%	-4.4721%	0.1800%	0.2900%	0.3008%	0.2954%	0.3333%	2.0700%	1.9167%	-4.8054%
Sep-12	2.5800%	1.2281%	0.1700%	0.2908%	0.3067%	0.2988%	0.3350%	2.4100%	2.2450%	0.8931%
Oct-12	-1.8500%	1.7240%	0.2100%	0.2892%	0.3025%	0.2958%	0.3258%	-2.0600%	-2.1758%	1.3982%
Nov-12	0.5800%	-4.6428%	0.1900%	0.2917%	0.2975%	0.2946%	0.3200%	0.3900%	0.2600%	-4.9628%
Dec-12	0.9100%	0.1108%	0.1900%	0.3042%	0.3083%	0.3063%	0.3333%	0.7200%	0.5767%	-0.2225%
Jan-13	5.1800%	3.5100%	0.2200%	0.3167%	0.3225%	0.3196%	0.3458%	4.9600%	4.8342%	3.1642%
Feb-13	1.3600%	3.3900%	0.2200%	0.3250%	0.3292%	0.3271%	0.3483%	1.1400%	1.0117%	3.0417%
Mar-13	3.7500%	5.4000%	0.2100%	0.3167%	0.3225%	0.3196%	0.3458%	3.5400%	3.4042%	5.0542%
Apr-13	1.9300%	5.9000%	0.2600%	0.3108%	0.3142%	0.3125%	0.3333%	1.6700%	1.5967%	5.5667%
May-13	2.3400%	-8.9600%	0.2300%	0.3242%	0.3283%	0.3263%	0.3475%	2.1100%	1.9925%	-9.3075%
Jun-13	-1.3400%	1.1400%	0.2400%	0.3558%	0.3600%	0.3579%	0.3775%	-1.5800%	-1.7175%	0.7625%
Jul-13	5.0900%	3.8500%	0.3000%	0.3617%	0.3717%	0.3667%	0.3900%	4.7900%	4.7000%	3.4600%
Aug-13	-2.9000%	-5.0000%	0.2800%	0.3783%	0.3858%	0.3821%	0.3942%	-3.1800%	-3.2942%	-5.3942%
Sep-13	3.1400%	1.0800%	0.2900%	0.3867%	0.3908%	0.3888%	0.4000%	2.8500%	2.7400%	0.6800%
Oct-13	4.6000%	3.7700%	0.2900%	0.3775%	0.3825%	0.3800%	0.3917%	4.3100%	4.2083%	3.3783%
Nov-13	3.0500%	-1.9900%	0.2700%	0.3858%	0.3892%	0.3875%	0.3975%	2.7800%	2.6525%	-2.3875%
Dec-13	2.5300%	0.7600%	0.3100%	0.3850%	0.3900%	0.3875%	0.4008%	2.2200%	2.1292%	0.3592%
Jan-14	-3.4600%	2.8100%	0.3200%	0.3742%	0.3775%	0.3758%	0.3858%	-3.7800%	-3.8458%	2.4242%
Feb-14	4.5700%	3.3500%	0.2600%	0.3708%	0.3717%	0.3713%	0.3775%	4.3100%	4.1925%	2.9725%
Mar-14	0.8400%	3.3700%	0.2900%	0.3650%	0.3700%	0.3675%	0.3758%	0.5500%	0.4642%	2.9942%
Apr-14	0.7400%	4.2600%	0.2800%	0.3533%	0.3608%	0.3571%	0.3675%	0.4600%	0.3725%	3.8925%
May-14	2.3500%	-1.0500%	0.2800%	0.3467%	0.3500%	0.3483%	0.3550%	2.0700%	1.9950%	-1.4050%
Jun-14	2.0700%	4.4800%	0.2500%	0.3542%	0.3550%	0.3546%	0.3575%	1.8200%	1.7125%	4.1225%
Jul-14	-1.3800%	-6.8000%	0.2700%	0.3467%	0.3500%	0.3483%	0.3525%	-1.6500%	-1.7325%	-7.1525%
Aug-14	4.0000%	4.9500%	0.2600%	0.3400%	0.3417%	0.3408%	0.3442%	3.7400%	3.6558%	4.6058%
Sep-14	-1.4000%	-1.8600%	0.2300%	0.3425%	0.3492%	0.3458%	0.3533%	-1.6300%	-1.7533%	-2.2133%
Oct-14	2.4400%	8.0200%	0.2500%	0.3267%	0.3325%	0.3296%	0.3383%	2.1900%	2.1017%	7.6817%
Nov-14	2.6900%	1.2000%	0.2300%	0.3267%	0.3367%	0.3317%	0.3408%	2.4600%	2.3492%	0.8592%
Dec-14	-0.2500%	3.5000%	0.2200%	0.3158%	0.3242%	0.3200%	0.3292%	-0.4700%	-0.5792%	3.1708%
Jan-15	-3.0000%	2.3300%	0.2000%	0.2883%	0.2950%	0.2917%	0.2983%	-3.2000%	-3.2983%	2.0317%
Feb-15	5.7500%	-6.3300%	0.1500%	0.3008%	0.3033%	0.3021%	0.3058%	5.6000%	5.4442%	-6.6358%
Mar-15	-1.5800%	-0.4900%	0.2100%	0.3033%	0.3083%	0.3058%	0.3117%	-1.7900%	-1.8917%	-0.8017%
Apr-15	0.9600%	-1.2900%	0.1900%	0.2933%	0.3033%	0.2983%	0.3125%	0.7700%	0.6475%	-1.6025%
May-15	1.2900%	0.6500%	0.2000%	0.3317%	0.3400%	0.3358%	0.3475%	1.0900%	0.9425%	0.3025%
Jun-15	-1.9400%	-6.0000%	0.2300%	0.3492%	0.3558%	0.3525%	0.3658%	-2.1700%	-2.3058%	-6.3658%
Jul-15	2.1000%	4.8100%	0.2400%	0.3458%	0.3542%	0.3500%	0.3667%	1.8600%	1.7333%	4.4433%
Aug-15	-6.0300%	-3.9700%	0.2200%	0.3367%	0.3442%	0.3404%	0.3542%	-6.2500%	-6.3842%	-4.3242%
Sep-15	-2.4700%	2.9000%	0.2100%	0.3392%	0.3508%	0.3450%	0.3658%	-2.6800%	-2.8358%	2.5342%
Oct-15	8.4400%	1.0800%	0.2100%	0.3292%	0.3425%	0.3358%	0.3575%	8.2300%	8.0825%	0.7225%
Nov-15	0.3000%	-2.1300%	0.2200%	0.3383%	0.3508%	0.3446%	0.3667%	0.0800%	-0.0667%	-2.4967%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-15	-1.5800%	2.1600%	0.2200%	0.3308%	0.3467%	0.3388%	0.3625%	-1.8000%	-1.9425%	1.7975%
Jan-16	-4.9600%	4.9223%	0.2100%	0.3333%	0.3433%	0.3383%	0.3558%	-5.1700%	-5.3158%	4.5665%
Feb-16	-0.1300%	1.9408%	0.2000%	0.3300%	0.3317%	0.3308%	0.3425%	-0.3300%	-0.4725%	1.5983%
Mar-16	6.7800%	8.1400%	0.1800%	0.3183%	0.3258%	0.3221%	0.3467%	6.6000%	6.4333%	7.7933%
Apr-16	0.3900%	-2.4100%	0.1700%	0.3183%	0.3258%	0.3221%	0.3467%	0.2200%	0.0433%	-2.7567%
May-16	1.8000%	1.5100%	0.2000%	0.3042%	0.3083%	0.3063%	0.3275%	1.6000%	1.4725%	1.1825%
Jun-16	0.2600%	7.7900%	0.1800%	0.2917%	0.3000%	0.2958%	0.3150%	0.0800%	-0.0550%	7.4750%
Jul-16	3.6900%	-0.8000%	0.1400%	0.2733%	0.2825%	0.2779%	0.2975%	3.5500%	3.3925%	-1.0975%
Aug-16	0.1400%	-5.5100%	0.1600%	0.2767%	0.2850%	0.2808%	0.2992%	-0.0200%	-0.1592%	-5.8092%
Sep-16	0.0200%	0.4000%	0.1500%	0.2842%	0.2917%	0.2879%	0.3050%	-0.1300%	-0.2850%	0.0950%
Oct-16	-1.8200%	0.8600%	0.1600%	0.2842%	0.2917%	0.2879%	0.3050%	-1.9800%	-2.1250%	0.5550%
Nov-16	3.7000%	-5.3900%	0.1800%	0.3217%	0.3275%	0.3246%	0.3400%	3.5200%	3.3600%	-5.7300%
Dec-16	1.9800%	4.9400%	0.2200%	0.3383%	0.3433%	0.3408%	0.3558%	1.7600%	1.6242%	4.5842%
Jan-17	1.9000%	1.2600%	0.2400%	0.3267%	0.3317%	0.3292%	0.3450%	1.6600%	1.5550%	0.9150%
Feb-17	3.9700%	5.2600%	0.2100%	0.3292%	0.3342%	0.3317%	0.3425%	3.7600%	3.6275%	4.9175%
Mar-17	0.1200%	2.9800%	0.2300%	0.3292%	0.3342%	0.3317%	0.3483%	-0.1100%	-0.2283%	2.6317%
Apr-17	1.0300%	0.7800%	0.2100%	0.3225%	0.3275%	0.3250%	0.3433%	0.8200%	0.6867%	0.4367%
May-17	1.4100%	4.2200%	0.2400%	0.3208%	0.3275%	0.3242%	0.3442%	1.1700%	1.0658%	3.8758%
Jun-17	0.6200%	-2.7000%	0.2100%	0.3067%	0.3142%	0.3104%	0.3283%	0.4100%	0.2917%	-3.0283%
Jul-17	2.0600%	2.4400%	0.2200%	0.3150%	0.3225%	0.3188%	0.3375%	1.8400%	1.7225%	2.1025%
Aug-17	0.3100%	3.2400%	0.2200%	0.3083%	0.3167%	0.3125%	0.3325%	0.0900%	-0.0225%	2.9075%
Sep-17	2.0600%	-2.7300%	0.1900%	0.3025%	0.3100%	0.3063%	0.3217%	1.8700%	1.7383%	-3.0517%
Oct-17	2.3300%	3.9000%	0.2200%	0.3000%	0.3117%	0.3058%	0.3258%	2.1100%	2.0042%	3.5742%
Nov-17	3.0700%	2.7500%	0.2100%	0.3000%	0.3117%	0.3058%	0.3258%	2.8600%	2.7442%	2.4242%
Dec-17	1.1100%	-6.1300%	0.2000%	0.2925%	0.3008%	0.2967%	0.3158%	0.9100%	0.7942%	-6.4458%
Jan-18	5.7300%	-3.0700%	0.2400%	0.2925%	0.3008%	0.2967%	0.3158%	5.4900%	5.4142%	-3.3858%
Feb-18	-3.6900%	-3.8400%	0.2200%	0.2958%	0.3067%	0.3013%	0.3217%	-3.9100%	-4.0117%	-4.1617%
Mar-18	-2.5400%	3.7700%	0.2400%	0.3225%	0.3325%	0.3275%	0.3442%	-2.7800%	-2.8842%	3.4258%
Apr-18	0.3800%	2.1000%	0.2500%	0.3208%	0.3342%	0.3275%	0.3475%	0.1300%	0.0325%	1.7525%
May-18	2.4100%	-1.1400%	0.2500%	0.3325%	0.3433%	0.3379%	0.3567%	2.1600%	2.0533%	-1.4967%
Jun-18	0.6200%	2.7300%	0.2300%	0.3300%	0.3425%	0.3363%	0.3558%	0.3900%	0.2642%	2.3742%
Jul-18	3.7200%	1.8600%	0.2500%	0.3225%	0.3392%	0.3308%	0.3558%	3.4700%	3.3642%	1.5042%
Aug-18	3.2600%	1.1300%	0.2500%	0.3233%	0.3375%	0.3304%	0.3550%	3.0100%	2.9050%	0.7750%
Sep-18	0.5700%	-0.6000%	0.2200%	0.3233%	0.3375%	0.3304%	0.3550%	0.3500%	0.2150%	-0.9550%
Oct-18	-6.8400%	1.9500%	0.3000%	0.3450%	0.0000%	0.1725%	0.3708%	-7.1400%	-7.2108%	1.5792%
Nov-18	2.0400%	3.5500%	0.2800%	0.3517%	0.3642%	0.3579%	0.3767%	1.7600%	1.6633%	3.1733%
Dec-18	-9.0300%	-4.0100%	0.2700%	0.3350%	0.3500%	0.3425%	0.3642%	-9.3000%	-9.3942%	-4.3742%
Jan-19	8.0100%	4.8400%	0.2500%	0.3275%	0.3450%	0.3363%	0.3625%	7.7600%	7.6475%	4.4775%
Feb-19	3.2100%	4.1100%	0.2200%	0.3158%	0.3325%	0.3242%	0.3542%	2.9900%	2.8558%	3.7558%
Mar-19	1.9400%	2.8800%	0.2300%	0.3158%	0.3325%	0.3242%	0.3542%	1.7100%	1.5858%	2.5258%
Apr-19	4.0500%	0.9300%	0.2300%	0.3075%	0.3208%	0.3142%	0.3400%	3.8200%	3.7100%	0.5900%
May-19	-6.3500%	-0.7800%	0.2300%	0.3058%	0.3167%	0.3113%	0.3317%	-6.5800%	-6.6817%	-1.1117%
Jun-19	7.0500%	3.2200%	0.1800%	0.3058%	0.3167%	0.3113%	0.3317%	6.8700%	6.7183%	2.8883%
Jul-19	1.4400%	-0.2700%	0.2100%	0.2742%	0.2883%	0.2813%	0.3075%	1.2300%	1.1325%	-0.5775%
Aug-19	-1.5800%	5.1300%	0.1900%	0.2742%	0.2883%	0.2813%	0.3075%	-1.7700%	-1.8875%	4.8225%
Sep-19	1.8700%	4.2500%	0.1500%	0.2483%	0.2567%	0.2525%	0.2742%	1.7200%	1.5958%	3.9758%
Oct-19	2.1700%	-0.7700%	0.1600%	0.2525%	0.2608%	0.2567%	0.2808%	2.0100%	1.8892%	-1.0508%
Nov-19	3.6300%	-1.8600%	0.1600%	0.2558%	0.2642%	0.2600%	0.2858%	3.4700%	3.3442%	-2.1458%
Dec-19	3.0200%	3.4300%	0.1800%	0.2508%	0.2592%	0.2550%	0.2833%	2.8400%	2.7367%	3.1467%
Jan-20	-0.0400%	6.6500%	0.2000%	0.2350%	0.2392%	0.2371%	0.2608%	-0.2400%	-0.3008%	6.3892%
Feb-20	-8.2300%	-9.8500%	0.1500%	0.2450%	0.2517%	0.2483%	0.2742%	-8.3800%	-8.5042%	-10.1242%
Mar-20	-12.3500%	-9.9900%	0.1230%	0.2317%	0.2375%	0.2346%	0.2592%	-12.4730%	-12.6092%	-10.2492%
Apr-20	12.8200%	3.2300%	0.0900%	0.2025%	0.2292%	0.2158%	0.2658%	12.7300%	12.5542%	2.9642%
May-20	4.7600%	4.3500%	0.0900%	0.2075%	0.2267%	0.2171%	0.2617%	4.6700%	4.4983%	4.0883%
Jun-20	1.9900%	-4.6500%	0.0900%	0.2008%	0.2192%	0.2100%	0.2558%	1.9000%	1.7342%	-4.9058%
Jul-20	5.6400%	7.8200%	0.1000%	0.1692%	0.1817%	0.1754%	0.2133%	5.5400%	5.4267%	7.6067%
Aug-20	7.1900%	-2.6500%	0.0800%	0.1875%	0.1975%	0.1925%	0.2275%	7.1100%	6.9625%	-2.8775%
Sep-20	-3.8000%	1.1209%	0.0000%	0.1925%	0.2058%	0.1992%	0.2367%	-3.8000%	-4.0367%	0.8842%
Oct-20	-2.6600%	5.0400%	0.0900%	0.1958%	0.2125%	0.2042%	0.2458%	-2.7500%	-2.9058%	4.7942%
Nov-20	10.9500%	0.7352%	0.1100%	0.1917%	0.2058%	0.1988%	0.2375%	10.8400%	10.7125%	0.4977%
Dec-20	3.8400%	0.7033%	0.1100%	0.1883%	0.2033%	0.1958%	0.2308%	3.7300%	3.6092%	0.4724%
Jan-21	-1.0100%	-0.9149%	0.1100%	0.2042%	0.2175%	0.2108%	0.2425%	-1.1200%	-1.2525%	-1.1574%
Feb-21	2.7600%	-6.0950%	0.1200%	0.2250%	0.2358%	0.2304%	0.2575%	2.6400%	2.5025%	-6.3525%
Mar-21	4.3800%	10.4988%	0.1800%	0.2533%	0.2642%	0.2588%	0.2867%	4.2000%	4.0933%	10.2122%
Apr-21	5.3400%	4.2771%	0.1900%	0.2417%	0.2525%	0.2471%	0.2750%	5.1500%	5.0650%	4.0021%
May-21	0.7000%	-2.3728%	0.1800%	0.2467%	0.2558%	0.2513%	0.2775%	0.5200%	0.4225%	-2.6503%
Jun-21	2.3300%	-2.1630%	0.1700%	0.2325%	0.2425%	0.2375%	0.2633%	2.1600%	2.0667%	-2.4263%
Jul-21	2.3800%	3.8580%	0.1600%	0.2142%	0.2258%	0.2200%	0.2458%	2.2200%	2.1342%	3.6122%
Aug-21	3.0400%	3.9755%	0.1500%	0.2125%	0.2275%	0.2200%	0.2458%	2.8900%	2.7942%	3.7297%
Sep-21	-4.6500%	-6.1695%	0.1400%	0.2108%	0.2275%	0.2192%	0.2467%	-4.7900%	-4.8967%	-6.4161%
Oct-21	7.0100%	4.7338%	0.1500%	0.2233%	0.2383%	0.2308%	0.2575%	6.8600%	6.7525%	4.4763%
Nov-21	-0.6900%	-1.6394%	0.1700%	0.2183%	0.2308%	0.2246%	0.2517%	-0.8600%	-0.9417%	-1.8911%

	Market Return	S&P Return	Ibbot LT RF	Aaa Corp	Aa Corp	Avg Aaa and Aa Corp	A PU	RPMKT	RPAPU	RPSPA
Dec-21	4.4800%	9.6216%	0.1500%	0.2200%	0.2308%	0.2254%	0.2533%	4.3300%	4.2267%	9.3683%
Jan-22	-5.1700%	-3.2749%	0.1700%	0.2442%	0.2517%	0.2479%	0.2775%	-5.3400%	-5.4475%	-3.5524%
Feb-22	-2.9900%	-3.4092%	0.1700%	0.2708%	0.2800%	0.2754%	0.3067%	-3.1600%	-3.2967%	-3.7159%
Mar-22	3.7100%	10.3402%	0.2000%	0.2858%	0.3017%	0.2938%	0.3317%	3.5100%	3.3783%	10.0085%
Apr-22	-8.7200%	-4.2501%	0.2100%	0.3125%	0.3267%	0.3196%	0.3583%	-8.9300%	-9.0783%	-4.6085%
May-22	0.1800%	4.3041%	0.2800%	0.3442%	0.3633%	0.3538%	0.3958%	-0.1000%	-0.2158%	3.9083%
Jun-22	-8.2500%	-4.9726%	0.2800%	0.3533%	0.3742%	0.3638%	0.4050%	-8.5300%	-8.6550%	-5.3776%
Jul-22	9.2200%	5.4986%	0.2700%	0.3383%	0.3642%	0.3513%	0.3983%	8.9500%	8.8217%	5.1003%
Aug-22	-4.0800%	0.5100%	0.2900%	0.3392%	0.3633%	0.3513%	0.3967%	-4.3700%	-4.4767%	0.1133%
Sep-22	-9.2100%	-11.3165%	0.2900%	0.3808%	0.4050%	0.3929%	0.4383%	-9.5000%	-9.6483%	-11.7548%
Oct-22	8.1000%	1.6754%	0.3500%	0.4250%	0.4500%	0.4375%	0.4900%	7.7500%	7.6100%	1.1854%
Nov-22	5.5900%	6.9879%	0.3600%	0.4083%	0.4358%	0.4221%	0.4792%	5.2300%	5.1108%	6.5087%
Dec-22	-5.7600%	-0.4901%	0.3300%	0.3675%	0.3958%	0.3817%	0.4392%	-6.0900%	-6.1992%	-0.9292%
Jan-23	6.2834%	-2.0054%	0.3050%	0.3667%	0.3933%	0.3800%	0.4333%	5.9784%	5.8501%	-2.4387%
Feb-23	-2.4400%	-5.8516%	0.3167%	0.3800%	0.4033%	0.3917%	0.4408%	-2.7566%	-2.8808%	-6.2924%
Mar-23	3.6714%	4.8888%	0.3142%	0.3833%	0.4117%	0.3975%	0.4492%	3.3573%	3.2223%	4.4397%
Apr-23	0.7188%	1.8900%	0.3067%	0.3725%	0.4017%	0.3871%	0.4275%	0.4121%	0.2913%	1.4625%
May-23	0.4347%	-5.8087%	0.3217%	0.3892%	0.4217%	0.4054%	0.4467%	0.1130%	-0.0120%	-6.2554%
Jun-23	6.6076%	1.6572%	0.3225%	0.3875%	0.4183%	0.4029%	0.4483%	6.2851%	6.1592%	1.2088%
Jul-23	3.2125%	2.4678%	0.3300%	0.3883%	0.4225%	0.4054%	0.4508%	2.8825%	2.7616%	2.0170%
Aug-23	-1.5921%	-6.1408%	0.3567%	0.4133%	0.4475%	0.4304%	0.4767%	-1.9488%	-2.0688%	-6.6174%
Sep-23	-4.7678%	-5.5938%	0.3725%	0.4275%	0.4592%	0.4433%	0.4883%	-5.1403%	-5.2562%	-6.0821%
Oct-23	-2.7391%	1.2938%	0.4125%	0.4675%	0.4975%	0.4825%	0.5283%	-3.1516%	-3.2675%	0.7655%
Nov-23	8.6885%	5.1596%	0.3883%	0.4400%	0.4725%	0.4563%	0.5042%	8.3002%	8.1843%	4.6555%
Dec-23	4.5431%	1.9135%	0.3450%	0.3950%	0.4217%	0.4083%	0.4525%	4.1981%	4.0906%	1.4610%
Jan-24	3.3417%	-2.7985%	0.3550%	0.4058%	0.4275%	0.4167%	0.4567%	2.9867%	2.8850%	-3.2552%
Feb-24	5.3396%	0.8951%	0.3650%	0.4192%	0.4375%	0.4283%	0.4633%	4.9746%	4.8763%	0.4318%
Mar-24	3.2175%	6.5802%	0.3633%	0.4175%	0.4383%	0.4279%	0.4625%	2.8541%	2.7550%	6.1177%
Apr-24	-4.0845%	1.6367%	0.3883%	0.4400%	0.4583%	0.4492%	0.4825%	-4.4728%	-4.5670%	1.1542%

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Jan-26	Market Return			-		0.0031	-0.0031
Feb-26	Market Return			(0.0385)		0.0028	-0.0413
Mar-26	Market Return			(0.0575)		0.0032	-0.0607
Apr-26	Market Return			0.0253		0.0030	0.0223
May-26	Market Return			0.0179		0.0028	0.0151
Jun-26	Market Return			0.0457		0.0033	0.0424
Jul-26	Market Return			0.0479		0.0031	0.0448
Aug-26	Market Return			0.0248		0.0031	0.0217
Sep-26	Market Return			0.0252		0.0030	0.0222
Oct-26	Market Return			(0.0284)		0.0030	-0.0314
Nov-26	Market Return			0.0347		0.0031	0.0316
Dec-26	Market Return			0.0196		0.0030	0.0166
Jan-27	Market Return			(0.0193)		0.0030	-0.0223
Feb-27	Market Return			0.0537		0.0027	0.0510
Mar-27	Market Return			0.0087		0.0029	0.0058
Apr-27	Market Return			0.0201		0.0027	0.0174
May-27	Market Return			0.0607		0.0028	0.0579
Jun-27	Market Return			(0.0067)		0.0027	-0.0094
Jul-27	Market Return			0.0670		0.0027	0.0643
Aug-27	Market Return			0.0515		0.0029	0.0486
Sep-27	Market Return			0.0450		0.0027	0.0423
Oct-27	Market Return			(0.0502)		0.0028	-0.0530
Nov-27	Market Return			0.0721		0.0027	0.0694
Dec-27	Market Return			0.0279		0.0027	0.0252
Jan-28	Market Return			(0.0040)		0.0027	-0.0067
Feb-28	Market Return			(0.0125)		0.0025	-0.0150
Mar-28	Market Return			0.1101		0.0027	0.1074
Apr-28	Market Return			0.0345		0.0026	0.0319
May-28	Market Return			0.0197		0.0027	0.0170
Jun-28	Market Return			(0.0385)		0.0027	-0.0412
Jul-28	Market Return			0.0141		0.0027	0.0114
Aug-28	Market Return			0.0803		0.0029	0.0774
Sep-28	Market Return			0.0259		0.0027	0.0232
Oct-28	Market Return			0.0168		0.0030	0.0138
Nov-28	Market Return			0.1292		0.0027	0.1265
Dec-28	Market Return			0.0049		0.0029	0.0020
Jan-29	Market Return			0.0583		0.0029	0.0554
Feb-29	Market Return			(0.0019)		0.0027	-0.0046
Mar-29	Market Return			(0.0012)		0.0028	-0.0040
Apr-29	Market Return			0.0176		0.0034	0.0142
May-29	Market Return			(0.0362)		0.0030	-0.0392
Jun-29	Market Return			0.1140		0.0029	0.1111
Jul-29	Market Return			0.0471		0.0032	0.0439
Aug-29	Market Return			0.1028		0.0030	0.0998
Sep-29	Market Return			(0.0476)		0.0032	-0.0508
Oct-29	Market Return			(0.1973)		0.0031	-0.2004
Nov-29	Market Return			(0.1246)		0.0026	-0.1272
Dec-29	Market Return			0.0282		0.0031	0.0251
Jan-30	Market Return			0.0639		0.0029	0.0610
Feb-30	Market Return			0.0259		0.0026	0.0233
Mar-30	Market Return			0.0812		0.0029	0.0783
Apr-30	Market Return			(0.0080)		0.0027	-0.0107
May-30	Market Return			(0.0096)		0.0027	-0.0123
Jun-30	Market Return			(0.1625)		0.0029	-0.1654
Jul-30	Market Return			0.0386		0.0028	0.0358

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Aug-30	Market Return			0.0141		0.0026	0.0115
Sep-30	Market Return			(0.1282)		0.0029	-0.1311
Oct-30	Market Return			(0.0855)		0.0027	-0.0882
Nov-30	Market Return			(0.0089)		0.0026	-0.0115
Dec-30	Market Return			(0.0706)		0.0028	-0.0734
Jan-31	Market Return			0.0502		0.0028	0.0474
Feb-31	Market Return			0.1193		0.0026	0.1167
Mar-31	Market Return			(0.0675)		0.0029	-0.0704
Apr-31	Market Return			(0.0935)		0.0027	-0.0962
May-31	Market Return			(0.1279)		0.0026	-0.1305
Jun-31	Market Return			0.1421		0.0028	0.1393
Jul-31	Market Return			(0.0722)		0.0027	-0.0749
Aug-31	Market Return			0.0182		0.0027	0.0155
Sep-31	Market Return			(0.2973)		0.0027	-0.3000
Oct-31	Market Return			0.0896		0.0029	0.0867
Nov-31	Market Return			(0.0798)		0.0031	-0.0829
Dec-31	Market Return			(0.1400)		0.0032	-0.1432
Jan-32	Market Return			(0.0271)		0.0032	-0.0303
Feb-32	Market Return			0.0570		0.0032	0.0538
Mar-32	Market Return			(0.1158)		0.0031	-0.1189
Apr-32	Market Return			(0.1997)		0.0030	-0.2027
May-32	Market Return			(0.2196)		0.0028	-0.2224
Jun-32	Market Return			(0.0022)		0.0028	-0.0050
Jul-32	Market Return			0.3815		0.0028	0.3787
Aug-32	Market Return			0.3869		0.0028	0.3841
Sep-32	Market Return			(0.0346)		0.0026	-0.0372
Oct-32	Market Return			(0.1349)		0.0027	-0.1376
Nov-32	Market Return			(0.0417)		0.0026	-0.0443
Dec-32	Market Return			0.0565		0.0027	0.0538
Jan-33	Market Return			0.0087		0.0027	0.0060
Feb-33	Market Return			(0.1772)		0.0023	-0.1795
Mar-33	Market Return			0.0353		0.0027	0.0326
Apr-33	Market Return			0.4256		0.0025	0.4231
May-33	Market Return			0.1683		0.0028	0.1655
Jun-33	Market Return			0.1338		0.0025	0.1313
Jul-33	Market Return			(0.0862)		0.0026	-0.0888
Aug-33	Market Return			0.1206		0.0026	0.1180
Sep-33	Market Return			(0.1118)		0.0025	-0.1143
Oct-33	Market Return			(0.0855)		0.0026	-0.0881
Nov-33	Market Return			0.1127		0.0025	0.1102
Dec-33	Market Return			0.0253		0.0028	0.0225
Jan-34	Market Return			0.1069		0.0029	0.1040
Feb-34	Market Return			(0.0322)		0.0024	-0.0346
Mar-34	Market Return			-		0.0027	-0.0027
Apr-34	Market Return			(0.0251)		0.0025	-0.0276
May-34	Market Return			(0.0736)		0.0025	-0.0761
Jun-34	Market Return			0.0229		0.0024	0.0205
Jul-34	Market Return			(0.1132)		0.0024	-0.1156
Aug-34	Market Return			0.0611		0.0024	0.0587
Sep-34	Market Return			(0.0033)		0.0023	-0.0056
Oct-34	Market Return			(0.0286)		0.0027	-0.0313
Nov-34	Market Return			0.0942		0.0025	0.0917
Dec-34	Market Return			(0.0010)		0.0025	-0.0035
Jan-35	Market Return			(0.0411)		0.0025	-0.0436
Feb-35	Market Return			(0.0341)		0.0021	-0.0362

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Mar-35	Market Return			(0.0286)		0.0022	-0.0308

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Apr-35	Market Return			0.0980		0.0023	0.0957
May-35	Market Return			0.0409		0.0023	0.0386
Jun-35	Market Return			0.0699		0.0022	0.0677
Jul-35	Market Return			0.0850		0.0024	0.0826
Aug-35	Market Return			0.0280		0.0023	0.0257
Sep-35	Market Return			0.0256		0.0023	0.0233
Oct-35	Market Return			0.0777		0.0023	0.0754
Nov-35	Market Return			0.0474		0.0024	0.0450
Dec-35	Market Return			0.0394		0.0024	0.0370
Jan-36	Market Return			0.0670		0.0024	0.0646
Feb-36	Market Return			0.0224		0.0023	0.0201
Mar-36	Market Return			0.0268		0.0024	0.0244
Apr-36	Market Return			(0.0751)		0.0022	-0.0773
May-36	Market Return			0.0545		0.0022	0.0523
Jun-36	Market Return			0.0333		0.0024	0.0309
Jul-36	Market Return			0.0701		0.0023	0.0678
Aug-36	Market Return			0.0151		0.0023	0.0128
Sep-36	Market Return			0.0031		0.0021	0.0010
Oct-36	Market Return			0.0775		0.0023	0.0752
Nov-36	Market Return			0.0134		0.0022	0.0112
Dec-36	Market Return			(0.0029)		0.0022	-0.0051
Jan-37	Market Return			0.0390		0.0021	0.0369
Feb-37	Market Return			0.0191		0.0020	0.0171
Mar-37	Market Return			(0.0077)		0.0022	-0.0099
Apr-37	Market Return			(0.0809)		0.0023	-0.0832
May-37	Market Return			(0.0024)		0.0022	-0.0046
Jun-37	Market Return			(0.0504)		0.0025	-0.0529
Jul-37	Market Return			0.1045		0.0024	0.1021
Aug-37	Market Return			(0.0483)		0.0023	-0.0506
Sep-37	Market Return			(0.1403)		0.0023	-0.1426
Oct-37	Market Return			(0.0981)		0.0023	-0.1004
Nov-37	Market Return			(0.0866)		0.0024	-0.0890
Dec-37	Market Return			(0.0459)		0.0023	-0.0482
Jan-38	Market Return			0.0152		0.0023	0.0129
Feb-38	Market Return			0.0674		0.0021	0.0653
Mar-38	Market Return			(0.2487)		0.0023	-0.2510
Apr-38	Market Return			0.1447		0.0022	0.1425
May-38	Market Return			(0.0330)		0.0022	-0.0352
Jun-38	Market Return			0.2503		0.0021	0.2482
Jul-38	Market Return			0.0744		0.0021	0.0723
Aug-38	Market Return			(0.0226)		0.0022	-0.0248
Sep-38	Market Return			0.0166		0.0021	0.0145
Oct-38	Market Return			0.0776		0.0022	0.0754
Nov-38	Market Return			(0.0273)		0.0021	-0.0294
Dec-38	Market Return			0.0401		0.0022	0.0379
Jan-39	Market Return			(0.0674)		0.0021	-0.0695
Feb-39	Market Return			0.0390		0.0019	0.0371
Mar-39	Market Return			(0.1339)		0.0021	-0.1360
Apr-39	Market Return			(0.0027)		0.0019	-0.0046
May-39	Market Return			0.0733		0.0020	0.0713
Jun-39	Market Return			(0.0612)		0.0018	-0.0630
Jul-39	Market Return			0.1105		0.0019	0.1086
Aug-39	Market Return			(0.0648)		0.0018	-0.0666
Sep-39	Market Return			0.1673		0.0019	0.1654
Oct-39	Market Return			(0.0123)		0.0023	-0.0146

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Nov-39	Market Return			(0.0398)		0.0020	-0.0418
Dec-39	Market Return			0.0270		0.0019	0.0251
Jan-40	Market Return			(0.0336)		0.0020	-0.0356
Feb-40	Market Return			0.0133		0.0018	0.0115
Mar-40	Market Return			0.0124		0.0019	0.0105
Apr-40	Market Return			(0.0024)		0.0018	-0.0042
May-40	Market Return			(0.2289)		0.0019	-0.2308
Jun-40	Market Return			0.0809		0.0019	0.0790
Jul-40	Market Return			0.0341		0.0020	0.0321
Aug-40	Market Return			0.0350		0.0019	0.0331
Sep-40	Market Return			0.0123		0.0018	0.0105
Oct-40	Market Return			0.0422		0.0018	0.0404
Nov-40	Market Return			(0.0316)		0.0018	-0.0334
Dec-40	Market Return			0.0009		0.0017	-0.0008
Jan-41	Market Return			(0.0463)		0.0016	-0.0479
Feb-41	Market Return			(0.0060)		0.0016	-0.0076
Mar-41	Market Return			0.0071		0.0018	0.0053
Apr-41	Market Return			(0.0612)		0.0017	-0.0629
May-41	Market Return			0.0183		0.0017	0.0166
Jun-41	Market Return			0.0578		0.0016	0.0562
Jul-41	Market Return			0.0579		0.0016	0.0563
Aug-41	Market Return			0.0010		0.0016	-0.0006
Sep-41	Market Return			(0.0068)		0.0016	-0.0084
Oct-41	Market Return			(0.0657)		0.0016	-0.0673
Nov-41	Market Return			(0.0284)		0.0014	-0.0298
Dec-41	Market Return			(0.0407)		0.0016	-0.0423
Jan-42	Market Return			0.0161		0.0021	0.0140
Feb-42	Market Return			(0.0159)		0.0019	-0.0178
Mar-42	Market Return			(0.0652)		0.0021	-0.0673
Apr-42	Market Return			(0.0399)		0.0020	-0.0419
May-42	Market Return			0.0796		0.0019	0.0777
Jun-42	Market Return			0.0221		0.0021	0.0200
Jul-42	Market Return			0.0337		0.0021	0.0316
Aug-42	Market Return			0.0164		0.0021	0.0143
Sep-42	Market Return			0.0290		0.0020	0.0270
Oct-42	Market Return			0.0678		0.0021	0.0657
Nov-42	Market Return			(0.0021)		0.0020	-0.0041
Dec-42	Market Return			0.0549		0.0021	0.0528
Jan-43	Market Return			0.0737		0.0020	0.0717
Feb-43	Market Return			0.0583		0.0019	0.0564
Mar-43	Market Return			0.0545		0.0021	0.0524
Apr-43	Market Return			0.0035		0.0020	0.0015
May-43	Market Return			0.0552		0.0019	0.0533
Jun-43	Market Return			0.0223		0.0021	0.0202
Jul-43	Market Return			(0.0526)		0.0021	-0.0547
Aug-43	Market Return			0.0171		0.0021	0.0150
Sep-43	Market Return			0.0263		0.0020	0.0243
Oct-43	Market Return			(0.0108)		0.0020	-0.0128
Nov-43	Market Return			(0.0654)		0.0021	-0.0675
Dec-43	Market Return			0.0617		0.0021	0.0596
Jan-44	Market Return			0.0171		0.0021	0.0150
Feb-44	Market Return			0.0042		0.0020	0.0022
Mar-44	Market Return			0.0195		0.0021	0.0174
Apr-44	Market Return			(0.0100)		0.0020	-0.0120
May-44	Market Return			0.0505		0.0022	0.0483

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Jun-44	Market Return			0.0543		0.0020	0.0523
Jul-44	Market Return			(0.0193)		0.0021	-0.0214
Aug-44	Market Return			0.0157		0.0021	0.0136
Sep-44	Market Return			(0.0008)		0.0020	-0.0028
Oct-44	Market Return			0.0023		0.0021	0.0002
Nov-44	Market Return			0.0133		0.0020	0.0113
Dec-44	Market Return			0.0374		0.0020	0.0354
Jan-45	Market Return			0.0158		0.0021	0.0137
Feb-45	Market Return			0.0683		0.0018	0.0665
Mar-45	Market Return			(0.0441)		0.0020	-0.0461
Apr-45	Market Return			0.0902		0.0019	0.0883
May-45	Market Return			0.0195		0.0019	0.0176
Jun-45	Market Return			(0.0007)		0.0019	-0.0026
Jul-45	Market Return			(0.0180)		0.0018	-0.0198
Aug-45	Market Return			0.0641		0.0019	0.0622
Sep-45	Market Return			0.0438		0.0018	0.0420
Oct-45	Market Return			0.0322		0.0019	0.0303
Nov-45	Market Return			0.0396		0.0018	0.0378
Dec-45	Market Return			0.0116		0.0018	0.0098
Jan-46	Market Return			0.0714		0.0017	0.0697
Feb-46	Market Return			(0.0641)		0.0015	-0.0656
Mar-46	Market Return			0.0480		0.0016	0.0464
Apr-46	Market Return			0.0393		0.0017	0.0376
May-46	Market Return			0.0288		0.0018	0.0270
Jun-46	Market Return			(0.0370)		0.0016	-0.0386
Jul-46	Market Return			(0.0239)		0.0019	-0.0258
Aug-46	Market Return			(0.0674)		0.0017	-0.0691
Sep-46	Market Return			(0.0997)		0.0018	-0.1015
Oct-46	Market Return			(0.0060)		0.0019	-0.0079
Nov-46	Market Return			(0.0027)		0.0018	-0.0045
Dec-46	Market Return			0.0457		0.0019	0.0438
Jan-47	Market Return			0.0255		0.0018	0.0237
Feb-47	Market Return			(0.0077)		0.0016	-0.0093
Mar-47	Market Return			(0.0149)		0.0018	-0.0167
Apr-47	Market Return			(0.0363)		0.0017	-0.0380
May-47	Market Return			0.0014		0.0017	-0.0003
Jun-47	Market Return			0.0554		0.0019	0.0535
Jul-47	Market Return			0.0381		0.0018	0.0363
Aug-47	Market Return			(0.0203)		0.0017	-0.0220
Sep-47	Market Return			(0.0111)		0.0018	-0.0129
Oct-47	Market Return			0.0238		0.0018	0.0220
Nov-47	Market Return			(0.0175)		0.0017	-0.0192
Dec-47	Market Return			0.0233		0.0021	0.0212
Jan-48	Market Return			(0.0379)		0.0020	-0.0399
Feb-48	Market Return			(0.0388)		0.0019	-0.0407
Mar-48	Market Return			0.0793		0.0022	0.0771
Apr-48	Market Return			0.0292		0.0020	0.0272
May-48	Market Return			0.0879		0.0018	0.0861
Jun-48	Market Return			0.0054		0.0021	0.0033
Jul-48	Market Return			(0.0508)		0.0019	-0.0527
Aug-48	Market Return			0.0158		0.0021	0.0137
Sep-48	Market Return			(0.0276)		0.0020	-0.0296
Oct-48	Market Return			0.0710		0.0019	0.0691
Nov-48	Market Return			(0.0961)		0.0021	-0.0982
Dec-48	Market Return			0.0346		0.0020	0.0326

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Jan-49	Market Return			0.0039		0.0020	0.0019
Feb-49	Market Return			(0.0296)		0.0018	-0.0314
Mar-49	Market Return			0.0328		0.0019	0.0309
Apr-49	Market Return			(0.0179)		0.0018	-0.0197
May-49	Market Return			(0.0258)		0.0020	-0.0278
Jun-49	Market Return			0.0014		0.0019	-0.0005
Jul-49	Market Return			0.0650		0.0017	0.0633
Aug-49	Market Return			0.0219		0.0019	0.0200
Sep-49	Market Return			0.0263		0.0017	0.0246
Oct-49	Market Return			0.0340		0.0018	0.0322
Nov-49	Market Return			0.0175		0.0017	0.0158
Dec-49	Market Return			0.0486		0.0017	0.0469
Jan-50	Market Return			0.0197		0.0018	0.0179
Feb-50	Market Return			0.0199		0.0016	0.0183
Mar-50	Market Return			0.0070		0.0018	0.0052
Apr-50	Market Return			0.0486		0.0016	0.0470
May-50	Market Return			0.0509		0.0019	0.0490
Jun-50	Market Return			(0.0548)		0.0017	-0.0565
Jul-50	Market Return			0.0119		0.0018	0.0101
Aug-50	Market Return			0.0443		0.0018	0.0425
Sep-50	Market Return			0.0592		0.0017	0.0575
Oct-50	Market Return			0.0093		0.0019	0.0074
Nov-50	Market Return			0.0169		0.0018	0.0151
Dec-50	Market Return			0.0513		0.0018	0.0495
Jan-51	Market Return			0.0637		0.0020	0.0617
Feb-51	Market Return			0.0157		0.0017	0.0140
Mar-51	Market Return			(0.0156)		0.0019	-0.0175
Apr-51	Market Return			0.0509		0.0020	0.0489
May-51	Market Return			(0.0299)		0.0021	-0.0320
Jun-51	Market Return			(0.0228)		0.0020	-0.0248
Jul-51	Market Return			0.0711		0.0023	0.0688
Aug-51	Market Return			0.0478		0.0021	0.0457
Sep-51	Market Return			0.0013		0.0019	-0.0006
Oct-51	Market Return			(0.0103)		0.0023	-0.0126
Nov-51	Market Return			0.0096		0.0021	0.0075
Dec-51	Market Return			0.0424		0.0022	0.0402
Jan-52	Market Return			0.0181		0.0023	0.0158
Feb-52	Market Return			(0.0282)		0.0021	-0.0303
Mar-52	Market Return			0.0503		0.0023	0.0480
Apr-52	Market Return			(0.0402)		0.0022	-0.0424
May-52	Market Return			0.0343		0.0020	0.0323
Jun-52	Market Return			0.0490		0.0022	0.0468
Jul-52	Market Return			0.0196		0.0022	0.0174
Aug-52	Market Return			(0.0071)		0.0021	-0.0092
Sep-52	Market Return			(0.0176)		0.0023	-0.0199
Oct-52	Market Return			0.0020		0.0023	-0.0003
Nov-52	Market Return			0.0571		0.0021	0.0550
Dec-52	Market Return			0.0382		0.0024	0.0358
Jan-53	Market Return			(0.0049)		0.0023	-0.0072
Feb-53	Market Return			(0.0106)		0.0021	-0.0127
Mar-53	Market Return			(0.0212)		0.0025	-0.0237
Apr-53	Market Return			(0.0237)		0.0024	-0.0261
May-53	Market Return			0.0077		0.0024	0.0053
Jun-53	Market Return			(0.0134)		0.0027	-0.0161
Jul-53	Market Return			0.0273		0.0025	0.0248

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Aug-53	Market Return			(0.0501)		0.0025	-0.0526
Sep-53	Market Return			0.0034		0.0025	0.0009
Oct-53	Market Return			0.0540		0.0023	0.0517
Nov-53	Market Return			0.0204		0.0024	0.0180
Dec-53	Market Return			0.0052		0.0024	0.0028
Jan-54	Market Return			0.0536		0.0023	0.0513
Feb-54	Market Return			0.0111		0.0022	0.0089
Mar-54	Market Return			0.0325		0.0025	0.0300
Apr-54	Market Return			0.0516		0.0022	0.0494
May-54	Market Return			0.0418		0.0020	0.0398
Jun-54	Market Return			0.0031		0.0025	0.0006
Jul-54	Market Return			0.0589		0.0022	0.0567
Aug-54	Market Return			(0.0275)		0.0023	-0.0298
Sep-54	Market Return			0.0851		0.0022	0.0829
Oct-54	Market Return			(0.0167)		0.0021	-0.0188
Nov-54	Market Return			0.0909		0.0023	0.0886
Dec-54	Market Return			0.0534		0.0023	0.0511
Jan-55	Market Return			0.0197		0.0022	0.0175
Feb-55	Market Return			0.0098		0.0022	0.0076
Mar-55	Market Return			(0.0030)		0.0024	-0.0054
Apr-55	Market Return			0.0396		0.0022	0.0374
May-55	Market Return			0.0055		0.0025	0.0030
Jun-55	Market Return			0.0841		0.0023	0.0818
Jul-55	Market Return			0.0622		0.0023	0.0599
Aug-55	Market Return			(0.0025)		0.0027	-0.0052
Sep-55	Market Return			0.0130		0.0024	0.0106
Oct-55	Market Return			(0.0284)		0.0025	-0.0309
Nov-55	Market Return			0.0827		0.0024	0.0803
Dec-55	Market Return			0.0015		0.0024	-0.0009
Jan-56	Market Return			(0.0347)		0.0025	-0.0372
Feb-56	Market Return			0.0413		0.0023	0.0390
Mar-56	Market Return			0.0710		0.0023	0.0687
Apr-56	Market Return			(0.0004)		0.0026	-0.0030
May-56	Market Return			(0.0593)		0.0026	-0.0619
Jun-56	Market Return			0.0409		0.0023	0.0386
Jul-56	Market Return			0.0530		0.0026	0.0504
Aug-56	Market Return			(0.0328)		0.0026	-0.0354
Sep-56	Market Return			(0.0440)		0.0025	-0.0465
Oct-56	Market Return			0.0066		0.0029	0.0037
Nov-56	Market Return			(0.0050)		0.0027	-0.0077
Dec-56	Market Return			0.0370		0.0028	0.0342
Jan-57	Market Return			(0.0401)		0.0029	-0.0430
Feb-57	Market Return			(0.0264)		0.0025	-0.0289
Mar-57	Market Return			0.0215		0.0026	0.0189
Apr-57	Market Return			0.0388		0.0029	0.0359
May-57	Market Return			0.0437		0.0029	0.0408
Jun-57	Market Return			0.0004		0.0025	-0.0021
Jul-57	Market Return			0.0131		0.0033	0.0098
Aug-57	Market Return			(0.0505)		0.0030	-0.0535
Sep-57	Market Return			(0.0602)		0.0031	-0.0633
Oct-57	Market Return			(0.0302)		0.0031	-0.0333
Nov-57	Market Return			0.0231		0.0029	0.0202
Dec-57	Market Return			(0.0395)		0.0029	-0.0424
Jan-58	Market Return			0.0445		0.0027	0.0418
Feb-58	Market Return			(0.0141)		0.0025	-0.0166

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Mar-58	Market Return			0.0328		0.0027	0.0301
Apr-58	Market Return			0.0337		0.0026	0.0311
May-58	Market Return			0.0212		0.0024	0.0188
Jun-58	Market Return			0.0279		0.0027	0.0252
Jul-58	Market Return			0.0449		0.0027	0.0422
Aug-58	Market Return			0.0176		0.0027	0.0149
Sep-58	Market Return			0.0501		0.0032	0.0469
Oct-58	Market Return			0.0270		0.0032	0.0238
Nov-58	Market Return			0.0284		0.0028	0.0256
Dec-58	Market Return			0.0535		0.0033	0.0502
Jan-59	Market Return			0.0053		0.0031	0.0022
Feb-59	Market Return			0.0049		0.0031	0.0018
Mar-59	Market Return			0.0020		0.0035	-0.0015
Apr-59	Market Return			0.0402		0.0033	0.0369
May-59	Market Return			0.0240		0.0033	0.0207
Jun-59	Market Return			(0.0022)		0.0036	-0.0058
Jul-59	Market Return			0.0363		0.0035	0.0328
Aug-59	Market Return			(0.0102)		0.0035	-0.0137
Sep-59	Market Return			(0.0443)		0.0034	-0.0477
Oct-59	Market Return			0.0128		0.0035	0.0093
Nov-59	Market Return			0.0186		0.0035	0.0151
Dec-59	Market Return			0.0292		0.0036	0.0256
Jan-60	Market Return			(0.0700)		0.0035	-0.0735
Feb-60	Market Return			0.0147		0.0037	0.0110
Mar-60	Market Return			(0.0123)		0.0036	-0.0159
Apr-60	Market Return			(0.0161)		0.0032	-0.0193
May-60	Market Return			0.0326		0.0037	0.0289
Jun-60	Market Return			0.0211		0.0034	0.0177
Jul-60	Market Return			(0.0234)		0.0032	-0.0266
Aug-60	Market Return			0.0317		0.0034	0.0283
Sep-60	Market Return			(0.0590)		0.0032	-0.0622
Oct-60	Market Return			(0.0007)		0.0033	-0.0040
Nov-60	Market Return			0.0465		0.0032	0.0433
Dec-60	Market Return			0.0479		0.0033	0.0446
Jan-61	Market Return			0.0645		0.0033	0.0612
Feb-61	Market Return			0.0319		0.0030	0.0289
Mar-61	Market Return			0.0270		0.0031	0.0239
Apr-61	Market Return			0.0051		0.0031	0.0020
May-61	Market Return			0.0239		0.0034	0.0205
Jun-61	Market Return			(0.0275)		0.0032	-0.0307
Jul-61	Market Return			0.0342		0.0033	0.0309
Aug-61	Market Return			0.0243		0.0033	0.0210
Sep-61	Market Return			(0.0184)		0.0032	-0.0216
Oct-61	Market Return			0.0298		0.0034	0.0264
Nov-61	Market Return			0.0447		0.0032	0.0415
Dec-61	Market Return			0.0046		0.0031	0.0015
Jan-62	Market Return			(0.0366)		0.0037	-0.0403
Feb-62	Market Return			0.0209		0.0032	0.0177
Mar-62	Market Return			(0.0046)		0.0033	-0.0079
Apr-62	Market Return			(0.0607)		0.0033	-0.0640
May-62	Market Return			(0.0811)		0.0032	-0.0843
Jun-62	Market Return			(0.0803)		0.0030	-0.0833
Jul-62	Market Return			0.0652		0.0034	0.0618
Aug-62	Market Return			0.0208		0.0034	0.0174
Sep-62	Market Return			(0.0465)		0.0030	-0.0495

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Oct-62	Market Return			0.0064		0.0035	0.0029
Nov-62	Market Return			0.1086		0.0031	0.1055
Dec-62	Market Return			0.0153		0.0032	0.0121
Jan-63	Market Return			0.0506		0.0032	0.0474
Feb-63	Market Return			(0.0239)		0.0029	-0.0268
Mar-63	Market Return			0.0370		0.0031	0.0339
Apr-63	Market Return			0.0500		0.0034	0.0466
May-63	Market Return			0.0193		0.0033	0.0160
Jun-63	Market Return			(0.0188)		0.0030	-0.0218
Jul-63	Market Return			(0.0022)		0.0036	-0.0058
Aug-63	Market Return			0.0535		0.0033	0.0502
Sep-63	Market Return			(0.0097)		0.0034	-0.0131
Oct-63	Market Return			0.0339		0.0034	0.0305
Nov-63	Market Return			(0.0046)		0.0032	-0.0078
Dec-63	Market Return			0.0262		0.0036	0.0226
Jan-64	Market Return			0.0283		0.0035	0.0248
Feb-64	Market Return			0.0147		0.0032	0.0115
Mar-64	Market Return			0.0165		0.0037	0.0128
Apr-64	Market Return			0.0075		0.0035	0.0040
May-64	Market Return			0.0162		0.0032	0.0130
Jun-64	Market Return			0.0178		0.0038	0.0140
Jul-64	Market Return			0.0195		0.0035	0.0160
Aug-64	Market Return			(0.0118)		0.0035	-0.0153
Sep-64	Market Return			0.0301		0.0034	0.0267
Oct-64	Market Return			0.0096		0.0034	0.0062
Nov-64	Market Return			0.0005		0.0035	-0.0030
Dec-64	Market Return			0.0056		0.0035	0.0021
Jan-65	Market Return			0.0345		0.0033	0.0312
Feb-65	Market Return			0.0031		0.0032	-0.0001
Mar-65	Market Return			(0.0133)		0.0038	-0.0171
Apr-65	Market Return			0.0356		0.0033	0.0323
May-65	Market Return			(0.0030)		0.0033	-0.0063
Jun-65	Market Return			(0.0473)		0.0038	-0.0511
Jul-65	Market Return			0.0147		0.0034	0.0113
Aug-65	Market Return			0.0272		0.0037	0.0235
Sep-65	Market Return			0.0334		0.0035	0.0299
Oct-65	Market Return			0.0289		0.0034	0.0255
Nov-65	Market Return			(0.0031)		0.0037	-0.0068
Dec-65	Market Return			0.0106		0.0037	0.0069
Jan-66	Market Return			0.0062		0.0038	0.0024
Feb-66	Market Return			(0.0131)		0.0034	-0.0165
Mar-66	Market Return			(0.0205)		0.0040	-0.0245
Apr-66	Market Return			0.0220		0.0036	0.0184
May-66	Market Return			(0.0492)		0.0041	-0.0533
Jun-66	Market Return			(0.0146)		0.0039	-0.0185
Jul-66	Market Return			(0.0120)		0.0038	-0.0158
Aug-66	Market Return			(0.0725)		0.0043	-0.0768
Sep-66	Market Return			(0.0053)		0.0041	-0.0094
Oct-66	Market Return			0.0494		0.0040	0.0454
Nov-66	Market Return			0.0095		0.0038	0.0057
Dec-66	Market Return			0.0002		0.0039	-0.0037
Jan-67	Market Return			0.0798		0.0040	0.0758
Feb-67	Market Return			0.0072		0.0034	0.0038
Mar-67	Market Return			0.0409		0.0039	0.0370
Apr-67	Market Return			0.0437		0.0035	0.0402

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
May-67	Market Return			(0.0477)		0.0043	-0.0520
Jun-67	Market Return			0.0190		0.0039	0.0151
Jul-67	Market Return			0.0468		0.0043	0.0425
Aug-67	Market Return			(0.0070)		0.0042	-0.0112
Sep-67	Market Return			0.0342		0.0040	0.0302
Oct-67	Market Return			(0.0276)		0.0045	-0.0321
Nov-67	Market Return			0.0065		0.0045	0.0020
Dec-67	Market Return			0.0278		0.0044	0.0234
Jan-68	Market Return			(0.0425)		0.0050	-0.0475
Feb-68	Market Return			(0.0261)		0.0042	-0.0303
Mar-68	Market Return			0.0110		0.0043	0.0067
Apr-68	Market Return			0.0834		0.0049	0.0785
May-68	Market Return			0.0161		0.0046	0.0115
Jun-68	Market Return			0.0105		0.0042	0.0063
Jul-68	Market Return			(0.0172)		0.0048	-0.0220
Aug-68	Market Return			0.0164		0.0042	0.0122
Sep-68	Market Return			0.0400		0.0044	0.0356
Oct-68	Market Return			0.0087		0.0045	0.0042
Nov-68	Market Return			0.0531		0.0043	0.0488
Dec-68	Market Return			(0.0402)		0.0049	-0.0451
Jan-69	Market Return			(0.0068)		0.0050	-0.0118
Feb-69	Market Return			(0.0426)		0.0046	-0.0472
Mar-69	Market Return			0.0359		0.0047	0.0312
Apr-69	Market Return			0.0229		0.0055	0.0174
May-69	Market Return			0.0026		0.0047	-0.0021
Jun-69	Market Return			(0.0542)		0.0055	-0.0597
Jul-69	Market Return			(0.0587)		0.0052	-0.0639
Aug-69	Market Return			0.0454		0.0048	0.0406
Sep-69	Market Return			(0.0236)		0.0055	-0.0291
Oct-69	Market Return			0.0459		0.0057	0.0402
Nov-69	Market Return			(0.0297)		0.0049	-0.0346
Dec-69	Market Return			(0.0177)		0.0060	-0.0237
Jan-70	Market Return			(0.0743)		0.0056	-0.0799
Feb-70	Market Return			0.0586		0.0052	0.0534
Mar-70	Market Return			0.0030		0.0056	-0.0026
Apr-70	Market Return			(0.0889)		0.0054	-0.0943
May-70	Market Return			(0.0547)		0.0055	-0.0602
Jun-70	Market Return			(0.0482)		0.0064	-0.0546
Jul-70	Market Return			0.0752		0.0059	0.0693
Aug-70	Market Return			0.0509		0.0057	0.0452
Sep-70	Market Return			0.0347		0.0056	0.0291
Oct-70	Market Return			(0.0097)		0.0055	-0.0152
Nov-70	Market Return			0.0536		0.0058	0.0478
Dec-70	Market Return			0.0584		0.0053	0.0531
Jan-71	Market Return			0.0419		0.0051	0.0368
Feb-71	Market Return			0.0141		0.0046	0.0095
Mar-71	Market Return			0.0382		0.0056	0.0326
Apr-71	Market Return			0.0377		0.0048	0.0329
May-71	Market Return			(0.0367)		0.0047	-0.0414
Jun-71	Market Return			0.0021		0.0056	-0.0035
Jul-71	Market Return			(0.0399)		0.0052	-0.0451
Aug-71	Market Return			0.0412		0.0055	0.0357
Sep-71	Market Return			(0.0056)		0.0049	-0.0105
Oct-71	Market Return			(0.0404)		0.0047	-0.0451
Nov-71	Market Return			0.0027		0.0051	-0.0024

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Dec-71	Market Return			0.0877		0.0050	0.0827
Jan-72	Market Return			0.0194		0.0050	0.0144
Feb-72	Market Return			0.0299		0.0047	0.0252
Mar-72	Market Return			0.0072		0.0049	0.0023
Apr-72	Market Return			0.0057		0.0048	0.0009
May-72	Market Return			0.0219		0.0055	0.0164
Jun-72	Market Return			(0.0205)		0.0049	-0.0254
Jul-72	Market Return			0.0036		0.0051	-0.0015
Aug-72	Market Return			0.0391		0.0049	0.0342
Sep-72	Market Return			(0.0036)		0.0047	-0.0083
Oct-72	Market Return			0.0107		0.0052	0.0055
Nov-72	Market Return			0.0505		0.0048	0.0457
Dec-72	Market Return			0.0131		0.0045	0.0086
Jan-73	Market Return			(0.0159)		0.0054	-0.0213
Feb-73	Market Return			(0.0333)		0.0051	-0.0384
Mar-73	Market Return			(0.0002)		0.0056	-0.0058
Apr-73	Market Return			(0.0395)		0.0057	-0.0452
May-73	Market Return			(0.0139)		0.0058	-0.0197
Jun-73	Market Return			(0.0051)		0.0055	-0.0106
Jul-73	Market Return			0.0394		0.0061	0.0333
Aug-73	Market Return			(0.0318)		0.0062	-0.0380
Sep-73	Market Return			0.0415		0.0055	0.0360
Oct-73	Market Return			0.0003		0.0063	-0.0060
Nov-73	Market Return			(0.1082)		0.0056	-0.1138
Dec-73	Market Return			0.0183		0.0060	0.0123
Jan-74	Market Return			(0.0085)		0.0061	-0.0146
Feb-74	Market Return			0.0019		0.0055	-0.0036
Mar-74	Market Return			(0.0217)		0.0058	-0.0275
Apr-74	Market Return			(0.0373)		0.0068	-0.0441
May-74	Market Return			(0.0272)		0.0068	-0.0340
Jun-74	Market Return			(0.0128)		0.0061	-0.0189
Jul-74	Market Return			(0.0759)		0.0072	-0.0831
Aug-74	Market Return			(0.0828)		0.0065	-0.0893
Sep-74	Market Return			(0.1170)		0.0071	-0.1241
Oct-74	Market Return			0.1657		0.0070	0.1587
Nov-74	Market Return			(0.0448)		0.0062	-0.0510
Dec-74	Market Return			(0.0177)		0.0067	-0.0244
Jan-75	Market Return			0.1251		0.0068	0.1183
Feb-75	Market Return			0.0674		0.0060	0.0614
Mar-75	Market Return			0.0237		0.0066	0.0171
Apr-75	Market Return			0.0493		0.0067	0.0426
May-75	Market Return			0.0509		0.0067	0.0442
Jun-75	Market Return			0.0462		0.0070	0.0392
Jul-75	Market Return			(0.0659)		0.0068	-0.0727
Aug-75	Market Return			(0.0144)		0.0065	-0.0209
Sep-75	Market Return			(0.0328)		0.0073	-0.0401
Oct-75	Market Return			0.0637		0.0072	0.0565
Nov-75	Market Return			0.0313		0.0061	0.0252
Dec-75	Market Return			(0.0096)		0.0074	-0.0170
Jan-76	Market Return			0.1199		0.0065	0.1134
Feb-76	Market Return			(0.0058)		0.0060	-0.0118
Mar-76	Market Return			0.0326		0.0071	0.0255
Apr-76	Market Return			(0.0099)		0.0064	-0.0163
May-76	Market Return			(0.0073)		0.0059	-0.0132
Jun-76	Market Return			0.0427		0.0073	0.0354

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Jul-76	Market Return			(0.0068)		0.0065	-0.0133
Aug-76	Market Return			0.0014		0.0069	-0.0055
Sep-76	Market Return			0.0247		0.0064	0.0183
Oct-76	Market Return			(0.0206)		0.0061	-0.0267
Nov-76	Market Return			(0.0009)		0.0066	-0.0075
Dec-76	Market Return			0.0540		0.0063	0.0477
Jan-77	Market Return			(0.0489)		0.0059	-0.0548
Feb-77	Market Return			(0.0151)		0.0057	-0.0208
Mar-77	Market Return			(0.0119)		0.0065	-0.0184
Apr-77	Market Return			0.0014		0.0061	-0.0047
May-77	Market Return			(0.0150)		0.0067	-0.0217
Jun-77	Market Return			0.0475		0.0062	0.0413
Jul-77	Market Return			(0.0151)		0.0059	-0.0210
Aug-77	Market Return			(0.0133)		0.0067	-0.0200
Sep-77	Market Return			-		0.0061	-0.0061
Oct-77	Market Return			(0.0415)		0.0063	-0.0478
Nov-77	Market Return			0.0370		0.0063	0.0307
Dec-77	Market Return			0.0048		0.0062	-0.0014
Jan-78	Market Return			(0.0596)		0.0069	-0.0665
Feb-78	Market Return			(0.0161)		0.0060	-0.0221
Mar-78	Market Return			0.0276		0.0069	0.0207
Apr-78	Market Return			0.0870		0.0063	0.0807
May-78	Market Return			0.0136		0.0075	0.0061
Jun-78	Market Return			(0.0152)		0.0069	-0.0221
Jul-78	Market Return			0.0560		0.0073	0.0487
Aug-78	Market Return			0.0340		0.0070	0.0270
Sep-78	Market Return			(0.0048)		0.0065	-0.0113
Oct-78	Market Return			(0.0891)		0.0073	-0.0964
Nov-78	Market Return			0.0260		0.0071	0.0189
Dec-78	Market Return			0.0172		0.0068	0.0104
Jan-79	Market Return			0.0421		0.0079	0.0342
Feb-79	Market Return			(0.0284)		0.0065	-0.0349
Mar-79	Market Return			0.0575		0.0074	0.0501
Apr-79	Market Return			0.0036		0.0076	-0.0040
May-79	Market Return			(0.0168)		0.0077	-0.0245
Jun-79	Market Return			0.0410		0.0071	0.0339
Jul-79	Market Return			0.0110		0.0076	0.0034
Aug-79	Market Return			0.0611		0.0073	0.0538
Sep-79	Market Return			0.0025		0.0068	-0.0043
Oct-79	Market Return			(0.0656)		0.0082	-0.0738
Nov-79	Market Return			0.0514		0.0083	0.0431
Dec-79	Market Return			0.0192		0.0083	0.0109
Jan-80	Market Return			0.0610		0.0083	0.0527
Feb-80	Market Return			0.0031		0.0084	-0.0053
Mar-80	Market Return			(0.0987)		0.0099	-0.1086
Apr-80	Market Return			0.0429		0.0100	0.0329
May-80	Market Return			0.0562		0.0087	0.0475
Jun-80	Market Return			0.0296		0.0086	0.0210
Jul-80	Market Return			0.0676		0.0084	0.0592
Aug-80	Market Return			0.0131		0.0081	0.0050
Sep-80	Market Return			0.0281		0.0097	0.0184
Oct-80	Market Return			0.0187		0.0097	0.0090
Nov-80	Market Return			0.1095		0.0091	0.1004
Dec-80	Market Return			(0.0315)		0.0108	-0.0423
Jan-81	Market Return			(0.0438)		0.0094	-0.0532

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Feb-81	Market Return			0.0208		0.0088	0.0120
Mar-81	Market Return			0.0380		0.0111	0.0269
Apr-81	Market Return			(0.0213)		0.0101	-0.0314
May-81	Market Return			0.0062		0.0104	-0.0042
Jun-81	Market Return			(0.0080)		0.0109	-0.0189
Jul-81	Market Return			0.0007		0.0109	-0.0102
Aug-81	Market Return			(0.0554)		0.0110	-0.0664
Sep-81	Market Return			(0.0502)		0.0114	-0.0616
Oct-81	Market Return			0.0528		0.0117	0.0411
Nov-81	Market Return			0.0441		0.0113	0.0328
Dec-81	Market Return			(0.0265)		0.0100	-0.0365
Jan-82	Market Return			(0.0163)		0.0108	-0.0271
Feb-82	Market Return			(0.0512)		0.0103	-0.0615
Mar-82	Market Return			(0.0060)		0.0124	-0.0184
Apr-82	Market Return			0.0414		0.0112	0.0302
May-82	Market Return			(0.0288)		0.0101	-0.0389
Jun-82	Market Return			(0.0174)		0.0120	-0.0294
Jul-82	Market Return			(0.0215)		0.0114	-0.0329
Aug-82	Market Return			0.1267		0.0112	0.1155
Sep-82	Market Return			0.0110		0.0100	0.0010
Oct-82	Market Return			0.1126		0.0091	0.1035
Nov-82	Market Return			0.0438		0.0094	0.0344
Dec-82	Market Return			0.0173		0.0093	0.0080
Jan-83	Market Return			0.0348		0.0087	0.0261
Feb-83	Market Return			0.0260		0.0081	0.0179
Mar-83	Market Return			0.0365		0.0089	0.0276
Apr-83	Market Return			0.0758		0.0085	0.0673
May-83	Market Return			(0.0052)		0.0091	-0.0143
Jun-83	Market Return			0.0382		0.0090	0.0292
Jul-83	Market Return			(0.0313)		0.0088	-0.0401
Aug-83	Market Return			0.0170		0.0103	0.0067
Sep-83	Market Return			0.0136		0.0096	0.0040
Oct-83	Market Return			(0.0134)		0.0095	-0.0229
Nov-83	Market Return			0.0233		0.0094	0.0139
Dec-83	Market Return			(0.0061)		0.0094	-0.0155
Jan-84	Market Return			(0.0065)		0.0103	-0.0168
Feb-84	Market Return			(0.0328)		0.0092	-0.0420
Mar-84	Market Return			0.0171		0.0098	0.0073
Apr-84	Market Return			0.0069		0.0104	-0.0035
May-84	Market Return			(0.0534)		0.0103	-0.0637
Jun-84	Market Return			0.0221		0.0106	0.0115
Jul-84	Market Return			(0.0143)		0.0116	-0.0259
Aug-84	Market Return			0.1125		0.0106	0.1019
Sep-84	Market Return			0.0002		0.0094	-0.0092
Oct-84	Market Return			0.0026		0.0108	-0.0082
Nov-84	Market Return			(0.0101)		0.0091	-0.0192
Dec-84	Market Return			0.0253		0.0098	0.0155
Jan-85	Market Return			0.0768		0.0096	0.0672
Feb-85	Market Return			0.0137		0.0082	0.0055
Mar-85	Market Return			0.0018		0.0094	-0.0076
Apr-85	Market Return			(0.0032)		0.0102	-0.0134
May-85	Market Return			0.0615		0.0097	0.0518
Jun-85	Market Return			0.0159		0.0080	0.0079
Jul-85	Market Return			(0.0026)		0.0094	-0.0120
Aug-85	Market Return			(0.0061)		0.0085	-0.0146

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Sep-85	Market Return			(0.0321)		0.0088	-0.0409
Oct-85	Market Return			0.0447		0.0089	0.0358
Nov-85	Market Return			0.0716		0.0081	0.0635
Dec-85	Market Return			0.0467		0.0086	0.0381
Jan-86	Market Return			0.0044		0.0079	-0.0035
Feb-86	Market Return			0.0761		0.0073	0.0688
Mar-86	Market Return			0.0554		0.0071	0.0483
Apr-86	Market Return			(0.0124)		0.0063	-0.0187
May-86	Market Return			0.0549		0.0062	0.0487
Jun-86	Market Return			0.0166		0.0070	0.0096
Jul-86	Market Return			(0.0569)		0.0066	-0.0635
Aug-86	Market Return			0.0748		0.0063	0.0685
Sep-86	Market Return			(0.0822)		0.0065	-0.0887
Oct-86	Market Return			0.0556		0.0069	0.0487
Nov-86	Market Return			0.0256		0.0059	0.0197
Dec-86	Market Return			(0.0264)		0.0070	-0.0334
Jan-87	Market Return			0.1343		0.0064	0.1279
Feb-87	Market Return			0.0413		0.0059	0.0354
Mar-87	Market Return			0.0272		0.0066	0.0206
Apr-87	Market Return			(0.0088)		0.0065	-0.0153
May-87	Market Return			0.0103		0.0066	0.0037
Jun-87	Market Return			0.0499		0.0075	0.0424
Jul-87	Market Return			0.0498		0.0073	0.0425
Aug-87	Market Return			0.0385		0.0075	0.0310
Sep-87	Market Return			(0.0220)		0.0075	-0.0295
Oct-87	Market Return			(0.2152)		0.0079	-0.2231
Nov-87	Market Return			(0.0819)		0.0075	-0.0894
Dec-87	Market Return			0.0738		0.0078	0.0660
Jan-88	Market Return			0.0427		0.0072	0.0355
Feb-88	Market Return			0.0470		0.0071	0.0399
Mar-88	Market Return			(0.0302)		0.0072	-0.0374
Apr-88	Market Return			0.0108		0.0070	0.0038
May-88	Market Return			0.0078		0.0078	0.0000
Jun-88	Market Return			0.0464		0.0076	0.0388
Jul-88	Market Return			(0.0040)		0.0071	-0.0111
Aug-88	Market Return			(0.0331)		0.0083	-0.0414
Sep-88	Market Return			0.0424		0.0076	0.0348
Oct-88	Market Return			0.0273		0.0076	0.0197
Nov-88	Market Return			(0.0142)		0.0070	-0.0212
Dec-88	Market Return			0.0181		0.0075	0.0106
Jan-89	Market Return			0.0723		0.0080	0.0643
Feb-89	Market Return			(0.0249)		0.0069	-0.0318
Mar-89	Market Return			0.0236		0.0079	0.0157
Apr-89	Market Return			0.0516		0.0070	0.0446
May-89	Market Return			0.0402		0.0080	0.0322
Jun-89	Market Return			(0.0054)		0.0070	-0.0124
Jul-89	Market Return			0.0898		0.0068	0.0830
Aug-89	Market Return			0.0193		0.0066	0.0127
Sep-89	Market Return			(0.0039)		0.0065	-0.0104
Oct-89	Market Return			(0.0233)		0.0072	-0.0305
Nov-89	Market Return			0.0208		0.0064	0.0144
Dec-89	Market Return			0.0236		0.0064	0.0172
Jan-90	Market Return			(0.0671)		0.0073	-0.0744
Feb-90	Market Return			0.0129		0.0066	0.0063
Mar-90	Market Return			0.0263		0.0071	0.0192

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Apr-90	Market Return			(0.0247)		0.0075	-0.0322
May-90	Market Return			0.0975		0.0075	0.0900
Jun-90	Market Return			(0.0070)		0.0068	-0.0138
Jul-90	Market Return			(0.0032)		0.0074	-0.0106
Aug-90	Market Return			(0.0903)		0.0071	-0.0974
Sep-90	Market Return			(0.0492)		0.0069	-0.0561
Oct-90	Market Return			(0.0037)		0.0081	-0.0118
Nov-90	Market Return			0.0644		0.0071	0.0573
Dec-90	Market Return			0.0274		0.0072	0.0202
Jan-91	Market Return			0.0442		0.0071	0.0371
Feb-91	Market Return			0.0716		0.0064	0.0652
Mar-91	Market Return			0.0238		0.0064	0.0174
Apr-91	Market Return			0.0028		0.0076	-0.0048
May-91	Market Return			0.0428		0.0068	0.0360
Jun-91	Market Return			(0.0457)		0.0063	-0.0520
Jul-91	Market Return			0.0468		0.0076	0.0392
Aug-91	Market Return			0.0235		0.0068	0.0167
Sep-91	Market Return			(0.0164)		0.0068	-0.0232
Oct-91	Market Return			0.0134		0.0065	0.0069
Nov-91	Market Return			(0.0404)		0.0060	-0.0464
Dec-91	Market Return			0.1143		0.0068	0.1075
Jan-92	Market Return			(0.0186)		0.0061	-0.0247
Feb-92	Market Return			0.0128		0.0059	0.0069
Mar-92	Market Return			(0.0196)		0.0067	-0.0263
Apr-92	Market Return			0.0291		0.0065	0.0226
May-92	Market Return			0.0054		0.0061	-0.0007
Jun-92	Market Return			(0.0145)		0.0067	-0.0212
Jul-92	Market Return			0.0403		0.0063	0.0340
Aug-92	Market Return			(0.0202)		0.0060	-0.0262
Sep-92	Market Return			0.0115		0.0058	0.0057
Oct-92	Market Return			0.0036		0.0057	-0.0021
Nov-92	Market Return			0.0337		0.0061	0.0276
Dec-92	Market Return			0.0131		0.0063	0.0068
Jan-93	Market Return			0.0073		0.0059	0.0014
Feb-93	Market Return			0.0135		0.0055	0.0080
Mar-93	Market Return			0.0215		0.0063	0.0152
Apr-93	Market Return			(0.0245)		0.0057	-0.0302
May-93	Market Return			0.0270		0.0052	0.0218
Jun-93	Market Return			0.0033		0.0062	-0.0029
Jul-93	Market Return			(0.0047)		0.0054	-0.0101
Aug-93	Market Return			0.0381		0.0056	0.0325
Sep-93	Market Return			(0.0074)		0.0050	-0.0124
Oct-93	Market Return			0.0203		0.0049	0.0154
Nov-93	Market Return			(0.0094)		0.0053	-0.0147
Dec-93	Market Return			0.0123		0.0055	0.0068
Jan-94	Market Return			0.0335		0.0055	0.0280
Feb-94	Market Return			(0.0270)		0.0049	-0.0319
Mar-94	Market Return			(0.0435)		0.0058	-0.0493
Apr-94	Market Return			0.0130		0.0057	0.0073
May-94	Market Return			0.0163		0.0063	0.0100
Jun-94	Market Return			(0.0247)		0.0061	-0.0308
Jul-94	Market Return			0.0331		0.0060	0.0271
Aug-94	Market Return			0.0407		0.0066	0.0341
Sep-94	Market Return			(0.0241)		0.0061	-0.0302
Oct-94	Market Return			0.0229		0.0066	0.0163

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Nov-94	Market Return			(0.0367)		0.0064	-0.0431
Dec-94	Market Return			0.0146		0.0066	0.0080
Jan-95	Market Return			0.0260		0.0070	0.0190
Feb-95	Market Return			0.0388		0.0059	0.0329
Mar-95	Market Return			0.0296		0.0064	0.0232
Apr-95	Market Return			0.0291		0.0058	0.0233
May-95	Market Return			0.0395		0.0065	0.0330
Jun-95	Market Return			0.0235		0.0054	0.0181
Jul-95	Market Return			0.0333		0.0056	0.0277
Aug-95	Market Return			0.0027		0.0057	-0.0030
Sep-95	Market Return			0.0419		0.0052	0.0367
Oct-95	Market Return			(0.0035)		0.0057	-0.0092
Nov-95	Market Return			0.0440		0.0051	0.0389
Dec-95	Market Return			0.0185		0.0049	0.0136
Jan-96	Market Return			0.0344		0.0054	0.0290
Feb-96	Market Return			0.0096		0.0048	0.0048
Mar-96	Market Return			0.0096		0.0052	0.0044
Apr-96	Market Return			0.0147		0.0059	0.0088
May-96	Market Return			0.0258		0.0058	0.0200
Jun-96	Market Return			0.0041		0.0054	-0.0013
Jul-96	Market Return			(0.0445)		0.0062	-0.0507
Aug-96	Market Return			0.0212		0.0057	0.0155
Sep-96	Market Return			0.0562		0.0060	0.0502
Oct-96	Market Return			0.0274		0.0058	0.0216
Nov-96	Market Return			0.0759		0.0052	0.0707
Dec-96	Market Return			(0.0196)		0.0056	-0.0252
Jan-97	Market Return			0.0621		0.0056	0.0565
Feb-97	Market Return			0.0081		0.0051	0.0030
Mar-97	Market Return			(0.0416)		0.0059	-0.0475
Apr-97	Market Return			0.0597		0.0059	0.0538
May-97	Market Return			0.0614		0.0058	0.0556
Jun-97	Market Return			0.0446		0.0059	0.0387
Jul-97	Market Return			0.0794		0.0058	0.0736
Aug-97	Market Return			(0.0556)		0.0049	-0.0605
Sep-97	Market Return			0.0548		0.0058	0.0490
Oct-97	Market Return			(0.0334)		0.0054	-0.0388
Nov-97	Market Return			0.0463		0.0047	0.0416
Dec-97	Market Return			0.0172		0.0054	0.0118
Jan-98	Market Return			0.0111		0.0048	0.0063
Feb-98	Market Return			0.0721		0.0044	0.0677
Mar-98	Market Return			0.0512		0.0052	0.0460
Apr-98	Market Return			0.0101		0.0049	0.0052
May-98	Market Return			(0.0172)		0.0048	-0.0220
Jun-98	Market Return			0.0406		0.0052	0.0354
Jul-98	Market Return			(0.0106)		0.0049	-0.0155
Aug-98	Market Return			(0.1446)		0.0048	-0.1494
Sep-98	Market Return			0.0641		0.0044	0.0597
Oct-98	Market Return			0.0813		0.0042	0.0771
Nov-98	Market Return			0.0606		0.0045	0.0561
Dec-98	Market Return			0.0576		0.0045	0.0531
Jan-99	Market Return			0.0418		0.0042	0.0376
Feb-99	Market Return			(0.0311)		0.0040	-0.0351
Mar-99	Market Return			0.0400		0.0053	0.0347
Apr-99	Market Return			0.0387		0.0048	0.0339
May-99	Market Return			(0.0236)		0.0045	-0.0281

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Jun-99	Market Return			0.0555		0.0055	0.0500
Jul-99	Market Return			(0.0312)		0.0051	-0.0363
Aug-99	Market Return			(0.0050)		0.0054	-0.0104
Sep-99	Market Return			(0.0274)		0.0052	-0.0326
Oct-99	Market Return			0.0633		0.0050	0.0583
Nov-99	Market Return			0.0203		0.0056	0.0147
Dec-99	Market Return			0.0589		0.0055	0.0534
Jan-00	Market Return			(0.0502)		0.0057	-0.0559
Feb-00	Market Return			(0.0189)		0.0051	-0.0240
Mar-00	Market Return			0.0978		0.0054	0.0924
Apr-00	Market Return			(0.0301)		0.0047	-0.0348
May-00	Market Return			(0.0205)		0.0056	-0.0261
Jun-00	Market Return			0.0246		0.0052	0.0194
Jul-00	Market Return			(0.0156)		0.0052	-0.0208
Aug-00	Market Return			0.0621		0.0050	0.0571
Sep-00	Market Return			(0.0528)		0.0046	-0.0574
Oct-00	Market Return			(0.0042)		0.0053	-0.0095
Nov-00	Market Return			(0.0788)		0.0048	-0.0836
Dec-00	Market Return			0.0049		0.0045	0.0004
Jan-01	Market Return			0.0355		0.0049	0.0306
Feb-01	Market Return			(0.0912)		0.0042	-0.0954
Mar-01	Market Return			(0.0634)		0.0045	-0.0679
Apr-01	Market Return			0.0777		0.0047	0.0730
May-01	Market Return			0.0067		0.0050	0.0017
Jun-01	Market Return			(0.0243)		0.0047	-0.0290
Jul-01	Market Return			(0.0098)		0.0052	-0.0150
Aug-01	Market Return			(0.0626)		0.0046	-0.0672
Sep-01	Market Return			(0.0808)		0.0041	-0.0849
Oct-01	Market Return			0.0191		0.0048	0.0143
Nov-01	Market Return			0.0767		0.0041	0.0726
Dec-01	Market Return			0.0088		0.0046	0.0042
Jan-02	Market Return			(0.0146)		0.0048	-0.0194
Feb-02	Market Return			(0.0193)		0.0043	-0.0236
Mar-02	Market Return			0.0376		0.0043	0.0333
Apr-02	Market Return			(0.0606)		0.0054	-0.0660
May-02	Market Return			(0.0074)		0.0049	-0.0123
Jun-02	Market Return			(0.0712)		0.0044	-0.0756
Jul-02	Market Return			(0.0780)		0.0051	-0.0831
Aug-02	Market Return			0.0066		0.0044	0.0022
Sep-02	Market Return			(0.1087)		0.0042	-0.1129
Oct-02	Market Return			0.0880		0.0040	0.0840
Nov-02	Market Return			0.0589		0.0040	0.0549
Dec-02	Market Return			(0.0588)		0.0045	-0.0633
Jan-03	Market Return			(0.0262)		0.0041	-0.0303
Feb-03	Market Return			(0.0150)		0.0038	-0.0188
Mar-03	Market Return			0.0097		0.0040	0.0057
Apr-03	Market Return			0.0824		0.0040	0.0784
May-03	Market Return			0.0527		0.0039	0.0488
Jun-03	Market Return			0.0128		0.0036	0.0092
Jul-03	Market Return			0.0176		0.0038	0.0138
Aug-03	Market Return			0.0195		0.0042	0.0153
Sep-03	Market Return			(0.0106)		0.0046	-0.0152
Oct-03	Market Return			0.0566		0.0041	0.0525
Nov-03	Market Return			0.0088		0.0039	0.0049
Dec-03	Market Return			0.0524		0.0047	0.0477

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Jan-04	Market Return			0.0184		0.0042	0.0142
Feb-04	Market Return			0.0139		0.0038	0.0101
Mar-04	Market Return			(0.0151)		0.0043	-0.0194
Apr-04	Market Return			(0.0157)		0.0039	-0.0196
May-04	Market Return			0.0137		0.0040	0.0097
Jun-04	Market Return			0.0194		0.0048	0.0146
Jul-04	Market Return			(0.0331)		0.0043	-0.0374
Aug-04	Market Return			0.0040		0.0045	-0.0005
Sep-04	Market Return			0.0108		0.0040	0.0068
Oct-04	Market Return			0.0153		0.0038	0.0115
Nov-04	Market Return			0.0405		0.0041	0.0364
Dec-04	Market Return			0.0340		0.0043	0.0297
Jan-05	Market Return			(0.0244)		0.0041	-0.0285
Feb-05	Market Return			0.0210		0.0035	0.0175
Mar-05	Market Return			(0.0177)		0.0041	-0.0218

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Apr-05	Market Return			(0.0190)		0.0039	-0.0229
May-05	Market Return			0.0318		0.0040	0.0278
Jun-05	Market Return			0.0014		0.0036	-0.0022
Jul-05	Market Return			0.0372		0.0034	0.0338
Aug-05	Market Return			(0.0091)		0.0040	-0.0131
Sep-05	Market Return			0.0081		0.0035	0.0046
Oct-05	Market Return			(0.0167)		0.0039	-0.0206
Nov-05	Market Return			0.0378		0.0039	0.0339
Dec-05	Market Return			0.0003		0.0039	-0.0036
Jan-06	Market Return			0.0265		0.0040	0.0225
Feb-06	Market Return			0.0027		0.0036	-0.0009
Mar-06	Market Return			0.0124		0.0039	0.0085
Apr-06	Market Return			0.0134		0.0039	0.0095
May-06	Market Return			(0.0288)		0.0048	-0.0336
Jun-06	Market Return			0.0014		0.0044	-0.0030
Jul-06	Market Return			0.0062		0.0045	0.0017
Aug-06	Market Return			0.0238		0.0043	0.0195
Sep-06	Market Return			0.0258		0.0039	0.0219
Oct-06	Market Return			0.0326		0.0042	0.0284
Nov-06	Market Return			0.0190		0.0039	0.0151
Dec-06	Market Return			0.0140		0.0036	0.0104
Jan-07	Market Return			0.0151		0.0043	0.0108
Feb-07	Market Return			(0.0196)		0.0038	-0.0234
Mar-07	Market Return			0.0112		0.0039	0.0073
Apr-07	Market Return			0.0443		0.0042	0.0401
May-07	Market Return			0.0349		0.0041	0.0308
Jun-07	Market Return			(0.0166)		0.0040	-0.0206
Jul-07	Market Return			(0.0310)		0.0046	-0.0356
Aug-07	Market Return			0.0150		0.0042	0.0108
Sep-07	Market Return			0.0375		0.0037	0.0338
Oct-07	Market Return			0.0159		0.0043	0.0116
Nov-07	Market Return			(0.0418)		0.0039	-0.0457
Dec-07	Market Return			(0.0069)		0.0037	-0.0106
Jan-08	Market Return			(0.0600)		0.0040	-0.0640
Feb-08	Market Return			(0.0352)		0.0034	-0.0386
Mar-08	Market Return			(0.0043)		0.0037	-0.0080
Apr-08	Market Return			0.0487		0.0035	0.0452
May-08	Market Return			0.0130		0.0037	0.0093
Jun-08	Market Return			(0.0843)		0.0040	-0.0883
Jul-08	Market Return			(0.0084)		0.0039	-0.0123
Aug-08	Market Return			0.0145		0.0036	0.0109
Sep-08	Market Return			(0.0891)		0.0039	-0.0930
Oct-08	Market Return			(0.1679)		0.0037	-0.1716
Nov-08	Market Return			(0.0718)		0.0036	-0.0754
Dec-08	Market Return			0.0106		0.0033	0.0073
Jan-09	Market Return			(0.0843)		0.0024	-0.0867
Feb-09	Market Return			(0.1065)		0.0030	-0.1095
Mar-09	Market Return			0.0876		0.0035	0.0841
Apr-09	Market Return			0.0957		0.0029	0.0928
May-09	Market Return			0.0559		0.0033	0.0526
Jun-09	Market Return			0.0020		0.0038	-0.0018
Jul-09	Market Return			0.0756		0.0036	0.0720
Aug-09	Market Return			0.0361		0.0036	0.0325
Sep-09	Market Return			0.0373		0.0034	0.0339
Oct-09	Market Return			(0.0186)		0.0033	-0.0219

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Nov-09	Market Return			0.0600		0.0035	0.0565

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Dec-09	Market Return			0.0193		0.0034	0.0159
Jan-10	Market Return			(0.0360)		0.0036	-0.0396
Feb-10	Market Return			0.0310		0.0033	0.0277
Mar-10	Market Return			0.0603		0.0040	0.0563
Apr-10	Market Return			0.0158		0.0038	0.0120
May-10	Market Return			(0.0799)		0.0034	-0.0833
Jun-10	Market Return			(0.0523)		0.0037	-0.0560
Jul-10	Market Return			0.0707		0.0031	0.0676
Aug-10	Market Return			(0.0451)		0.0032	-0.0483
Sep-10	Market Return			0.0892		0.0026	0.0866
Oct-10	Market Return			0.0380		0.0027	0.0353
Nov-10	Market Return			0.0001		0.0032	-0.0031
Dec-10	Market Return			0.0668		0.0032	0.0636
Jan-11	Market Return			0.0237		0.003567	0.0201
Feb-11	Market Return			0.0343		0.003683	0.0306
Mar-11	Market Return			0.0004		0.003558	-0.0032
Apr-11	Market Return			0.0296		0.003567	0.0260
May-11	Market Return			(0.0113)		0.003342	-0.0146
Jun-11	Market Return			(0.0167)		0.003258	-0.0200
Jul-11	Market Return			(0.0203)		0.003292	-0.0236
Aug-11	Market Return			(0.0543)		0.003042	-0.0573
Sep-11	Market Return			(0.0703)		0.002358	-0.0727
Oct-11	Market Return			0.1093		0.002392	0.1069
Nov-11	Market Return			(0.0022)		0.002267	-0.0045
Dec-11	Market Return			0.0102		0.002483	0.0077
Jan-12	Market Return			0.0448		0.0021	0.0427
Feb-12	Market Return			0.0432		0.002	0.0412
Mar-12	Market Return			0.0329		0.0022	0.0307
Apr-12	Market Return			(0.0063)		0.0025	-0.0088
May-12	Market Return			(0.0601)		0.0023	-0.0624
Jun-12	Market Return			0.0412		0.0018	0.0394
Jul-12	Market Return			0.0139		0.002	0.0119
Aug-12	Market Return			0.0225		0.0018	0.0207
Sep-12	Market Return			0.0258		0.0017	0.0241
Oct-12	Market Return			(0.0185)		0.0021	-0.0206
Nov-12	Market Return			0.0058		0.0019	0.0039
Dec-12	Market Return			0.0091		0.0019	0.0072
Jan-13	Market Return			0.0518		0.0022	0.0496
Feb-13	Market Return			0.0136		0.0022	0.0114
Mar-13	Market Return			0.0375		0.0021	0.0354
Apr-13	Market Return			0.0193		0.0026	0.0167
May-13	Market Return			0.0234		0.0023	0.0211
Jun-13	Market Return			(0.0134)		0.0024	-0.0158
Jul-13	Market Return			0.0509		0.003	0.0479
Aug-13	Market Return			(0.0290)		0.0028	-0.0318
Sep-13	Market Return			0.0314		0.0029	0.0285
Oct-13	Market Return			0.0460		0.0029	0.0431
Nov-13	Market Return			0.0305		0.0027	0.0278
Dec-13	Market Return			0.0253		0.0031	0.0222
Jan-14	Market Return			(0.0346)		0.0032	-0.0378
Feb-14	Market Return			0.0457		0.0026	0.0431
Mar-14	Market Return			0.0084		0.0029	0.0055
Apr-14	Market Return			0.0074		0.0028	0.0046
May-14	Market Return			0.0235		0.0028	0.0207
Jun-14	Market Return			0.0207		0.0025	0.0182

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	IbbotRf	RP
Jul-14	Market Return			(0.0138)		0.0027	-0.0165
Aug-14	Market Return			0.0400		0.0026	0.0374
Sep-14	Market Return			(0.0140)		0.0023	-0.0163
Oct-14	Market Return			0.0244		0.0025	0.0219
Nov-14	Market Return			0.0269		0.0023	0.0246
Dec-14	Market Return			(0.0025)		0.0022	-0.0047
Jan-15	Market Return			(0.0300)		0.002	-0.0320
Feb-15	Market Return			0.0575		0.0015	0.0560
Mar-15	Market Return			(0.0158)		0.0021	-0.0179
Apr-15	Market Return			0.0096		0.0019	0.0077
May-15	Market Return			0.0129		0.002	0.0109
Jun-15	Market Return			(0.0194)		0.0023	-0.0217
Jul-15	Market Return			0.0210		0.0024	0.0186
Aug-15	Market Return			(0.0603)		0.0022	-0.0625
Sep-15	Market Return			(0.0247)		0.0021	-0.0268
Oct-15	Market Return			0.0844		0.0021	0.0823
Nov-15	Market Return			0.0030		0.0022	0.0008

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jan-26							
Feb-26							
Mar-26							
Apr-26							
May-26							
Jun-26							
Jul-26							
Aug-26							
Sep-26							
Oct-26							
Nov-26							
Dec-26							
Jan-27							
Feb-27							
Mar-27							
Apr-27							
May-27							
Jun-27							
Jul-27							
Aug-27							
Sep-27							
Oct-27							
Nov-27							
Dec-27							
Jan-28	S&P 500 Utility Index			0.0375		0.0040	0.0335
Feb-28	S&P 500 Utility Index			-0.0080		0.0040	-0.0120
Mar-28	S&P 500 Utility Index			0.0723		0.0040	0.0683
Apr-28	S&P 500 Utility Index			0.0986		0.0040	0.0946
May-28	S&P 500 Utility Index			0.0208		0.0041	0.0167
Jun-28	S&P 500 Utility Index			-0.0401		0.0042	-0.0443
Jul-28	S&P 500 Utility Index			-0.0076		0.0042	-0.0118
Aug-28	S&P 500 Utility Index			0.0682		0.0042	0.0640
Sep-28	S&P 500 Utility Index			0.0287		0.0042	0.0245
Oct-28	S&P 500 Utility Index			-0.0092		0.0042	-0.0134
Nov-28	S&P 500 Utility Index			0.2147		0.0042	0.2106
Dec-28	S&P 500 Utility Index			0.0100		0.0042	0.0058
Jan-29	S&P 500 Utility Index			0.1325		0.0042	0.1283
Feb-29	S&P 500 Utility Index			-0.0232		0.0043	-0.0275
Mar-29	S&P 500 Utility Index			-0.0110		0.0043	-0.0153
Apr-29	S&P 500 Utility Index			0.0347		0.0043	0.0304
May-29	S&P 500 Utility Index			0.0470		0.0043	0.0427
Jun-29	S&P 500 Utility Index			0.2178		0.0044	0.2134
Jul-29	S&P 500 Utility Index			0.0905		0.0044	0.0861
Aug-29	S&P 500 Utility Index			0.1033		0.0044	0.0989
Sep-29	S&P 500 Utility Index			0.0004		0.0045	-0.0041
Oct-29	S&P 500 Utility Index			-0.3022		0.0045	-0.3067
Nov-29	S&P 500 Utility Index			-0.1424		0.0044	-0.1468
Dec-29	S&P 500 Utility Index			0.0680		0.0044	0.0636
Jan-30	S&P 500 Utility Index			0.0740		0.0044	0.0696
Feb-30	S&P 500 Utility Index			0.0885		0.0044	0.0841
Mar-30	S&P 500 Utility Index			0.0891		0.0043	0.0848

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Apr-30	S&P 500 Utility Index			0.0341		0.0043	0.0298
May-30	S&P 500 Utility Index			-0.0236		0.0042	-0.0278
Jun-30	S&P 500 Utility Index			-0.1903		0.0042	-0.1945
Jul-30	S&P 500 Utility Index			0.0176		0.0042	0.0134
Aug-30	S&P 500 Utility Index			0.0076		0.0041	0.0035
Sep-30	S&P 500 Utility Index			-0.1108		0.0041	-0.1149
Oct-30	S&P 500 Utility Index			-0.0818		0.0041	-0.0859
Nov-30	S&P 500 Utility Index			-0.0730		0.0041	-0.0771
Dec-30	S&P 500 Utility Index			-0.0339		0.0043	-0.0382
Jan-31	S&P 500 Utility Index			0.0540		0.0042	0.0498
Feb-31	S&P 500 Utility Index			0.1524		0.0042	0.1482
Mar-31	S&P 500 Utility Index			-0.0239		0.0042	-0.0281
Apr-31	S&P 500 Utility Index			-0.1054		0.0041	-0.1095
May-31	S&P 500 Utility Index			-0.1029		0.0040	-0.1069
Jun-31	S&P 500 Utility Index			0.1373		0.0041	0.1332
Jul-31	S&P 500 Utility Index			-0.0622		0.0040	-0.0662
Aug-31	S&P 500 Utility Index			0.0256		0.0040	0.0216
Sep-31	S&P 500 Utility Index			-0.3149		0.0042	-0.3191
Oct-31	S&P 500 Utility Index			0.0990		0.0046	0.0944
Nov-31	S&P 500 Utility Index			-0.0614		0.0046	-0.0660
Dec-31	S&P 500 Utility Index			-0.1283		0.0052	-0.1335
Jan-32	S&P 500 Utility Index			-0.0200		0.0051	-0.0251
Feb-32	S&P 500 Utility Index			0.0799		0.0053	0.0746
Mar-32	S&P 500 Utility Index			-0.1058		0.0051	-0.1109
Apr-32	S&P 500 Utility Index			-0.1535		0.0057	-0.1592
May-32	S&P 500 Utility Index			-0.2806		0.0061	-0.2867
Jun-32	S&P 500 Utility Index			0.0090		0.0063	0.0027
Jul-32	S&P 500 Utility Index			0.3318		0.0061	0.3257
Aug-32	S&P 500 Utility Index			0.4030		0.0053	0.3977
Sep-32	S&P 500 Utility Index			-0.0270		0.0049	-0.0319
Oct-32	S&P 500 Utility Index			-0.1047		0.0048	-0.1095
Nov-32	S&P 500 Utility Index			-0.0354		0.0049	-0.0403
Dec-32	S&P 500 Utility Index			0.0893		0.0049	0.0844
Jan-33	S&P 500 Utility Index			-0.0311		0.0045	-0.0356
Feb-33	S&P 500 Utility Index			-0.1984		0.0048	-0.2032
Mar-33	S&P 500 Utility Index			-0.1080		0.0053	-0.1133
Apr-33	S&P 500 Utility Index			0.2635		0.0057	0.2578
May-33	S&P 500 Utility Index			0.1732		0.0054	0.1678
Jun-33	S&P 500 Utility Index			0.1426		0.0051	0.1375
Jul-33	S&P 500 Utility Index			-0.1204		0.0049	-0.1253
Aug-33	S&P 500 Utility Index			-0.0056		0.0050	-0.0106
Sep-33	S&P 500 Utility Index			-0.1759		0.0053	-0.1812
Oct-33	S&P 500 Utility Index			-0.0712		0.0053	-0.0765
Nov-33	S&P 500 Utility Index			-0.0180		0.0059	-0.0239
Dec-33	S&P 500 Utility Index			0.0126		0.0060	0.0066
Jan-34	S&P 500 Utility Index			0.1746		0.0055	0.1691
Feb-34	S&P 500 Utility Index			-0.0242		0.0048	-0.0290
Mar-34	S&P 500 Utility Index			-0.0111		0.0047	-0.0158
Apr-34	S&P 500 Utility Index			-0.0351		0.0045	-0.0396
May-34	S&P 500 Utility Index			-0.0765		0.0045	-0.0810
Jun-34	S&P 500 Utility Index			0.0478		0.0045	0.0433

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jul-34	S&P 500 Utility Index			-0.1603		0.0044	-0.1647
Aug-34	S&P 500 Utility Index			0.0269		0.0045	0.0224
Sep-34	S&P 500 Utility Index			0.0095		0.0046	0.0049
Oct-34	S&P 500 Utility Index			-0.0666		0.0045	-0.0711
Nov-34	S&P 500 Utility Index			-0.0048		0.0045	-0.0093
Dec-34	S&P 500 Utility Index			-0.0701		0.0045	-0.0746
Jan-35	S&P 500 Utility Index			-0.0231		0.0043	-0.0274
Feb-35	S&P 500 Utility Index			-0.1136		0.0041	-0.1177
Mar-35	S&P 500 Utility Index			0.1043		0.0041	0.1002
Apr-35	S&P 500 Utility Index			0.1178		0.0040	0.1138
May-35	S&P 500 Utility Index			0.1106		0.0038	0.1068
Jun-35	S&P 500 Utility Index			0.1036		0.0038	0.0998
Jul-35	S&P 500 Utility Index			0.0870		0.0037	0.0833
Aug-35	S&P 500 Utility Index			0.0563		0.0037	0.0526
Sep-35	S&P 500 Utility Index			-0.0122		0.0037	-0.0159
Oct-35	S&P 500 Utility Index			0.1224		0.0037	0.1187
Nov-35	S&P 500 Utility Index			0.0108		0.0036	0.0072
Dec-35	S&P 500 Utility Index			0.0479		0.0036	0.0443
Jan-36	S&P 500 Utility Index			0.1103		0.0035	0.1068
Feb-36	S&P 500 Utility Index			-0.0342		0.0035	-0.0377
Mar-36	S&P 500 Utility Index			0.0033		0.0035	-0.0002
Apr-36	S&P 500 Utility Index			-0.0814		0.0035	-0.0849
May-36	S&P 500 Utility Index			0.0761		0.0035	0.0727
Jun-36	S&P 500 Utility Index			0.0350		0.0034	0.0316
Jul-36	S&P 500 Utility Index			0.1009		0.0034	0.0975
Aug-36	S&P 500 Utility Index			-0.0018		0.0034	-0.0052
Sep-36	S&P 500 Utility Index			-0.0225		0.0034	-0.0259
Oct-36	S&P 500 Utility Index			0.0566		0.0034	0.0532
Nov-36	S&P 500 Utility Index			-0.0169		0.0033	-0.0202
Dec-36	S&P 500 Utility Index			-0.0174		0.0032	-0.0206
Jan-37	S&P 500 Utility Index			0.0195		0.0032	0.0163
Feb-37	S&P 500 Utility Index			-0.0353		0.0032	-0.0385
Mar-37	S&P 500 Utility Index			-0.0573		0.0033	-0.0606
Apr-37	S&P 500 Utility Index			-0.0736		0.0034	-0.0770
May-37	S&P 500 Utility Index			-0.0516		0.0033	-0.0549
Jun-37	S&P 500 Utility Index			-0.0467		0.0033	-0.0500
Jul-37	S&P 500 Utility Index			0.1671		0.0033	0.1638
Aug-37	S&P 500 Utility Index			-0.0903		0.0032	-0.0935
Sep-37	S&P 500 Utility Index			-0.1174		0.0033	-0.1207
Oct-37	S&P 500 Utility Index			-0.0516		0.0034	-0.0550
Nov-37	S&P 500 Utility Index			0.0080		0.0034	0.0046
Dec-37	S&P 500 Utility Index			-0.0951		0.0034	-0.0985
Jan-38	S&P 500 Utility Index			-0.0368		0.0033	-0.0401
Feb-38	S&P 500 Utility Index			0.0341		0.0034	0.0307
Mar-38	S&P 500 Utility Index			-0.1984		0.0033	-0.2017
Apr-38	S&P 500 Utility Index			0.1538		0.0034	0.1504
May-38	S&P 500 Utility Index			0.0181		0.0033	0.0148
Jun-38	S&P 500 Utility Index			0.1622		0.0033	0.1589
Jul-38	S&P 500 Utility Index			0.0148		0.0032	0.0116
Aug-38	S&P 500 Utility Index			-0.0557		0.0032	-0.0589
Sep-38	S&P 500 Utility Index			0.0191		0.0032	0.0159

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Oct-38	S&P 500 Utility Index			0.1801		0.0032	0.1769
Nov-38	S&P 500 Utility Index			-0.0620		0.0031	-0.0651
Dec-38	S&P 500 Utility Index			0.0391		0.0031	0.0360
Jan-39	S&P 500 Utility Index			0.0165		0.0031	0.0134
Feb-39	S&P 500 Utility Index			0.0801		0.0030	0.0771
Mar-39	S&P 500 Utility Index			-0.1378		0.0030	-0.1408
Apr-39	S&P 500 Utility Index			0.0285		0.0030	0.0255
May-39	S&P 500 Utility Index			0.0665		0.0029	0.0636
Jun-39	S&P 500 Utility Index			-0.0423		0.0029	-0.0452
Jul-39	S&P 500 Utility Index			0.1208		0.0029	0.1179
Aug-39	S&P 500 Utility Index			-0.0647		0.0028	-0.0675
Sep-39	S&P 500 Utility Index			0.0421		0.0031	0.0390
Oct-39	S&P 500 Utility Index			0.0130		0.0030	0.0100
Nov-39	S&P 500 Utility Index			-0.0157		0.0028	-0.0185
Dec-39	S&P 500 Utility Index			0.0272		0.0028	0.0244
Jan-40	S&P 500 Utility Index			0.0069		0.0028	0.0041
Feb-40	S&P 500 Utility Index			-0.0102		0.0028	-0.0130
Mar-40	S&P 500 Utility Index			0.0094		0.0028	0.0066
Apr-40	S&P 500 Utility Index			-0.0092		0.0027	-0.0119
May-40	S&P 500 Utility Index			-0.1964		0.0028	-0.1992
Jun-40	S&P 500 Utility Index			0.1506		0.0028	0.1478
Jul-40	S&P 500 Utility Index			0.0065		0.0027	0.0038
Aug-40	S&P 500 Utility Index			-0.0094		0.0027	-0.0121
Sep-40	S&P 500 Utility Index			-0.0211		0.0027	-0.0238
Oct-40	S&P 500 Utility Index			0.0317		0.0026	0.0291
Nov-40	S&P 500 Utility Index			-0.1207		0.0026	-0.1233
Dec-40	S&P 500 Utility Index			0.0154		0.0026	0.0128
Jan-41	S&P 500 Utility Index			-0.0084		0.0026	-0.0110
Feb-41	S&P 500 Utility Index			-0.0233		0.0027	-0.0260
Mar-41	S&P 500 Utility Index			-0.0280		0.0026	-0.0306
Apr-41	S&P 500 Utility Index			-0.0844		0.0026	-0.0870
May-41	S&P 500 Utility Index			-0.0337		0.0026	-0.0363
Jun-41	S&P 500 Utility Index			0.0257		0.0025	0.0232
Jul-41	S&P 500 Utility Index			0.0538		0.0025	0.0513
Aug-41	S&P 500 Utility Index			-0.0192		0.0025	-0.0217
Sep-41	S&P 500 Utility Index			-0.0282		0.0025	-0.0307
Oct-41	S&P 500 Utility Index			-0.0848		0.0025	-0.0873
Nov-41	S&P 500 Utility Index			-0.0652		0.0025	-0.0677
Dec-41	S&P 500 Utility Index			-0.0678		0.0026	-0.0704
Jan-42	S&P 500 Utility Index			0.0252		0.0026	0.0226
Feb-42	S&P 500 Utility Index			-0.0339		0.0026	-0.0365
Mar-42	S&P 500 Utility Index			-0.1046		0.0026	-0.1072
Apr-42	S&P 500 Utility Index			-0.0432		0.0026	-0.0458
May-42	S&P 500 Utility Index			0.0956		0.0026	0.0930
Jun-42	S&P 500 Utility Index			0.0057		0.0026	0.0031
Jul-42	S&P 500 Utility Index			0.0040		0.0026	0.0014
Aug-42	S&P 500 Utility Index			0.0026		0.0026	0.0000
Sep-42	S&P 500 Utility Index			0.0466		0.0026	0.0440
Oct-42	S&P 500 Utility Index			0.1362		0.0026	0.1336
Nov-42	S&P 500 Utility Index			-0.0015		0.0026	-0.0041
Dec-42	S&P 500 Utility Index			0.0328		0.0026	0.0303

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jan-43	S&P 500 Utility Index			0.1217		0.0025	0.1192
Feb-43	S&P 500 Utility Index			0.0719		0.0025	0.0694
Mar-43	S&P 500 Utility Index			0.0412		0.0025	0.0387
Apr-43	S&P 500 Utility Index			0.0387		0.0025	0.0362
May-43	S&P 500 Utility Index			0.0347		0.0025	0.0322
Jun-43	S&P 500 Utility Index			0.0538		0.0025	0.0513
Jul-43	S&P 500 Utility Index			0.0038		0.0025	0.0013
Aug-43	S&P 500 Utility Index			0.0105		0.0025	0.0080
Sep-43	S&P 500 Utility Index			0.0323		0.0025	0.0298
Oct-43	S&P 500 Utility Index			0.0082		0.0025	0.0057
Nov-43	S&P 500 Utility Index			-0.0775		0.0025	-0.0800
Dec-43	S&P 500 Utility Index			0.0578		0.0025	0.0553
Jan-44	S&P 500 Utility Index			0.0106		0.0025	0.0081
Feb-44	S&P 500 Utility Index			0.0179		0.0025	0.0154
Mar-44	S&P 500 Utility Index			0.0104		0.0025	0.0079
Apr-44	S&P 500 Utility Index			-0.0091		0.0025	-0.0116
May-44	S&P 500 Utility Index			0.0301		0.0025	0.0276
Jun-44	S&P 500 Utility Index			0.0526		0.0025	0.0501
Jul-44	S&P 500 Utility Index			0.0029		0.0025	0.0004
Aug-44	S&P 500 Utility Index			0.0357		0.0025	0.0333
Sep-44	S&P 500 Utility Index			-0.0150		0.0024	-0.0174
Oct-44	S&P 500 Utility Index			0.0139		0.0025	0.0115
Nov-44	S&P 500 Utility Index			-0.0130		0.0025	-0.0155
Dec-44	S&P 500 Utility Index			0.0324		0.0025	0.0299
Jan-45	S&P 500 Utility Index			0.0497		0.0025	0.0472
Feb-45	S&P 500 Utility Index			0.0695		0.0025	0.0670
Mar-45	S&P 500 Utility Index			-0.0357		0.0025	-0.0382
Apr-45	S&P 500 Utility Index			0.1066		0.0025	0.1041
May-45	S&P 500 Utility Index			0.0171		0.0024	0.0147
Jun-45	S&P 500 Utility Index			0.0662		0.0024	0.0638
Jul-45	S&P 500 Utility Index			-0.0051		0.0024	-0.0075
Aug-45	S&P 500 Utility Index			0.0031		0.0023	0.0008
Sep-45	S&P 500 Utility Index			0.0739		0.0023	0.0716
Oct-45	S&P 500 Utility Index			0.0641		0.0023	0.0618
Nov-45	S&P 500 Utility Index			0.0471		0.0023	0.0448
Dec-45	S&P 500 Utility Index			-0.0117		0.0023	-0.0140
Jan-46	S&P 500 Utility Index			0.1199		0.0022	0.1177
Feb-46	S&P 500 Utility Index			-0.0640		0.0022	-0.0662
Mar-46	S&P 500 Utility Index			0.0631		0.0022	0.0609
Apr-46	S&P 500 Utility Index			0.0338		0.0022	0.0316
May-46	S&P 500 Utility Index			0.0301		0.0022	0.0279
Jun-46	S&P 500 Utility Index			-0.0276		0.0023	-0.0299
Jul-46	S&P 500 Utility Index			-0.0395		0.0022	-0.0417
Aug-46	S&P 500 Utility Index			-0.0724		0.0023	-0.0747
Sep-46	S&P 500 Utility Index			-0.1051		0.0023	-0.1074
Oct-46	S&P 500 Utility Index			0.0220		0.0023	0.0197
Nov-46	S&P 500 Utility Index			0.0058		0.0023	0.0035
Dec-46	S&P 500 Utility Index			0.0706		0.0023	0.0683
Jan-47	S&P 500 Utility Index			-0.0002		0.0023	-0.0025
Feb-47	S&P 500 Utility Index			-0.0089		0.0023	-0.0112
Mar-47	S&P 500 Utility Index			-0.0364		0.0023	-0.0387

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Apr-47	S&P 500 Utility Index			-0.0320		0.0023	-0.0343
May-47	S&P 500 Utility Index			-0.0279		0.0023	-0.0302
Jun-47	S&P 500 Utility Index			0.0428		0.0023	0.0405
Jul-47	S&P 500 Utility Index			0.0214		0.0023	0.0191
Aug-47	S&P 500 Utility Index			-0.0022		0.0023	-0.0045
Sep-47	S&P 500 Utility Index			-0.0142		0.0023	-0.0165
Oct-47	S&P 500 Utility Index			-0.0133		0.0024	-0.0157
Nov-47	S&P 500 Utility Index			-0.0824		0.0024	-0.0848
Dec-47	S&P 500 Utility Index			0.0189		0.0025	0.0164
Jan-48	S&P 500 Utility Index			0.0070		0.0025	0.0045
Feb-48	S&P 500 Utility Index			-0.0372		0.0025	-0.0397
Mar-48	S&P 500 Utility Index			0.0617		0.0025	0.0592
Apr-48	S&P 500 Utility Index			0.0160		0.0025	0.0135
May-48	S&P 500 Utility Index			0.0583		0.0025	0.0559
Jun-48	S&P 500 Utility Index			0.0212		0.0025	0.0188
Jul-48	S&P 500 Utility Index			-0.0443		0.0025	-0.0468
Aug-48	S&P 500 Utility Index			0.0036		0.0025	0.0011
Sep-48	S&P 500 Utility Index			-0.0071		0.0025	-0.0096
Oct-48	S&P 500 Utility Index			0.0403		0.0025	0.0378
Nov-48	S&P 500 Utility Index			-0.0913		0.0026	-0.0939
Dec-48	S&P 500 Utility Index			0.0221		0.0026	0.0196
Jan-49	S&P 500 Utility Index			0.0504		0.0025	0.0479
Feb-49	S&P 500 Utility Index			0.0005		0.0025	-0.0020
Mar-49	S&P 500 Utility Index			0.0364		0.0025	0.0339
Apr-49	S&P 500 Utility Index			0.0058		0.0025	0.0033
May-49	S&P 500 Utility Index			0.0034		0.0025	0.0009
Jun-49	S&P 500 Utility Index			-0.0134		0.0025	-0.0159
Jul-49	S&P 500 Utility Index			0.0569		0.0024	0.0545
Aug-49	S&P 500 Utility Index			0.0346		0.0024	0.0322
Sep-49	S&P 500 Utility Index			0.0373		0.0024	0.0349
Oct-49	S&P 500 Utility Index			0.0112		0.0024	0.0088
Nov-49	S&P 500 Utility Index			0.0159		0.0023	0.0136
Dec-49	S&P 500 Utility Index			0.0396		0.0023	0.0373
Jan-50	S&P 500 Utility Index			0.0353		0.0023	0.0330
Feb-50	S&P 500 Utility Index			0.0100		0.0023	0.0077
Mar-50	S&P 500 Utility Index			0.0084		0.0023	0.0061
Apr-50	S&P 500 Utility Index			0.0185		0.0023	0.0162
May-50	S&P 500 Utility Index			0.0192		0.0023	0.0169
Jun-50	S&P 500 Utility Index			-0.0771		0.0023	-0.0794
Jul-50	S&P 500 Utility Index			-0.0436		0.0023	-0.0459
Aug-50	S&P 500 Utility Index			0.0154		0.0023	0.0131
Sep-50	S&P 500 Utility Index			0.0418		0.0023	0.0395
Oct-50	S&P 500 Utility Index			-0.0027		0.0024	-0.0051
Nov-50	S&P 500 Utility Index			-0.0176		0.0024	-0.0200
Dec-50	S&P 500 Utility Index			0.0312		0.0024	0.0288
Jan-51	S&P 500 Utility Index			0.0438		0.0024	0.0414
Feb-51	S&P 500 Utility Index			0.0268		0.0024	0.0244
Mar-51	S&P 500 Utility Index			-0.0174		0.0025	-0.0199
Apr-51	S&P 500 Utility Index			0.0005		0.0026	-0.0021
May-51	S&P 500 Utility Index			0.0066		0.0026	0.0040
Jun-51	S&P 500 Utility Index			-0.0040		0.0027	-0.0067

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jul-51	S&P 500 Utility Index			0.0439		0.0027	0.0412
Aug-51	S&P 500 Utility Index			0.0152		0.0027	0.0125
Sep-51	S&P 500 Utility Index			0.0086		0.0026	0.0060
Oct-51	S&P 500 Utility Index			0.0029		0.0026	0.0003
Nov-51	S&P 500 Utility Index			0.0120		0.0027	0.0093
Dec-51	S&P 500 Utility Index			0.0352		0.0027	0.0325
Jan-52	S&P 500 Utility Index			0.0305		0.0027	0.0278
Feb-52	S&P 500 Utility Index			0.0059		0.0027	0.0032
Mar-52	S&P 500 Utility Index			0.0176		0.0027	0.0149
Apr-52	S&P 500 Utility Index			-0.0154		0.0027	-0.0181
May-52	S&P 500 Utility Index			0.0190		0.0027	0.0163
Jun-52	S&P 500 Utility Index			0.0049		0.0027	0.0022
Jul-52	S&P 500 Utility Index			0.0206		0.0027	0.0179
Aug-52	S&P 500 Utility Index			0.0203		0.0027	0.0176
Sep-52	S&P 500 Utility Index			0.0015		0.0027	-0.0012
Oct-52	S&P 500 Utility Index			0.0101		0.0027	0.0074
Nov-52	S&P 500 Utility Index			0.0423		0.0027	0.0396
Dec-52	S&P 500 Utility Index			0.0213		0.0027	0.0186
Jan-53	S&P 500 Utility Index			0.0103		0.0027	0.0076
Feb-53	S&P 500 Utility Index			-0.0067		0.0028	-0.0095
Mar-53	S&P 500 Utility Index			-0.0043		0.0028	-0.0071
Apr-53	S&P 500 Utility Index			-0.0192		0.0029	-0.0221
May-53	S&P 500 Utility Index			0.0024		0.0030	-0.0006
Jun-53	S&P 500 Utility Index			-0.0273		0.0031	-0.0304
Jul-53	S&P 500 Utility Index			0.0345		0.0031	0.0315
Aug-53	S&P 500 Utility Index			0.0016		0.0030	-0.0014
Sep-53	S&P 500 Utility Index			0.0119		0.0030	0.0089
Oct-53	S&P 500 Utility Index			0.0411		0.0029	0.0382
Nov-53	S&P 500 Utility Index			0.0274		0.0028	0.0246
Dec-53	S&P 500 Utility Index			0.0064		0.0028	0.0036
Jan-54	S&P 500 Utility Index			0.0327		0.0028	0.0299
Feb-54	S&P 500 Utility Index			0.0117		0.0027	0.0090
Mar-54	S&P 500 Utility Index			0.0270		0.0026	0.0244
Apr-54	S&P 500 Utility Index			0.0121		0.0026	0.0095
May-54	S&P 500 Utility Index			0.0257		0.0026	0.0231
Jun-54	S&P 500 Utility Index			0.0096		0.0026	0.0070
Jul-54	S&P 500 Utility Index			0.0495		0.0026	0.0469
Aug-54	S&P 500 Utility Index			-0.0131		0.0026	-0.0157
Sep-54	S&P 500 Utility Index			0.0178		0.0026	0.0152
Oct-54	S&P 500 Utility Index			-0.0368		0.0026	-0.0394
Nov-54	S&P 500 Utility Index			0.0565		0.0026	0.0539
Dec-54	S&P 500 Utility Index			0.0341		0.0026	0.0315
Jan-55	S&P 500 Utility Index			0.0143		0.0026	0.0117
Feb-55	S&P 500 Utility Index			0.0344		0.0026	0.0318
Mar-55	S&P 500 Utility Index			-0.0110		0.0026	-0.0136
Apr-55	S&P 500 Utility Index			0.0202		0.0026	0.0176
May-55	S&P 500 Utility Index			-0.0058		0.0027	-0.0085
Jun-55	S&P 500 Utility Index			0.0211		0.0027	0.0184
Jul-55	S&P 500 Utility Index			0.0466		0.0027	0.0439
Aug-55	S&P 500 Utility Index			0.0052		0.0027	0.0025
Sep-55	S&P 500 Utility Index			-0.0290		0.0027	-0.0317

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Oct-55	S&P 500 Utility Index			-0.0085		0.0028	-0.0113
Nov-55	S&P 500 Utility Index			0.0292		0.0028	0.0264
Dec-55	S&P 500 Utility Index			-0.0067		0.0028	-0.0095
Jan-56	S&P 500 Utility Index			0.0030		0.0028	0.0002
Feb-56	S&P 500 Utility Index			0.0178		0.0027	0.0151
Mar-56	S&P 500 Utility Index			0.0394		0.0027	0.0367
Apr-56	S&P 500 Utility Index			-0.0287		0.0028	-0.0315
May-56	S&P 500 Utility Index			-0.0138		0.0029	-0.0167
Jun-56	S&P 500 Utility Index			0.0211		0.0029	0.0182
Jul-56	S&P 500 Utility Index			0.0525		0.0030	0.0495
Aug-56	S&P 500 Utility Index			-0.0259		0.0030	-0.0289
Sep-56	S&P 500 Utility Index			-0.0319		0.0031	-0.0350
Oct-56	S&P 500 Utility Index			0.0063		0.0032	0.0031
Nov-56	S&P 500 Utility Index			0.0028		0.0032	-0.0004
Dec-56	S&P 500 Utility Index			0.0104		0.0033	0.0071
Jan-57	S&P 500 Utility Index			0.0324		0.0033	0.0291
Feb-57	S&P 500 Utility Index			-0.0061		0.0034	-0.0095
Mar-57	S&P 500 Utility Index			0.0078		0.0034	0.0044
Apr-57	S&P 500 Utility Index			0.0402		0.0033	0.0369
May-57	S&P 500 Utility Index			0.0180		0.0033	0.0147
Jun-57	S&P 500 Utility Index			-0.0418		0.0034	-0.0452
Jul-57	S&P 500 Utility Index			0.0035		0.0035	0.0000
Aug-57	S&P 500 Utility Index			-0.0294		0.0036	-0.0330
Sep-57	S&P 500 Utility Index			-0.0138		0.0038	-0.0176
Oct-57	S&P 500 Utility Index			-0.0074		0.0038	-0.0112
Nov-57	S&P 500 Utility Index			0.0428		0.0039	0.0390
Dec-57	S&P 500 Utility Index			0.0195		0.0036	0.0159
Jan-58	S&P 500 Utility Index			0.0602		0.0033	0.0569
Feb-58	S&P 500 Utility Index			0.0137		0.0033	0.0104
Mar-58	S&P 500 Utility Index			0.0200		0.0034	0.0166
Apr-58	S&P 500 Utility Index			0.0516		0.0033	0.0483
May-58	S&P 500 Utility Index			0.0164		0.0033	0.0131
Jun-58	S&P 500 Utility Index			0.0172		0.0033	0.0139
Jul-58	S&P 500 Utility Index			0.0109		0.0034	0.0075
Aug-58	S&P 500 Utility Index			-0.0067		0.0036	-0.0103
Sep-58	S&P 500 Utility Index			0.0332		0.0038	0.0294
Oct-58	S&P 500 Utility Index			0.0406		0.0038	0.0368
Nov-58	S&P 500 Utility Index			0.0263		0.0037	0.0226
Dec-58	S&P 500 Utility Index			0.0655		0.0037	0.0618
Jan-59	S&P 500 Utility Index			0.0134		0.0038	0.0096
Feb-59	S&P 500 Utility Index			0.0206		0.0038	0.0169
Mar-59	S&P 500 Utility Index			0.0102		0.0037	0.0065
Apr-59	S&P 500 Utility Index			-0.0028		0.0038	-0.0066
May-59	S&P 500 Utility Index			-0.0120		0.0040	-0.0160
Jun-59	S&P 500 Utility Index			-0.0088		0.0041	-0.0129
Jul-59	S&P 500 Utility Index			0.0371		0.0041	0.0330
Aug-59	S&P 500 Utility Index			0.0175		0.0041	0.0134
Sep-59	S&P 500 Utility Index			-0.0393		0.0042	-0.0435
Oct-59	S&P 500 Utility Index			0.0157		0.0041	0.0116
Nov-59	S&P 500 Utility Index			0.0001		0.0041	-0.0040
Dec-59	S&P 500 Utility Index			0.0230		0.0041	0.0189

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jan-60	S&P 500 Utility Index			-0.0108		0.0042	-0.0150
Feb-60	S&P 500 Utility Index			0.0181		0.0042	0.0139
Mar-60	S&P 500 Utility Index			0.0141		0.0041	0.0100
Apr-60	S&P 500 Utility Index			0.0075		0.0040	0.0035
May-60	S&P 500 Utility Index			0.0233		0.0041	0.0193
Jun-60	S&P 500 Utility Index			0.0408		0.0040	0.0368
Jul-60	S&P 500 Utility Index			-0.0100		0.0040	-0.0140
Aug-60	S&P 500 Utility Index			0.0502		0.0039	0.0463
Sep-60	S&P 500 Utility Index			-0.0514		0.0038	-0.0552
Oct-60	S&P 500 Utility Index			-0.0012		0.0038	-0.0050
Nov-60	S&P 500 Utility Index			0.0386		0.0039	0.0347
Dec-60	S&P 500 Utility Index			0.0724		0.0039	0.0685
Jan-61	S&P 500 Utility Index			0.0619		0.0039	0.0580
Feb-61	S&P 500 Utility Index			0.0357		0.0038	0.0319
Mar-61	S&P 500 Utility Index			0.0319		0.0037	0.0282
Apr-61	S&P 500 Utility Index			0.0109		0.0037	0.0072
May-61	S&P 500 Utility Index			0.0133		0.0038	0.0095
Jun-61	S&P 500 Utility Index			-0.0227		0.0038	-0.0265
Jul-61	S&P 500 Utility Index			0.0424		0.0039	0.0385
Aug-61	S&P 500 Utility Index			0.0454		0.0039	0.0415
Sep-61	S&P 500 Utility Index			-0.0067		0.0039	-0.0106
Oct-61	S&P 500 Utility Index			0.0480		0.0039	0.0441
Nov-61	S&P 500 Utility Index			0.0335		0.0039	0.0296
Dec-61	S&P 500 Utility Index			-0.0292		0.0039	-0.0331
Jan-62	S&P 500 Utility Index			-0.0366		0.0039	-0.0405
Feb-62	S&P 500 Utility Index			0.0300		0.0039	0.0261
Mar-62	S&P 500 Utility Index			0.0081		0.0039	0.0042
Apr-62	S&P 500 Utility Index			-0.0353		0.0038	-0.0391
May-62	S&P 500 Utility Index			-0.0912		0.0038	-0.0950
Jun-62	S&P 500 Utility Index			-0.0548		0.0037	-0.0585
Jul-62	S&P 500 Utility Index			0.0689		0.0038	0.0652
Aug-62	S&P 500 Utility Index			0.0271		0.0038	0.0233
Sep-62	S&P 500 Utility Index			-0.0334		0.0038	-0.0372
Oct-62	S&P 500 Utility Index			-0.0014		0.0037	-0.0051
Nov-62	S&P 500 Utility Index			0.0768		0.0037	0.0731
Dec-62	S&P 500 Utility Index			0.0312		0.0037	0.0275
Jan-63	S&P 500 Utility Index			0.0558		0.0037	0.0521
Feb-63	S&P 500 Utility Index			-0.0206		0.0036	-0.0242
Mar-63	S&P 500 Utility Index			0.0186		0.0036	0.0150
Apr-63	S&P 500 Utility Index			0.0232		0.0036	0.0196
May-63	S&P 500 Utility Index			0.0070		0.0036	0.0034
Jun-63	S&P 500 Utility Index			-0.0123		0.0036	-0.0159
Jul-63	S&P 500 Utility Index			0.0123		0.0037	0.0086
Aug-63	S&P 500 Utility Index			0.0425		0.0037	0.0389
Sep-63	S&P 500 Utility Index			-0.0258		0.0037	-0.0295
Oct-63	S&P 500 Utility Index			-0.0033		0.0037	-0.0070
Nov-63	S&P 500 Utility Index			-0.0082		0.0037	-0.0119
Dec-63	S&P 500 Utility Index			0.0317		0.0037	0.0280
Jan-64	S&P 500 Utility Index			0.0127		0.0037	0.0090
Feb-64	S&P 500 Utility Index			0.0032		0.0038	-0.0006
Mar-64	S&P 500 Utility Index			-0.0035		0.0038	-0.0073

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Apr-64	S&P 500 Utility Index			0.0067		0.0038	0.0029
May-64	S&P 500 Utility Index			0.0032		0.0038	-0.0006
Jun-64	S&P 500 Utility Index			0.0234		0.0038	0.0196
Jul-64	S&P 500 Utility Index			0.0471		0.0038	0.0433
Aug-64	S&P 500 Utility Index			0.0031		0.0038	-0.0007
Sep-64	S&P 500 Utility Index			0.0170		0.0038	0.0132
Oct-64	S&P 500 Utility Index			0.0165		0.0038	0.0127
Nov-64	S&P 500 Utility Index			0.0114		0.0038	0.0076
Dec-64	S&P 500 Utility Index			0.0086		0.0038	0.0048
Jan-65	S&P 500 Utility Index			0.0371		0.0038	0.0333
Feb-65	S&P 500 Utility Index			0.0009		0.0038	-0.0029
Mar-65	S&P 500 Utility Index			0.0007		0.0038	-0.0031
Apr-65	S&P 500 Utility Index			0.0109		0.0037	0.0072
May-65	S&P 500 Utility Index			-0.0084		0.0038	-0.0122
Jun-65	S&P 500 Utility Index			-0.0340		0.0038	-0.0378
Jul-65	S&P 500 Utility Index			0.0105		0.0038	0.0067
Aug-65	S&P 500 Utility Index			0.0097		0.0038	0.0059
Sep-65	S&P 500 Utility Index			0.0194		0.0039	0.0155
Oct-65	S&P 500 Utility Index			0.0129		0.0039	0.0090
Nov-65	S&P 500 Utility Index			-0.0116		0.0039	-0.0155
Dec-65	S&P 500 Utility Index			-0.0008		0.0040	-0.0048
Jan-66	S&P 500 Utility Index			-0.0297		0.0041	-0.0338
Feb-66	S&P 500 Utility Index			-0.0414		0.0041	-0.0455
Mar-66	S&P 500 Utility Index			-0.0045		0.0043	-0.0088
Apr-66	S&P 500 Utility Index			0.0172		0.0044	0.0128
May-66	S&P 500 Utility Index			-0.0296		0.0044	-0.0340
Jun-66	S&P 500 Utility Index			-0.0181		0.0045	-0.0226
Jul-66	S&P 500 Utility Index			0.0009		0.0045	-0.0036
Aug-66	S&P 500 Utility Index			-0.0875		0.0047	-0.0922
Sep-66	S&P 500 Utility Index			0.0475		0.0048	0.0427
Oct-66	S&P 500 Utility Index			0.0970		0.0048	0.0922
Nov-66	S&P 500 Utility Index			-0.0076		0.0047	-0.0123
Dec-66	S&P 500 Utility Index			0.0221		0.0047	0.0174
Jan-67	S&P 500 Utility Index			0.0271		0.0046	0.0226
Feb-67	S&P 500 Utility Index			-0.0157		0.0044	-0.0201
Mar-67	S&P 500 Utility Index			0.0197		0.0045	0.0152
Apr-67	S&P 500 Utility Index			0.0202		0.0045	0.0157
May-67	S&P 500 Utility Index			-0.0506		0.0047	-0.0553
Jun-67	S&P 500 Utility Index			-0.0131		0.0049	-0.0180
Jul-67	S&P 500 Utility Index			0.0204		0.0050	0.0155
Aug-67	S&P 500 Utility Index			-0.0065		0.0050	-0.0115
Sep-67	S&P 500 Utility Index			-0.0037		0.0050	-0.0087
Oct-67	S&P 500 Utility Index			-0.0572		0.0052	-0.0624
Nov-67	S&P 500 Utility Index			0.0293		0.0054	0.0239
Dec-67	S&P 500 Utility Index			0.0286		0.0056	0.0230
Jan-68	S&P 500 Utility Index			0.0082		0.0055	0.0028
Feb-68	S&P 500 Utility Index			-0.0233		0.0053	-0.0286
Mar-68	S&P 500 Utility Index			-0.0399		0.0053	-0.0452
Apr-68	S&P 500 Utility Index			0.0275		0.0055	0.0220
May-68	S&P 500 Utility Index			-0.0062		0.0055	-0.0117
Jun-68	S&P 500 Utility Index			0.0807		0.0055	0.0752

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jul-68	S&P 500 Utility Index			-0.0070		0.0054	-0.0124
Aug-68	S&P 500 Utility Index			0.0004		0.0052	-0.0048
Sep-68	S&P 500 Utility Index			0.0100		0.0052	0.0048
Oct-68	S&P 500 Utility Index			0.0086		0.0053	0.0033
Nov-68	S&P 500 Utility Index			0.0781		0.0055	0.0726
Dec-68	S&P 500 Utility Index			-0.0309		0.0057	-0.0366
Jan-69	S&P 500 Utility Index			0.0169		0.0059	0.0110
Feb-69	S&P 500 Utility Index			-0.0532		0.0059	-0.0591
Mar-69	S&P 500 Utility Index			-0.0096		0.0061	-0.0157
Apr-69	S&P 500 Utility Index			0.0139		0.0061	0.0078
May-69	S&P 500 Utility Index			-0.0006		0.0060	-0.0066
Jun-69	S&P 500 Utility Index			-0.0516		0.0062	-0.0578
Jul-69	S&P 500 Utility Index			-0.0363		0.0063	-0.0426
Aug-69	S&P 500 Utility Index			-0.0114		0.0062	-0.0176
Sep-69	S&P 500 Utility Index			-0.0372		0.0064	-0.0436
Oct-69	S&P 500 Utility Index			0.0798		0.0067	0.0731
Nov-69	S&P 500 Utility Index			-0.0588		0.0067	-0.0655
Dec-69	S&P 500 Utility Index			-0.0097		0.0072	-0.0169
Jan-70	S&P 500 Utility Index			-0.0453		0.0072	-0.0525
Feb-70	S&P 500 Utility Index			0.1053		0.0071	0.0982
Mar-70	S&P 500 Utility Index			0.0232		0.0069	0.0163
Apr-70	S&P 500 Utility Index			-0.0929		0.0069	-0.0998
May-70	S&P 500 Utility Index			-0.0515		0.0072	-0.0587
Jun-70	S&P 500 Utility Index			-0.0582		0.0075	-0.0657
Jul-70	S&P 500 Utility Index			0.0973		0.0076	0.0898
Aug-70	S&P 500 Utility Index			0.0581		0.0074	0.0507
Sep-70	S&P 500 Utility Index			-0.0114		0.0074	-0.0188
Oct-70	S&P 500 Utility Index			-0.0149		0.0073	-0.0222
Nov-70	S&P 500 Utility Index			0.0975		0.0073	0.0902
Dec-70	S&P 500 Utility Index			0.0735		0.0071	0.0664
Jan-71	S&P 500 Utility Index			0.0257		0.0068	0.0189
Feb-71	S&P 500 Utility Index			-0.0277		0.0066	-0.0343
Mar-71	S&P 500 Utility Index			0.0331		0.0067	0.0264
Apr-71	S&P 500 Utility Index			-0.0349		0.0067	-0.0416
May-71	S&P 500 Utility Index			-0.0351		0.0070	-0.0421
Jun-71	S&P 500 Utility Index			0.0398		0.0070	0.0328
Jul-71	S&P 500 Utility Index			-0.0225		0.0070	-0.0295
Aug-71	S&P 500 Utility Index			-0.0247		0.0070	-0.0317
Sep-71	S&P 500 Utility Index			-0.0146		0.0068	-0.0214
Oct-71	S&P 500 Utility Index			0.0170		0.0068	0.0103
Nov-71	S&P 500 Utility Index			-0.0055		0.0066	-0.0121
Dec-71	S&P 500 Utility Index			0.0806		0.0066	0.0740
Jan-72	S&P 500 Utility Index			-0.0074		0.0065	-0.0139
Feb-72	S&P 500 Utility Index			-0.0240		0.0065	-0.0305
Mar-72	S&P 500 Utility Index			-0.0036		0.0065	-0.0101
Apr-72	S&P 500 Utility Index			-0.0277		0.0065	-0.0342
May-72	S&P 500 Utility Index			-0.0017		0.0065	-0.0082
Jun-72	S&P 500 Utility Index			-0.0210		0.0065	-0.0275
Jul-72	S&P 500 Utility Index			-0.0014		0.0065	-0.0079
Aug-72	S&P 500 Utility Index			0.0574		0.0064	0.0510
Sep-72	S&P 500 Utility Index			0.0027		0.0063	-0.0036

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Oct-72	S&P 500 Utility Index			0.0651		0.0064	0.0587
Nov-72	S&P 500 Utility Index			0.0639		0.0063	0.0576
Dec-72	S&P 500 Utility Index			-0.0174		0.0062	-0.0236
Jan-73	S&P 500 Utility Index			-0.0439		0.0063	-0.0502
Feb-73	S&P 500 Utility Index			-0.0234		0.0064	-0.0298
Mar-73	S&P 500 Utility Index			-0.0135		0.0064	-0.0199
Apr-73	S&P 500 Utility Index			-0.0049		0.0064	-0.0113
May-73	S&P 500 Utility Index			0.0067		0.0064	0.0003
Jun-73	S&P 500 Utility Index			-0.0167		0.0064	-0.0231
Jul-73	S&P 500 Utility Index			-0.0199		0.0065	-0.0264
Aug-73	S&P 500 Utility Index			-0.0284		0.0067	-0.0351
Sep-73	S&P 500 Utility Index			0.0771		0.0067	0.0704
Oct-73	S&P 500 Utility Index			-0.0388		0.0067	-0.0455
Nov-73	S&P 500 Utility Index			-0.1172		0.0068	-0.1240
Dec-73	S&P 500 Utility Index			0.0375		0.0069	0.0306
Jan-74	S&P 500 Utility Index			0.0418		0.0070	0.0348
Feb-74	S&P 500 Utility Index			0.0060		0.0070	-0.0010
Mar-74	S&P 500 Utility Index			-0.0389		0.0071	-0.0460
Apr-74	S&P 500 Utility Index			-0.1296		0.0073	-0.1369
May-74	S&P 500 Utility Index			-0.0484		0.0075	-0.0559
Jun-74	S&P 500 Utility Index			-0.0570		0.0078	-0.0648
Jul-74	S&P 500 Utility Index			-0.0089		0.0081	-0.0170
Aug-74	S&P 500 Utility Index			-0.0871		0.0084	-0.0955
Sep-74	S&P 500 Utility Index			-0.0086		0.0087	-0.0173
Oct-74	S&P 500 Utility Index			0.1199		0.0090	0.1109
Nov-74	S&P 500 Utility Index			-0.0119		0.0087	-0.0206
Dec-74	S&P 500 Utility Index			0.0044		0.0086	-0.0042
Jan-75	S&P 500 Utility Index			0.1897		0.0086	0.1811
Feb-75	S&P 500 Utility Index			0.0143		0.0083	0.0060
Mar-75	S&P 500 Utility Index			-0.0216		0.0081	-0.0297
Apr-75	S&P 500 Utility Index			-0.0140		0.0084	-0.0224
May-75	S&P 500 Utility Index			0.0866		0.0085	0.0781
Jun-75	S&P 500 Utility Index			0.1067		0.0084	0.0983
Jul-75	S&P 500 Utility Index			-0.0510		0.0083	-0.0593
Aug-75	S&P 500 Utility Index			-0.0212		0.0084	-0.0296
Sep-75	S&P 500 Utility Index			-0.0049		0.0085	-0.0134
Oct-75	S&P 500 Utility Index			0.0708		0.0085	0.0623
Nov-75	S&P 500 Utility Index			0.0350		0.0084	0.0266
Dec-75	S&P 500 Utility Index			0.0077		0.0084	-0.0007
Jan-76	S&P 500 Utility Index			0.0894		0.0083	0.0812
Feb-76	S&P 500 Utility Index			-0.0356		0.0081	-0.0437
Mar-76	S&P 500 Utility Index			0.0100		0.0081	0.0019
Apr-76	S&P 500 Utility Index			0.0037		0.0079	-0.0042
May-76	S&P 500 Utility Index			-0.0139		0.0080	-0.0219
Jun-76	S&P 500 Utility Index			0.0337		0.0080	0.0258
Jul-76	S&P 500 Utility Index			0.0341		0.0078	0.0263
Aug-76	S&P 500 Utility Index			0.0383		0.0076	0.0307
Sep-76	S&P 500 Utility Index			0.0381		0.0074	0.0307
Oct-76	S&P 500 Utility Index			-0.0021		0.0073	-0.0094
Nov-76	S&P 500 Utility Index			0.0268		0.0073	0.0195
Dec-76	S&P 500 Utility Index			0.0631		0.0072	0.0559

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jan-77	S&P 500 Utility Index			0.0035		0.0072	-0.0037
Feb-77	S&P 500 Utility Index			-0.0372		0.0072	-0.0444
Mar-77	S&P 500 Utility Index			0.0102		0.0073	0.0030
Apr-77	S&P 500 Utility Index			0.0209		0.0073	0.0136
May-77	S&P 500 Utility Index			0.0211		0.0073	0.0138
Jun-77	S&P 500 Utility Index			0.0531		0.0072	0.0460
Jul-77	S&P 500 Utility Index			0.0164		0.0071	0.0093
Aug-77	S&P 500 Utility Index			-0.0353		0.0071	-0.0424
Sep-77	S&P 500 Utility Index			0.0247		0.0071	0.0177
Oct-77	S&P 500 Utility Index			-0.0296		0.0072	-0.0368
Nov-77	S&P 500 Utility Index			0.0381		0.0072	0.0309
Dec-77	S&P 500 Utility Index			0.0019		0.0072	-0.0053
Jan-78	S&P 500 Utility Index			-0.0533		0.0074	-0.0607
Feb-78	S&P 500 Utility Index			-0.0062		0.0075	-0.0137
Mar-78	S&P 500 Utility Index			0.0309		0.0075	0.0234
Apr-78	S&P 500 Utility Index			0.0106		0.0076	0.0030
May-78	S&P 500 Utility Index			0.0043		0.0077	-0.0034
Jun-78	S&P 500 Utility Index			0.0036		0.0078	-0.0042
Jul-78	S&P 500 Utility Index			0.0316		0.0079	0.0237
Aug-78	S&P 500 Utility Index			-0.0003		0.0078	-0.0081
Sep-78	S&P 500 Utility Index			-0.0056		0.0077	-0.0133
Oct-78	S&P 500 Utility Index			-0.0684		0.0079	-0.0763
Nov-78	S&P 500 Utility Index			0.0356		0.0081	0.0275
Dec-78	S&P 500 Utility Index			-0.0149		0.0081	-0.0230
Jan-79	S&P 500 Utility Index			0.0692		0.0083	0.0610
Feb-79	S&P 500 Utility Index			-0.0212		0.0082	-0.0294
Mar-79	S&P 500 Utility Index			0.0196		0.0084	0.0112
Apr-79	S&P 500 Utility Index			-0.0249		0.0084	-0.0333
May-79	S&P 500 Utility Index			0.0150		0.0086	0.0064
Jun-79	S&P 500 Utility Index			0.0386		0.0085	0.0302
Jul-79	S&P 500 Utility Index			0.0342		0.0083	0.0259
Aug-79	S&P 500 Utility Index			0.0102		0.0085	0.0018
Sep-79	S&P 500 Utility Index			-0.0177		0.0086	-0.0263
Oct-79	S&P 500 Utility Index			-0.0505		0.0095	-0.0600
Nov-79	S&P 500 Utility Index			0.0607		0.0099	0.0508
Dec-79	S&P 500 Utility Index			0.0022		0.0101	-0.0079
Jan-80	S&P 500 Utility Index			-0.0023		0.0102	-0.0125
Feb-80	S&P 500 Utility Index			-0.0247		0.0110	-0.0357
Mar-80	S&P 500 Utility Index			-0.0529		0.0122	-0.0651
Apr-80	S&P 500 Utility Index			0.1186		0.0119	0.1067
May-80	S&P 500 Utility Index			0.0323		0.0106	0.0217
Jun-80	S&P 500 Utility Index			0.0337		0.0103	0.0234
Jul-80	S&P 500 Utility Index			-0.0041		0.0101	-0.0142
Aug-80	S&P 500 Utility Index			-0.0139		0.0106	-0.0245
Sep-80	S&P 500 Utility Index			-0.0114		0.0111	-0.0225
Oct-80	S&P 500 Utility Index			0.0274		0.0113	0.0161
Nov-80	S&P 500 Utility Index			0.0501		0.0117	0.0384
Dec-80	S&P 500 Utility Index			-0.0014		0.0122	-0.0136
Jan-81	S&P 500 Utility Index			-0.0186		0.0119	-0.0305
Feb-81	S&P 500 Utility Index			-0.0224		0.0122	-0.0346
Mar-81	S&P 500 Utility Index			0.0420		0.0126	0.0294

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Apr-81	S&P 500 Utility Index			-0.0096		0.0127	-0.0223
May-81	S&P 500 Utility Index			0.0291		0.0134	0.0157
Jun-81	S&P 500 Utility Index			0.0272		0.0132	0.0140
Jul-81	S&P 500 Utility Index			0.0341		0.0134	0.0207
Aug-81	S&P 500 Utility Index			-0.0024		0.0137	-0.0161
Sep-81	S&P 500 Utility Index			-0.0409		0.0142	-0.0551
Oct-81	S&P 500 Utility Index			0.0617		0.0144	0.0473
Nov-81	S&P 500 Utility Index			0.0481		0.0137	0.0344
Dec-81	S&P 500 Utility Index			-0.0305		0.0135	-0.0440
Jan-82	S&P 500 Utility Index			0.0037		0.0140	-0.0103
Feb-82	S&P 500 Utility Index			-0.0035		0.0141	-0.0176
Mar-82	S&P 500 Utility Index			0.0168		0.0137	0.0031
Apr-82	S&P 500 Utility Index			0.0548		0.0137	0.0411
May-82	S&P 500 Utility Index			-0.0187		0.0134	-0.0321
Jun-82	S&P 500 Utility Index			-0.0161		0.0136	-0.0297
Jul-82	S&P 500 Utility Index			-0.0198		0.0137	-0.0335
Aug-82	S&P 500 Utility Index			0.1211		0.0133	0.1078
Sep-82	S&P 500 Utility Index			0.0052		0.0129	-0.0077
Oct-82	S&P 500 Utility Index			0.0659		0.0125	0.0534
Nov-82	S&P 500 Utility Index			0.0017		0.0121	-0.0104
Dec-82	S&P 500 Utility Index			0.0360		0.0120	0.0240
Jan-83	S&P 500 Utility Index			0.0372		0.0119	0.0253
Feb-83	S&P 500 Utility Index			-0.0005		0.0119	-0.0124
Mar-83	S&P 500 Utility Index			0.0017		0.0117	-0.0100
Apr-83	S&P 500 Utility Index			0.0571		0.0114	0.0457
May-83	S&P 500 Utility Index			0.0124		0.0112	0.0012
Jun-83	S&P 500 Utility Index			-0.0123		0.0114	-0.0237
Jul-83	S&P 500 Utility Index			0.0339		0.0113	0.0226
Aug-83	S&P 500 Utility Index			0.0040		0.0113	-0.0073
Sep-83	S&P 500 Utility Index			0.0445		0.0112	0.0333
Oct-83	S&P 500 Utility Index			0.0532		0.0110	0.0422
Nov-83	S&P 500 Utility Index			-0.0204		0.0112	-0.0316
Dec-83	S&P 500 Utility Index			-0.0226		0.0113	-0.0339
Jan-84	S&P 500 Utility Index			0.0482		0.0112	0.0370
Feb-84	S&P 500 Utility Index			-0.0411		0.0112	-0.0523
Mar-84	S&P 500 Utility Index			-0.0055		0.0115	-0.0170
Apr-84	S&P 500 Utility Index			0.0159		0.0118	0.0041
May-84	S&P 500 Utility Index			-0.0230		0.0124	-0.0354
Jun-84	S&P 500 Utility Index			0.0069		0.0126	-0.0057
Jul-84	S&P 500 Utility Index			0.0433		0.0124	0.0309
Aug-84	S&P 500 Utility Index			0.0646		0.0120	0.0526
Sep-84	S&P 500 Utility Index			0.0438		0.0118	0.0320
Oct-84	S&P 500 Utility Index			0.0272		0.0115	0.0157
Nov-84	S&P 500 Utility Index			0.0270		0.0110	0.0160
Dec-84	S&P 500 Utility Index			0.0316		0.0109	0.0207
Jan-85	S&P 500 Utility Index			0.0235		0.0108	0.0127
Feb-85	S&P 500 Utility Index			0.0193		0.0109	0.0084
Mar-85	S&P 500 Utility Index			0.0362		0.0115	0.0247
Apr-85	S&P 500 Utility Index			0.0207		0.0113	0.0094
May-85	S&P 500 Utility Index			0.0606		0.0110	0.0496
Jun-85	S&P 500 Utility Index			0.0279		0.0101	0.0178

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jul-85	S&P 500 Utility Index			-0.0427		0.0101	-0.0528
Aug-85	S&P 500 Utility Index			0.0181		0.0101	0.0080
Sep-85	S&P 500 Utility Index			-0.0521		0.0101	-0.0622
Oct-85	S&P 500 Utility Index			0.0638		0.0100	0.0538
Nov-85	S&P 500 Utility Index			0.0522		0.0096	0.0426
Dec-85	S&P 500 Utility Index			0.0694		0.0092	0.0602
Jan-86	S&P 500 Utility Index			0.0293		0.0090	0.0203
Feb-86	S&P 500 Utility Index			0.0623		0.0086	0.0537
Mar-86	S&P 500 Utility Index			0.0514		0.0079	0.0435
Apr-86	S&P 500 Utility Index			-0.0333		0.0076	-0.0409
May-86	S&P 500 Utility Index			0.0525		0.0080	0.0445
Jun-86	S&P 500 Utility Index			0.0597		0.0080	0.0517
Jul-86	S&P 500 Utility Index			0.0283		0.0078	0.0205
Aug-86	S&P 500 Utility Index			0.0884		0.0078	0.0806
Sep-86	S&P 500 Utility Index			-0.1137		0.0079	-0.1216
Oct-86	S&P 500 Utility Index			0.0505		0.0079	0.0426
Nov-86	S&P 500 Utility Index			0.0211		0.0077	0.0134
Dec-86	S&P 500 Utility Index			-0.0254		0.0076	-0.0330
Jan-87	S&P 500 Utility Index			0.0984		0.0075	0.0909
Feb-87	S&P 500 Utility Index			-0.0301		0.0075	-0.0376
Mar-87	S&P 500 Utility Index			-0.0189		0.0074	-0.0263
Apr-87	S&P 500 Utility Index			-0.0414		0.0078	-0.0492
May-87	S&P 500 Utility Index			-0.0064		0.0082	-0.0146
Jun-87	S&P 500 Utility Index			0.0439		0.0083	0.0356
Jul-87	S&P 500 Utility Index			-0.0025		0.0084	-0.0109
Aug-87	S&P 500 Utility Index			0.0527		0.0087	0.0440
Sep-87	S&P 500 Utility Index			0.0021		0.0093	-0.0072
Oct-87	S&P 500 Utility Index			-0.0705		0.0095	-0.0800
Nov-87	S&P 500 Utility Index			-0.0555		0.0090	-0.0645
Dec-87	S&P 500 Utility Index			0.0108		0.0091	0.0017
Jan-88	S&P 500 Utility Index			0.1153		0.0090	0.1063
Feb-88	S&P 500 Utility Index			-0.0175		0.0084	-0.0259
Mar-88	S&P 500 Utility Index			-0.0527		0.0084	-0.0611
Apr-88	S&P 500 Utility Index			0.0019		0.0088	-0.0069
May-88	S&P 500 Utility Index			0.0460		0.0090	0.0370
Jun-88	S&P 500 Utility Index			0.0315		0.0090	0.0225
Jul-88	S&P 500 Utility Index			0.0017		0.0092	-0.0075
Aug-88	S&P 500 Utility Index			-0.0137		0.0093	-0.0230
Sep-88	S&P 500 Utility Index			0.0413		0.0089	0.0324
Oct-88	S&P 500 Utility Index			0.0262		0.0083	0.0179
Nov-88	S&P 500 Utility Index			-0.0079		0.0082	-0.0161
Dec-88	S&P 500 Utility Index			0.0063		0.0084	-0.0021
Jan-89	S&P 500 Utility Index			0.0571		0.0084	0.0487
Feb-89	S&P 500 Utility Index			-0.0215		0.0084	-0.0299
Mar-89	S&P 500 Utility Index			0.0269		0.0085	0.0184
Apr-89	S&P 500 Utility Index			0.0634		0.0085	0.0549
May-89	S&P 500 Utility Index			0.0580		0.0083	0.0497
Jun-89	S&P 500 Utility Index			0.0161		0.0080	0.0081
Jul-89	S&P 500 Utility Index			0.0804		0.0079	0.0725
Aug-89	S&P 500 Utility Index			-0.0057		0.0079	-0.0136
Sep-89	S&P 500 Utility Index			0.0170		0.0080	0.0090

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Oct-89	S&P 500 Utility Index			0.0045		0.0079	-0.0034
Nov-89	S&P 500 Utility Index			0.0336		0.0079	0.0257
Dec-89	S&P 500 Utility Index			0.0731		0.0079	0.0652
Jan-90	S&P 500 Utility Index			-0.0809		0.0080	-0.0889
Feb-90	S&P 500 Utility Index			-0.0109		0.0081	-0.0190
Mar-90	S&P 500 Utility Index			0.0187		0.0082	0.0105
Apr-90	S&P 500 Utility Index			-0.0385		0.0083	-0.0468
May-90	S&P 500 Utility Index			0.0682		0.0083	0.0599
Jun-90	S&P 500 Utility Index			-0.0211		0.0082	-0.0293
Jul-90	S&P 500 Utility Index			-0.0032		0.0081	-0.0113
Aug-90	S&P 500 Utility Index			-0.0792		0.0082	-0.0874
Sep-90	S&P 500 Utility Index			0.0411		0.0084	0.0327
Oct-90	S&P 500 Utility Index			0.0653		0.0084	0.0569
Nov-90	S&P 500 Utility Index			0.0193		0.0083	0.0110
Dec-90	S&P 500 Utility Index			0.0086		0.0081	0.0005
Jan-91	S&P 500 Utility Index			-0.0301		0.0081	-0.0382
Feb-91	S&P 500 Utility Index			0.0349		0.0079	0.0270
Mar-91	S&P 500 Utility Index			0.0198		0.0080	0.0118
Apr-91	S&P 500 Utility Index			-0.0162		0.0079	-0.0241
May-91	S&P 500 Utility Index			-0.0130		0.0079	-0.0209
Jun-91	S&P 500 Utility Index			-0.0139		0.0080	-0.0219
Jul-91	S&P 500 Utility Index			0.0307		0.0080	0.0227
Aug-91	S&P 500 Utility Index			0.0258		0.0078	0.0180
Sep-91	S&P 500 Utility Index			0.0202		0.0076	0.0126
Oct-91	S&P 500 Utility Index			0.0200		0.0076	0.0124
Nov-91	S&P 500 Utility Index			-0.0098		0.0075	-0.0173
Dec-91	S&P 500 Utility Index			0.0733		0.0074	0.0659
Jan-92	S&P 500 Utility Index			-0.0536		0.0074	-0.0610
Feb-92	S&P 500 Utility Index			-0.0273		0.0074	-0.0347
Mar-92	S&P 500 Utility Index			-0.0143		0.0075	-0.0218
Apr-92	S&P 500 Utility Index			0.0645		0.0074	0.0571
May-92	S&P 500 Utility Index			-0.0015		0.0074	-0.0089
Jun-92	S&P 500 Utility Index			0.0141		0.0073	0.0068
Jul-92	S&P 500 Utility Index			0.0790		0.0071	0.0719
Aug-92	S&P 500 Utility Index			-0.0074		0.0070	-0.0144
Sep-92	S&P 500 Utility Index			0.0073		0.0070	0.0003
Oct-92	S&P 500 Utility Index			-0.0094		0.0071	-0.0165
Nov-92	S&P 500 Utility Index			-0.0015		0.0072	-0.0087
Dec-92	S&P 500 Utility Index			0.0358		0.0070	0.0288
Jan-93	S&P 500 Utility Index			0.0157		0.0069	0.0088
Feb-93	S&P 500 Utility Index			0.0721		0.0067	0.0654
Mar-93	S&P 500 Utility Index			0.0180		0.0066	0.0114
Apr-93	S&P 500 Utility Index			-0.0027		0.0065	-0.0092
May-93	S&P 500 Utility Index			-0.0191		0.0065	-0.0256
Jun-93	S&P 500 Utility Index			0.0463		0.0065	0.0398
Jul-93	S&P 500 Utility Index			0.0226		0.0063	0.0163
Aug-93	S&P 500 Utility Index			0.0484		0.0061	0.0423
Sep-93	S&P 500 Utility Index			-0.0020		0.0059	-0.0079
Oct-93	S&P 500 Utility Index			-0.0021		0.0059	-0.0080
Nov-93	S&P 500 Utility Index			-0.0507		0.0061	-0.0568
Dec-93	S&P 500 Utility Index			-0.0053		0.0061	-0.0114

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jan-94	S&P 500 Utility Index			0.0072		0.0061	0.0011
Feb-94	S&P 500 Utility Index			-0.0567		0.0062	-0.0629
Mar-94	S&P 500 Utility Index			-0.0338		0.0065	-0.0403
Apr-94	S&P 500 Utility Index			0.0246		0.0069	0.0177
May-94	S&P 500 Utility Index			-0.0268		0.0069	-0.0337
Jun-94	S&P 500 Utility Index			0.0021		0.0069	-0.0048
Jul-94	S&P 500 Utility Index			0.0336		0.0071	0.0265
Aug-94	S&P 500 Utility Index			-0.0028		0.0070	-0.0098
Sep-94	S&P 500 Utility Index			-0.0254		0.0072	-0.0326
Oct-94	S&P 500 Utility Index			0.0086		0.0074	0.0012
Nov-94	S&P 500 Utility Index			-0.0146		0.0075	-0.0221
Dec-94	S&P 500 Utility Index			0.0052		0.0073	-0.0021
Jan-95	S&P 500 Utility Index			0.0779		0.0073	0.0706
Feb-95	S&P 500 Utility Index			-0.0015		0.0071	-0.0086
Mar-95	S&P 500 Utility Index			-0.0060		0.0070	-0.0130
Apr-95	S&P 500 Utility Index			0.0365		0.0069	0.0296
May-95	S&P 500 Utility Index			0.0316		0.0066	0.0250
Jun-95	S&P 500 Utility Index			0.0047		0.0063	-0.0016
Jul-95	S&P 500 Utility Index			0.0255		0.0064	0.0191
Aug-95	S&P 500 Utility Index			0.0202		0.0065	0.0137
Sep-95	S&P 500 Utility Index			0.0638		0.0064	0.0575
Oct-95	S&P 500 Utility Index			0.0238		0.0062	0.0176
Nov-95	S&P 500 Utility Index			0.0136		0.0062	0.0074
Dec-95	S&P 500 Utility Index			0.0708		0.0060	0.0648
Jan-96	S&P 500 Utility Index			0.0129		0.0060	0.0069
Feb-96	S&P 500 Utility Index			-0.0395		0.0061	-0.0456
Mar-96	S&P 500 Utility Index			-0.0203		0.0064	-0.0267
Apr-96	S&P 500 Utility Index			0.0110		0.0066	0.0044
May-96	S&P 500 Utility Index			-0.0025		0.0067	-0.0092
Jun-96	S&P 500 Utility Index			0.0416		0.0067	0.0349
Jul-96	S&P 500 Utility Index			-0.0628		0.0067	-0.0695
Aug-96	S&P 500 Utility Index			0.0213		0.0065	0.0148
Sep-96	S&P 500 Utility Index			0.0095		0.0067	0.0028
Oct-96	S&P 500 Utility Index			0.0508		0.0065	0.0443
Nov-96	S&P 500 Utility Index			0.0211		0.0063	0.0148
Dec-96	S&P 500 Utility Index			-0.0060		0.0063	-0.0123
Jan-97	S&P 500 Utility Index			0.0066		0.0065	0.0001
Feb-97	S&P 500 Utility Index			-0.0095		0.0064	-0.0159
Mar-97	S&P 500 Utility Index			-0.0301		0.0066	-0.0367
Apr-97	S&P 500 Utility Index			-0.0150		0.0067	-0.0217
May-97	S&P 500 Utility Index			0.0423		0.0066	0.0357
Jun-97	S&P 500 Utility Index			0.0314		0.0064	0.0250
Jul-97	S&P 500 Utility Index			0.0230		0.0062	0.0168
Aug-97	S&P 500 Utility Index			-0.0183		0.0062	-0.0245
Sep-97	S&P 500 Utility Index			0.0433		0.0062	0.0371
Oct-97	S&P 500 Utility Index			0.0098		0.0061	0.0037
Nov-97	S&P 500 Utility Index			0.0707		0.0060	0.0647
Dec-97	S&P 500 Utility Index			0.0752		0.0060	0.0692
Jan-98	S&P 500 Utility Index			-0.0395		0.0059	-0.0454
Feb-98	S&P 500 Utility Index			0.0341		0.0059	0.0282
Mar-98	S&P 500 Utility Index			0.0642		0.0060	0.0582

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Apr-98	S&P 500 Utility Index			-0.0193		0.0060	-0.0253
May-98	S&P 500 Utility Index			-0.0050		0.0060	-0.0110
Jun-98	S&P 500 Utility Index			0.0369		0.0059	0.0310
Jul-98	S&P 500 Utility Index			-0.0493		0.0059	-0.0552
Aug-98	S&P 500 Utility Index			0.0161		0.0058	0.0103
Sep-98	S&P 500 Utility Index			0.0835		0.0058	0.0777
Oct-98	S&P 500 Utility Index			-0.0166		0.0058	-0.0224
Nov-98	S&P 500 Utility Index			0.0134		0.0059	0.0075
Dec-98	S&P 500 Utility Index			0.0295		0.0058	0.0237
Jan-99	S&P 500 Utility Index			-0.0451		0.0058	-0.0509
Feb-99	S&P 500 Utility Index			-0.0364		0.0059	-0.0423
Mar-99	S&P 500 Utility Index			-0.0148		0.0060	-0.0208
Apr-99	S&P 500 Utility Index			0.0884		0.0060	0.0824
May-99	S&P 500 Utility Index			0.0609		0.0062	0.0547
Jun-99	S&P 500 Utility Index			-0.0332		0.0064	-0.0396
Jul-99	S&P 500 Utility Index			-0.0114		0.0064	-0.0178
Aug-99	S&P 500 Utility Index			0.0117		0.0066	0.0051
Sep-99	S&P 500 Utility Index			-0.0480		0.0066	-0.0546
Oct-99	S&P 500 Utility Index			0.0157		0.0067	0.0090
Nov-99	S&P 500 Utility Index			-0.0773		0.0066	-0.0839
Dec-99	S&P 500 Utility Index			0.0093		0.0068	0.0025
Jan-00	S&P 500 Utility Index			0.1085		0.0070	0.1015
Feb-00	S&P 500 Utility Index			-0.0578		0.0069	-0.0647
Mar-00	S&P 500 Utility Index			0.0349		0.0069	0.0280
Apr-00	S&P 500 Utility Index			0.0794		0.0069	0.0725
May-00	S&P 500 Utility Index			0.0486		0.0072	0.0414
Jun-00	S&P 500 Utility Index			-0.0575		0.0070	-0.0645
Jul-00	S&P 500 Utility Index			0.0677		0.0069	0.0608
Aug-00	S&P 500 Utility Index			0.1372		0.0068	0.1304
Sep-00	S&P 500 Utility Index			0.0915		0.0069	0.0846
Oct-00	S&P 500 Utility Index			-0.0357		0.0068	-0.0425
Nov-00	S&P 500 Utility Index			-0.0132		0.0068	-0.0200
Dec-00	S&P 500 Utility Index			0.0982		0.0065	0.0917
Jan-01	S&P 500 Utility Index			-0.0967		0.0065	-0.1032
Feb-01	S&P 500 Utility Index			0.0353		0.0064	0.0289
Mar-01	S&P 500 Utility Index			-0.0063		0.0064	-0.0127
Apr-01	S&P 500 Utility Index			0.0605		0.0066	0.0539
May-01	S&P 500 Utility Index			-0.0343		0.0067	-0.0410
Jun-01	S&P 500 Utility Index			-0.0791		0.0065	-0.0856
Jul-01	S&P 500 Utility Index			-0.0448		0.0065	-0.0513
Aug-01	S&P 500 Utility Index			-0.0290		0.0063	-0.0353
Sep-01	S&P 500 Utility Index			-0.1152		0.0064	-0.1216
Oct-01	S&P 500 Utility Index			-0.0017		0.0064	-0.0081
Nov-01	S&P 500 Utility Index			-0.0552		0.0063	-0.0615
Dec-01	S&P 500 Utility Index			0.0260		0.0065	0.0195
Jan-02	S&P 500 Utility Index			-0.0565		0.0064	-0.0629
Feb-02	S&P 500 Utility Index			-0.0235		0.0063	-0.0298
Mar-02	S&P 500 Utility Index			0.1223		0.0065	0.1158
Apr-02	S&P 500 Utility Index			-0.0171		0.0063	-0.0234
May-02	S&P 500 Utility Index			-0.0902		0.0063	-0.0965
Jun-02	S&P 500 Utility Index			-0.0710		0.0062	-0.0772

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jul-02	S&P 500 Utility Index			-0.1380		0.0061	-0.1441
Aug-02	S&P 500 Utility Index			0.0350		0.0060	0.0290
Sep-02	S&P 500 Utility Index			-0.1283		0.0059	-0.1342
Oct-02	S&P 500 Utility Index			-0.0173		0.0060	-0.0233
Nov-02	S&P 500 Utility Index			0.0249		0.0060	0.0189
Dec-02	S&P 500 Utility Index			0.0416		0.0059	0.0357
Jan-03	S&P 500 Utility Index			-0.0292		0.0059	-0.0351
Feb-03	S&P 500 Utility Index			-0.0490		0.0058	-0.0548
Mar-03	S&P 500 Utility Index			0.0505		0.0057	0.0448
Apr-03	S&P 500 Utility Index			0.0885		0.0055	0.0830
May-03	S&P 500 Utility Index			0.1021		0.0053	0.0968
Jun-03	S&P 500 Utility Index			0.0119		0.0052	0.0067
Jul-03	S&P 500 Utility Index			-0.0650		0.0055	-0.0705
Aug-03	S&P 500 Utility Index			0.0175		0.0057	0.0118
Sep-03	S&P 500 Utility Index			0.0457		0.0055	0.0402
Oct-03	S&P 500 Utility Index			0.0112		0.0054	0.0059
Nov-03	S&P 500 Utility Index			-0.0005		0.0053	-0.0058
Dec-03	S&P 500 Utility Index			0.0675		0.0052	0.0623
Jan-04	S&P 500 Utility Index			0.0216		0.0051	0.0165
Feb-04	S&P 500 Utility Index			0.0181		0.0051	0.0130
Mar-04	S&P 500 Utility Index			0.0104		0.0050	0.0054
Apr-04	S&P 500 Utility Index			-0.0362		0.0053	-0.0415
May-04	S&P 500 Utility Index			0.0079		0.0055	0.0024
Jun-04	S&P 500 Utility Index			0.0155		0.0054	0.0101
Jul-04	S&P 500 Utility Index			0.0173		0.0052	0.0121
Aug-04	S&P 500 Utility Index			0.0393		0.0051	0.0342
Sep-04	S&P 500 Utility Index			0.0091		0.0050	0.0041
Oct-04	S&P 500 Utility Index			0.0495		0.0050	0.0445
Nov-04	S&P 500 Utility Index			0.0407		0.0050	0.0357
Dec-04	S&P 500 Utility Index			0.0265		0.0049	0.0216
Jan-05	S&P 500 Utility Index			0.0221		0.0048	0.0173
Feb-05	S&P 500 Utility Index			0.0197		0.0047	0.0150
Mar-05	S&P 500 Utility Index			0.0108		0.0049	0.0059
Apr-05	S&P 500 Utility Index			0.0321		0.0047	0.0274
May-05	S&P 500 Utility Index			0.0008		0.0046	-0.0038
Jun-05	S&P 500 Utility Index			0.0576		0.0045	0.0531
Jul-05	S&P 500 Utility Index			0.0233		0.0046	0.0187
Aug-05	S&P 500 Utility Index			0.0073		0.0046	0.0027
Sep-05	S&P 500 Utility Index			0.0402		0.0046	0.0356
Oct-05	S&P 500 Utility Index			-0.0617		0.0048	-0.0665
Nov-05	S&P 500 Utility Index			-0.0039		0.0049	-0.0088
Dec-05	S&P 500 Utility Index			0.0110		0.0048	0.0062
Jan-06	S&P 500 Utility Index			0.0263		0.0048	0.0216
Feb-06	S&P 500 Utility Index			0.0095		0.0049	0.0047
Mar-06	S&P 500 Utility Index			-0.0463		0.0050	-0.0513
Apr-06	S&P 500 Utility Index			0.0172		0.0052	0.0119
May-06	S&P 500 Utility Index			0.0143		0.0054	0.0089
Jun-06	S&P 500 Utility Index			0.0242		0.0053	0.0188
Jul-06	S&P 500 Utility Index			0.0511		0.0053	0.0458
Aug-06	S&P 500 Utility Index			0.0271		0.0052	0.0220
Sep-06	S&P 500 Utility Index			-0.0174		0.0050	-0.0224

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Oct-06	S&P 500 Utility Index			0.0560		0.0050	0.0510
Nov-06	S&P 500 Utility Index			0.0214		0.0048	0.0166
Dec-06	S&P 500 Utility Index			0.0118		0.0048	0.0070
Jan-07	S&P 500 Utility Index			-0.0011		0.0050	-0.0061
Feb-07	S&P 500 Utility Index			0.0503		0.0049	0.0454
Mar-07	S&P 500 Utility Index			0.0414		0.0049	0.0365
Apr-07	S&P 500 Utility Index			0.0438		0.0050	0.0388
May-07	S&P 500 Utility Index			0.0051		0.0050	0.0002
Jun-07	S&P 500 Utility Index			-0.0506		0.0053	-0.0559
Jul-07	S&P 500 Utility Index			-0.0357		0.0052	-0.0409
Aug-07	S&P 500 Utility Index			0.0210		0.0052	0.0158
Sep-07	S&P 500 Utility Index			0.0354		0.0052	0.0303
Oct-07	S&P 500 Utility Index			0.0686		0.0051	0.0635
Nov-07	S&P 500 Utility Index			0.0034		0.0050	-0.0016
Dec-07	S&P 500 Utility Index			0.0028		0.0051	-0.0024
Jan-08	S&P 500 Utility Index			-0.0681		0.0050	-0.0731
Feb-08	S&P 500 Utility Index			-0.0500		0.0052	-0.0551
Mar-08	S&P 500 Utility Index			0.0171		0.0052	0.0119
Apr-08	S&P 500 Utility Index			0.0552		0.0052	0.0499
May-08	S&P 500 Utility Index			0.0320		0.0052	0.0268
Jun-08	S&P 500 Utility Index			-0.0087		0.0053	-0.0140
Jul-08	S&P 500 Utility Index			-0.0611		0.0053	-0.0664
Aug-08	S&P 500 Utility Index			-0.0166		0.0053	-0.0219
Sep-08	S&P 500 Utility Index			-0.1148		0.0054	-0.1202
Oct-08	S&P 500 Utility Index			-0.1161		0.0063	-0.1224
Nov-08	S&P 500 Utility Index			0.0279		0.0063	0.0216
Dec-08	S&P 500 Utility Index			-0.0168		0.0055	-0.0222
Jan-09	S&P 500 Utility Index			-0.0045		0.0053	-0.0099
Feb-09	S&P 500 Utility Index			-0.1257		0.0053	-0.1310
Mar-09	S&P 500 Utility Index			0.0253		0.0054	0.0199
Apr-09	S&P 500 Utility Index			0.0085		0.0054	0.0031
May-09	S&P 500 Utility Index			0.0353		0.0054	0.0299
Jun-09	S&P 500 Utility Index			0.0552		0.0052	0.0500
Jul-09	S&P 500 Utility Index			0.0408		0.0050	0.0358
Aug-09	S&P 500 Utility Index			0.0055		0.0048	0.0007
Sep-09	S&P 500 Utility Index			0.0143		0.0046	0.0097
Oct-09	S&P 500 Utility Index			-0.0284		0.0046	-0.0331
Nov-09	S&P 500 Utility Index			0.0456		0.0047	0.0409
Dec-09	S&P 500 Utility Index			0.0558		0.0048	0.0510
Jan-10	S&P 500 Utility Index			-0.0475		0.0048	-0.0523
Feb-10	S&P 500 Utility Index			-0.0149		0.0049	-0.0198
Mar-10	S&P 500 Utility Index			0.0280		0.0049	0.0231
Apr-10	S&P 500 Utility Index			0.0281		0.0048	0.0232
May-10	S&P 500 Utility Index			-0.0576		0.0046	-0.0622
Jun-10	S&P 500 Utility Index			-0.0064		0.0046	-0.0109
Jul-10	S&P 500 Utility Index			0.0774		0.0044	0.0730
Aug-10	S&P 500 Utility Index			0.0125		0.0042	0.0083
Sep-10	S&P 500 Utility Index			0.0296		0.0042	0.0254
Oct-10	S&P 500 Utility Index			0.0129		0.0043	0.0086
Nov-10	S&P 500 Utility Index			-0.0323		0.0045	-0.0368
Dec-10	S&P 500 Utility Index			0.0312		0.0046	0.0265

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Jan-11	S&P 500 Utility Index			0.0142		0.0046	0.0096
Feb-11	S&P 500 Utility Index			0.0112		0.0047	0.0065
Mar-11	S&P 500 Utility Index			0.0015		0.0046	-0.0032
Apr-11	S&P 500 Utility Index			0.0419		0.0046	0.0373
May-11	S&P 500 Utility Index			0.0198		0.0044	0.0153
Jun-11	S&P 500 Utility Index			-0.0013		0.0044	-0.0057
Jul-11	S&P 500 Utility Index			-0.0075		0.0044	-0.0119
Aug-11	S&P 500 Utility Index			0.0204		0.0039	0.0165
Sep-11	S&P 500 Utility Index			0.0023		0.0037	-0.0015
Oct-11	S&P 500 Utility Index			0.0387		0.0038	0.0350
Nov-11	S&P 500 Utility Index			0.0080		0.0035	0.0045
Dec-11	S&P 500 Utility Index			0.0338		0.0036	0.0302
Jan-12	S&P 500 Utility Index			-0.0332		0.0036	-0.0369
Feb-12	S&P 500 Utility Index			0.0035		0.0036	-0.0002
Mar-12	S&P 500 Utility Index			0.0137		0.0037	0.0100
Apr-12	S&P 500 Utility Index			0.0212		0.0037	0.0176
May-12	S&P 500 Utility Index			0.0022		0.0035	-0.0013
Jun-12	S&P 500 Utility Index			0.0410		0.0034	0.0376
Jul-12	S&P 500 Utility Index			0.0284		0.0033	0.0252
Aug-12	S&P 500 Utility Index			-0.0447		0.0033	-0.0481
Sep-12	S&P 500 Utility Index			0.0123		0.0034	0.0089
Oct-12	S&P 500 Utility Index			0.0172		0.0033	0.0140
Nov-12	S&P 500 Utility Index			-0.0464		0.0032	-0.0496
Dec-12	S&P 500 Utility Index			0.0011		0.0033	-0.0022
Jan-13	S&P 500 Utility Index			0.0351		0.0035	0.0316
Feb-13	S&P 500 Utility Index			0.0339		0.0035	0.0304
Mar-13	S&P 500 Utility Index			0.0540		0.0035	0.0505
Apr-13	S&P 500 Utility Index			0.0590		0.0033	0.0557
May-13	S&P 500 Utility Index			-0.0896		0.0035	-0.0931
Jun-13	S&P 500 Utility Index			0.0114		0.0038	0.0076
Jul-13	S&P 500 Utility Index			0.0385		0.0039	0.0346
Aug-13	S&P 500 Utility Index			-0.0500		0.0039	-0.0539
Sep-13	S&P 500 Utility Index			0.0108		0.0040	0.0068
Oct-13	S&P 500 Utility Index			0.0377		0.0039	0.0338
Nov-13	S&P 500 Utility Index			-0.0199		0.0040	-0.0239
Dec-13	S&P 500 Utility Index			0.0076		0.0040	0.0036
Jan-14	S&P 500 Utility Index			0.0281		0.0039	0.0242
Feb-14	S&P 500 Utility Index			0.0335		0.0038	0.0297
Mar-14	S&P 500 Utility Index			0.0337		0.0038	0.0299
Apr-14	S&P 500 Utility Index			0.0426		0.0037	0.0389
May-14	S&P 500 Utility Index			-0.0105		0.0036	-0.0141
Jun-14	S&P 500 Utility Index			0.0448		0.0036	0.0412
Jul-14	S&P 500 Utility Index			-0.0680		0.0035	-0.0715
Aug-14	S&P 500 Utility Index			0.0495		0.0034	0.0461
Sep-14	S&P 500 Utility Index			-0.0186		0.0035	-0.0221
Oct-14	S&P 500 Utility Index			0.0802		0.0034	0.0768
Nov-14	S&P 500 Utility Index			0.0120		0.0034	0.0086
Dec-14	S&P 500 Utility Index			0.0350		0.0033	0.0317
Jan-15	S&P 500 Utility Index			0.0233		0.0030	0.0203
Feb-15	S&P 500 Utility Index			-0.0633		0.0031	-0.0664
Mar-15	S&P 500 Utility Index			-0.0049		0.0031	-0.0080

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	A Rated PU	RP
Apr-15	S&P 500 Utility Index			-0.0129		0.0031	-0.0160
May-15	S&P 500 Utility Index			0.0065		0.0035	0.0030
Jun-15	S&P 500 Utility Index			-0.0600		0.0037	-0.0637
Jul-15	S&P 500 Utility Index			0.0481		0.0037	0.0444
Aug-15	S&P 500 Utility Index			-0.0397		0.0035	-0.0432
Sep-15	S&P 500 Utility Index			0.0290		0.0037	0.0253
Oct-15	S&P 500 Utility Index			0.0108		0.0036	0.0072
Nov-15	S&P 500 Utility Index			-0.0213		0.0037	-0.0250

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jan-26							
Feb-26							
Mar-26							
Apr-26							
May-26							
Jun-26							
Jul-26							
Aug-26							
Sep-26							
Oct-26							
Nov-26							
Dec-26							
Jan-27							
Feb-27							
Mar-27							
Apr-27							
May-27							
Jun-27							
Jul-27							
Aug-27							
Sep-27							
Oct-27							
Nov-27							
Dec-27							
Jan-28	MKT Minus Aaa and Aa Avg			(0.0040)		0.0038	-0.0078
Feb-28	MKT Minus Aaa and Aa Avg			(0.0125)		0.0038	-0.0163
Mar-28	MKT Minus Aaa and Aa Avg			0.1101		0.0038	0.1063
Apr-28	MKT Minus Aaa and Aa Avg			0.0345		0.0038	0.0307
May-28	MKT Minus Aaa and Aa Avg			0.0197		0.0038	0.0159
Jun-28	MKT Minus Aaa and Aa Avg			(0.0385)		0.0039	-0.0424
Jul-28	MKT Minus Aaa and Aa Avg			0.0141		0.0039	0.0102
Aug-28	MKT Minus Aaa and Aa Avg			0.0803		0.0039	0.0764
Sep-28	MKT Minus Aaa and Aa Avg			0.0259		0.0039	0.0220
Oct-28	MKT Minus Aaa and Aa Avg			0.0168		0.0039	0.0129
Nov-28	MKT Minus Aaa and Aa Avg			0.1292		0.0039	0.1253
Dec-28	MKT Minus Aaa and Aa Avg			0.0049		0.0039	0.0010
Jan-29	MKT Minus Aaa and Aa Avg			0.0583		0.0039	0.0544
Feb-29	MKT Minus Aaa and Aa Avg			(0.0019)		0.0040	-0.0059
Mar-29	MKT Minus Aaa and Aa Avg			(0.0012)		0.0040	-0.0052
Apr-29	MKT Minus Aaa and Aa Avg			0.0176		0.0040	0.0136
May-29	MKT Minus Aaa and Aa Avg			(0.0362)		0.0040	-0.0402
Jun-29	MKT Minus Aaa and Aa Avg			0.1140		0.0041	0.1099
Jul-29	MKT Minus Aaa and Aa Avg			0.0471		0.0041	0.0430
Aug-29	MKT Minus Aaa and Aa Avg			0.1028		0.0041	0.0987
Sep-29	MKT Minus Aaa and Aa Avg			(0.0476)		0.0041	-0.0517
Oct-29	MKT Minus Aaa and Aa Avg			(0.1973)		0.0041	-0.2014
Nov-29	MKT Minus Aaa and Aa Avg			(0.1246)		0.0040	-0.1286
Dec-29	MKT Minus Aaa and Aa Avg			0.0282		0.0040	0.0242
Jan-30	MKT Minus Aaa and Aa Avg			0.0639		0.0040	0.0599
Feb-30	MKT Minus Aaa and Aa Avg			0.0259		0.0040	0.0219
Mar-30	MKT Minus Aaa and Aa Avg			0.0812		0.0039	0.0773

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Apr-30	MKT Minus Aaa and Aa Avg			(0.0080)		0.0039	-0.0119
May-30	MKT Minus Aaa and Aa Avg			(0.0096)		0.0039	-0.0135
Jun-30	MKT Minus Aaa and Aa Avg			(0.1625)		0.0039	-0.1664
Jul-30	MKT Minus Aaa and Aa Avg			0.0386		0.0039	0.0347
Aug-30	MKT Minus Aaa and Aa Avg			0.0141		0.0038	0.0103
Sep-30	MKT Minus Aaa and Aa Avg			(0.1282)		0.0038	-0.1320
Oct-30	MKT Minus Aaa and Aa Avg			(0.0855)		0.0038	-0.0893
Nov-30	MKT Minus Aaa and Aa Avg			(0.0089)		0.0038	-0.0127
Dec-30	MKT Minus Aaa and Aa Avg			(0.0706)		0.0039	-0.0745
Jan-31	MKT Minus Aaa and Aa Avg			0.0502		0.0038	0.0464
Feb-31	MKT Minus Aaa and Aa Avg			0.1193		0.0038	0.1155
Mar-31	MKT Minus Aaa and Aa Avg			(0.0675)		0.0038	-0.0713
Apr-31	MKT Minus Aaa and Aa Avg			(0.0935)		0.0038	-0.0973
May-31	MKT Minus Aaa and Aa Avg			(0.1279)		0.0038	-0.1317
Jun-31	MKT Minus Aaa and Aa Avg			0.1421		0.0038	0.1383
Jul-31	MKT Minus Aaa and Aa Avg			(0.0722)		0.0038	-0.0760
Aug-31	MKT Minus Aaa and Aa Avg			0.0182		0.0039	0.0143
Sep-31	MKT Minus Aaa and Aa Avg			(0.2973)		0.0040	-0.3013
Oct-31	MKT Minus Aaa and Aa Avg			0.0896		0.0044	0.0852
Nov-31	MKT Minus Aaa and Aa Avg			(0.0798)		0.0044	-0.0842
Dec-31	MKT Minus Aaa and Aa Avg			(0.1400)		0.0048	-0.1448
Jan-32	MKT Minus Aaa and Aa Avg			(0.0271)		0.0047	-0.0318
Feb-32	MKT Minus Aaa and Aa Avg			0.0570		0.0047	0.0523
Mar-32	MKT Minus Aaa and Aa Avg			(0.1158)		0.0045	-0.1203
Apr-32	MKT Minus Aaa and Aa Avg			(0.1997)		0.0047	-0.2044
May-32	MKT Minus Aaa and Aa Avg			(0.2196)		0.0049	-0.2245
Jun-32	MKT Minus Aaa and Aa Avg			(0.0022)		0.0050	-0.0072
Jul-32	MKT Minus Aaa and Aa Avg			0.3815		0.0049	0.3766
Aug-32	MKT Minus Aaa and Aa Avg			0.3869		0.0045	0.3824
Sep-32	MKT Minus Aaa and Aa Avg			(0.0346)		0.0043	-0.0389
Oct-32	MKT Minus Aaa and Aa Avg			(0.1349)		0.0042	-0.1391
Nov-32	MKT Minus Aaa and Aa Avg			(0.0417)		0.0043	-0.0460
Dec-32	MKT Minus Aaa and Aa Avg			0.0565		0.0042	0.0523
Jan-33	MKT Minus Aaa and Aa Avg			0.0087		0.0041	0.0046
Feb-33	MKT Minus Aaa and Aa Avg			(0.1772)		0.0041	-0.1813
Mar-33	MKT Minus Aaa and Aa Avg			0.0353		0.0043	0.0310
Apr-33	MKT Minus Aaa and Aa Avg			0.4256		0.0044	0.4212
May-33	MKT Minus Aaa and Aa Avg			0.1683		0.0042	0.1641
Jun-33	MKT Minus Aaa and Aa Avg			0.1338		0.0040	0.1298
Jul-33	MKT Minus Aaa and Aa Avg			(0.0862)		0.0038	-0.0900
Aug-33	MKT Minus Aaa and Aa Avg			0.1206		0.0038	0.1168
Sep-33	MKT Minus Aaa and Aa Avg			(0.1118)		0.0039	-0.1157
Oct-33	MKT Minus Aaa and Aa Avg			(0.0855)		0.0039	-0.0894
Nov-33	MKT Minus Aaa and Aa Avg			0.1127		0.0041	0.1086
Dec-33	MKT Minus Aaa and Aa Avg			0.0253		0.0041	0.0212
Jan-34	MKT Minus Aaa and Aa Avg			0.1069		0.0039	0.1030
Feb-34	MKT Minus Aaa and Aa Avg			(0.0322)		0.0037	-0.0359
Mar-34	MKT Minus Aaa and Aa Avg			-		0.0036	-0.0036
Apr-34	MKT Minus Aaa and Aa Avg			(0.0251)		0.0035	-0.0286
May-34	MKT Minus Aaa and Aa Avg			(0.0736)		0.0035	-0.0771
Jun-34	MKT Minus Aaa and Aa Avg			0.0229		0.0034	0.0195

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jul-34	MKT Minus Aaa and Aa Avg			(0.1132)		0.0034	-0.1166
Aug-34	MKT Minus Aaa and Aa Avg			0.0611		0.0034	0.0577
Sep-34	MKT Minus Aaa and Aa Avg			(0.0033)		0.0035	-0.0068
Oct-34	MKT Minus Aaa and Aa Avg			(0.0286)		0.0034	-0.0320
Nov-34	MKT Minus Aaa and Aa Avg			0.0942		0.0034	0.0908
Dec-34	MKT Minus Aaa and Aa Avg			(0.0010)		0.0034	-0.0044
Jan-35	MKT Minus Aaa and Aa Avg			(0.0411)		0.0033	-0.0444
Feb-35	MKT Minus Aaa and Aa Avg			(0.0341)		0.0033	-0.0374
Mar-35	MKT Minus Aaa and Aa Avg			(0.0286)		0.0032	-0.0318
Apr-35	MKT Minus Aaa and Aa Avg			0.0980		0.0032	0.0948
May-35	MKT Minus Aaa and Aa Avg			0.0409		0.0032	0.0377
Jun-35	MKT Minus Aaa and Aa Avg			0.0699		0.0032	0.0667
Jul-35	MKT Minus Aaa and Aa Avg			0.0850		0.0031	0.0819
Aug-35	MKT Minus Aaa and Aa Avg			0.0280		0.0031	0.0249
Sep-35	MKT Minus Aaa and Aa Avg			0.0256		0.0031	0.0225
Oct-35	MKT Minus Aaa and Aa Avg			0.0777		0.0031	0.0746
Nov-35	MKT Minus Aaa and Aa Avg			0.0474		0.0030	0.0444
Dec-35	MKT Minus Aaa and Aa Avg			0.0394		0.0030	0.0364
Jan-36	MKT Minus Aaa and Aa Avg			0.0670		0.0029	0.0641
Feb-36	MKT Minus Aaa and Aa Avg			0.0224		0.0029	0.0195
Mar-36	MKT Minus Aaa and Aa Avg			0.0268		0.0029	0.0240
Apr-36	MKT Minus Aaa and Aa Avg			(0.0751)		0.0029	-0.0780
May-36	MKT Minus Aaa and Aa Avg			0.0545		0.0028	0.0517
Jun-36	MKT Minus Aaa and Aa Avg			0.0333		0.0028	0.0305
Jul-36	MKT Minus Aaa and Aa Avg			0.0701		0.0028	0.0673
Aug-36	MKT Minus Aaa and Aa Avg			0.0151		0.0028	0.0123
Sep-36	MKT Minus Aaa and Aa Avg			0.0031		0.0027	0.0004
Oct-36	MKT Minus Aaa and Aa Avg			0.0775		0.0027	0.0748
Nov-36	MKT Minus Aaa and Aa Avg			0.0134		0.0027	0.0107
Dec-36	MKT Minus Aaa and Aa Avg			(0.0029)		0.0027	-0.0056
Jan-37	MKT Minus Aaa and Aa Avg			0.0390		0.0027	0.0363
Feb-37	MKT Minus Aaa and Aa Avg			0.0191		0.0028	0.0163
Mar-37	MKT Minus Aaa and Aa Avg			(0.0077)		0.0028	-0.0105
Apr-37	MKT Minus Aaa and Aa Avg			(0.0809)		0.0029	-0.0838
May-37	MKT Minus Aaa and Aa Avg			(0.0024)		0.0028	-0.0052
Jun-37	MKT Minus Aaa and Aa Avg			(0.0504)		0.0028	-0.0532
Jul-37	MKT Minus Aaa and Aa Avg			0.1045		0.0028	0.1017
Aug-37	MKT Minus Aaa and Aa Avg			(0.0483)		0.0028	-0.0511
Sep-37	MKT Minus Aaa and Aa Avg			(0.1403)		0.0028	-0.1431
Oct-37	MKT Minus Aaa and Aa Avg			(0.0981)		0.0028	-0.1009
Nov-37	MKT Minus Aaa and Aa Avg			(0.0866)		0.0028	-0.0894
Dec-37	MKT Minus Aaa and Aa Avg			(0.0459)		0.0028	-0.0487
Jan-38	MKT Minus Aaa and Aa Avg			0.0152		0.0028	0.0124
Feb-38	MKT Minus Aaa and Aa Avg			0.0674		0.0028	0.0646
Mar-38	MKT Minus Aaa and Aa Avg			(0.2487)		0.0028	-0.2515
Apr-38	MKT Minus Aaa and Aa Avg			0.1447		0.0029	0.1418
May-38	MKT Minus Aaa and Aa Avg			(0.0330)		0.0028	-0.0358
Jun-38	MKT Minus Aaa and Aa Avg			0.2503		0.0029	0.2474
Jul-38	MKT Minus Aaa and Aa Avg			0.0744		0.0029	0.0716
Aug-38	MKT Minus Aaa and Aa Avg			(0.0226)		0.0028	-0.0254
Sep-38	MKT Minus Aaa and Aa Avg			0.0166		0.0028	0.0138

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Oct-38	MKT Minus Aaa and Aa Avg			0.0776		0.0028	0.0748
Nov-38	MKT Minus Aaa and Aa Avg			(0.0273)		0.0027	-0.0300
Dec-38	MKT Minus Aaa and Aa Avg			0.0401		0.0027	0.0374
Jan-39	MKT Minus Aaa and Aa Avg			(0.0674)		0.0026	-0.0700
Feb-39	MKT Minus Aaa and Aa Avg			0.0390		0.0026	0.0364
Mar-39	MKT Minus Aaa and Aa Avg			(0.1339)		0.0026	-0.1365
Apr-39	MKT Minus Aaa and Aa Avg			(0.0027)		0.0026	-0.0053
May-39	MKT Minus Aaa and Aa Avg			0.0733		0.0026	0.0707
Jun-39	MKT Minus Aaa and Aa Avg			(0.0612)		0.0025	-0.0637
Jul-39	MKT Minus Aaa and Aa Avg			0.1105		0.0025	0.1080
Aug-39	MKT Minus Aaa and Aa Avg			(0.0648)		0.0025	-0.0673
Sep-39	MKT Minus Aaa and Aa Avg			0.1673		0.0028	0.1645
Oct-39	MKT Minus Aaa and Aa Avg			(0.0123)		0.0027	-0.0150
Nov-39	MKT Minus Aaa and Aa Avg			(0.0398)		0.0026	-0.0424
Dec-39	MKT Minus Aaa and Aa Avg			0.0270		0.0025	0.0245
Jan-40	MKT Minus Aaa and Aa Avg			(0.0336)		0.0025	-0.0361
Feb-40	MKT Minus Aaa and Aa Avg			0.0133		0.0025	0.0108
Mar-40	MKT Minus Aaa and Aa Avg			0.0124		0.0025	0.0100
Apr-40	MKT Minus Aaa and Aa Avg			(0.0024)		0.0024	-0.0048
May-40	MKT Minus Aaa and Aa Avg			(0.2289)		0.0025	-0.2314
Jun-40	MKT Minus Aaa and Aa Avg			0.0809		0.0025	0.0784
Jul-40	MKT Minus Aaa and Aa Avg			0.0341		0.0025	0.0316
Aug-40	MKT Minus Aaa and Aa Avg			0.0350		0.0025	0.0326
Sep-40	MKT Minus Aaa and Aa Avg			0.0123		0.0024	0.0099
Oct-40	MKT Minus Aaa and Aa Avg			0.0422		0.0024	0.0398
Nov-40	MKT Minus Aaa and Aa Avg			(0.0316)		0.0024	-0.0340
Dec-40	MKT Minus Aaa and Aa Avg			0.0009		0.0023	-0.0014
Jan-41	MKT Minus Aaa and Aa Avg			(0.0463)		0.0024	-0.0487
Feb-41	MKT Minus Aaa and Aa Avg			(0.0060)		0.0024	-0.0084
Mar-41	MKT Minus Aaa and Aa Avg			0.0071		0.0024	0.0047
Apr-41	MKT Minus Aaa and Aa Avg			(0.0612)		0.0024	-0.0636
May-41	MKT Minus Aaa and Aa Avg			0.0183		0.0024	0.0159
Jun-41	MKT Minus Aaa and Aa Avg			0.0578		0.0024	0.0554
Jul-41	MKT Minus Aaa and Aa Avg			0.0579		0.0024	0.0556
Aug-41	MKT Minus Aaa and Aa Avg			0.0010		0.0024	-0.0014
Sep-41	MKT Minus Aaa and Aa Avg			(0.0068)		0.0024	-0.0092
Oct-41	MKT Minus Aaa and Aa Avg			(0.0657)		0.0023	-0.0680
Nov-41	MKT Minus Aaa and Aa Avg			(0.0284)		0.0023	-0.0307
Dec-41	MKT Minus Aaa and Aa Avg			(0.0407)		0.0024	-0.0431
Jan-42	MKT Minus Aaa and Aa Avg			0.0161		0.0024	0.0137
Feb-42	MKT Minus Aaa and Aa Avg			(0.0159)		0.0024	-0.0183
Mar-42	MKT Minus Aaa and Aa Avg			(0.0652)		0.0024	-0.0676
Apr-42	MKT Minus Aaa and Aa Avg			(0.0399)		0.0024	-0.0423
May-42	MKT Minus Aaa and Aa Avg			0.0796		0.0024	0.0772
Jun-42	MKT Minus Aaa and Aa Avg			0.0221		0.0024	0.0197
Jul-42	MKT Minus Aaa and Aa Avg			0.0337		0.0024	0.0313
Aug-42	MKT Minus Aaa and Aa Avg			0.0164		0.0024	0.0140
Sep-42	MKT Minus Aaa and Aa Avg			0.0290		0.0024	0.0266
Oct-42	MKT Minus Aaa and Aa Avg			0.0678		0.0024	0.0654
Nov-42	MKT Minus Aaa and Aa Avg			(0.0021)		0.0024	-0.0045
Dec-42	MKT Minus Aaa and Aa Avg			0.0549		0.0024	0.0525

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jan-43	MKT Minus Aaa and Aa Avg			0.0737		0.0024	0.0713
Feb-43	MKT Minus Aaa and Aa Avg			0.0583		0.0024	0.0559
Mar-43	MKT Minus Aaa and Aa Avg			0.0545		0.0024	0.0522
Apr-43	MKT Minus Aaa and Aa Avg			0.0035		0.0024	0.0012
May-43	MKT Minus Aaa and Aa Avg			0.0552		0.0023	0.0529
Jun-43	MKT Minus Aaa and Aa Avg			0.0223		0.0023	0.0200
Jul-43	MKT Minus Aaa and Aa Avg			(0.0526)		0.0023	-0.0549
Aug-43	MKT Minus Aaa and Aa Avg			0.0171		0.0023	0.0148
Sep-43	MKT Minus Aaa and Aa Avg			0.0263		0.0023	0.0240
Oct-43	MKT Minus Aaa and Aa Avg			(0.0108)		0.0023	-0.0131
Nov-43	MKT Minus Aaa and Aa Avg			(0.0654)		0.0023	-0.0677
Dec-43	MKT Minus Aaa and Aa Avg			0.0617		0.0023	0.0594
Jan-44	MKT Minus Aaa and Aa Avg			0.0171		0.0023	0.0148
Feb-44	MKT Minus Aaa and Aa Avg			0.0042		0.0023	0.0019
Mar-44	MKT Minus Aaa and Aa Avg			0.0195		0.0023	0.0172
Apr-44	MKT Minus Aaa and Aa Avg			(0.0100)		0.0023	-0.0123
May-44	MKT Minus Aaa and Aa Avg			0.0505		0.0023	0.0482
Jun-44	MKT Minus Aaa and Aa Avg			0.0543		0.0023	0.0520
Jul-44	MKT Minus Aaa and Aa Avg			(0.0193)		0.0023	-0.0216
Aug-44	MKT Minus Aaa and Aa Avg			0.0157		0.0023	0.0134
Sep-44	MKT Minus Aaa and Aa Avg			(0.0008)		0.0023	-0.0031
Oct-44	MKT Minus Aaa and Aa Avg			0.0023		0.0023	0.0000
Nov-44	MKT Minus Aaa and Aa Avg			0.0133		0.0023	0.0110
Dec-44	MKT Minus Aaa and Aa Avg			0.0374		0.0023	0.0351
Jan-45	MKT Minus Aaa and Aa Avg			0.0158		0.0023	0.0135
Feb-45	MKT Minus Aaa and Aa Avg			0.0683		0.0022	0.0661
Mar-45	MKT Minus Aaa and Aa Avg			(0.0441)		0.0022	-0.0463
Apr-45	MKT Minus Aaa and Aa Avg			0.0902		0.0022	0.0880
May-45	MKT Minus Aaa and Aa Avg			0.0195		0.0022	0.0173
Jun-45	MKT Minus Aaa and Aa Avg			(0.0007)		0.0022	-0.0029
Jul-45	MKT Minus Aaa and Aa Avg			(0.0180)		0.0022	-0.0202
Aug-45	MKT Minus Aaa and Aa Avg			0.0641		0.0022	0.0619
Sep-45	MKT Minus Aaa and Aa Avg			0.0438		0.0022	0.0416
Oct-45	MKT Minus Aaa and Aa Avg			0.0322		0.0022	0.0300
Nov-45	MKT Minus Aaa and Aa Avg			0.0396		0.0022	0.0374
Dec-45	MKT Minus Aaa and Aa Avg			0.0116		0.0022	0.0094
Jan-46	MKT Minus Aaa and Aa Avg			0.0714		0.0022	0.0693
Feb-46	MKT Minus Aaa and Aa Avg			(0.0641)		0.0021	-0.0662
Mar-46	MKT Minus Aaa and Aa Avg			0.0480		0.0021	0.0459
Apr-46	MKT Minus Aaa and Aa Avg			0.0393		0.0021	0.0372
May-46	MKT Minus Aaa and Aa Avg			0.0288		0.0021	0.0267
Jun-46	MKT Minus Aaa and Aa Avg			(0.0370)		0.0021	-0.0391
Jul-46	MKT Minus Aaa and Aa Avg			(0.0239)		0.0021	-0.0260
Aug-46	MKT Minus Aaa and Aa Avg			(0.0674)		0.0021	-0.0695
Sep-46	MKT Minus Aaa and Aa Avg			(0.0997)		0.0022	-0.1019
Oct-46	MKT Minus Aaa and Aa Avg			(0.0060)		0.0022	-0.0082
Nov-46	MKT Minus Aaa and Aa Avg			(0.0027)		0.0022	-0.0049
Dec-46	MKT Minus Aaa and Aa Avg			0.0457		0.0022	0.0435
Jan-47	MKT Minus Aaa and Aa Avg			0.0255		0.0022	0.0233
Feb-47	MKT Minus Aaa and Aa Avg			(0.0077)		0.0022	-0.0099
Mar-47	MKT Minus Aaa and Aa Avg			(0.0149)		0.0022	-0.0171

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Apr-47	MKT Minus Aaa and Aa Avg			(0.0363)		0.0022	-0.0385
May-47	MKT Minus Aaa and Aa Avg			0.0014		0.0022	-0.0008
Jun-47	MKT Minus Aaa and Aa Avg			0.0554		0.0022	0.0532
Jul-47	MKT Minus Aaa and Aa Avg			0.0381		0.0022	0.0359
Aug-47	MKT Minus Aaa and Aa Avg			(0.0203)		0.0022	-0.0225
Sep-47	MKT Minus Aaa and Aa Avg			(0.0111)		0.0022	-0.0133
Oct-47	MKT Minus Aaa and Aa Avg			0.0238		0.0023	0.0215
Nov-47	MKT Minus Aaa and Aa Avg			(0.0175)		0.0023	-0.0198
Dec-47	MKT Minus Aaa and Aa Avg			0.0233		0.0024	0.0209
Jan-48	MKT Minus Aaa and Aa Avg			(0.0379)		0.0024	-0.0403
Feb-48	MKT Minus Aaa and Aa Avg			(0.0388)		0.0024	-0.0412
Mar-48	MKT Minus Aaa and Aa Avg			0.0793		0.0024	0.0769
Apr-48	MKT Minus Aaa and Aa Avg			0.0292		0.0024	0.0268
May-48	MKT Minus Aaa and Aa Avg			0.0879		0.0023	0.0856
Jun-48	MKT Minus Aaa and Aa Avg			0.0054		0.0023	0.0031
Jul-48	MKT Minus Aaa and Aa Avg			(0.0508)		0.0024	-0.0532
Aug-48	MKT Minus Aaa and Aa Avg			0.0158		0.0024	0.0134
Sep-48	MKT Minus Aaa and Aa Avg			(0.0276)		0.0024	-0.0300
Oct-48	MKT Minus Aaa and Aa Avg			0.0710		0.0024	0.0686
Nov-48	MKT Minus Aaa and Aa Avg			(0.0961)		0.0024	-0.0985
Dec-48	MKT Minus Aaa and Aa Avg			0.0346		0.0024	0.0322
Jan-49	MKT Minus Aaa and Aa Avg			0.0039		0.0023	0.0016
Feb-49	MKT Minus Aaa and Aa Avg			(0.0296)		0.0023	-0.0319
Mar-49	MKT Minus Aaa and Aa Avg			0.0328		0.0023	0.0305
Apr-49	MKT Minus Aaa and Aa Avg			(0.0179)		0.0023	-0.0202
May-49	MKT Minus Aaa and Aa Avg			(0.0258)		0.0023	-0.0281
Jun-49	MKT Minus Aaa and Aa Avg			0.0014		0.0023	-0.0009
Jul-49	MKT Minus Aaa and Aa Avg			0.0650		0.0023	0.0627
Aug-49	MKT Minus Aaa and Aa Avg			0.0219		0.0022	0.0197
Sep-49	MKT Minus Aaa and Aa Avg			0.0263		0.0022	0.0241
Oct-49	MKT Minus Aaa and Aa Avg			0.0340		0.0022	0.0318
Nov-49	MKT Minus Aaa and Aa Avg			0.0175		0.0022	0.0153
Dec-49	MKT Minus Aaa and Aa Avg			0.0486		0.0022	0.0464
Jan-50	MKT Minus Aaa and Aa Avg			0.0197		0.0022	0.0175
Feb-50	MKT Minus Aaa and Aa Avg			0.0199		0.0022	0.0177
Mar-50	MKT Minus Aaa and Aa Avg			0.0070		0.0022	0.0048
Apr-50	MKT Minus Aaa and Aa Avg			0.0486		0.0022	0.0464
May-50	MKT Minus Aaa and Aa Avg			0.0509		0.0022	0.0487
Jun-50	MKT Minus Aaa and Aa Avg			(0.0548)		0.0022	-0.0570
Jul-50	MKT Minus Aaa and Aa Avg			0.0119		0.0022	0.0097
Aug-50	MKT Minus Aaa and Aa Avg			0.0443		0.0022	0.0421
Sep-50	MKT Minus Aaa and Aa Avg			0.0592		0.0022	0.0570
Oct-50	MKT Minus Aaa and Aa Avg			0.0093		0.0022	0.0071
Nov-50	MKT Minus Aaa and Aa Avg			0.0169		0.0022	0.0147
Dec-50	MKT Minus Aaa and Aa Avg			0.0513		0.0022	0.0491
Jan-51	MKT Minus Aaa and Aa Avg			0.0637		0.0022	0.0615
Feb-51	MKT Minus Aaa and Aa Avg			0.0157		0.0022	0.0135
Mar-51	MKT Minus Aaa and Aa Avg			(0.0156)		0.0023	-0.0179
Apr-51	MKT Minus Aaa and Aa Avg			0.0509		0.0024	0.0485
May-51	MKT Minus Aaa and Aa Avg			(0.0299)		0.0024	-0.0323
Jun-51	MKT Minus Aaa and Aa Avg			(0.0228)		0.0025	-0.0253

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jul-51	MKT Minus Aaa and Aa Avg			0.0711		0.0025	0.0686
Aug-51	MKT Minus Aaa and Aa Avg			0.0478		0.0024	0.0454
Sep-51	MKT Minus Aaa and Aa Avg			0.0013		0.0024	-0.0011
Oct-51	MKT Minus Aaa and Aa Avg			(0.0103)		0.0024	-0.0127
Nov-51	MKT Minus Aaa and Aa Avg			0.0096		0.0025	0.0071
Dec-51	MKT Minus Aaa and Aa Avg			0.0424		0.0025	0.0399
Jan-52	MKT Minus Aaa and Aa Avg			0.0181		0.0025	0.0156
Feb-52	MKT Minus Aaa and Aa Avg			(0.0282)		0.0025	-0.0307
Mar-52	MKT Minus Aaa and Aa Avg			0.0503		0.0025	0.0478
Apr-52	MKT Minus Aaa and Aa Avg			(0.0402)		0.0025	-0.0427
May-52	MKT Minus Aaa and Aa Avg			0.0343		0.0025	0.0318
Jun-52	MKT Minus Aaa and Aa Avg			0.0490		0.0025	0.0465
Jul-52	MKT Minus Aaa and Aa Avg			0.0196		0.0025	0.0171
Aug-52	MKT Minus Aaa and Aa Avg			(0.0071)		0.0025	-0.0096
Sep-52	MKT Minus Aaa and Aa Avg			(0.0176)		0.0025	-0.0201
Oct-52	MKT Minus Aaa and Aa Avg			0.0020		0.0025	-0.0005
Nov-52	MKT Minus Aaa and Aa Avg			0.0571		0.0025	0.0546
Dec-52	MKT Minus Aaa and Aa Avg			0.0382		0.0025	0.0357
Jan-53	MKT Minus Aaa and Aa Avg			(0.0049)		0.0025	-0.0074
Feb-53	MKT Minus Aaa and Aa Avg			(0.0106)		0.0026	-0.0132
Mar-53	MKT Minus Aaa and Aa Avg			(0.0212)		0.0026	-0.0238
Apr-53	MKT Minus Aaa and Aa Avg			(0.0237)		0.0027	-0.0264
May-53	MKT Minus Aaa and Aa Avg			0.0077		0.0028	0.0049
Jun-53	MKT Minus Aaa and Aa Avg			(0.0134)		0.0029	-0.0163
Jul-53	MKT Minus Aaa and Aa Avg			0.0273		0.0028	0.0245
Aug-53	MKT Minus Aaa and Aa Avg			(0.0501)		0.0028	-0.0529
Sep-53	MKT Minus Aaa and Aa Avg			0.0034		0.0028	0.0006
Oct-53	MKT Minus Aaa and Aa Avg			0.0540		0.0027	0.0513
Nov-53	MKT Minus Aaa and Aa Avg			0.0204		0.0027	0.0177
Dec-53	MKT Minus Aaa and Aa Avg			0.0052		0.0027	0.0025
Jan-54	MKT Minus Aaa and Aa Avg			0.0536		0.0026	0.0510
Feb-54	MKT Minus Aaa and Aa Avg			0.0111		0.0025	0.0086
Mar-54	MKT Minus Aaa and Aa Avg			0.0325		0.0025	0.0300
Apr-54	MKT Minus Aaa and Aa Avg			0.0516		0.0024	0.0492
May-54	MKT Minus Aaa and Aa Avg			0.0418		0.0025	0.0393
Jun-54	MKT Minus Aaa and Aa Avg			0.0031		0.0025	0.0006
Jul-54	MKT Minus Aaa and Aa Avg			0.0589		0.0025	0.0564
Aug-54	MKT Minus Aaa and Aa Avg			(0.0275)		0.0025	-0.0300
Sep-54	MKT Minus Aaa and Aa Avg			0.0851		0.0025	0.0826
Oct-54	MKT Minus Aaa and Aa Avg			(0.0167)		0.0025	-0.0192
Nov-54	MKT Minus Aaa and Aa Avg			0.0909		0.0025	0.0884
Dec-54	MKT Minus Aaa and Aa Avg			0.0534		0.0025	0.0509
Jan-55	MKT Minus Aaa and Aa Avg			0.0197		0.0025	0.0172
Feb-55	MKT Minus Aaa and Aa Avg			0.0098		0.0025	0.0073
Mar-55	MKT Minus Aaa and Aa Avg			(0.0030)		0.0026	-0.0056
Apr-55	MKT Minus Aaa and Aa Avg			0.0396		0.0026	0.0370
May-55	MKT Minus Aaa and Aa Avg			0.0055		0.0026	0.0029
Jun-55	MKT Minus Aaa and Aa Avg			0.0841		0.0026	0.0815
Jul-55	MKT Minus Aaa and Aa Avg			0.0622		0.0026	0.0596
Aug-55	MKT Minus Aaa and Aa Avg			(0.0025)		0.0026	-0.0051
Sep-55	MKT Minus Aaa and Aa Avg			0.0130		0.0026	0.0104

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Oct-55	MKT Minus Aaa and Aa Avg			(0.0284)		0.0026	-0.0310
Nov-55	MKT Minus Aaa and Aa Avg			0.0827		0.0026	0.0801
Dec-55	MKT Minus Aaa and Aa Avg			0.0015		0.0027	-0.0012
Jan-56	MKT Minus Aaa and Aa Avg			(0.0347)		0.0026	-0.0373
Feb-56	MKT Minus Aaa and Aa Avg			0.0413		0.0026	0.0387
Mar-56	MKT Minus Aaa and Aa Avg			0.0710		0.0026	0.0684
Apr-56	MKT Minus Aaa and Aa Avg			(0.0004)		0.0027	-0.0031
May-56	MKT Minus Aaa and Aa Avg			(0.0593)		0.0028	-0.0621
Jun-56	MKT Minus Aaa and Aa Avg			0.0409		0.0028	0.0381
Jul-56	MKT Minus Aaa and Aa Avg			0.0530		0.0028	0.0502
Aug-56	MKT Minus Aaa and Aa Avg			(0.0328)		0.0029	-0.0357
Sep-56	MKT Minus Aaa and Aa Avg			(0.0440)		0.0030	-0.0470
Oct-56	MKT Minus Aaa and Aa Avg			0.0066		0.0030	0.0036
Nov-56	MKT Minus Aaa and Aa Avg			(0.0050)		0.0031	-0.0081
Dec-56	MKT Minus Aaa and Aa Avg			0.0370		0.0032	0.0338
Jan-57	MKT Minus Aaa and Aa Avg			(0.0401)		0.0032	-0.0433
Feb-57	MKT Minus Aaa and Aa Avg			(0.0264)		0.0031	-0.0295
Mar-57	MKT Minus Aaa and Aa Avg			0.0215		0.0031	0.0184
Apr-57	MKT Minus Aaa and Aa Avg			0.0388		0.0031	0.0357
May-57	MKT Minus Aaa and Aa Avg			0.0437		0.0032	0.0405
Jun-57	MKT Minus Aaa and Aa Avg			0.0004		0.0033	-0.0029
Jul-57	MKT Minus Aaa and Aa Avg			0.0131		0.0034	0.0097
Aug-57	MKT Minus Aaa and Aa Avg			(0.0505)		0.0035	-0.0540
Sep-57	MKT Minus Aaa and Aa Avg			(0.0602)		0.0035	-0.0637
Oct-57	MKT Minus Aaa and Aa Avg			(0.0302)		0.0035	-0.0337
Nov-57	MKT Minus Aaa and Aa Avg			0.0231		0.0035	0.0196
Dec-57	MKT Minus Aaa and Aa Avg			(0.0395)		0.0033	-0.0428
Jan-58	MKT Minus Aaa and Aa Avg			0.0445		0.0031	0.0414
Feb-58	MKT Minus Aaa and Aa Avg			(0.0141)		0.0031	-0.0172
Mar-58	MKT Minus Aaa and Aa Avg			0.0328		0.0031	0.0297
Apr-58	MKT Minus Aaa and Aa Avg			0.0337		0.0031	0.0306
May-58	MKT Minus Aaa and Aa Avg			0.0212		0.0031	0.0181
Jun-58	MKT Minus Aaa and Aa Avg			0.0279		0.0031	0.0248
Jul-58	MKT Minus Aaa and Aa Avg			0.0449		0.0031	0.0418
Aug-58	MKT Minus Aaa and Aa Avg			0.0176		0.0033	0.0143
Sep-58	MKT Minus Aaa and Aa Avg			0.0501		0.0035	0.0466
Oct-58	MKT Minus Aaa and Aa Avg			0.0270		0.0035	0.0235
Nov-58	MKT Minus Aaa and Aa Avg			0.0284		0.0035	0.0249
Dec-58	MKT Minus Aaa and Aa Avg			0.0535		0.0034	0.0501
Jan-59	MKT Minus Aaa and Aa Avg			0.0053		0.0035	0.0018
Feb-59	MKT Minus Aaa and Aa Avg			0.0049		0.0035	0.0014
Mar-59	MKT Minus Aaa and Aa Avg			0.0020		0.0035	-0.0015
Apr-59	MKT Minus Aaa and Aa Avg			0.0402		0.0036	0.0366
May-59	MKT Minus Aaa and Aa Avg			0.0240		0.0037	0.0203
Jun-59	MKT Minus Aaa and Aa Avg			(0.0022)		0.0038	-0.0060
Jul-59	MKT Minus Aaa and Aa Avg			0.0363		0.0038	0.0325
Aug-59	MKT Minus Aaa and Aa Avg			(0.0102)		0.0038	-0.0140
Sep-59	MKT Minus Aaa and Aa Avg			(0.0443)		0.0038	-0.0481
Oct-59	MKT Minus Aaa and Aa Avg			0.0128		0.0039	0.0089
Nov-59	MKT Minus Aaa and Aa Avg			0.0186		0.0039	0.0147
Dec-59	MKT Minus Aaa and Aa Avg			0.0292		0.0039	0.0253

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jan-60	MKT Minus Aaa and Aa Avg			(0.0700)		0.0039	-0.0739
Feb-60	MKT Minus Aaa and Aa Avg			0.0147		0.0039	0.0108
Mar-60	MKT Minus Aaa and Aa Avg			(0.0123)		0.0038	-0.0161
Apr-60	MKT Minus Aaa and Aa Avg			(0.0161)		0.0038	-0.0199
May-60	MKT Minus Aaa and Aa Avg			0.0326		0.0038	0.0288
Jun-60	MKT Minus Aaa and Aa Avg			0.0211		0.0038	0.0173
Jul-60	MKT Minus Aaa and Aa Avg			(0.0234)		0.0037	-0.0271
Aug-60	MKT Minus Aaa and Aa Avg			0.0317		0.0036	0.0281
Sep-60	MKT Minus Aaa and Aa Avg			(0.0590)		0.0036	-0.0626
Oct-60	MKT Minus Aaa and Aa Avg			(0.0007)		0.0036	-0.0043
Nov-60	MKT Minus Aaa and Aa Avg			0.0465		0.0037	0.0428
Dec-60	MKT Minus Aaa and Aa Avg			0.0479		0.0037	0.0442
Jan-61	MKT Minus Aaa and Aa Avg			0.0645		0.0037	0.0608
Feb-61	MKT Minus Aaa and Aa Avg			0.0319		0.0036	0.0283
Mar-61	MKT Minus Aaa and Aa Avg			0.0270		0.0036	0.0234
Apr-61	MKT Minus Aaa and Aa Avg			0.0051		0.0036	0.0015
May-61	MKT Minus Aaa and Aa Avg			0.0239		0.0036	0.0203
Jun-61	MKT Minus Aaa and Aa Avg			(0.0275)		0.0037	-0.0312
Jul-61	MKT Minus Aaa and Aa Avg			0.0342		0.0037	0.0305
Aug-61	MKT Minus Aaa and Aa Avg			0.0243		0.0038	0.0205
Sep-61	MKT Minus Aaa and Aa Avg			(0.0184)		0.0038	-0.0222
Oct-61	MKT Minus Aaa and Aa Avg			0.0298		0.0037	0.0261
Nov-61	MKT Minus Aaa and Aa Avg			0.0447		0.0037	0.0410
Dec-61	MKT Minus Aaa and Aa Avg			0.0046		0.0037	0.0009
Jan-62	MKT Minus Aaa and Aa Avg			(0.0366)		0.0037	-0.0403
Feb-62	MKT Minus Aaa and Aa Avg			0.0209		0.0037	0.0172
Mar-62	MKT Minus Aaa and Aa Avg			(0.0046)		0.0037	-0.0083
Apr-62	MKT Minus Aaa and Aa Avg			(0.0607)		0.0037	-0.0644
May-62	MKT Minus Aaa and Aa Avg			(0.0811)		0.0036	-0.0847
Jun-62	MKT Minus Aaa and Aa Avg			(0.0803)		0.0036	-0.0839
Jul-62	MKT Minus Aaa and Aa Avg			0.0652		0.0037	0.0615
Aug-62	MKT Minus Aaa and Aa Avg			0.0208		0.0037	0.0171
Sep-62	MKT Minus Aaa and Aa Avg			(0.0465)		0.0037	-0.0502
Oct-62	MKT Minus Aaa and Aa Avg			0.0064		0.0036	0.0028
Nov-62	MKT Minus Aaa and Aa Avg			0.1086		0.0036	0.1050
Dec-62	MKT Minus Aaa and Aa Avg			0.0153		0.0036	0.0117
Jan-63	MKT Minus Aaa and Aa Avg			0.0506		0.0036	0.0470
Feb-63	MKT Minus Aaa and Aa Avg			(0.0239)		0.0036	-0.0275
Mar-63	MKT Minus Aaa and Aa Avg			0.0370		0.0036	0.0334
Apr-63	MKT Minus Aaa and Aa Avg			0.0500		0.0036	0.0464
May-63	MKT Minus Aaa and Aa Avg			0.0193		0.0036	0.0157
Jun-63	MKT Minus Aaa and Aa Avg			(0.0188)		0.0036	-0.0224
Jul-63	MKT Minus Aaa and Aa Avg			(0.0022)		0.0036	-0.0058
Aug-63	MKT Minus Aaa and Aa Avg			0.0535		0.0036	0.0499
Sep-63	MKT Minus Aaa and Aa Avg			(0.0097)		0.0036	-0.0133
Oct-63	MKT Minus Aaa and Aa Avg			0.0339		0.0036	0.0303
Nov-63	MKT Minus Aaa and Aa Avg			(0.0046)		0.0037	-0.0083
Dec-63	MKT Minus Aaa and Aa Avg			0.0262		0.0037	0.0225
Jan-64	MKT Minus Aaa and Aa Avg			0.0283		0.0037	0.0246
Feb-64	MKT Minus Aaa and Aa Avg			0.0147		0.0037	0.0110
Mar-64	MKT Minus Aaa and Aa Avg			0.0165		0.0037	0.0128

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Apr-64	MKT Minus Aaa and Aa Avg			0.0075		0.0037	0.0038
May-64	MKT Minus Aaa and Aa Avg			0.0162		0.0037	0.0125
Jun-64	MKT Minus Aaa and Aa Avg			0.0178		0.0037	0.0141
Jul-64	MKT Minus Aaa and Aa Avg			0.0195		0.0037	0.0158
Aug-64	MKT Minus Aaa and Aa Avg			(0.0118)		0.0037	-0.0155
Sep-64	MKT Minus Aaa and Aa Avg			0.0301		0.0037	0.0264
Oct-64	MKT Minus Aaa and Aa Avg			0.0096		0.0037	0.0059
Nov-64	MKT Minus Aaa and Aa Avg			0.0005		0.0037	-0.0032
Dec-64	MKT Minus Aaa and Aa Avg			0.0056		0.0037	0.0019
Jan-65	MKT Minus Aaa and Aa Avg			0.0345		0.0037	0.0308
Feb-65	MKT Minus Aaa and Aa Avg			0.0031		0.0037	-0.0006
Mar-65	MKT Minus Aaa and Aa Avg			(0.0133)		0.0037	-0.0170
Apr-65	MKT Minus Aaa and Aa Avg			0.0356		0.0037	0.0319
May-65	MKT Minus Aaa and Aa Avg			(0.0030)		0.0037	-0.0067
Jun-65	MKT Minus Aaa and Aa Avg			(0.0473)		0.0037	-0.0510
Jul-65	MKT Minus Aaa and Aa Avg			0.0147		0.0038	0.0109
Aug-65	MKT Minus Aaa and Aa Avg			0.0272		0.0038	0.0234
Sep-65	MKT Minus Aaa and Aa Avg			0.0334		0.0038	0.0296
Oct-65	MKT Minus Aaa and Aa Avg			0.0289		0.0038	0.0251
Nov-65	MKT Minus Aaa and Aa Avg			(0.0031)		0.0039	-0.0070
Dec-65	MKT Minus Aaa and Aa Avg			0.0106		0.0040	0.0067
Jan-66	MKT Minus Aaa and Aa Avg			0.0062		0.0040	0.0022
Feb-66	MKT Minus Aaa and Aa Avg			(0.0131)		0.0040	-0.0171
Mar-66	MKT Minus Aaa and Aa Avg			(0.0205)		0.0042	-0.0247
Apr-66	MKT Minus Aaa and Aa Avg			0.0220		0.0042	0.0178
May-66	MKT Minus Aaa and Aa Avg			(0.0492)		0.0042	-0.0534
Jun-66	MKT Minus Aaa and Aa Avg			(0.0146)		0.0043	-0.0189
Jul-66	MKT Minus Aaa and Aa Avg			(0.0120)		0.0043	-0.0163
Aug-66	MKT Minus Aaa and Aa Avg			(0.0725)		0.0045	-0.0770
Sep-66	MKT Minus Aaa and Aa Avg			(0.0053)		0.0046	-0.0099
Oct-66	MKT Minus Aaa and Aa Avg			0.0494		0.0045	0.0449
Nov-66	MKT Minus Aaa and Aa Avg			0.0095		0.0045	0.0050
Dec-66	MKT Minus Aaa and Aa Avg			0.0002		0.0045	-0.0043
Jan-67	MKT Minus Aaa and Aa Avg			0.0798		0.0044	0.0754
Feb-67	MKT Minus Aaa and Aa Avg			0.0072		0.0043	0.0029
Mar-67	MKT Minus Aaa and Aa Avg			0.0409		0.0043	0.0366
Apr-67	MKT Minus Aaa and Aa Avg			0.0437		0.0043	0.0394
May-67	MKT Minus Aaa and Aa Avg			(0.0477)		0.0044	-0.0521
Jun-67	MKT Minus Aaa and Aa Avg			0.0190		0.0046	0.0144
Jul-67	MKT Minus Aaa and Aa Avg			0.0468		0.0047	0.0421
Aug-67	MKT Minus Aaa and Aa Avg			(0.0070)		0.0047	-0.0117
Sep-67	MKT Minus Aaa and Aa Avg			0.0342		0.0048	0.0294
Oct-67	MKT Minus Aaa and Aa Avg			(0.0276)		0.0049	-0.0325
Nov-67	MKT Minus Aaa and Aa Avg			0.0065		0.0051	0.0014
Dec-67	MKT Minus Aaa and Aa Avg			0.0278		0.0052	0.0226
Jan-68	MKT Minus Aaa and Aa Avg			(0.0425)		0.0052	-0.0477
Feb-68	MKT Minus Aaa and Aa Avg			(0.0261)		0.0052	-0.0313
Mar-68	MKT Minus Aaa and Aa Avg			0.0110		0.0052	0.0058
Apr-68	MKT Minus Aaa and Aa Avg			0.0834		0.0052	0.0782
May-68	MKT Minus Aaa and Aa Avg			0.0161		0.0053	0.0108
Jun-68	MKT Minus Aaa and Aa Avg			0.0105		0.0053	0.0052

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jul-68	MKT Minus Aaa and Aa Avg			(0.0172)		0.0053	-0.0225
Aug-68	MKT Minus Aaa and Aa Avg			0.0164		0.0051	0.0113
Sep-68	MKT Minus Aaa and Aa Avg			0.0400		0.0051	0.0349
Oct-68	MKT Minus Aaa and Aa Avg			0.0087		0.0052	0.0035
Nov-68	MKT Minus Aaa and Aa Avg			0.0531		0.0053	0.0478
Dec-68	MKT Minus Aaa and Aa Avg			(0.0402)		0.0055	-0.0457
Jan-69	MKT Minus Aaa and Aa Avg			(0.0068)		0.0056	-0.0124
Feb-69	MKT Minus Aaa and Aa Avg			(0.0426)		0.0056	-0.0482
Mar-69	MKT Minus Aaa and Aa Avg			0.0359		0.0058	0.0302
Apr-69	MKT Minus Aaa and Aa Avg			0.0229		0.0058	0.0171
May-69	MKT Minus Aaa and Aa Avg			0.0026		0.0057	-0.0031
Jun-69	MKT Minus Aaa and Aa Avg			(0.0542)		0.0059	-0.0601
Jul-69	MKT Minus Aaa and Aa Avg			(0.0587)		0.0060	-0.0647
Aug-69	MKT Minus Aaa and Aa Avg			0.0454		0.0059	0.0395
Sep-69	MKT Minus Aaa and Aa Avg			(0.0236)		0.0060	-0.0296
Oct-69	MKT Minus Aaa and Aa Avg			0.0459		0.0062	0.0397
Nov-69	MKT Minus Aaa and Aa Avg			(0.0297)		0.0062	-0.0359
Dec-69	MKT Minus Aaa and Aa Avg			(0.0177)		0.0065	-0.0242
Jan-70	MKT Minus Aaa and Aa Avg			(0.0743)		0.0067	-0.0810
Feb-70	MKT Minus Aaa and Aa Avg			0.0586		0.0067	0.0519
Mar-70	MKT Minus Aaa and Aa Avg			0.0030		0.0066	-0.0036
Apr-70	MKT Minus Aaa and Aa Avg			(0.0889)		0.0066	-0.0955
May-70	MKT Minus Aaa and Aa Avg			(0.0547)		0.0068	-0.0615
Jun-70	MKT Minus Aaa and Aa Avg			(0.0482)		0.0071	-0.0553
Jul-70	MKT Minus Aaa and Aa Avg			0.0752		0.0071	0.0681
Aug-70	MKT Minus Aaa and Aa Avg			0.0509		0.0069	0.0440
Sep-70	MKT Minus Aaa and Aa Avg			0.0347		0.0069	0.0278
Oct-70	MKT Minus Aaa and Aa Avg			(0.0097)		0.0069	-0.0166
Nov-70	MKT Minus Aaa and Aa Avg			0.0536		0.0069	0.0467
Dec-70	MKT Minus Aaa and Aa Avg			0.0584		0.0066	0.0518
Jan-71	MKT Minus Aaa and Aa Avg			0.0419		0.0064	0.0355
Feb-71	MKT Minus Aaa and Aa Avg			0.0141		0.0061	0.0080
Mar-71	MKT Minus Aaa and Aa Avg			0.0382		0.0062	0.0320
Apr-71	MKT Minus Aaa and Aa Avg			0.0377		0.0062	0.0315
May-71	MKT Minus Aaa and Aa Avg			(0.0367)		0.0064	-0.0431
Jun-71	MKT Minus Aaa and Aa Avg			0.0021		0.0065	-0.0044
Jul-71	MKT Minus Aaa and Aa Avg			(0.0399)		0.0065	-0.0464
Aug-71	MKT Minus Aaa and Aa Avg			0.0412		0.0065	0.0347
Sep-71	MKT Minus Aaa and Aa Avg			(0.0056)		0.0064	-0.0120
Oct-71	MKT Minus Aaa and Aa Avg			(0.0404)		0.0063	-0.0467
Nov-71	MKT Minus Aaa and Aa Avg			0.0027		0.0062	-0.0035
Dec-71	MKT Minus Aaa and Aa Avg			0.0877		0.0062	0.0815
Jan-72	MKT Minus Aaa and Aa Avg			0.0194		0.0061	0.0133
Feb-72	MKT Minus Aaa and Aa Avg			0.0299		0.0062	0.0237
Mar-72	MKT Minus Aaa and Aa Avg			0.0072		0.0062	0.0010
Apr-72	MKT Minus Aaa and Aa Avg			0.0057		0.0062	-0.0005
May-72	MKT Minus Aaa and Aa Avg			0.0219		0.0062	0.0157
Jun-72	MKT Minus Aaa and Aa Avg			(0.0205)		0.0061	-0.0266
Jul-72	MKT Minus Aaa and Aa Avg			0.0036		0.0061	-0.0025
Aug-72	MKT Minus Aaa and Aa Avg			0.0391		0.0061	0.0330
Sep-72	MKT Minus Aaa and Aa Avg			(0.0036)		0.0061	-0.0097

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Oct-72	MKT Minus Aaa and Aa Avg			0.0107		0.0061	0.0046
Nov-72	MKT Minus Aaa and Aa Avg			0.0505		0.0060	0.0445
Dec-72	MKT Minus Aaa and Aa Avg			0.0131		0.0060	0.0071
Jan-73	MKT Minus Aaa and Aa Avg			(0.0159)		0.0061	-0.0220
Feb-73	MKT Minus Aaa and Aa Avg			(0.0333)		0.0061	-0.0394
Mar-73	MKT Minus Aaa and Aa Avg			(0.0002)		0.0062	-0.0064
Apr-73	MKT Minus Aaa and Aa Avg			(0.0395)		0.0061	-0.0456
May-73	MKT Minus Aaa and Aa Avg			(0.0139)		0.0062	-0.0201
Jun-73	MKT Minus Aaa and Aa Avg			(0.0051)		0.0062	-0.0113
Jul-73	MKT Minus Aaa and Aa Avg			0.0394		0.0063	0.0331
Aug-73	MKT Minus Aaa and Aa Avg			(0.0318)		0.0065	-0.0383
Sep-73	MKT Minus Aaa and Aa Avg			0.0415		0.0065	0.0350
Oct-73	MKT Minus Aaa and Aa Avg			0.0003		0.0064	-0.0061
Nov-73	MKT Minus Aaa and Aa Avg			(0.1082)		0.0065	-0.1147
Dec-73	MKT Minus Aaa and Aa Avg			0.0183		0.0065	0.0118
Jan-74	MKT Minus Aaa and Aa Avg			(0.0085)		0.0066	-0.0151
Feb-74	MKT Minus Aaa and Aa Avg			0.0019		0.0066	-0.0047
Mar-74	MKT Minus Aaa and Aa Avg			(0.0217)		0.0067	-0.0284
Apr-74	MKT Minus Aaa and Aa Avg			(0.0373)		0.0070	-0.0443
May-74	MKT Minus Aaa and Aa Avg			(0.0272)		0.0071	-0.0343
Jun-74	MKT Minus Aaa and Aa Avg			(0.0128)		0.0072	-0.0200
Jul-74	MKT Minus Aaa and Aa Avg			(0.0759)		0.0074	-0.0833
Aug-74	MKT Minus Aaa and Aa Avg			(0.0828)		0.0076	-0.0904
Sep-74	MKT Minus Aaa and Aa Avg			(0.1170)		0.0079	-0.1249
Oct-74	MKT Minus Aaa and Aa Avg			0.1657		0.0079	0.1578
Nov-74	MKT Minus Aaa and Aa Avg			(0.0448)		0.0076	-0.0524
Dec-74	MKT Minus Aaa and Aa Avg			(0.0177)		0.0075	-0.0252
Jan-75	MKT Minus Aaa and Aa Avg			0.1251		0.0075	0.1176
Feb-75	MKT Minus Aaa and Aa Avg			0.0674		0.0073	0.0601
Mar-75	MKT Minus Aaa and Aa Avg			0.0237		0.0073	0.0164
Apr-75	MKT Minus Aaa and Aa Avg			0.0493		0.0076	0.0417
May-75	MKT Minus Aaa and Aa Avg			0.0509		0.0076	0.0433
Jun-75	MKT Minus Aaa and Aa Avg			0.0462		0.0075	0.0387
Jul-75	MKT Minus Aaa and Aa Avg			(0.0659)		0.0075	-0.0734
Aug-75	MKT Minus Aaa and Aa Avg			(0.0144)		0.0076	-0.0220
Sep-75	MKT Minus Aaa and Aa Avg			(0.0328)		0.0076	-0.0404
Oct-75	MKT Minus Aaa and Aa Avg			0.0637		0.0076	0.0561
Nov-75	MKT Minus Aaa and Aa Avg			0.0313		0.0075	0.0238
Dec-75	MKT Minus Aaa and Aa Avg			(0.0096)		0.0075	-0.0171
Jan-76	MKT Minus Aaa and Aa Avg			0.1199		0.0074	0.1125
Feb-76	MKT Minus Aaa and Aa Avg			(0.0058)		0.0073	-0.0131
Mar-76	MKT Minus Aaa and Aa Avg			0.0326		0.0073	0.0253
Apr-76	MKT Minus Aaa and Aa Avg			(0.0099)		0.0072	-0.0171
May-76	MKT Minus Aaa and Aa Avg			(0.0073)		0.0073	-0.0146
Jun-76	MKT Minus Aaa and Aa Avg			0.0427		0.0073	0.0354
Jul-76	MKT Minus Aaa and Aa Avg			(0.0068)		0.0072	-0.0140
Aug-76	MKT Minus Aaa and Aa Avg			0.0014		0.0071	-0.0057
Sep-76	MKT Minus Aaa and Aa Avg			0.0247		0.0071	0.0177
Oct-76	MKT Minus Aaa and Aa Avg			(0.0206)		0.0070	-0.0276
Nov-76	MKT Minus Aaa and Aa Avg			(0.0009)		0.0070	-0.0079
Dec-76	MKT Minus Aaa and Aa Avg			0.0540		0.0068	0.0472

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jan-77	MKT Minus Aaa and Aa Avg			(0.0489)		0.0067	-0.0556
Feb-77	MKT Minus Aaa and Aa Avg			(0.0151)		0.0068	-0.0219
Mar-77	MKT Minus Aaa and Aa Avg			(0.0119)		0.0068	-0.0187
Apr-77	MKT Minus Aaa and Aa Avg			0.0014		0.0068	-0.0054
May-77	MKT Minus Aaa and Aa Avg			(0.0150)		0.0068	-0.0218
Jun-77	MKT Minus Aaa and Aa Avg			0.0475		0.0067	0.0408
Jul-77	MKT Minus Aaa and Aa Avg			(0.0151)		0.0067	-0.0218
Aug-77	MKT Minus Aaa and Aa Avg			(0.0133)		0.0067	-0.0200
Sep-77	MKT Minus Aaa and Aa Avg			-		0.0067	-0.0067
Oct-77	MKT Minus Aaa and Aa Avg			(0.0415)		0.0068	-0.0483
Nov-77	MKT Minus Aaa and Aa Avg			0.0370		0.0068	0.0302
Dec-77	MKT Minus Aaa and Aa Avg			0.0048		0.0069	-0.0021
Jan-78	MKT Minus Aaa and Aa Avg			(0.0596)		0.0071	-0.0667
Feb-78	MKT Minus Aaa and Aa Avg			(0.0161)		0.0071	-0.0232
Mar-78	MKT Minus Aaa and Aa Avg			0.0276		0.0071	0.0205
Apr-78	MKT Minus Aaa and Aa Avg			0.0870		0.0072	0.0798
May-78	MKT Minus Aaa and Aa Avg			0.0136		0.0073	0.0063
Jun-78	MKT Minus Aaa and Aa Avg			(0.0152)		0.0074	-0.0226
Jul-78	MKT Minus Aaa and Aa Avg			0.0560		0.0075	0.0485
Aug-78	MKT Minus Aaa and Aa Avg			0.0340		0.0074	0.0266
Sep-78	MKT Minus Aaa and Aa Avg			(0.0048)		0.0073	-0.0121
Oct-78	MKT Minus Aaa and Aa Avg			(0.0891)		0.0075	-0.0966
Nov-78	MKT Minus Aaa and Aa Avg			0.0260		0.0076	0.0184
Dec-78	MKT Minus Aaa and Aa Avg			0.0172		0.0077	0.0095
Jan-79	MKT Minus Aaa and Aa Avg			0.0421		0.0078	0.0343
Feb-79	MKT Minus Aaa and Aa Avg			(0.0284)		0.0078	-0.0362
Mar-79	MKT Minus Aaa and Aa Avg			0.0575		0.0079	0.0496
Apr-79	MKT Minus Aaa and Aa Avg			0.0036		0.0079	-0.0043
May-79	MKT Minus Aaa and Aa Avg			(0.0168)		0.0081	-0.0249
Jun-79	MKT Minus Aaa and Aa Avg			0.0410		0.0079	0.0331
Jul-79	MKT Minus Aaa and Aa Avg			0.0110		0.0078	0.0032
Aug-79	MKT Minus Aaa and Aa Avg			0.0611		0.0078	0.0533
Sep-79	MKT Minus Aaa and Aa Avg			0.0025		0.0080	-0.0055
Oct-79	MKT Minus Aaa and Aa Avg			(0.0656)		0.0086	-0.0742
Nov-79	MKT Minus Aaa and Aa Avg			0.0514		0.0092	0.0422
Dec-79	MKT Minus Aaa and Aa Avg			0.0192		0.0091	0.0101
Jan-80	MKT Minus Aaa and Aa Avg			0.0610		0.0094	0.0516
Feb-80	MKT Minus Aaa and Aa Avg			0.0031		0.0105	-0.0074
Mar-80	MKT Minus Aaa and Aa Avg			(0.0987)		0.0110	-0.1097
Apr-80	MKT Minus Aaa and Aa Avg			0.0429		0.0105	0.0324
May-80	MKT Minus Aaa and Aa Avg			0.0562		0.0095	0.0467
Jun-80	MKT Minus Aaa and Aa Avg			0.0296		0.0092	0.0204
Jul-80	MKT Minus Aaa and Aa Avg			0.0676		0.0094	0.0582
Aug-80	MKT Minus Aaa and Aa Avg			0.0131		0.0099	0.0032
Sep-80	MKT Minus Aaa and Aa Avg			0.0281		0.0102	0.0179
Oct-80	MKT Minus Aaa and Aa Avg			0.0187		0.0104	0.0083
Nov-80	MKT Minus Aaa and Aa Avg			0.1095		0.0110	0.0985
Dec-80	MKT Minus Aaa and Aa Avg			(0.0315)		0.0112	-0.0427
Jan-81	MKT Minus Aaa and Aa Avg			(0.0438)		0.0110	-0.0548
Feb-81	MKT Minus Aaa and Aa Avg			0.0208		0.0114	0.0095
Mar-81	MKT Minus Aaa and Aa Avg			0.0380		0.0113	0.0267

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Apr-81	MKT Minus Aaa and Aa Avg			(0.0213)		0.0118	-0.0331
May-81	MKT Minus Aaa and Aa Avg			0.0062		0.0122	-0.0060
Jun-81	MKT Minus Aaa and Aa Avg			(0.0080)		0.0117	-0.0197
Jul-81	MKT Minus Aaa and Aa Avg			0.0007		0.0122	-0.0115
Aug-81	MKT Minus Aaa and Aa Avg			(0.0554)		0.0126	-0.0680
Sep-81	MKT Minus Aaa and Aa Avg			(0.0502)		0.0131	-0.0633
Oct-81	MKT Minus Aaa and Aa Avg			0.0528		0.0130	0.0398
Nov-81	MKT Minus Aaa and Aa Avg			0.0441		0.0122	0.0319
Dec-81	MKT Minus Aaa and Aa Avg			(0.0265)		0.0122	-0.0387
Jan-82	MKT Minus Aaa and Aa Avg			(0.0163)		0.0129	-0.0292
Feb-82	MKT Minus Aaa and Aa Avg			(0.0512)		0.0129	-0.0641
Mar-82	MKT Minus Aaa and Aa Avg			(0.0060)		0.0124	-0.0184
Apr-82	MKT Minus Aaa and Aa Avg			0.0414		0.0122	0.0292
May-82	MKT Minus Aaa and Aa Avg			(0.0288)		0.0121	-0.0409
Jun-82	MKT Minus Aaa and Aa Avg			(0.0174)		0.0125	-0.0299
Jul-82	MKT Minus Aaa and Aa Avg			(0.0215)		0.0124	-0.0339
Aug-82	MKT Minus Aaa and Aa Avg			0.1267		0.0117	0.1150
Sep-82	MKT Minus Aaa and Aa Avg			0.0110		0.0111	-0.0001
Oct-82	MKT Minus Aaa and Aa Avg			0.1126		0.0105	0.1021
Nov-82	MKT Minus Aaa and Aa Avg			0.0438		0.0101	0.0337
Dec-82	MKT Minus Aaa and Aa Avg			0.0173		0.0101	0.0072
Jan-83	MKT Minus Aaa and Aa Avg			0.0348		0.0101	0.0247
Feb-83	MKT Minus Aaa and Aa Avg			0.0260		0.0102	0.0158
Mar-83	MKT Minus Aaa and Aa Avg			0.0365		0.0100	0.0265
Apr-83	MKT Minus Aaa and Aa Avg			0.0758		0.0098	0.0660
May-83	MKT Minus Aaa and Aa Avg			(0.0052)		0.0098	-0.0150
Jun-83	MKT Minus Aaa and Aa Avg			0.0382		0.0100	0.0282
Jul-83	MKT Minus Aaa and Aa Avg			(0.0313)		0.0102	-0.0415
Aug-83	MKT Minus Aaa and Aa Avg			0.0170		0.0105	0.0065
Sep-83	MKT Minus Aaa and Aa Avg			0.0136		0.0104	0.0032
Oct-83	MKT Minus Aaa and Aa Avg			(0.0134)		0.0103	-0.0237
Nov-83	MKT Minus Aaa and Aa Avg			0.0233		0.0104	0.0129
Dec-83	MKT Minus Aaa and Aa Avg			(0.0061)		0.0106	-0.0167
Jan-84	MKT Minus Aaa and Aa Avg			(0.0065)		0.0104	-0.0169
Feb-84	MKT Minus Aaa and Aa Avg			(0.0328)		0.0103	-0.0431
Mar-84	MKT Minus Aaa and Aa Avg			0.0171		0.0107	0.0064
Apr-84	MKT Minus Aaa and Aa Avg			0.0069		0.0110	-0.0041
May-84	MKT Minus Aaa and Aa Avg			(0.0534)		0.0114	-0.0648
Jun-84	MKT Minus Aaa and Aa Avg			0.0221		0.0116	0.0105
Jul-84	MKT Minus Aaa and Aa Avg			(0.0143)		0.0115	-0.0258
Aug-84	MKT Minus Aaa and Aa Avg			0.1125		0.0110	0.1015
Sep-84	MKT Minus Aaa and Aa Avg			0.0002		0.0108	-0.0106
Oct-84	MKT Minus Aaa and Aa Avg			0.0026		0.0107	-0.0081
Nov-84	MKT Minus Aaa and Aa Avg			(0.0101)		0.0104	-0.0205
Dec-84	MKT Minus Aaa and Aa Avg			0.0253		0.0103	0.0150
Jan-85	MKT Minus Aaa and Aa Avg			0.0768		0.0102	0.0666
Feb-85	MKT Minus Aaa and Aa Avg			0.0137		0.0103	0.0034
Mar-85	MKT Minus Aaa and Aa Avg			0.0018		0.0106	-0.0088
Apr-85	MKT Minus Aaa and Aa Avg			(0.0032)		0.0104	-0.0136
May-85	MKT Minus Aaa and Aa Avg			0.0615		0.0100	0.0515
Jun-85	MKT Minus Aaa and Aa Avg			0.0159		0.0093	0.0066

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jul-85	MKT Minus Aaa and Aa Avg			(0.0026)		0.0093	-0.0119
Aug-85	MKT Minus Aaa and Aa Avg			(0.0061)		0.0094	-0.0155
Sep-85	MKT Minus Aaa and Aa Avg			(0.0321)		0.0094	-0.0415
Oct-85	MKT Minus Aaa and Aa Avg			0.0447		0.0094	0.0353
Nov-85	MKT Minus Aaa and Aa Avg			0.0716		0.0090	0.0626
Dec-85	MKT Minus Aaa and Aa Avg			0.0467		0.0087	0.0380
Jan-86	MKT Minus Aaa and Aa Avg			0.0044		0.0085	-0.0041
Feb-86	MKT Minus Aaa and Aa Avg			0.0761		0.0083	0.0679
Mar-86	MKT Minus Aaa and Aa Avg			0.0554		0.0077	0.0477
Apr-86	MKT Minus Aaa and Aa Avg			(0.0124)		0.0075	-0.0199
May-86	MKT Minus Aaa and Aa Avg			0.0549		0.0077	0.0472
Jun-86	MKT Minus Aaa and Aa Avg			0.0166		0.0078	0.0088
Jul-86	MKT Minus Aaa and Aa Avg			(0.0569)		0.0076	-0.0645
Aug-86	MKT Minus Aaa and Aa Avg			0.0748		0.0075	0.0673
Sep-86	MKT Minus Aaa and Aa Avg			(0.0822)		0.0076	-0.0898
Oct-86	MKT Minus Aaa and Aa Avg			0.0556		0.0076	0.0480
Nov-86	MKT Minus Aaa and Aa Avg			0.0256		0.0075	0.0182
Dec-86	MKT Minus Aaa and Aa Avg			(0.0264)		0.0073	-0.0337
Jan-87	MKT Minus Aaa and Aa Avg			0.1343		0.0072	0.1271
Feb-87	MKT Minus Aaa and Aa Avg			0.0413		0.0072	0.0341
Mar-87	MKT Minus Aaa and Aa Avg			0.0272		0.0072	0.0200
Apr-87	MKT Minus Aaa and Aa Avg			(0.0088)		0.0075	-0.0163
May-87	MKT Minus Aaa and Aa Avg			0.0103		0.0079	0.0024
Jun-87	MKT Minus Aaa and Aa Avg			0.0499		0.0079	0.0420
Jul-87	MKT Minus Aaa and Aa Avg			0.0498		0.0079	0.0419
Aug-87	MKT Minus Aaa and Aa Avg			0.0385		0.0081	0.0304
Sep-87	MKT Minus Aaa and Aa Avg			(0.0220)		0.0086	-0.0306
Oct-87	MKT Minus Aaa and Aa Avg			(0.2152)		0.0089	-0.2241
Nov-87	MKT Minus Aaa and Aa Avg			(0.0819)		0.0085	-0.0904
Dec-87	MKT Minus Aaa and Aa Avg			0.0738		0.0085	0.0653
Jan-88	MKT Minus Aaa and Aa Avg			0.0427		0.0083	0.0344
Feb-88	MKT Minus Aaa and Aa Avg			0.0470		0.0079	0.0391
Mar-88	MKT Minus Aaa and Aa Avg			(0.0302)		0.0079	-0.0381
Apr-88	MKT Minus Aaa and Aa Avg			0.0108		0.0081	0.0027
May-88	MKT Minus Aaa and Aa Avg			0.0078		0.0083	-0.0005
Jun-88	MKT Minus Aaa and Aa Avg			0.0464		0.0083	0.0381
Jul-88	MKT Minus Aaa and Aa Avg			(0.0040)		0.0084	-0.0124
Aug-88	MKT Minus Aaa and Aa Avg			(0.0331)		0.0085	-0.0416
Sep-88	MKT Minus Aaa and Aa Avg			0.0424		0.0083	0.0341
Oct-88	MKT Minus Aaa and Aa Avg			0.0273		0.0080	0.0193
Nov-88	MKT Minus Aaa and Aa Avg			(0.0142)		0.0080	-0.0222
Dec-88	MKT Minus Aaa and Aa Avg			0.0181		0.0081	0.0100
Jan-89	MKT Minus Aaa and Aa Avg			0.0723		0.0081	0.0642
Feb-89	MKT Minus Aaa and Aa Avg			(0.0249)		0.0081	-0.0330
Mar-89	MKT Minus Aaa and Aa Avg			0.0236		0.0082	0.0154
Apr-89	MKT Minus Aaa and Aa Avg			0.0516		0.0082	0.0434
May-89	MKT Minus Aaa and Aa Avg			0.0402		0.0081	0.0322
Jun-89	MKT Minus Aaa and Aa Avg			(0.0054)		0.0077	-0.0131
Jul-89	MKT Minus Aaa and Aa Avg			0.0898		0.0075	0.0823
Aug-89	MKT Minus Aaa and Aa Avg			0.0193		0.0075	0.0118
Sep-89	MKT Minus Aaa and Aa Avg			(0.0039)		0.0076	-0.0115

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Oct-89	MKT Minus Aaa and Aa Avg			(0.0233)		0.0075	-0.0308
Nov-89	MKT Minus Aaa and Aa Avg			0.0208		0.0075	0.0133
Dec-89	MKT Minus Aaa and Aa Avg			0.0236		0.0075	0.0161
Jan-90	MKT Minus Aaa and Aa Avg			(0.0671)		0.0076	-0.0747
Feb-90	MKT Minus Aaa and Aa Avg			0.0129		0.0078	0.0051
Mar-90	MKT Minus Aaa and Aa Avg			0.0263		0.0079	0.0184
Apr-90	MKT Minus Aaa and Aa Avg			(0.0247)		0.0080	-0.0327
May-90	MKT Minus Aaa and Aa Avg			0.0975		0.0080	0.0895
Jun-90	MKT Minus Aaa and Aa Avg			(0.0070)		0.0078	-0.0148
Jul-90	MKT Minus Aaa and Aa Avg			(0.0032)		0.0078	-0.0110
Aug-90	MKT Minus Aaa and Aa Avg			(0.0903)		0.0079	-0.0982
Sep-90	MKT Minus Aaa and Aa Avg			(0.0492)		0.0081	-0.0573
Oct-90	MKT Minus Aaa and Aa Avg			(0.0037)		0.0080	-0.0117
Nov-90	MKT Minus Aaa and Aa Avg			0.0644		0.0079	0.0565
Dec-90	MKT Minus Aaa and Aa Avg			0.0274		0.0077	0.0197
Jan-91	MKT Minus Aaa and Aa Avg			0.0442		0.0077	0.0365
Feb-91	MKT Minus Aaa and Aa Avg			0.0716		0.0075	0.0641
Mar-91	MKT Minus Aaa and Aa Avg			0.0238		0.0076	0.0162
Apr-91	MKT Minus Aaa and Aa Avg			0.0028		0.0075	-0.0047
May-91	MKT Minus Aaa and Aa Avg			0.0428		0.0075	0.0353
Jun-91	MKT Minus Aaa and Aa Avg			(0.0457)		0.0076	-0.0533
Jul-91	MKT Minus Aaa and Aa Avg			0.0468		0.0076	0.0392
Aug-91	MKT Minus Aaa and Aa Avg			0.0235		0.0074	0.0161
Sep-91	MKT Minus Aaa and Aa Avg			(0.0164)		0.0073	-0.0237
Oct-91	MKT Minus Aaa and Aa Avg			0.0134		0.0072	0.0062
Nov-91	MKT Minus Aaa and Aa Avg			(0.0404)		0.0072	-0.0476
Dec-91	MKT Minus Aaa and Aa Avg			0.1143		0.0071	0.1073
Jan-92	MKT Minus Aaa and Aa Avg			(0.0186)		0.0070	-0.0256
Feb-92	MKT Minus Aaa and Aa Avg			0.0128		0.0071	0.0057
Mar-92	MKT Minus Aaa and Aa Avg			(0.0196)		0.0071	-0.0267
Apr-92	MKT Minus Aaa and Aa Avg			0.0291		0.0071	0.0220
May-92	MKT Minus Aaa and Aa Avg			0.0054		0.0070	-0.0016
Jun-92	MKT Minus Aaa and Aa Avg			(0.0145)		0.0070	-0.0215
Jul-92	MKT Minus Aaa and Aa Avg			0.0403		0.0069	0.0335
Aug-92	MKT Minus Aaa and Aa Avg			(0.0202)		0.0067	-0.0269
Sep-92	MKT Minus Aaa and Aa Avg			0.0115		0.0067	0.0048
Oct-92	MKT Minus Aaa and Aa Avg			0.0036		0.0068	-0.0032
Nov-92	MKT Minus Aaa and Aa Avg			0.0337		0.0069	0.0268
Dec-92	MKT Minus Aaa and Aa Avg			0.0131		0.0068	0.0063
Jan-93	MKT Minus Aaa and Aa Avg			0.0073		0.0067	0.0006
Feb-93	MKT Minus Aaa and Aa Avg			0.0135		0.0065	0.0070
Mar-93	MKT Minus Aaa and Aa Avg			0.0215		0.0064	0.0151
Apr-93	MKT Minus Aaa and Aa Avg			(0.0245)		0.0063	-0.0308
May-93	MKT Minus Aaa and Aa Avg			0.0270		0.0063	0.0207
Jun-93	MKT Minus Aaa and Aa Avg			0.0033		0.0062	-0.0029
Jul-93	MKT Minus Aaa and Aa Avg			(0.0047)		0.0061	-0.0108
Aug-93	MKT Minus Aaa and Aa Avg			0.0381		0.0058	0.0323
Sep-93	MKT Minus Aaa and Aa Avg			(0.0074)		0.0056	-0.0130
Oct-93	MKT Minus Aaa and Aa Avg			0.0203		0.0056	0.0147
Nov-93	MKT Minus Aaa and Aa Avg			(0.0094)		0.0059	-0.0153
Dec-93	MKT Minus Aaa and Aa Avg			0.0123		0.0059	0.0064

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa RP	
Jan-94	MKT Minus Aaa and Aa Avg			0.0335		0.0059	0.0277
Feb-94	MKT Minus Aaa and Aa Avg			(0.0270)		0.0060	-0.0330
Mar-94	MKT Minus Aaa and Aa Avg			(0.0435)		0.0060	-0.0495
Apr-94	MKT Minus Aaa and Aa Avg			0.0130		0.0063	0.0067
May-94	MKT Minus Aaa and Aa Avg			0.0163		0.0067	0.0096
Jun-94	MKT Minus Aaa and Aa Avg			(0.0247)		0.0067	-0.0314
Jul-94	MKT Minus Aaa and Aa Avg			0.0331		0.0068	0.0263
Aug-94	MKT Minus Aaa and Aa Avg			0.0407		0.0068	0.0339
Sep-94	MKT Minus Aaa and Aa Avg			(0.0241)		0.0070	-0.0311
Oct-94	MKT Minus Aaa and Aa Avg			0.0229		0.0072	0.0157
Nov-94	MKT Minus Aaa and Aa Avg			(0.0367)		0.0073	-0.0440
Dec-94	MKT Minus Aaa and Aa Avg			0.0146		0.0071	0.0075
Jan-95	MKT Minus Aaa and Aa Avg			0.0260		0.0071	0.0189
Feb-95	MKT Minus Aaa and Aa Avg			0.0388		0.0069	0.0319
Mar-95	MKT Minus Aaa and Aa Avg			0.0296		0.0068	0.0228
Apr-95	MKT Minus Aaa and Aa Avg			0.0291		0.0067	0.0224
May-95	MKT Minus Aaa and Aa Avg			0.0395		0.0064	0.0331
Jun-95	MKT Minus Aaa and Aa Avg			0.0235		0.0061	0.0174
Jul-95	MKT Minus Aaa and Aa Avg			0.0333		0.0062	0.0271
Aug-95	MKT Minus Aaa and Aa Avg			0.0027		0.0064	-0.0037
Sep-95	MKT Minus Aaa and Aa Avg			0.0419		0.0062	0.0357
Oct-95	MKT Minus Aaa and Aa Avg			(0.0035)		0.0060	-0.0095
Nov-95	MKT Minus Aaa and Aa Avg			0.0440		0.0059	0.0381
Dec-95	MKT Minus Aaa and Aa Avg			0.0185		0.0058	0.0127
Jan-96	MKT Minus Aaa and Aa Avg			0.0344		0.0058	0.0287
Feb-96	MKT Minus Aaa and Aa Avg			0.0096		0.0059	0.0037
Mar-96	MKT Minus Aaa and Aa Avg			0.0096		0.0062	0.0034
Apr-96	MKT Minus Aaa and Aa Avg			0.0147		0.0063	0.0084
May-96	MKT Minus Aaa and Aa Avg			0.0258		0.0064	0.0194
Jun-96	MKT Minus Aaa and Aa Avg			0.0041		0.0065	-0.0024
Jul-96	MKT Minus Aaa and Aa Avg			(0.0445)		0.0064	-0.0509
Aug-96	MKT Minus Aaa and Aa Avg			0.0212		0.0063	0.0149
Sep-96	MKT Minus Aaa and Aa Avg			0.0562		0.0065	0.0498
Oct-96	MKT Minus Aaa and Aa Avg			0.0274		0.0062	0.0212
Nov-96	MKT Minus Aaa and Aa Avg			0.0759		0.0060	0.0699
Dec-96	MKT Minus Aaa and Aa Avg			(0.0196)		0.0061	-0.0257
Jan-97	MKT Minus Aaa and Aa Avg			0.0621		0.0063	0.0558
Feb-97	MKT Minus Aaa and Aa Avg			0.0081		0.0062	0.0019
Mar-97	MKT Minus Aaa and Aa Avg			(0.0416)		0.0064	-0.0480
Apr-97	MKT Minus Aaa and Aa Avg			0.0597		0.0065	0.0532
May-97	MKT Minus Aaa and Aa Avg			0.0614		0.0064	0.0550
Jun-97	MKT Minus Aaa and Aa Avg			0.0446		0.0063	0.0383
Jul-97	MKT Minus Aaa and Aa Avg			0.0794		0.0060	0.0734
Aug-97	MKT Minus Aaa and Aa Avg			(0.0556)		0.0061	-0.0617
Sep-97	MKT Minus Aaa and Aa Avg			0.0548		0.0060	0.0488
Oct-97	MKT Minus Aaa and Aa Avg			(0.0334)		0.0059	-0.0393
Nov-97	MKT Minus Aaa and Aa Avg			0.0463		0.0058	0.0405
Dec-97	MKT Minus Aaa and Aa Avg			0.0172		0.0057	0.0115
Jan-98	MKT Minus Aaa and Aa Avg			0.0111		0.0056	0.0055
Feb-98	MKT Minus Aaa and Aa Avg			0.0721		0.0056	0.0665
Mar-98	MKT Minus Aaa and Aa Avg			0.0512		0.0057	0.0455

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Apr-98	MKT Minus Aaa and Aa Avg			0.0101		0.0057	0.0044
May-98	MKT Minus Aaa and Aa Avg			(0.0172)		0.0057	-0.0229
Jun-98	MKT Minus Aaa and Aa Avg			0.0406		0.0055	0.0351
Jul-98	MKT Minus Aaa and Aa Avg			(0.0106)		0.0056	-0.0162
Aug-98	MKT Minus Aaa and Aa Avg			(0.1446)		0.0055	-0.1501
Sep-98	MKT Minus Aaa and Aa Avg			0.0641		0.0055	0.0587
Oct-98	MKT Minus Aaa and Aa Avg			0.0813		0.0054	0.0759
Nov-98	MKT Minus Aaa and Aa Avg			0.0606		0.0055	0.0551
Dec-98	MKT Minus Aaa and Aa Avg			0.0576		0.0054	0.0522
Jan-99	MKT Minus Aaa and Aa Avg			0.0418		0.0054	0.0364
Feb-99	MKT Minus Aaa and Aa Avg			(0.0311)		0.0055	-0.0366
Mar-99	MKT Minus Aaa and Aa Avg			0.0400		0.0057	0.0343
Apr-99	MKT Minus Aaa and Aa Avg			0.0387		0.0057	0.0330
May-99	MKT Minus Aaa and Aa Avg			(0.0236)		0.0059	-0.0295
Jun-99	MKT Minus Aaa and Aa Avg			0.0555		0.0061	0.0494
Jul-99	MKT Minus Aaa and Aa Avg			(0.0312)		0.0061	-0.0373
Aug-99	MKT Minus Aaa and Aa Avg			(0.0050)		0.0063	-0.0113
Sep-99	MKT Minus Aaa and Aa Avg			(0.0274)		0.0063	-0.0337
Oct-99	MKT Minus Aaa and Aa Avg			0.0633		0.0064	0.0569
Nov-99	MKT Minus Aaa and Aa Avg			0.0203		0.0062	0.0141
Dec-99	MKT Minus Aaa and Aa Avg			0.0589		0.0064	0.0525
Jan-00	MKT Minus Aaa and Aa Avg			(0.0502)		0.0066	-0.0568
Feb-00	MKT Minus Aaa and Aa Avg			(0.0189)		0.0065	-0.0254
Mar-00	MKT Minus Aaa and Aa Avg			0.0978		0.0065	0.0913
Apr-00	MKT Minus Aaa and Aa Avg			(0.0301)		0.0064	-0.0365
May-00	MKT Minus Aaa and Aa Avg			(0.0205)		0.0068	-0.0273
Jun-00	MKT Minus Aaa and Aa Avg			0.0246		0.0065	0.0181
Jul-00	MKT Minus Aaa and Aa Avg			(0.0156)		0.0064	-0.0220
Aug-00	MKT Minus Aaa and Aa Avg			0.0621		0.0064	0.0557
Sep-00	MKT Minus Aaa and Aa Avg			(0.0528)		0.0064	-0.0592
Oct-00	MKT Minus Aaa and Aa Avg			(0.0042)		0.0064	-0.0106
Nov-00	MKT Minus Aaa and Aa Avg			(0.0788)		0.0063	-0.0851
Dec-00	MKT Minus Aaa and Aa Avg			0.0049		0.0061	-0.0012
Jan-01	MKT Minus Aaa and Aa Avg			0.0355		0.0061	0.0294
Feb-01	MKT Minus Aaa and Aa Avg			(0.0912)		0.0060	-0.0972
Mar-01	MKT Minus Aaa and Aa Avg			(0.0634)		0.0059	-0.0693
Apr-01	MKT Minus Aaa and Aa Avg			0.0777		0.0061	0.0716
May-01	MKT Minus Aaa and Aa Avg			0.0067		0.0062	0.0005
Jun-01	MKT Minus Aaa and Aa Avg			(0.0243)		0.0061	-0.0304
Jul-01	MKT Minus Aaa and Aa Avg			(0.0098)		0.0060	-0.0158
Aug-01	MKT Minus Aaa and Aa Avg			(0.0626)		0.0060	-0.0686
Sep-01	MKT Minus Aaa and Aa Avg			(0.0808)		0.0060	-0.0868
Oct-01	MKT Minus Aaa and Aa Avg			0.0191		0.0059	0.0132
Nov-01	MKT Minus Aaa and Aa Avg			0.0767		0.0058	0.0709
Dec-01	MKT Minus Aaa and Aa Avg			0.0088		0.0058	0.0030
Jan-02	MKT Minus Aaa and Aa Avg			(0.0146)		0.0057	-0.0203
Feb-02	MKT Minus Aaa and Aa Avg			(0.0193)		0.0056	-0.0249
Mar-02	MKT Minus Aaa and Aa Avg			0.0376		0.0058	0.0318
Apr-02	MKT Minus Aaa and Aa Avg			(0.0606)		0.0058	-0.0664
May-02	MKT Minus Aaa and Aa Avg			(0.0074)		0.0058	-0.0132
Jun-02	MKT Minus Aaa and Aa Avg			(0.0712)		0.0057	-0.0769

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jul-02	MKT Minus Aaa and Aa Avg			(0.0780)		0.0056	-0.0836
Aug-02	MKT Minus Aaa and Aa Avg			0.0066		0.0055	0.0011
Sep-02	MKT Minus Aaa and Aa Avg			(0.1087)		0.0053	-0.1140
Oct-02	MKT Minus Aaa and Aa Avg			0.0880		0.0054	0.0826
Nov-02	MKT Minus Aaa and Aa Avg			0.0589		0.0054	0.0535
Dec-02	MKT Minus Aaa and Aa Avg			(0.0588)		0.0054	-0.0642
Jan-03	MKT Minus Aaa and Aa Avg			(0.0262)		0.0053	-0.0315
Feb-03	MKT Minus Aaa and Aa Avg			(0.0150)		0.0051	-0.0201
Mar-03	MKT Minus Aaa and Aa Avg			0.0097		0.0051	0.0046
Apr-03	MKT Minus Aaa and Aa Avg			0.0824		0.0050	0.0774
May-03	MKT Minus Aaa and Aa Avg			0.0527		0.0046	0.0481
Jun-03	MKT Minus Aaa and Aa Avg			0.0128		0.0045	0.0083
Jul-03	MKT Minus Aaa and Aa Avg			0.0176		0.0048	0.0128
Aug-03	MKT Minus Aaa and Aa Avg			0.0195		0.0051	0.0144
Sep-03	MKT Minus Aaa and Aa Avg			(0.0106)		0.0049	-0.0155
Oct-03	MKT Minus Aaa and Aa Avg			0.0566		0.0049	0.0517
Nov-03	MKT Minus Aaa and Aa Avg			0.0088		0.0049	0.0039
Dec-03	MKT Minus Aaa and Aa Avg			0.0524		0.0049	0.0475
Jan-04	MKT Minus Aaa and Aa Avg			0.0184		0.0048	0.0136
Feb-04	MKT Minus Aaa and Aa Avg			0.0139		0.0047	0.0092
Mar-04	MKT Minus Aaa and Aa Avg			(0.0151)		0.0046	-0.0197
Apr-04	MKT Minus Aaa and Aa Avg			(0.0157)		0.0049	-0.0206
May-04	MKT Minus Aaa and Aa Avg			0.0137		0.0052	0.0085
Jun-04	MKT Minus Aaa and Aa Avg			0.0194		0.0051	0.0143
Jul-04	MKT Minus Aaa and Aa Avg			(0.0331)		0.0049	-0.0380
Aug-04	MKT Minus Aaa and Aa Avg			0.0040		0.0048	-0.0008
Sep-04	MKT Minus Aaa and Aa Avg			0.0108		0.0047	0.0061
Oct-04	MKT Minus Aaa and Aa Avg			0.0153		0.0047	0.0107
Nov-04	MKT Minus Aaa and Aa Avg			0.0405		0.0047	0.0358
Dec-04	MKT Minus Aaa and Aa Avg			0.0340		0.0047	0.0294
Jan-05	MKT Minus Aaa and Aa Avg			(0.0244)		0.0046	-0.0290
Feb-05	MKT Minus Aaa and Aa Avg			0.0210		0.0044	0.0166
Mar-05	MKT Minus Aaa and Aa Avg			(0.0177)		0.0046	-0.0223
Apr-05	MKT Minus Aaa and Aa Avg			(0.0190)		0.0045	-0.0235
May-05	MKT Minus Aaa and Aa Avg			0.0318		0.0044	0.0275
Jun-05	MKT Minus Aaa and Aa Avg			0.0014		0.0042	-0.0028
Jul-05	MKT Minus Aaa and Aa Avg			0.0372		0.0043	0.0330
Aug-05	MKT Minus Aaa and Aa Avg			(0.0091)		0.0043	-0.0134
Sep-05	MKT Minus Aaa and Aa Avg			0.0081		0.0043	0.0038
Oct-05	MKT Minus Aaa and Aa Avg			(0.0167)		0.0045	-0.0212
Nov-05	MKT Minus Aaa and Aa Avg			0.0378		0.0046	0.0332
Dec-05	MKT Minus Aaa and Aa Avg			0.0003		0.0045	-0.0042
Jan-06	MKT Minus Aaa and Aa Avg			0.0265		0.0045	0.0220
Feb-06	MKT Minus Aaa and Aa Avg			0.0027		0.0045	-0.0018
Mar-06	MKT Minus Aaa and Aa Avg			0.0124		0.0047	0.0077
Apr-06	MKT Minus Aaa and Aa Avg			0.0134		0.0049	0.0085
May-06	MKT Minus Aaa and Aa Avg			(0.0288)		0.0050	-0.0338
Jun-06	MKT Minus Aaa and Aa Avg			0.0014		0.0050	-0.0036
Jul-06	MKT Minus Aaa and Aa Avg			0.0062		0.0050	0.0012
Aug-06	MKT Minus Aaa and Aa Avg			0.0238		0.0048	0.0190
Sep-06	MKT Minus Aaa and Aa Avg			0.0258		0.0047	0.0211

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Oct-06	MKT Minus Aaa and Aa Avg			0.0326		0.0047	0.0279
Nov-06	MKT Minus Aaa and Aa Avg			0.0190		0.0045	0.0145
Dec-06	MKT Minus Aaa and Aa Avg			0.0140		0.0045	0.0095
Jan-07	MKT Minus Aaa and Aa Avg			0.0151		0.0046	0.0105
Feb-07	MKT Minus Aaa and Aa Avg			(0.0196)		0.0046	-0.0242
Mar-07	MKT Minus Aaa and Aa Avg			0.0112		0.0046	0.0066
Apr-07	MKT Minus Aaa and Aa Avg			0.0443		0.0047	0.0396
May-07	MKT Minus Aaa and Aa Avg			0.0349		0.0047	0.0302
Jun-07	MKT Minus Aaa and Aa Avg			(0.0166)		0.0028	-0.0194
Jul-07	MKT Minus Aaa and Aa Avg			(0.0310)		0.0049	-0.0359
Aug-07	MKT Minus Aaa and Aa Avg			0.0150		0.0049	0.0101
Sep-07	MKT Minus Aaa and Aa Avg			0.0375		0.0049	0.0326
Oct-07	MKT Minus Aaa and Aa Avg			0.0159		0.0048	0.0111
Nov-07	MKT Minus Aaa and Aa Avg			(0.0418)		0.0047	-0.0465
Dec-07	MKT Minus Aaa and Aa Avg			(0.0069)		0.0048	-0.0117
Jan-08	MKT Minus Aaa and Aa Avg			(0.0600)		0.0046	-0.0646
Feb-08	MKT Minus Aaa and Aa Avg			(0.0352)		0.0048	-0.0400
Mar-08	MKT Minus Aaa and Aa Avg			(0.0043)		0.0048	-0.0091
Apr-08	MKT Minus Aaa and Aa Avg			0.0487		0.0048	0.0439
May-08	MKT Minus Aaa and Aa Avg			0.0130		0.0048	0.0082
Jun-08	MKT Minus Aaa and Aa Avg			(0.0843)		0.0049	-0.0892
Jul-08	MKT Minus Aaa and Aa Avg			(0.0084)		0.0049	-0.0133
Aug-08	MKT Minus Aaa and Aa Avg			0.0145		0.0049	0.0096
Sep-08	MKT Minus Aaa and Aa Avg			(0.0891)		0.0049	-0.0940
Oct-08	MKT Minus Aaa and Aa Avg			(0.1679)		0.0054	-0.1733
Nov-08	MKT Minus Aaa and Aa Avg			(0.0718)		0.0054	-0.0772
Dec-08	MKT Minus Aaa and Aa Avg			0.0106		0.0045	0.0061
Jan-09	MKT Minus Aaa and Aa Avg			(0.0843)		0.0045	-0.0888
Feb-09	MKT Minus Aaa and Aa Avg			(0.1065)		0.0047	-0.1112
Mar-09	MKT Minus Aaa and Aa Avg			0.0876		0.0048	0.0828
Apr-09	MKT Minus Aaa and Aa Avg			0.0957		0.0048	0.0909
May-09	MKT Minus Aaa and Aa Avg			0.0559		0.0049	0.0510
Jun-09	MKT Minus Aaa and Aa Avg			0.0020		0.0049	-0.0029
Jul-09	MKT Minus Aaa and Aa Avg			0.0756		0.0046	0.0710
Aug-09	MKT Minus Aaa and Aa Avg			0.0361		0.0045	0.0316
Sep-09	MKT Minus Aaa and Aa Avg			0.0373		0.0043	0.0330
Oct-09	MKT Minus Aaa and Aa Avg			(0.0186)		0.0043	-0.0229
Nov-09	MKT Minus Aaa and Aa Avg			0.0600		0.0044	0.0556
Dec-09	MKT Minus Aaa and Aa Avg			0.0193		0.0045	0.0148
Jan-10	MKT Minus Aaa and Aa Avg			(0.0360)		0.0045	-0.0405
Feb-10	MKT Minus Aaa and Aa Avg			0.0310		0.0046	0.0264
Mar-10	MKT Minus Aaa and Aa Avg			0.0603		0.0045	0.0558
Apr-10	MKT Minus Aaa and Aa Avg			0.0158		0.0045	0.0113
May-10	MKT Minus Aaa and Aa Avg			(0.0799)		0.0043	-0.0842
Jun-10	MKT Minus Aaa and Aa Avg			(0.0523)		0.0042	-0.0565
Jul-10	MKT Minus Aaa and Aa Avg			0.0707		0.0040	0.0667
Aug-10	MKT Minus Aaa and Aa Avg			(0.0451)		0.0038	-0.0489
Sep-10	MKT Minus Aaa and Aa Avg			0.0892		0.0039	0.0853
Oct-10	MKT Minus Aaa and Aa Avg			0.0380		0.0040	0.0340
Nov-10	MKT Minus Aaa and Aa Avg			0.0001		0.0041	-0.0040
Dec-10	MKT Minus Aaa and Aa Avg			0.0668		0.0043	0.0625

Trading Date	Company Name	Ticker	Closing Price	Total Return	Dividend Amount	Aaa and Aa	RP
Jan-11	MKT Minus Aaa and Aa Avg			0.0237		0.0043	0.0194
Feb-11	MKT Minus Aaa and Aa Avg			0.0343		0.0044	0.0299
Mar-11	MKT Minus Aaa and Aa Avg			0.0004		0.0043	-0.0039
Apr-11	MKT Minus Aaa and Aa Avg			0.0296		0.0044	0.0252
May-11	MKT Minus Aaa and Aa Avg			(0.0113)		0.0042	-0.0155
Jun-11	MKT Minus Aaa and Aa Avg			(0.0167)		0.0042	-0.0209
Jul-11	MKT Minus Aaa and Aa Avg			(0.0203)		0.0042	-0.0245
Aug-11	MKT Minus Aaa and Aa Avg			(0.0543)		0.0037	-0.0580
Sep-11	MKT Minus Aaa and Aa Avg			(0.0703)		0.0035	-0.0738
Oct-11	MKT Minus Aaa and Aa Avg			0.1093		0.0034	0.1059
Nov-11	MKT Minus Aaa and Aa Avg			(0.0022)		0.0033	-0.0055
Dec-11	MKT Minus Aaa and Aa Avg			0.0102		0.0033	0.0069
Jan-12	MKT Minus Aaa and Aa Avg			0.0448		0.0033	0.0415
Feb-12	MKT Minus Aaa and Aa Avg			0.0432		0.0033	0.0399
Mar-12	MKT Minus Aaa and Aa Avg			0.0329		0.0034	0.0295
Apr-12	MKT Minus Aaa and Aa Avg			(0.0063)		0.0034	-0.0097
May-12	MKT Minus Aaa and Aa Avg			(0.0601)		0.0032	-0.0633
Jun-12	MKT Minus Aaa and Aa Avg			0.0412		0.0031	0.0381
Jul-12	MKT Minus Aaa and Aa Avg			0.0139		0.002892	0.0110
Aug-12	MKT Minus Aaa and Aa Avg			0.0225		0.002954	0.0195
Sep-12	MKT Minus Aaa and Aa Avg			0.0258		0.002988	0.0228
Oct-12	MKT Minus Aaa and Aa Avg			(0.0185)		0.002958	-0.0215
Nov-12	MKT Minus Aaa and Aa Avg			0.0058		0.002946	0.0029
Dec-12	MKT Minus Aaa and Aa Avg			0.0091		0.003063	0.0060
Jan-13	MKT Minus Aaa and Aa Avg			0.0518		0.003196	0.0486
Feb-13	MKT Minus Aaa and Aa Avg			0.0136		0.003271	0.0103
Mar-13	MKT Minus Aaa and Aa Avg			0.0375		0.003196	0.0343
Apr-13	MKT Minus Aaa and Aa Avg			0.0193		0.003125	0.0162
May-13	MKT Minus Aaa and Aa Avg			0.0234		0.003263	0.0201
Jun-13	MKT Minus Aaa and Aa Avg			(0.0134)		0.003579	-0.0170
Jul-13	MKT Minus Aaa and Aa Avg			0.0509		0.003667	0.0472
Aug-13	MKT Minus Aaa and Aa Avg			(0.0290)		0.003821	-0.0328
Sep-13	MKT Minus Aaa and Aa Avg			0.0314		0.003888	0.0275
Oct-13	MKT Minus Aaa and Aa Avg			0.0460		0.0038	0.0422
Nov-13	MKT Minus Aaa and Aa Avg			0.0305		0.003875	0.0266
Dec-13	MKT Minus Aaa and Aa Avg			0.0253		0.003875	0.0214
Jan-14	MKT Minus Aaa and Aa Avg			(0.0346)		0.003758	-0.0384
Feb-14	MKT Minus Aaa and Aa Avg			0.0457		0.003713	0.0420

Capital Structures
5/31/2024

	Bluegrass	Confluence Rivers
Notes Payable	2,784,081	6,717,069
Total Long Term Debt	2,784,081	6,717,069
Payable to Associated Companies	10,220,135	30,239,847
Paid-In Capital	4,585,948	12,632,535
Retained Earnings	(3,082,576)	(6,217,222)
Total Equity	11,723,507	36,655,159
Debt %	**19.19%**	**15.49%**
Equity %	**80.81%**	**84.51%**

Great River	Magnolia
19,849,000	47,454,932
19,849,000	47,454,932
18,767,444	91,072,623
67,596,311	102,848,554
(5,177,605)	(4,869,746)
81,186,150	189,051,431
19.65%	**20.06%**
80.35%	**79.94%**

Ticker
AWR

		FYE: 12/31/2022	2023
Capital Structure:			
Long Term Debt		LTDEBT	575,908,000.00
Preferred Stock		PFD	0.000
Common Shares Outst.		Input Data	36,980,612.000
Common Equity		TOTEQ	776,109,000.000
Sinking Fund Requirements		Input Data	0.000
Short Term Debt		STDEBT	333,500,000.000
EPS excluding extra		EPSAPPCOMM	3.360
Price - High		Bloomberg	98.76
Price - Low		Bloomberg	76.39
DPS by payable date		Bloomberg	1.655
AFUDC		AFUDC	14,000.000
Total Interest		INTEXP	42,762,000.000
Net Income before Extra.		NETINC	124,921,000.000
CE Income before Extra.		INCAVAILCOMM	124,921,000.000
Preferred Stock Dividends		PFDDIV	0.000
Common Dividends		COMDIVS1	61,195,000.000
Income Bef Extra Items-S&U		INCBEFEXT	124,921,000.000
Net Operating Cash Flow		NETOPGFC	67,683,000.000
Change in op'g Assets + Liabilities		CHGOPASLIAB	-104,786,000.000
Depreciation & Amortization		DEPAMORT	43,254,000.000
Income Tax Expense		INCTAX	41,599,000.000
Calculations			
Com Eq / Shares Out.		calc	20.987
Total Permanent Capital		calc	1,352,017,000.000
Average Price		calc	87.575
Total Debt			909,408,000.000

Total Capital	calc	1,685,517,000.000
Preferred Stk + Sink Fund Req.	calc	0.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	-37,117,000.000
EBITDA	calc	252,536,000.000

Amer. States Water
CAPITALIZATION AND FINANCIAL ST
2018 - 2023, Inclusive

2022	2021	2020	2019
446,946,000.00	412,553,000.00	440,706,000.00	281,340,000.00
0.000	0.000	0.000	0.000
36,962,241.000	36,936,285.000	36,889,103.000	36,846,614.000
709,549,000.000	685,947,000.000	641,673,000.000	601,530,000.000
0.000	0.000	0.000	0.000
277,500,000.000	174,500,000.000	134,200,000.000	200,000,000.000
2.110	2.550	2.330	2.280
102.80	103.44	93.85	95.13
71.43	70.64	65.41	63.35
1.590	1.400	1.280	1.160
106,000.000	216,000.000	200,000.000	0.000
27,027,000.000	22,834,000.000	22,531,000.000	24,586,000.000
78,396,000.000	94,347,000.000	86,425,000.000	84,342,000.000
78,396,000.000	94,347,000.000	86,425,000.000	84,342,000.000
0.000	0.000	0.000	0.000
56,356,000.000	51,689,000.000	47,206,000.000	42,702,000.000
78,396,000.000	94,347,000.000	86,425,000.000	84,342,000.000
117,799,000.000	115,584,000.000	122,170,000.000	116,864,000.000
-13,926,000.000	-21,315,000.000	-3,697,000.000	-9,632,000.000
41,697,000.000	39,596,000.000	36,850,000.000	35,397,000.000
23,664,000.000	30,423,000.000	28,197,000.000	24,670,000.000
19.197	18.571	17.395	16.325
1,156,495,000.000	1,098,500,000.000	1,082,379,000.000	882,870,000.000
87.115	87.040	79.630	79.240
724,446,000.000	587,053,000.000	574,906,000.000	481,340,000.000

1,433,995,000.000	1,273,000,000.000	1,216,579,000.000	1,082,870,000.000
0.000	0.000	0.000	0.000
103,767,000.000	94,053,000.000	118,273,000.000	107,232,000.000
170,784,000.000	187,200,000.000	174,003,000.000	168,995,000.000

2018	
321,407,000.000	
0.000	
	CAPITALIZATION STATISTICS
36,757,842.000	
558,223,000.000	AMOUNT OF CAPITAL EMPLOYED
0.000	TOTAL PERMANENT CAPITAL
	SHORT-TERM DEBT
95,500,000.000	TOTAL CAPITAL EMPLOYED
1.720	INDICATED AVERAGE CAPITAL COST RATES (2)
69.19	TOTAL DEBT
50.34	PREFERRED STOCK
	CAPITAL STRUCTURE RATIOS
1.060	BASED ON TOTAL PERMANENT CAPITAL:
	LONG-TERM DEBT
156,000.000	PREFERRED STOCK
	COMMON EQUITY
23,433,000.000	TOTAL
63,871,000.000	BASED ON TOTAL CAPITAL:
	TOTAL DEBT, INCLUDING SHORT-TERM
63,871,000.000	PREFERRED STOCK
	COMMON EQUITY
0.000	TOTAL
38,937,000.000	
63,871,000.000	FINANCIAL STATISTICS
136,774,000.000	
32,751,000.000	FINANCIAL RATIOS - MARKET BASED
40,425,000.000	EARNINGS / PRICE RATIO
18,017,000.000	MARKET / AVERAGE BOOK RATIO
	DIVIDEND YIELD
	DIVIDEND PAYOUT RATIO
15.187	RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY
879,630,000.000	TOTAL DEBT / EBITDA (3)
59.765	FUNDS FROM OPERATIONS / TOTAL DEBT (4)
416,907,000.000	TOTAL DEBT / TOTAL CAPITAL

975,130,000.000

0.000

169,369,000.000

145,746,000.000

Amer. States Water

ZATION AND FINANCIAL STATISTICS (1)

2018 - 2023, Inclusive

2023	2022	2021	2020	2019	
			(MILLIONS OF DOLLARS)		
$1,352.017	$1,156.495	$1,098.500	$1,082.379	$882.870	
$333.500	$277.500	$174.500	$134.200	$200.000	
$1,685.517	$1,433.995	$1,273.000	$1,216.579	$1,082.870	
5.23 %	4.12 %	3.93 %	4.27 %	5.47 %	
					5 YEAR AVERAGE
42.60 %	38.65 %	37.56 %	40.72 %	31.87 %	38.28 %
0.00	0.00	0.00	0.00	0.00	0.00
57.40	61.35	62.44	59.28	68.13	61.72
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
53.95 %	50.52 %	46.12 %	47.26 %	44.45 %	48.46 %
0.00	0.00	0.00	0.00	0.00	0.00
46.05	49.48	53.88	52.74	55.55	51.54
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
3.84 %	2.42 %	2.93 %	2.93 %	2.88 %	3.00 %
435.88	461.32	484.02	472.30	502.92	471.29
1.89	1.83	1.61	1.61	1.46	1.68
48.99	71.89	54.79	54.62	50.63	56.18
16.82 %	11.24 %	14.21 %	13.90 %	14.54 %	14.14 %
3.60 x	4.24 x	3.14 x	3.30 x	2.85 x	3.43 x
-4.08 %	14.32 %	16.02 %	20.57 %	22.28 %	13.82 %
53.95 %	50.52 %	46.12 %	47.26 %	44.45 %	48.46 %

SEE PAGE 2 FOR NOTES.

Ticker
AWK

	FYE: 12/31/2022	2023
Capital Structure:		
Long Term Debt	LTDEBT	12,190,000,000.00
Preferred Stock	PFD	3,000,000.00
Common Shares Outst.	Input Data	200,144,968
Common Equity	TOTEQ	9,797,000,000
Sinking Fund Requirements	Input Data	
Short Term Debt	STDEBT	179,000,000
EPS excluding extra	EPSAPPCOMM	4.9
Price - High	Bloomberg	161.42
Price - Low	Bloomberg	115.5
DPS by payable date	Bloomberg	2.83
AFUDC	AFUDC	65,000,000
Total Interest	INTEXP	460,000,000
Net Income before Extra.	NETINC	944,000,000
CE Income before Extra.	INCAVAILCOMM	944,000,000
Preferred Stock Dividends	PFDDIV	0
Common Dividends	COMDIVS1	532,000,000
Income Bef Extra Items-S&U	INCBEFEXT	944,000,000
Net Operating Cash Flow	NETOPGFC	1,874,000,000
Change in op'g Assets + Liabilities	CHGOPASLIAB	48,000,000
Depreciation & Amortization	DEPAMORT	704,000,000
Income Tax Expense	INCTAX	252,000,000
Calculations		
Com Eq / Shares Out.	calc	48.950
Total Permanent Capital	calc	21,990,000,000.000
Average Price	calc	138.460

Total Debt		12,369,000,000.000
Total Capital	calc	22,169,000,000.000
Preferred Stk + Sink Fund Req.	calc	3,000,000.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	1,857,000,000.000
EBITDA	calc	2,360,000,000.000

Amer. Water Works

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2022	2021	2020	2019
11,207,000,000.00	10,398,000,000.000	9,658,000,000.000	8,667,000,000.000
3,000,000.00	3,000,000.000	4,000,000.000	5,000,000.000
187,200,539	181,611,089.000	181,298,492.000	180,812,872.000
7,693,000,000	7,298,000,000.000	6,454,000,000.000	6,121,000,000.000
1,175,000,000	584,000,000.000	1,282,000,000.000	786,000,000.000
4.51	6.950	3.910	3.430
184.14	188.86	165.550	129.500
126.01	132.13	97.070	88.770
2.62	2.410	2.200	2.000
34,000,000	37,000,000.000	43,000,000.000	41,000,000.000
381,000,000	399,000,000.000	395,000,000.000	382,000,000.000
820,000,000	1,263,000,000.000	709,000,000.000	621,000,000.000
820,000,000	1,263,000,000.000	709,000,000.000	621,000,000.000
0	0.000	0.000	0.000
467,000,000	428,000,000.000	389,000,000.000	353,000,000.000
820,000,000	1,263,000,000.000	709,000,000.000	621,000,000.000
1,108,000,000	1,441,000,000.000	1,426,000,000.000	1,383,000,000.000
-178,000,000	86,000,000.000	-94,000,000.000	-66,000,000.000
649,000,000	636,000,000.000	604,000,000.000	582,000,000.000
188,000,000	377,000,000.000	215,000,000.000	212,000,000.000
41.095	40.185	35.599	33.853
18,903,000,000.000	17,699,000,000.000	16,116,000,000.000	14,793,000,000.000
155.075	160.495	131.310	109.135

12,382,000,000.000	10,982,000,000.000	10,940,000,000.000	9,453,000,000.000
20,078,000,000.000	18,283,000,000.000	17,398,000,000.000	15,579,000,000.000
3,000,000.000	3,000,000.000	4,000,000.000	5,000,000.000
896,000,000.000	1,490,000,000.000	1,289,000,000.000	1,276,000,000.000
2,038,000,000.000	2,675,000,000.000	1,923,000,000.000	1,797,000,000.000

2018	
7,640,000,000.000	
7,000,000.000	
	CAPITALIZATION STATISTICS
180,684,002.000	
5,864,000,000.000	AMOUNT OF CAPITAL EMPLOYED
	TOTAL PERMANENT CAPITAL
	SHORT-TERM DEBT
964,000,000.000	TOTAL CAPITAL EMPLOYED
3.150	INDICATED AVERAGE CAPITAL COST RATES (2)
97.800	TOTAL DEBT
76.060	PREFERRED STOCK
	CAPITAL STRUCTURE RATIOS
1.820	BASED ON TOTAL PERMANENT CAPITAL:
	LONG-TERM DEBT
37,000,000.000	PREFERRED STOCK
	COMMON EQUITY
350,000,000.000	TOTAL
565,000,000.000	BASED ON TOTAL CAPITAL:
	TOTAL DEBT, INCLUDING SHORT-TERM
567,000,000.000	PREFERRED STOCK
	COMMON EQUITY
0.000	TOTAL
319,000,000.000	
565,000,000.000	FINANCIAL STATISTICS
1,386,000,000.000	
-32,000,000.000	FINANCIAL RATIOS - MARKET BASED
545,000,000.000	EARNINGS / PRICE RATIO
222,000,000.000	MARKET / AVERAGE BOOK RATIO
	DIVIDEND YIELD
	DIVIDEND PAYOUT RATIO
32.454	RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY
13,511,000,000.000	TOTAL DEBT / EBITDA (3)
86.930	FUNDS FROM OPERATIONS / TOTAL DEBT (4)

8,604,000,000.000	TOTAL DEBT / TOTAL CAPITAL
14,475,000,000.000	
7,000,000.000	
1,317,000,000.000	
1,682,000,000.000	

Amer. Water Works

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2023	2022	2021	2020	2019
			(MILLIONS OF DOLLARS)	
$21,990.000	$18,903.000	$17,699.000	$16,116.000	$14,793.000
$179.000	$1,175.000	$584.000	$1,282.000	$786.000
$22,169.000	$20,078.000	$18,283.000	$17,398.000	$15,579.000
3.72 %	3.26 %	3.64 %	3.87 %	4.23
55.44 %	59.29 %	58.75 %	59.93 %	58.59
0.01	0.01	0.02	0.02	0.03
44.55	40.70	41.23	40.05	41.38
100.00 %	100.00 %	100.00 %	100.00 %	100.00
55.80 %	61.67 %	60.07 %	62.88 %	60.68
0.01	0.01	0.01	0.02	0.03
44.19	38.32	39.92	37.10	39.29
100.00 %	100.00 %	100.00 %	100.00 %	100.00
3.54 %	2.91 %	4.33 %	2.98 %	3.14
307.54	381.58	423.56	378.13	329.18
2.04	1.69	1.50	1.68	1.83
56.36	56.95	33.89	54.87	56.84
10.79 %	10.94 %	18.37 %	11.28 %	10.36
5.24 x	6.08 x	4.11 x	5.69 x	5.26
15.01 %	7.24 %	13.57 %	11.78 %	13.50

55.80 %	61.67 %	60.07 %	62.88 %	60.68

%		
	5 YEAR AVERAGE	
%	58.40	%
	0.02	
	41.58	
%	100.00	%
%	60.22	%
	0.02	
	39.76	
%	100.00	%
%	3.38	%
	364.00	
	1.75	
	51.78	
%	12.35	%
x	5.28	x
%	12.22	%

% 60.22 %

SEE PAGE 2 FOR NOTES.

Ticker
CWT

	FYE: 12/31/2023	2023
Capital Structure:		
Long Term Debt	LTDEBT	1,053,440,000.000
Preferred Stock	PFD	0.000
Common Shares Outst.	Input Data	57,724,000.000
Common Equity	TOTEQ	1,430,312,000.000
Sinking Fund Requirements	Input Data	0.000
Short Term Debt	STDEBT	180,000,000.00
EPS excluding extra	EPSAPPCOMM	0.910
Price - High	Bloomberg	63.920
Price - Low	Bloomberg	46.280
DPS by payable date	Bloomberg	1.040
AFUDC	AFUDC	2,561,000.000
Total Interest	INTEXP	52,809,000.000
Net Income before Extra.	NETINC	51,376,000.000
CE Income before Extra.	INCAVAILCOMM	51,911,000.000
Preferred Stock Dividends	PFDDIV	0.000
Common Dividends	COMDIVS1	59,036,000.000
Income Bef Extra Items-S&U	INCBEFEXT	51,376,000.000
Net Operating Cash Flow	NETOPGFC	217,817,000.00
Change in op'g Assets + Liabilities	CHGOPASLIAB	15,441,000.00
Depreciation & Amortization	DEPAMORT	121,212,000.00
Income Tax Expense	INCTAX	-23,597,000.000
Calculations		
Com Eq / Shares Out.	calc	24.778
Total Permanent Capital	calc	2,483,752,000.000
Average Price	calc	55.100
Total Debt		1,233,440,000.000

Total Capital	calc	2,663,752,000.000
Preferred Stk + Sink Fund Req.	calc	0.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	230,697,000.000
EBITDA	calc	201,800,000.000

California Water
CAPITALIZATION AND FINANCIAL
2019 - 2023, Inclusiv

2022	2021	2020	2019
1,055,797,000.000	1,060,986,000.000	786,227,000.000	808,622,000.000
0.000	0.000	0.000	0.000
55,598,000.000	53,716,000.000	50,333,655.000	48,532,199.000
1,322,394,000.000	1,182,980,000.000	921,344,000.000	779,906,000.000
0.000	0.000	0.000	0.000
70,000,000.00	35,000,000.00	370,000,000.00	175,100,000.00
1.770	1.960	1.970	1.310
71.870	71.860	56.800	57.020
48.760	52.590	41.660	44.860
1.000	0.920	0.850	0.790
1,783,000.000	1,766,000.000	3,185,000.000	3,670,000.000
44,342,000.000	43,214,000.000	41,862,000.000	41,221,000.000
95,263,000.000	100,979,000.000	96,831,000.000	63,116,000.000
96,011,000.000	101,125,000.000	96,831,000.000	63,116,000.000
0.000	0.000	0.000	0.000
54,186,000.000	47,398,000.000	41,768,000.000	38,023,000.000
95,263,000.000	100,979,000.000	96,831,000.000	63,116,000.00
243,772,000.00	231,718,000.00	117,924,000.00	168,794,000.00
-5,001,000.00	-16,066,000.00	-26,566,000.00	2,424,000.00
114,575,000.00	108,715,000.00	98,505,000.00	89,220,000.00
-6,375,000.000	4,092,000.000	12,018,000.000	17,671,000.000
23.785	22.023	18.305	16.070
2,378,191,000.000	2,243,966,000.000	1,707,571,000.000	1,588,528,000.000
60.315	62.225	49.230	50.940
1,125,797,000.000	1,095,986,000.000	1,156,227,000.000	983,722,000.000

2,448,191,000.000	2,278,966,000.000	2,077,571,000.000	1,763,628,000.000
0.000	0.000	0.000	0.000
236,988,000.000	213,886,000.000	88,173,000.000	167,548,000.000
247,805,000.000	257,000,000.000	249,216,000.000	211,228,000.000

STATISTICS (1)
e

2018	
814,938,000.000	
0.000	
	CAPITALIZATION STATISTICS
48,064,707.000	
730,157,000.000	AMOUNT OF CAPITAL EMPLOYED
0.000	TOTAL PERMANENT CAPITAL
	SHORT-TERM DEBT
65,100,000.000	TOTAL CAPITAL EMPLOYED
1.360	INDICATED AVERAGE CAPITAL COST RATES (2)
48.770	TOTAL DEBT
35.400	PREFERRED STOCK
	CAPITAL STRUCTURE RATIOS
0.750	BASED ON TOTAL PERMANENT CAPITAL:
	LONG-TERM DEBT
2,063,000.000	PREFERRED STOCK
	COMMON EQUITY
37,854,000.000	TOTAL
65,584,000.000	BASED ON TOTAL CAPITAL:
	TOTAL DEBT, INCLUDING SHORT-TERM
65,584,000.000	PREFERRED STOCK
	COMMON EQUITY
0.000	TOTAL
36,043,000.000	
65,584,000.000	FINANCIAL STATISTICS
179,019,000.000	
16,503,000.000	FINANCIAL RATIOS - MARKET BASED
83,781,000.000	EARNINGS / PRICE RATIO
21,306,000.000	MARKET / AVERAGE BOOK RATIO
	DIVIDEND YIELD
	DIVIDEND PAYOUT RATIO
15.191	RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY
1,545,095,000.000	TOTAL DEBT / EBITDA (3)
42.085	FUNDS FROM OPERATIONS / TOTAL DEBT (4)
880,038,000.000	TOTAL DEBT / TOTAL CAPITAL

1,610,195,000.000

0.000

193,459,000.000

208,525,000.000

California Water

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2023	2022	2021	2020
			(MILLIONS OF
$2,483.752	$2,378.191	$2,243.966	$1,707.571
$180.000	$70.000	$35.000	$370.000
$2,663.752	$2,448.191	$2,278.966	$2,077.571
4.48 %	3.99 %	3.84 %	3.91 %
42.41 %	44.39 %	47.28 %	46.04 %
0.00	0.00	0.00	0.00
57.59	55.61	52.72	53.96
100.00 %	100.00 %	100.00 %	100.00 %
46.30 %	45.98 %	48.09 %	55.65 %
0.00	0.00	0.00	0.00
53.70	54.02	51.91	44.35
100.00 %	100.00 %	100.00 %	100.00 %
1.65 %	2.93 %	3.15 %	4.00 %
226.92	263.34	308.60	286.43
1.89	1.66	1.48	1.73
113.73	56.44	46.87	43.13
3.77 %	7.66 %	9.61 %	11.38 %
6.11 x	4.54 x	4.26 x	4.64 x
18.70 %	21.05 %	19.52 %	7.63 %
46.30 %	45.98 %	48.09 %	55.65 %

	2019
F DOLLARS)	
	$1,588.528
	$175.100
	$1,763.628
	4.42 %

		5 YEAR AVERAGE
	50.90 %	46.20 %
	0.00	0.00
	49.10	53.80
	100.00 %	100.00 %
	55.78 %	50.36 %
	0.00	0.00
	44.22	49.64
	100.00 %	100.00 %
	2.57 %	2.86 %
	325.90	282.24
	1.55	1.66
	60.24	64.08
	8.36 %	8.16 %
	4.66 x	4.84 x
	17.03 %	16.79 %
	55.78 %	50.36 %

SEE PAGE 2 FOR NOTES.

Ticker
MSEX

	FYE: 12/31/2023	2023
Capital Structure:		
Long Term Debt	LTDEBT	365,893,000.00
Preferred Stock	PFD	2,084,000.00
Common Shares Outst.	Input Data	17,821,000.000
Common Equity	TOTEQ	422,991,000.00
Sinking Fund Requirements	Input Data	0.000
Short Term Debt	STDEBT	42,750,000.000
EPS excluding extra	EPSAPPCOMM	1.760
Price - High	Bloomberg	90.09
Price - Low	Bloomberg	61.68
DPS by payable date	Bloomberg	1.300
AFUDC	AFUDC	2,433,000.000
Total Interest	INTEXP	13,143,000.00
Net Income before Extra.	NETINC	31,524,000.000
CE Income before Extra.	INCAVAILCOMM	31,524,000.000
Preferred Stock Dividends	PFDDIV	120,000.000
Common Dividends	COMDIVS1	22,441,000.000
Income Bef Extra Items-S&U	INCBEFEXT	31,524,000.000
Net Operating Cash Flow	NETOPGFC	52,782,000.000
Change in op'g Assets + Liabilities	CHGOPASLIAB	-3,041,000.000
Depreciation & Amortization	DEPAMORT	29,442,000.000
Income Tax Expense	INCTAX	1,041,000.000
Calculations		
Com Eq / Shares Out.	calc	23.736
Total Permanent Capital	calc	790,968,000.000
Average Price	calc	75.885
Total Debt		408,643,000.000

Total Capital	calc	833,718,000.000
Preferred Stk + Sink Fund Req.	calc	2,084,000.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	47,308,000.000
EBITDA	calc	75,150,000.000

Middlesex Water
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2019 - 2023, Inclusive

2022	2021	2020	2019
307,742,000.00	313,251,000.00	280,499,000.00	237,955,000.00
2,084,000.00	2,084,000.00	2,084,000.00	2,084,000.00
17,642,000.000	17,522,000.000	17,473,000.000	17,434,000.000
400,328,000.00	367,726,000.00	346,208,000.00	323,792,000.00
0.000	0.000	0.000	0.000
55,500,000.000	13,000,000.000	2,000,000.000	20,000,000.000
2.390	2.070	2.180	2.010
119.13	120.3	74.580	67.250
75.08	67.52	49.450	51.850
1.250	1.108	1.041	0.976
2,314,000.000	2,653,000.000	4,016,000.000	3,146,000.000
9,367,000.00	8,114,000.00	7,493,000.00	7,264,000.00
42,429,000.000	36,543,000.000	38,425,000.000	33,888,000.000
42,309,000.000	36,423,000.000	38,305,000.000	33,756,000.000
120,000.000	120,000.000	120,000.000	132,000.000
20,810,000.000	19,373,000.000	18,178,000.000	16,165,000.000
42,429,000.000	36,543,000.000	38,425,000.000	33,888,000.000
61,361,000.000	33,028,000.000	53,355,000.000	36,053,000.000
1,379,000.000	-19,022,000.000	9,380,000.000	-1,736,000.000
27,475,000.000	26,799,000.000	20,838,000.000	16,716,000.000
3,240,000.000	-5,488,000.000	-4,119,000.000	-3,140,000.000
22.692	20.987	19.814	18.572
710,154,000.000	683,061,000.000	628,791,000.000	563,831,000.000
97.105	93.910	62.015	59.550
363,242,000.000	326,251,000.000	282,499,000.000	257,955,000.000

765,654,000.000	696,061,000.000	630,791,000.000	583,831,000.000
2,084,000.000	2,084,000.000	2,084,000.000	2,084,000.000
60,426,000.000	11,353,000.000	58,719,000.000	31,171,000.000
82,511,000.000	65,968,000.000	62,637,000.000	54,728,000.000

2018
160,194,000.000
2,433,000.000
16,403,000.000
248,787,000.000
0.000
48,500,000.000
1.960
58.560
34.520
0.911
1,362,000.000
6,758,000.000
32,452,000.000
32,308,000.000
144,000.000
14,930,000.000
32,452,000.000
45,864,000.000
6,164,000.000
15,037,000.000
924,000.000
15.167
411,414,000.000
46.540
208,694,000.000

459,914,000.000

2,433,000.000

50,666,000.000

55,171,000.000

Middlesex Wa
CAPITALIZATION AND FINANC
2019 - 2023, Inc

	2023	
CAPITALIZATION STATISTICS		
AMOUNT OF CAPITAL EMPLOYED		
TOTAL PERMANENT CAPITAL	$790.968	
SHORT-TERM DEBT	$42.750	
TOTAL CAPITAL EMPLOYED	$833.718	
INDICATED AVERAGE CAPITAL COST RATES (2)		
TOTAL DEBT	3.41	%
PREFERRED STOCK	5.76	
CAPITAL STRUCTURE RATIOS		
BASED ON TOTAL PERMANENT CAPITAL:		
LONG-TERM DEBT	46.26	%
PREFERRED STOCK	0.26	
COMMON EQUITY	53.48	
TOTAL	100.00	%
BASED ON TOTAL CAPITAL:		
TOTAL DEBT, INCLUDING SHORT-TERM	49.01	%
PREFERRED STOCK	0.25	
COMMON EQUITY	50.74	
TOTAL	100.00	%
FINANCIAL STATISTICS		
FINANCIAL RATIOS - MARKET BASED		
EARNINGS / PRICE RATIO	2.32	%
MARKET / AVERAGE BOOK RATIO	326.90	
DIVIDEND YIELD	1.71	
DIVIDEND PAYOUT RATIO	71.19	
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	7.66	%
TOTAL DEBT / EBITDA (3)	5.44	x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	11.58	%
TOTAL DEBT / TOTAL CAPITAL	49.01	%

ater
CIAL STATISTICS (1)
clusive

2022	2021	2020	2019	
		(MILLIONS OF DOLLARS)		
$710.154	$683.061	$628.791	$563.831	
$55.500	$13.000	$2.000	$20.000	
$765.654	$696.061	$630.791	$583.831	
2.72 %	2.67 %	2.77 %	3.11	
5.76	5.76	5.76	5.84	
				5 YEAR AVERAGE
43.33 %	45.86 %	44.61 %	42.20	44.45 %
0.29	0.31	0.33	0.37	0.31
56.37	53.84	55.06	57.43	55.23
100.00 %	100.00 %	100.00 %	100.00	99.99 %
47.44 %	46.87 %	44.79 %	44.18	46.46 %
0.27	0.30	0.33	0.36	0.30
52.29	52.83	54.88	55.46	53.24
100.00 %	100.00 %	100.00 %	100.00	100.00 %
2.46 %	2.20 %	3.52 %	3.38	2.78 %
444.64	460.34	323.11	353.00	381.60
1.29	1.18	1.68	1.64	1.50
49.19	53.19	47.46	47.89	53.78
11.02 %	10.20 %	11.43 %	11.79	10.42 %
4.40 x	4.95 x	4.51 x	4.71	4.80 x
16.64 %	3.48 %	20.79 %	12.08	12.91 %
47.44 %	46.87 %	44.79 %	44.18	46.46 %

SEE PAGE 2 FOR NOTES.

Ticker
SJW

	FYE: 12/31/2023	2023
Capital Structure:		
Long Term Debt	LTDEBT	1,575,674,000.00
Preferred Stock	PFD	0.000
Common Shares Outst.	Input Data	32,023,004.00
Common Equity	TOTEQ	1,233,397,000.00
Sinking Fund Requirements	Input Data	0.000
Short Term Debt	STDEBT	171,500,000.00
EPS excluding extra	EPSAPPCOMM	2.680
Price - High	Bloomberg	83.35
Price - Low	Bloomberg	57.35
DPS by payable date	Bloomberg	1.520
AFUDC	AFUDC	5,014,000
Total Interest	INTEXP	66,144,000.000
Net Income before Extra.	NETINC	84,987,000.000
CE Income before Extra.	INCAVAILCOMM	84,987,000.000
Preferred Stock Dividends	PFDDIV	
Common Dividends	COMDIVS1	47,905,000.000
Income Bef Extra Items-S&U	INCBEFEXT	84,987,000.000
Net Operating Cash Flow	NETOPGFC	190,831,000.00
Change in op'g Assets + Liabilities	CHGOPASLIAB	3,683,000.00
Depreciation & Amortization	DEPAMORT	108,138,000.00
Income Tax Expense	INCTAX	5,956,000.00
Calculations		
Com Eq / Shares Out.	calc	38.516
Total Permanent Capital	calc	2,809,071,000.000
Average Price	calc	70.350

Total Debt		1,747,174,000.000
Total Capital	calc	2,980,571,000.000
Preferred Stk + Sink Fund Req.	calc	0.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	189,500,000.000
EBITDA	calc	265,225,000.000

SJW Corp.

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2022	2021	2020	2019
1,496,325,000.00	1,532,041,000.00	1,363,821,000.00	1,283,597,000.00
0.000	0.000	0.000	0.000
30,801,912.00	30,181,348.00	28,556,605.00	28,456,508.00
1,110,868,000.00	1,034,519,000.00	917,160,000.00	889,984,000.00
0.000	0.000	0.000	0.000
159,578,000.00	62,996,000.00	175,094,000.00	117,209,000.00
2.430	2.030	2.140	0.820
83.55	73.2	74.730	74.470
56.6	58.81	49.480	54.740
1.440	1.360	1.280	1.200
6,254,000	6,348,000.000	0.000	0.000
58,062,000.000	54,339,000.000	54,255,000.000	31,796,000.000
73,828,000.000	60,478,000.000	61,515,000.000	23,627,000.000
73,828,000.000	60,478,000.000	61,515,000.000	23,627,000.000
0.000	0.000	0.000	0.000
43,582,000.000	40,137,000.000	36,509,000.000	34,134,000.000
73,828,000.000	60,478,000.000	61,515,000.000	23,627,000.00
166,199,000.00	130,040,000.00	104,051,000.00	130,005,000.00
-7,867,000.00	-17,171,000.00	-44,945,000.00	36,641,000.00
104,417,000.00	94,400,000.00	89,279,000.00	65,592,000.00
8,496,000.00	8,369,000.00	8,380,000.00	8,454,000.00
36.065	34.277	32.117	31.275
2,607,193,000.000	2,566,560,000.000	2,280,981,000.000	2,173,581,000.000
70.075	66.005	62.105	64.605

1,655,903,000.000	1,595,037,000.000	1,538,915,000.000	1,400,806,000.000
2,766,771,000.000	2,629,556,000.000	2,456,075,000.000	2,290,790,000.000
0.000	0.000	0.000	0.000
152,078,000.000	106,521,000.000	59,106,000.000	166,646,000.000
244,803,000.000	217,586,000.000	213,429,000.000	129,469,000.000

CA

2018	
431,424,000.000	
0.000	
	CAPITALIZATION STATISTICS
28,404,316.000	
889,312,000.000	AMOUNT OF CAPITAL EMPLOYED
0.000	TOTAL PERMANENT CAPITAL
	SHORT-TERM DEBT
100,000,000.000	TOTAL CAPITAL EMPLOYED
1.820	INDICATED AVERAGE CAPITAL COST RATES (2)
68.150	TOTAL DEBT
51.680	PREFERRED STOCK
	CAPITAL STRUCTURE RATIOS
1.120	BASED ON TOTAL PERMANENT CAPITAL:
	LONG-TERM DEBT
0.000	PREFERRED STOCK
	COMMON EQUITY
24,332,000.000	TOTAL
38,767,000.000	BASED ON TOTAL CAPITAL:
	TOTAL DEBT, INCLUDING SHORT-TERM
38,767,000.000	PREFERRED STOCK
	COMMON EQUITY
0.000	TOTAL
23,074,000.000	
38,767,000.000	FINANCIAL STATISTICS
91,343,000.000	
2,615,000.000	FINANCIAL RATIOS - MARKET BASED
54,601,000.000	EARNINGS / PRICE RATIO
10,065,000.000	MARKET / AVERAGE BOOK RATIO
	DIVIDEND YIELD
	DIVIDEND PAYOUT RATIO
31.309	RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY
1,320,736,000.000	TOTAL DEBT / EBITDA (3)
59.915	FUNDS FROM OPERATIONS / TOTAL DEBT (4)

531,424,000.000	TOTAL DEBT / TOTAL CAPITAL
1,420,736,000.000	
0.000	
93,958,000.000	
127,765,000.000	

SJW Corp.

APITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2023	2022	2021	2020	2019
			(MILLIONS OF DOLLARS)	
$2,809.071	$2,607.193	$2,566.560	$2,280.981	$2,173.581
$171.500	$159.578	$62.996	$175.094	$117.209
$2,980.571	$2,766.771	$2,629.556	$2,456.075	$2,290.790
3.89 %	3.57 %	3.47 %	3.69 %	3.29 %
56.09 %	57.39 %	59.69 %	59.79 %	59.05 %
0.00	0.00	0.00	0.00	0.00
43.91	42.61	40.31	40.21	40.95
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
58.62 %	59.85 %	60.66 %	62.66 %	61.15 %
0.00	0.00	0.00	0.00	0.00
41.38	40.15	39.34	37.34	38.85
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
3.81 %	3.47 %	3.08 %	3.45 %	1.27 %
188.65	199.24	198.83	195.94	206.46
2.16	2.05	2.06	2.06	1.86
56.37	59.03	66.37	59.35	144.47
7.25 %	6.88 %	6.20 %	6.81 %	2.66 %
6.59 x	6.76 x	7.33 x	7.21 x	10.82 x
10.85 %	9.18 %	6.68 %	3.84 %	11.90 %

58.62 %	59.85 %	60.66 %	62.66 %	61.15 %

5 YEAR AVERAGE	
58.40	%
0.00	
41.60	
100.00	%
60.59	%
0.00	
39.41	
100.00	%
3.02	%
197.82	
2.04	
77.12	
5.96	%
7.74	x
8.49	%

60.59 %

SEE PAGE 2 FOR NOTES.

Ticker
ARTNA

	FYE: 12/31/2021	2023
Capital Structure:		
Long Term Debt	LTDEBT	180,542,000.000
Preferred Stock	PFD	0.000
Common Shares Outst.	Input Data	10,022,000.000
Common Equity	TOTEQ	230,397,000.000
Sinking Fund Requirements	Input Data	
Short Term Debt	STDEBT	0.000
EPS excluding extra	EPSAPPCOMM	1.670
Price - High	Bloomberg	61.96
Price - Low	Bloomberg	39.27
DPS by payable date	DPS	1.140
AFUDC	AFUDC	2,002,000.000
Total Interest	INTEXP	9,156,000.000
Net Income before Extra.	NETINC	16,699,000.000
CE Income before Extra.	INCAVAILCOMM	16,699,000.000
Preferred Stock Dividends	PFDDIV	0.000
Common Dividends	COMDIVS1	11,242,000.000
Income Bef Extra Items-S&U	INCBEFEXT	16,699,000.000
Net Operating Cash Flow	NETOPGFC	31,851,000.000
Change in op'g Assets + Liabilities	CHGOPASLIAB	-1,454,000.000
Depreciation & Amortization	DEPAMORT	13,335,000.000
Income Tax Expense	INCTAX	6,348,000.000
Calculations		
Com Eq / Shares Out.	calc	22.989
Total Permanent Capital	calc	410,939,000.000
Average Price	calc	50.615

Total Debt		180,542,000.000
Total Capital	calc	410,939,000.000
Preferred Stk + Sink Fund Req.	calc	0.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	28,395,000.000
EBITDA	calc	45,538,000.000

Artesian Res Corp

CAPITALIZATION AND FINANCIAL STATIS

2019 - 2023, Inclusive

2022	2021	2020	2019
177,622,000.000	144,850,000.000	144,090,000.000	145,862,000.000
0.000	0.000	0.000	0.000
9,481,000.000	9,426,000.000	9,369,000.000	9,326,000.000
187,931,000.000	178,010,000.000	169,426,000.000	160,268,000.000
	0.000	0.000	0.000
20,174,000.000	26,703,000.000	26,813,000.000	7,500,000.000
1.900	1.790	1.790	1.600
58.85	47.62	40.110	40.280
43.65	36.13	31.240	33.670
1.090	1.050	1.007	0.984
1,329,000.000	823,000.000	1,170,000.000	1,410,000.000
8,502,000.000	7,592,000.000	7,619,000.000	7,024,000.000
17,998,000.000	16,827,000.000	16,817,000.000	14,925,000.000
17,998,000.000	16,827,000.000	16,817,000.000	14,925,000.000
0.000	0.000	0.000	0.000
10,319,000.000	9,826,000.000	9,376,000.000	9,122,000.000
17,998,000.000	16,827,000.000	16,817,000.000	14,925,000.000
24,265,000.000	31,310,000.000	20,358,000.000	18,870,000.000
-7,887,000.000	158,000.000	-5,036,000.000	-3,340,000.000
12,620,000.000	11,885,000.000	11,143,000.000	10,803,000.000
5,878,000.000	5,737,000.000	5,684,000.000	5,181,000.000
19.822	18.885	18.084	17.185
365,553,000.000	322,860,000.000	313,516,000.000	306,130,000.000
51.250	41.875	35.675	36.975

197,796,000.000	171,553,000.000	170,903,000.000	153,362,000.000
385,727,000.000	349,563,000.000	340,329,000.000	313,630,000.000
0.000	0.000	0.000	0.000
15,049,000.000	30,645,000.000	14,152,000.000	14,120,000.000
44,998,000.000	42,041,000.000	41,263,000.000	37,933,000.000

2018	
117,587,000.000	
0.000	
	CAPITALIZATION STATISTICS
9,293,000.000	
153,251,000.000	AMOUNT OF CAPITAL EMPLOYED
0.000	TOTAL PERMANENT CAPITAL
	SHORT-TERM DEBT
15,942,000.000	TOTAL CAPITAL EMPLOYED
1.540	INDICATED AVERAGE CAPITAL COST RATES (2)
41.890	TOTAL DEBT
32.510	PREFERRED STOCK
	CAPITAL STRUCTURE RATIOS
0.955	BASED ON TOTAL PERMANENT CAPITAL:
	LONG-TERM DEBT
622,000.000	PREFERRED STOCK
	COMMON EQUITY
6,252,000.000	TOTAL
14,278,000.000	BASED ON TOTAL CAPITAL:
	TOTAL DEBT, INCLUDING SHORT-TERM
14,278,000.000	PREFERRED STOCK
	COMMON EQUITY
0.000	TOTAL
8,819,000.000	
14,278,000.000	FINANCIAL STATISTICS
29,141,000.000	
3,911,000.000	FINANCIAL RATIOS - MARKET BASED
10,288,000.000	EARNINGS / PRICE RATIO
4,991,000.000	MARKET / AVERAGE BOOK RATIO
	DIVIDEND YIELD
	DIVIDEND PAYOUT RATIO
16.491	RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY
270,838,000.000	TOTAL DEBT / EBITDA (3)
37.200	FUNDS FROM OPERATIONS / TOTAL DEBT (4)

133,529,000.000	TOTAL DEBT / TOTAL CAPITAL
286,780,000.000	
0.000	
32,430,000.000	
35,809,000.000	

Artesian Res Corp

LIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2023	2022	2021	2020	2019	
			(MILLIONS OF DOLLARS)		
$410.939	$365.553	$322.860	$313.516	$306.130	
$0.000	$20.174	$26.703	$26.813	$7.500	
$410.939	$385.727	$349.563	$340.329	$313.630	
4.84 %	4.60 %	4.43 %	4.70 %	4.90 %	
					5 YEAR AVERAGE
43.93 %	48.59 %	44.86 %	45.96 %	47.65 %	46.20 %
0.00	0.00	0.00	0.00	0.00	0.00
56.07	51.41	55.14	54.04	52.35	53.80
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
43.93 %	51.28 %	49.08 %	50.22 %	48.90 %	48.68 %
0.00	0.00	0.00	0.00	0.00	0.00
56.07	48.72	50.92	49.78	51.10	51.32
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
3.30 %	3.71 %	4.27 %	5.02 %	4.33 %	4.13 %
236.46	264.81	226.54	202.30	219.59	229.94
2.25	2.13	2.51	2.82	2.66	2.47
67.32	57.33	58.39	55.75	61.12	59.98
7.98 %	9.84 %	9.69 %	10.20 %	9.52 %	9.45 %
3.96 x	4.40 x	4.08 x	4.14 x	4.04 x	4.12 x
15.73 %	7.61 %	17.86 %	8.28 %	9.21 %	11.74 %

43.93 %	51.28 %	49.08 %	50.22 %	48.90 %	48.68 %

SEE PAGE 2 FOR NOTES.

Ticker
WTRG

		FYE: 12/31/2022	2023
Capital Structure:			
	Long Term Debt	LTDEBT	6,893,500,000.000
	Preferred Stock	PFD	0.000
Common Shares Outst.		Input Data	276,595,228.000
Common Equity		TOTEQ	5,896,183,000.000
Sinking Fund Requirements		Input Data	
Short Term Debt		STDEBT	160,123,000.000
EPS excluding extra		EPSAPPCOMM	1.860
Price - High		Bloomberg	48.99
Price - Low		Bloomberg	32.59
DPS by payable date		Bloomberg	1.188
AFUDC		AFUDC	16,967,000.000
Total Interest		INTEXP	283,362,000.000
Net Income before Extra.		NETINC	498,226,000.000
CE Income before Extra.		INCAVAILCOMM	498,226,000.000
Preferred Stock Dividends		PFDDIV	0.000
Common Dividends		COMDIVS1	316,806,000.000
Income Bef Extra Items-S&U		INCBEFEXT	498,226,000.000
Net Operating Cash Flow		NETOPGFC	933,587,000.000
Change in op'g Assets + Liabilities		CHGOPASLIAB	175,430,000.000
Depreciation & Amortization		DEPAMORT	343,695,000.000
Income Tax Expense		INCTAX	-66,445,000.000
Calculations			
Com Eq / Shares Out.		calc	21.317
Total Permanent Capital		calc	12,789,683,000.000
Average Price		calc	40.790
Total Debt			7,053,623,000.000

Total Capital	calc	12,949,806,000.000
Preferred Stk + Sink Fund Req.	calc	0.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	1,092,050,000.000
EBITDA	calc	1,058,838,000.000

Essential Utilities, Inc.

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2022	2021	2020	2019
6,570,413,000.000	5,911,650,000.000	5,592,097,000.000	3,077,400,000.000
0.000	0.000	0.000	0.000
263,737,084.000	252,867,623.000	245,390,468.000	220,758,719.000
5,377,386,000.000	5,184,450,000.000	4,683,877,000.000	3,880,860,000.000
228,500,000.000	65,000,000.000	78,198,000.000	25,724,000.000
1.770	1.670	1.120	1.040
53.13	53.69	54.070	47.080
39.41	41.5	32.650	32.830
1.148	1.038	0.970	0.907
23,665,000.000	20,792,000.000	12,687,000.000	16,172,000.000
238,116,000.000	205,325,000.000	183,072,000.000	99,977,000.000
465,237,000.000	431,612,000.000	284,849,000.000	224,543,000.000
465,237,000.000	431,612,000.000	284,849,000.000	224,543,000.000
0.000	0.000	0.000	0.000
288,632,000.000	258,650,000.000	232,571,000.000	188,512,000.000
465,237,000.000	431,612,000.000	284,849,000.000	188,512,000.000
600,306,000.000	644,679,000.000	508,024,000.000	338,523,000.000
-169,574,000.000	-104,415,000.000	-37,167,000.000	773,000.000
321,177,000.000	297,952,000.000	257,059,000.000	156,476,000.000
-14,329,000.000	-9,612,000.000	-19,878,000.000	-13,017,000.000
20.389	20.503	19.087	17.580
11,947,799,000.000	11,096,100,000.000	10,275,974,000.000	6,958,260,000.000
46.270	47.595	43.360	39.955
6,798,913,000.000	5,976,650,000.000	5,670,295,000.000	3,103,124,000.000

12,176,299,000.000	11,161,100,000.000	10,354,172,000.000	6,983,984,000.000
0.000	0.000	0.000	0.000
407,067,000.000	519,472,000.000	458,170,000.000	323,124,000.000
1,010,201,000.000	925,277,000.000	705,102,000.000	431,948,000.000

Ess

CAPITALIZATION

20

2018		2023
2,563,660,000.000		
0.000		
	CAPITALIZATION STATISTICS	
178,091,621.000		
2,009,364,000.000	AMOUNT OF CAPITAL EMPLOYED	
	TOTAL PERMANENT CAPITAL	$12,789.683
	SHORT-TERM DEBT	$160.123
15,449,000.000	TOTAL CAPITAL EMPLOYED	$12,949.806
1.080	INDICATED AVERAGE CAPITAL COST RATES (2)	
39.230	TOTAL DEBT	4.09
32.370	PREFERRED STOCK	
	CAPITAL STRUCTURE RATIOS	
0.847	BASED ON TOTAL PERMANENT CAPITAL:	
	LONG-TERM DEBT	53.90
13,023,000.000	PREFERRED STOCK	0.00
	COMMON EQUITY	46.10
98,902,000.000	TOTAL	100.00
191,988,000.000	BASED ON TOTAL CAPITAL:	
	TOTAL DEBT, INCLUDING SHORT-TERM	54.47
191,988,000.000	PREFERRED STOCK	0.00
	COMMON EQUITY	45.53
0.000	TOTAL	100.00
150,736,000.000		
191,988,000.000	FINANCIAL STATISTICS	
368,522,000.000		
-17,457,000.000	FINANCIAL RATIOS - MARKET BASED	
146,673,000.000	EARNINGS / PRICE RATIO	4.56
-13,669,000.000	MARKET / AVERAGE BOOK RATIO	195.61
	DIVIDEND YIELD	2.91
	DIVIDEND PAYOUT RATIO	63.59
11.283	RATE OF RETURN ON AVERAGE BOOK COMMON EQU	8.84
4,573,024,000.000	TOTAL DEBT / EBITDA (3)	6.66
35.800	FUNDS FROM OPERATIONS / TOTAL DEBT (4)	15.48
2,579,109,000.000	TOTAL DEBT / TOTAL CAPITAL	54.47

4,588,473,000.000

0.000

338,042,000.000

423,894,000.000

sential Utilities, Inc.

l AND FINANCIAL STATISTICS (1)

)19 - 2023, Inclusive

	2022	2021	2020	2019	
			(MILLIONS OF DOLLARS)		
	$11,947.799	$11,096.100	$10,275.974	$6,958.260	
	$228.500	$65.000	$78.198	$25.724	
	$12,176.299	$11,161.100	$10,354.172	$6,983.984	
%	3.73 %	3.53 %	4.17 %	3.52 %	
					5 YEAR AVERAGE
%	54.99 %	53.28 %	54.42 %	44.23 %	52.16 %
	0.00	0.00	0.00	0.00	0.00
	45.01	46.72	45.58	55.77	47.84
%	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
%	55.84 %	53.55 %	54.76 %	44.43 %	52.61 %
	0.00	0.00	0.00	0.00	0.00
	44.16	46.45	45.24	55.57	47.39
%	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
%	3.83 %	3.51 %	2.58 %	2.60 %	3.42 %
	226.30	240.44	236.51	276.87	235.15
	2.48	2.18	2.24	2.27	2.42
	62.04	59.93	81.65	83.95	70.23
%	8.81 %	8.75 %	6.65 %	7.62 %	8.13 %
x	6.73 x	6.46 x	8.04 x	7.18 x	7.01 x
%	5.99 %	8.69 %	8.08 %	10.41 %	9.73 %
%	55.84 %	53.55 %	54.76 %	44.43 %	52.61 %

SEE PAGE 2 FOR NOTES.

Ticker
GWRS

	FYE: 12/31/2023	2023
Capital Structure:		
Long Term Debt	LTDEBT	105,221,000.00
Preferred Stock	PFD	0.000
Common Shares Outst.	Input Data	24,492,918.00
Common Equity	TOTEQ	48,620,000.00
Sinking Fund Requirements	Input Data	0.000
Short Term Debt	STDEBT	0.000
EPS excluding extra	EPSAPPCOMM	0.330
Price - High	Yahoo	14.86
Price - Low	Yahoo	9.42
DPS by payable date	Yahoo	0.300
AFUDC	AFUDC	981,000.000
Total Interest	INTEXP	4,882,000.00
Net Income before Extra.	NETINC	7,982,000.00
CE Income before Extra.	INCAVAILCOMM	7,982,000.00
Preferred Stock Dividends	PFDDIV	0.000
Common Dividends	COMDIVS1	7,185,000.000
Income Bef Extra Items-S&U	INCBEFEXT	7,982,000.00
Net Operating Cash Flow	NETOPGFC	25,393,000.000
Change in op'g Assets + Liabilities	CHGOPASLIAB	1,882,000.000
Depreciation & Amortization	DEPAMORT	11,437,000.000
Income Tax Expense	INCTAX	2,872,000.000
Calculations		
Com Eq / Shares Out.	calc	1.985
Total Permanent Capital	calc	153,841,000.000
Average Price	calc	12.140

Total Debt		105,221,000.000
Total Capital	calc	153,841,000.000
Preferred Stk + Sink Fund Req.	calc	0.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	26,294,000.000
EBITDA	calc	27,173,000.000

Global Water Resources, Inc.

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2022	2021	2020	2019
108,778,000.00	112,908,000.00	114,694,000.00	114,781,000.00
0.000	0.000	0.000	0.000
24,095,139.00	22,649,568.00	22,587,766.00	21,537,381.00
44,394,000.00	30,029,000.00	32,188,000.00	24,672,000.00
0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000
0.240	0.160	0.050	0.100
17.280001	20.44	15.560	13.690
10.95	14.58	9.370	9.020
0.300	0.290	0.288	0.290
500,000.000	0.000	0.000	0.000
4,036,000.00	5,201,000.00	5,377,000.00	5,388,000.00
5,506,000.00	3,609,000.00	1,105,000.00	2,224,000.00
5,506,000.00	3,609,000.00	1,105,000.00	2,224,000.00
0.000	0.000	0.000	0.000
6,889,000.000	6,609,000.000	6,539,000.000	6,165,000.000
5,506,000.00	3,609,000.00	1,105,000.00	2,224,000.00
23,336,000.000	20,386,000.000	14,566,000.000	11,566,000.000
4,712,000.000	4,516,000.000	1,593,000.000	-854,000.000
9,889,000.000	9,490,000.000	9,031,000.000	8,353,000.000
934,000.000	1,150,000.000	771,000.000	1,162,000.000
1.842	1.326	1.425	1.146
153,172,000.000	142,937,000.000	146,882,000.000	139,453,000.000
14.115	17.510	12.465	11.355

108,778,000.000	112,908,000.000	114,694,000.000	114,781,000.000
153,172,000.000	142,937,000.000	146,882,000.000	139,453,000.000
0.000	0.000	0.000	0.000
27,548,000.000	24,902,000.000	16,159,000.000	10,712,000.000
20,365,000.000	19,450,000.000	16,284,000.000	17,127,000.000

2018	
114,554,000.00	
0.000	
	CAPITALIZATION STATISTICS
21,471,296.000	
27,871,000.000	AMOUNT OF CAPITAL EMPLOYED
0.000	TOTAL PERMANENT CAPITAL
	SHORT-TERM DEBT
0.000	TOTAL CAPITAL EMPLOYED
0.150	INDICATED AVERAGE CAPITAL COST RATES (2)
11.380	TOTAL DEBT
8.500	PREFERRED STOCK
	CAPITAL STRUCTURE RATIOS
0.280	BASED ON TOTAL PERMANENT CAPITAL:
	LONG-TERM DEBT
0.000	PREFERRED STOCK
	COMMON EQUITY
5,255,000.000	TOTAL
3,103,000.000	BASED ON TOTAL CAPITAL:
	TOTAL DEBT, INCLUDING SHORT-TERM
3,103,000.000	PREFERRED STOCK
	COMMON EQUITY
0.000	TOTAL
5,791,000.000	
3,103,000.000	FINANCIAL STATISTICS
11,307,000.000	
-2,647,000.000	FINANCIAL RATIOS - MARKET BASED
7,469,000.000	EARNINGS / PRICE RATIO
1,782,000.000	MARKET / AVERAGE BOOK RATIO
	DIVIDEND YIELD
	DIVIDEND PAYOUT RATIO
1.298	RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY
142,425,000.000	TOTAL DEBT / EBITDA (3)
9.940	FUNDS FROM OPERATIONS / TOTAL DEBT (4)

114,554,000.000	TOTAL DEBT / TOTAL CAPITAL
142,425,000.000	
0.000	
8,660,000.000	
17,609,000.000	

Global Water Resources, Inc.

ALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2023	2022	2021	2020	2019	
			(MILLIONS OF DOLLARS)		
$153.841	$153.172	$142.937	$146.882	$139.453	
$0.000	$0.000	$0.000	$0.000	$0.000	
$153.841	$153.172	$142.937	$146.882	$139.453	
4.56 %	3.64 %	4.57 %	4.69 %	4.70 %	
					5 YEAR AVERAGE
68.40 %	71.02 %	78.99 %	78.09 %	82.31 %	75.76
0.00	0.00	0.00	0.00	0.00	0.00
31.60	28.98	21.01	21.91	17.69	24.24
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00
68.40 %	71.02 %	78.99 %	78.09 %	82.31 %	75.76
0.00	0.00	0.00	0.00	0.00	0.00
31.60	28.98	21.01	21.91	17.69	24.24
100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00
2.72 %	1.70 %	0.91 %	0.40 %	0.88 %	1.32
634.35	891.03	1273.07	969.83	929.37	939.53
2.47	2.13	1.66	2.31	2.55	2.22
90.02	125.12	183.13	591.76	277.20	253.45
17.16 %	14.80 %	11.60 %	3.89 %	8.47 %	11.18
3.87 x	5.34 x	5.81 x	7.04 x	6.70 x	5.75
24.99 %	25.32 %	22.06 %	14.09 %	9.33 %	19.16

68.40 %	71.02 %	78.99 %	78.09 %	82.31 %	75.76

%

%

%

%

%

%

x

%

%

Ticker
YORW

	FYE: 12/31/2021	2023
Capital Structure:		
Long Term Debt	LTDEBT	180,007,000.00
Preferred Stock	PFD	0.000
Common Shares Outst.	Input Data	14,332,245.00
Common Equity	TOTEQ	221,178,000.00
Sinking Fund Requirements	Input Data	
Short Term Debt	STDEBT	0.000
EPS excluding extra	EPSAPPCOMM	1.66
Price - High	Bloomberg	46.63
Price - Low	Bloomberg	35.32
DPS by payable date	DPS	0.819
AFUDC	AFUDC	4,153,000.000
Total Interest	INTEXP	7,047,000.000
Net Income before Extra.	NETINC	23,757,000.00
CE Income before Extra.	INCAVAILCOMM	23,757,000.00
Preferred Stock Dividends	PFDDIV	0.000
Common Dividends	COMDIVS1	11,590,000.000
Income Bef Extra Items-S&U	INCBEFEXT	23,757,000.00
Net Operating Cash Flow	NETOPGFC	31,908,000.00
Change in op'g Assets + Liabilities	CHGOPASLIAB	-3,311,000.000
Depreciation & Amortization	DEPAMORT	11,746,000.000
Income Tax Expense	INCTAX	1,277,000.000
Capital Expenditures		
Calculations		
Com Eq / Shares Out.	calc	15.432
Total Permanent Capital	calc	401,185,000.000
Average Price	calc	40.975

Total Debt		180,007,000.000
Total Capital	calc	401,185,000.000
Preferred Stk + Sink Fund Req.	calc	0.000
NETOPGFC + CHGOPASLIAB - AFUDC	calc	24,444,000.000
EBITDA	calc	43,827,000.000

York Water Co

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2022	2021	2020	2019
139,465,000.00	138,876,500.00	123,573,000.00	101,035,000.00
0	0.000	0.000	0.000
14,285,584	13,112,948.00	13,060,817.00	13,014,898.00
207,183,000	152,622,000.00	143,252,000.00	134,185,000.00
	0.000	0.000	0.000
0	0.000	0.000	0.000
1.4	1.3	1.27	1.11
49.26	53.39	50.65	46.75
37.5	41.02	35.6	30.98
0.7874	0.757	0.727	0.700
1,501,000	1,221,000.000	530,000.000	366,000.000
5114000	4,926,000.000	4,707,000.000	5,124,000.000
19580000	16,984,000.00	16,598,000.00	14,402,000.00
19,580,000.00	16,984,000.00	16,598,000.00	14,402,000.00
0	0.000	0.000	0.000
10,674,000.00	9,808,000.000	9,394,000.000	8,986,000.000
19,580,000.00	16,984,000.00	16,598,000.00	14,402,000.00
22018000	22,959,000.00	20,235,000.00	18,881,000.00
-7930000	-3,276,000.000	-4,819,000.000	-3,720,000.000
10139000	8,859,000.000	8,177,000.000	7,688,000.000
15000	1,120,000.000	2,018,000.000	2,240,000.000
14.503	11.639	10.968	10.310
346,648,000.000	291,498,500.000	266,825,000.000	235,220,000.000
43.380	47.205	43.125	38.865

139,465,000.000	138,876,500.000	123,573,000.000	101,035,000.000
346,648,000.000	291,498,500.000	266,825,000.000	235,220,000.000
0.000	0.000	0.000	0.000
12,587,000.000	18,462,000.000	14,886,000.000	14,795,000.000
34,848,000.000	31,889,000.000	31,500,000.000	29,454,000.000

2018	
93,358,000.000	
0.000	
	CAPITALIZATION STATISTICS
12,943,536.000	
126,195,000.000	AMOUNT OF CAPITAL EMPLOYED
0.000	TOTAL PERMANENT CAPITAL
	SHORT-TERM DEBT
1,000,000.000	TOTAL CAPITAL EMPLOYED
1.04	INDICATED AVERAGE CAPITAL COST RATES (2)
35.02	TOTAL DEBT
28.10	PREFERRED STOCK
	CAPITAL STRUCTURE RATIOS
0.673	BASED ON TOTAL PERMANENT CAPITAL:
	LONG-TERM DEBT
229,000.000	PREFERRED STOCK
	COMMON EQUITY
5,509,000.000	TOTAL
13,376,000.000	BASED ON TOTAL CAPITAL:
	TOTAL DEBT, INCLUDING SHORT-TERM
13,376,000.000	PREFERRED STOCK
	COMMON EQUITY
0.000	TOTAL
8,583,000.000	
13,376,000.000	FINANCIAL STATISTICS
18,372,000.000	
-2,447,000.000	FINANCIAL RATIOS - MARKET BASED
7,010,000.000	EARNINGS / PRICE RATIO
2,491,000.000	MARKET / AVERAGE BOOK RATIO
	DIVIDEND YIELD
	DIVIDEND PAYOUT RATIO
	RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY
9.750	
	TOTAL DEBT / EBITDA (3)
219,553,000.000	
	FUNDS FROM OPERATIONS / TOTAL DEBT (4)
31.560	

TOTAL DEBT / TOTAL CAPITAL

94,358,000.000

220,553,000.000

0.000

15,696,000.000

28,386,000.000

York Water Co

CAPITALIZATION AND FINANCIAL STATISTICS (1)

2019 - 2023, Inclusive

2023	2022	2021	2020
			(MILLIO
$401.185	$346.648	$291.499	$266.825
$0.000	$0.000	$0.000	$0.000
$401.185	$346.648	$291.499	$266.825
4.41 %	3.67 %	3.75 %	4.19
44.87 %	40.23 %	47.64 %	46.31
0.00	0.00	0.00	0.00
55.13	59.77	52.36	53.69
100.00 %	100.00 %	100.00 %	100.00
44.87 %	40.23 %	47.64 %	46.31
0.00	0.00	0.00	0.00
55.13	59.77	52.36	53.69
100.00 %	100.00 %	100.00 %	100.00
4.05 %	3.23 %	2.75 %	2.94
273.76	331.88	417.61	405.34
2.00	1.82	1.60	1.69
48.79	54.51	57.75	56.60
11.09 %	10.88 %	11.48 %	11.97
4.11 x	4.00 x	4.35 x	3.92
13.58 %	9.03 %	13.29 %	12.05

44.87 %	40.23 %	47.64 %	46.31

	2019	
NS OF DOLLARS)		
	$235.220	
	$0.000	
	$235.220	
%	5.24 %	
		5 YEAR AVERAGE
%	42.95 %	44.40 %
	0.00	0.00
	57.05	55.60
%	100.00 %	100.00 %
%	42.95 %	44.40 %
	0.00	0.00
	57.05	55.60
%	100.00 %	100.00 %
%	2.86 %	3.17 %
	387.49	363.22
	1.80	1.78
	62.39	56.01
%	11.06 %	11.30 %
x	3.43 x	3.96 x
%	14.64 %	12.52 %

%	42.95 %	44.40 %

SEE PAGE 2 FOR NO

TES.

Limestone Water Utility Operating Company, LLC
Index of Workpapers
to Mr. Dylan W. D'Ascendis' Direct Testimony and Schedules

1. *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).
2. *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n*, 262 U.S. 679 (1922).
3. *Value Line Investment Survey*, April 5, 2024.
4. SBBI – 2023, at 193-194, Appendix A-1, Appendix A-7.
5. Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. *A New Approach for Estimating the Equity Risk Premium for Public Utilities*, The Journal of Regulatory Economics (December 2011), 40:261-278.
6. Roger A. Morin, Modern Regulatory Finance, at pages 207, 221, 223.
7. Eugene F. Fama and Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, Journal of Economic Perspectives, Vol. 18, No. 3, Summer 2004 at 25-43.
8. Kroll, Cost of Capital Navigator: U.S. Cost of Capital Module, Size as a Predictor of Equity Returns, at 1.
9. Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance (McGraw-Hill Book Company, 1996), at 204-205, 229.
10. Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989), at 623.
11. Supporting data from Zacks Investment Research
12. Supporting data from Yahoo! Finance
13. Supporting data from *Value Line* Standard Edition
14. Supporting data from *Value Line* Summary & Index
15. Supporting data from S&P Global Market Intelligence and Moody's Investor Service
16. Supporting data from Eviews
17. Supporting data from Kroll Cost of Capital Navigator

64 S.Ct. 281
Supreme Court of the United States

FEDERAL POWER COMMISSION et al.
v.
HOPE NATURAL GAS CO.
CITY OF CLEVELAND
v.
SAME.

Nos. 34 and 35. | Argued Oct. 20, 21, 1943. | Decided Jan. 3, 1944.

Separate proceedings before the Federal Power Commission by such Commission, by the City of Cleveland and the City of Akron, and by Pennsylvania Public Utility Commission wherein the State of West Virginia and its Public Service Commission were permitted to intervene concerning rates charged by Hope Natural Gas Company which were consolidated for hearing. An order fixing rates was reversed and remanded with directions by the Circuit Court of Appeals, 134 F.2d 287, and Federal Power Commission, City of Akron and Pennsylvania Public Utility Commission in one case and the City of Cleveland in another bring certiorari.

Reversed.

Mr. Justice REED, Mr. Justice FRANKFURTER and Mr. Justice JACKSON, dissenting.

On Writs of Certiorari to the United States Circuit Court of Appeals for the Fourth Circuit.

West Headnotes (26)

[1] Public Utilities
Nature and extent in general

Rate-making is only one species of price-fixing which, like other applications of the police power, may reduce the value of the property regulated, but that does not render the regulation invalid.

25 Cases that cite this headnote

[2] Public Utilities
Reasonableness of charges in general

Rates cannot be made to depend upon fair value, which is the end product of the process of rate-making and not the starting point, when the value of the going enterprise depends on earnings under whatever rates may be anticipated.

101 Cases that cite this headnote

[3] Gas
Federal Power Commission

The rate-making function of the Federal Power Commission under the Natural Gas Act involves the making of pragmatic adjustments, and the Commission is not bound to the use of any single formula or combination of formulae in determining rates. Natural Gas Act, §§ 4(a), 5(a), 6, 15 U.S.C.A. §§ 717c(a), 717d(a), 717e.

46 Cases that cite this headnote

[4] Gas
Scope of review and trial de novo

When order of Federal Power Commission fixing natural gas rates is challenged in the courts, the question is whether order viewed in its entirety meets the requirements of the Natural Gas Act. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

8 Cases that cite this headnote

[5] Gas
Reasonableness of Charges

Under the statutory standard that natural gas rates shall be "just and reasonable" it is the result reached and not the method employed that is controlling. Natural Gas Act §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

69 Cases that cite this headnote

[6] Gas
Scope of review and trial de novo

If the total effect of natural gas rates fixed by Federal Power Commission cannot be said to be unjust and unreasonable, judicial inquiry under

the Natural Gas Act is at an end. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

74 Cases that cite this headnote

[7] Gas

Presumptions

An order of the Federal Power Commission fixing rates for natural gas is the product of expert judgment, which carries a presumption of validity, and one who would upset the rate must make a convincing showing that it is invalid because it is unjust and unreasonable in its consequences. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

118 Cases that cite this headnote

[8] Gas

Reasonableness of Charges

The fixing of just and reasonable rates for natural gas by the Federal Power Commission involves a balancing of the investor and the consumer interests. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

52 Cases that cite this headnote

[9] Gas

Depreciation and depletion

As respects rates for natural gas, from the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business, which includes service on the debt and dividends on stock, and by such standard the return to the equity owner should be commensurate with the terms on investments in other enterprises having corresponding risks, and such returns should be sufficient to assure confidence in the financial integrity of the enterprise so as to maintain its credit and to attract capital. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

265 Cases that cite this headnote

[10] Gas

Depreciation and depletion

The fixing by the Federal Power Commission of a rate of return that permitted a natural gas company to earn $2,191,314 annually was supported by substantial evidence. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

3 Cases that cite this headnote

[11] Gas

Depreciation and depletion

Rates which enable a natural gas company to operate successfully, to maintain its financial integrity, to attract capital and to compensate its investors for the risks assumed cannot be condemned as invalid, even though they might produce only a meager return on the so-called "fair value" rate base. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

155 Cases that cite this headnote

[12] Gas

Method of valuation

A return of only 3 27/100 per cent. on alleged rate base computed on reproduction cost new to natural gas company earning an annual average return of about 9 per cent. on average investment and satisfied with existing gas rates suggests an inflation of the base on which the rate had been computed, and justified Federal Power Commission in rejecting reproduction cost as the measure of the rate base. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

64 Cases that cite this headnote

[13] Gas

Depreciation and depletion

There is no constitutional requirement that owner who engages in a wasting-asset business of limited life shall receive at the end more than he has put into it, and such rule is applicable to a natural gas company since the ultimate

exhaustion of its supply of gas is inevitable. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

1 Cases that cite this headnote

[14] Gas

Depreciation and depletion

In fixing natural gas rate the basing of annual depreciation on cost is proper since by such procedure the utility is made whole and the integrity of its investment is maintained, and no more is required. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

13 Cases that cite this headnote

[15] Gas

Findings and orders

There are no constitutional requirements more exacting than the standards of the Natural Gas Act which are that gas rates shall be just and reasonable, and a rate order which conforms with the act is valid. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

13 Cases that cite this headnote

[16] Commerce

Gas

The purpose of the Natural Gas Act was to provide through the exercise of the national power over interstate commerce an agency for regulating the wholesale distribution to public service companies of natural gas moving in interstate commerce not subject to certain types of state regulation, and the act was not intended to take any authority from state commissions or to usurp state regulatory authority. Natural Gas Act, § 1 et seq., 15 U.S.C.A. § 717 et seq.

25 Cases that cite this headnote

[17] Mines and Minerals

Oil and gas

Under the Natural Gas Act, the Federal Power Commission has no authority over the production or gathering of natural gas. Natural Gas Act, § 1(b), 15 U.S.C.A. § 717(b).

8 Cases that cite this headnote

[18] Gas

In general; amount and regulation

The primary aim of the Natural Gas Act was to protect consumers against exploitation at the hands of natural gas companies and holding companies owning a majority of the pipe-line mileage which moved gas in interstate commerce and against which state commissions, independent producers and communities were growing quite helpless. Natural Gas Act, §§ 4, 6–10, 14, 15 U.S.C.A. §§ 717c, 717e–717i, 717m.

59 Cases that cite this headnote

[19] Gas

In general; amount and regulation

Apart from the express exemptions contained in § 7 of the Natural Gas Act considerations of conservation are material where abandonment or extensions of facilities or service by natural gas companies are involved, but exploitation of consumers by private operators through maintenance of high rates cannot be continued because of the indirect benefits derived therefrom by a state containing natural gas deposits. Natural Gas Act, §§ 4, 5, and § 7 as amended 15 U.S.C.A. §§ 717c, 717d, 717f.

19 Cases that cite this headnote

[20] Commerce

Gas

A limitation on the net earnings of a natural gas company from its interstate business is not a limitation on the power of the producing state, either to safeguard its tax revenues from such industry, or to protect the interests of those who sell their gas to the interstate operator, particularly where the return allowed the company by the Federal Power Commission was a net return after all such charges. Natural

Gas Act, §§ 4, 5, and § 7, as amended, 15 U.S.C.A. §§ 717c, 717d, 717f.

10 Cases that cite this headnote

[21] Gas

Reasonableness of Charges

The Natural Gas Act granting Federal Power Commission power to fix "just and reasonable rates" does not include the power to fix rates which will disallow or discourage resales for industrial use. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

73 Cases that cite this headnote

[22] Gas

Reasonableness of Charges

The wasting-asset nature of the natural gas industry does not require the maintenance of the level of rates so that natural gas companies can make a greater profit on each unit of gas sold. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

1 Cases that cite this headnote

[23] Federal Courts

Presentation of Questions Below or on Review; Record; Waiver

Federal Courts

Scope and Extent of Review

Where the Federal Power Commission made no findings as to any discrimination or unreasonable differences in rates, and its failure was not challenged in the petition to review, and had not been raised or argued by any party, the problem of discrimination was not open to review by the Supreme Court on certiorari. Natural Gas Act, § 4(b), 15 U.S.C.A. § 717c(b).

18 Cases that cite this headnote

[24] Constitutional Law

Judicial encroachment on executive acts taken under statutory authority

Gas

Power to control and regulate

Congress has entrusted the administration of the Natural Gas Act to the Federal Power Commission and not to the courts, and apart from the requirements of judicial review, it is not for the Supreme Court to advise the Commission how to discharge its functions. Natural Gas Act, §§ 1 et seq., 19(b), 15 U.S.C.A. §§ 717 et seq., 717r(b).

13 Cases that cite this headnote

[25] Gas

Decisions reviewable

Under the Natural Gas Act, where order sought to be reviewed does not of itself adversely affect complainant but only affects his rights adversely on the contingency of future administrative action, the order is not reviewable, and resort to the courts in such situation is either premature or wholly beyond the province of such courts. Natural Gas Act, § 19(b), 15 U.S.C.A. § 717r(b).

8 Cases that cite this headnote

[26] Gas

Persons entitled to relief; parties

Findings of the Federal Power Commission on lawfulness of past natural gas rates, which the Commission was without power to enforce, were not reviewable under the Natural Gas Act giving any "party aggrieved" by an order of the Commission the right of review. Natural Gas Act, § 19(b), 15 U.S.C.A. § 717r(b).

27 Cases that cite this headnote

Attorneys and Law Firms

****283** ***592** Mr. Francis M. Shea, Asst. Atty. Gen., for petitioners Federal Power Com'n and others.

***593** Mr. Spencer W. Reeder, of Cleveland, Ohio, for petitioner City of cleveland.

Mr. William B. Cockley, of Cleveland, Ohio, for respondent.

Mr. M. M. Neeley, of Charleston, W. Va., for State of West Virginia, as amicus curiae by special leave of Court.

Opinion

Mr. Justice DOUGLAS delivered the opinion of the Court.

The primary issue in these cases concerns the validity under the Natural Gas Act of 1938, 52 Stat. 821, 15 U.S.C. s 717 et seq., 15 U.S.C.A. s 717 et seq., of a rate order issued by the Federal Power Commission reducing the rates chargeable by Hope Natural Gas Co., 44 P.U.R.,N.S., 1. On a petition for review of the order made pursuant to s 19(b) of the Act, the ***594** Circuit Court of Appeals set it aside, one judge dissenting. 4 Cir., 134 F.2d 287. The cases ****284** are here on petitions for writs of certiorari which we granted because of the public importance of the questions presented. City of Cleveland v. Hope Natural Gas Co., 319 U.S. 735, 63 S.Ct. 1165.

Hope is a West Virginia corporation organized in 1898. It is a wholly owned subsidiary of Standard Oil Co. (N.J.). Since the date of its organization, it has been in the business of producing, purchasing and marketing natural gas in that state.[1] It sells some of that gas to local consumers in West Virginia. But the great bulk of it goes to five customer companies which receive it at the West Virginia line and distribute it in Ohio and in Pennsylvania.[2] In July, 1938, the cities of Cleveland and Akron filed complaints with the Commission charging that the rates collected by Hope from East Ohio Gas Co. (an affiliate of Hope which distributes gas in Ohio) were excessive and unreasonable. Later in 1938 the Commission on its own motion instituted an investigation to determine the reasonableness of all of Hope's interstate rates. In March ***595** 1939 the Public Utility Commission of Pennsylvania filed a complaint with the Commission charging that the rates collected by Hope from Peoples Natural Gas Co. (an affiliate of Hope distributing gas in Pennsylvania) and two non-affiliated companies were unreasonable. The City of Cleveland asked that the challenged rates be declared unlawful and that just and reasonable rates be determined from June 30, 1939 to the date of the Commission's order. The latter finding was requested in aid of state regulation and to afford the Public Utilities Commission of Ohio a proper basic for disposition of a fund collected by East Ohio under bond from Ohio consumers since June 30, 1939. The cases were consolidated and hearings were held.

On May 26, 1942, the Commission entered its order and made its findings. Its order required Hope to decrease its future interstate rates so as to reflect a reduction, on an annual basis of not less than $3,609,857 in operating revenues. And it established 'just and reasonable' average rates per m.c.f. for each of the five customer companies.[3] In response to the prayer of the City of Cleveland the Commission also made findings as to the lawfulness of past rates, although concededly it had no authority under the Act to fix past rates or to award reparations. 44 P.U.R.,U.S., at page 34. It found that the rates collected by Hope from East Ohio were unjust, unreasonable, excessive and therefore unlawful, by $830,892 during 1939, $3,219,551 during 1940, and $2,815,789 on an annual basis since 1940. It further found that just, reasonable, and lawful rates for gas sold by Hope to East Ohio for resale for ultimate public consumption were those required ***596** to produce $11,528,608 for 1939, $11,507,185 for 1940 and $11.910,947 annually since 1940.

The Commission established an interstate rate base of $33,712,526 which, it found, represented the 'actual legitimate cost' of the company's interstate property less depletion and depreciation and plus unoperated acreage, working capital and future net capital additions. The Commission, beginning with book cost, made ****285** certain adjustments not necessary to relate here and found the 'actual legitimate cost' of the plant in interstate service to be $51,957,416, as of December 31, 1940. It deducted accrued depletion and depreciation, which it found to be $22,328,016 on an 'economic-service-life' basis. And it added $1,392,021 for future net capital additions, $566,105 for useful unoperated acreage, and $2,125,000 for working capital. It used 1940 as a test year to estimate future revenues and expenses. It allowed over $16,000,000 as annual operating expenses—about $1,300,000 for taxes, $1,460,000 for depletion and depreciation, $600,000 for exploration and development costs, $8,500,000 for gas purchased. The Commission allowed a net increase of $421,160 over 1940 operating expenses, which amount was to take care of future increase in wages, in West Virginia property taxes, and in exploration and development costs. The total amount of deductions allowed from interstate revenues was $13,495,584.

Hope introduced evidence from which it estimated reproduction cost of the property at $97,000,000. It also presented a so-called trended 'original cost' estimate which exceeded $105,000,000. The latter was designed 'to indicate what the original cost of the property would have been if

1938 material and labor prices had prevailed throughout the whole period of the piece-meal construction of the company's property since 1898.' 44 P.U.R.,N.S., at pages 8, 9. Hope estimated by the 'percent condition' method accrued depreciation at about 35% of ***597** reproduction cost new. On that basis Hope contended for a rate base of $66,000,000. The Commission refused to place any reliance on reproduction cost new, saying that it was 'not predicated upon facts' and was 'too conjectural and illusory to be given any weight in these proceedings.' Id., 44 P.U.R.,U.S., at page 8. It likewise refused to give any 'probative value' to trended 'original cost' since it was 'not founded in fact' but was 'basically erroneous' and produced 'irrational results.' Id., 44 P.U.R., N.S., at page 9. In determining the amount of accrued depletion and depreciation the Commission, following Lindheimer v. Illinois Bell Telephone Co., 292 U.S. 151, 167-169, 54 S.Ct. 658, 664—666, 78 L.Ed. 1182; Federal Power Commission v. Natural Gas Pipeline Co., 315 U.S. 575, 592, 593, 62 S.Ct. 736, 745, 746, 86 L.Ed. 1037, based its computation on 'actual legitimate cost'. It found that Hope during the years when its business was not under regulation did not observe 'sound depreciation and depletion practices' but 'actually accumulated an excessive reserve' [4] of about $46,000,000. Id., 44 P.U.R.,N.S., at page 18. One member of the Commission thought that the entire amount of the reserve should be deducted from 'actual legitimate cost' in determining the rate base. [5] The majority of the ***598** Commission concluded, however, that where, as here, a business is brought under regulation for the first time and where incorrect depreciation and depletion practices have prevailed, the deduction of the reserve requirement (actual existing depreciation and depletion) rather than the excessive reserve should be made so as to ****286** lay 'a sound basis for future regulation and control of rates.' Id., 44 P.U.R.,N.S., at page 18. As we have pointed out, it determined accrued depletion and depreciation to be $22,328,016; and it allowed approximately $1,460,000 as the annual operating expense for depletion and depreciation. [6]

Hope's estimate of original cost was about $69,735,000—approximately $17,000,000 more than the amount found by the Commission. The item of $17,000,000 was made up largely of expenditures which prior to December 31, 1938, were charged to operating expenses. Chief among those expenditures was some $12,600,000 expended ***599** in well-drilling prior to 1923. Most of that sum was expended by Hope for labor, use of drilling-rigs, hauling, and similar costs of well-drilling. Prior to 1923 Hope followed the general practice of the natural gas industry and charged the cost of drilling wells to operating expenses. Hope continued that practice until the Public Service Commission of West Virginia in 1923 required it to capitalize such expenditures, as does the Commission under its present Uniform System of Accounts. [7] The Commission refused to add such items to the rate base stating that 'No greater injustice to consumers could be done than to allow items as operating expenses and at a later date include them in the rate base, thereby placing multiple charges upon the consumers.' Id., 44 P.U.R.,N.S., at page 12. For the same reason the Commission excluded from the rate base about $1,600,000 of expenditures on properties which Hope acquired from other utilities, the latter having charged those payments to operating expenses. The Commission disallowed certain other overhead items amounting to over $3,000,000 which also had been previously charged to operating expenses. And it refused to add some $632,000 as interest during construction since no interest was in fact paid.

Hope contended that it should be allowed a return of not less than 8%. The Commission found that an 8% return would be unreasonable but that 6 1/2% was a fair rate of return. That rate of return, applied to the rate base of $33,712,526, would produce $2,191,314 annually, as compared with the present income of not less than $5,801,171.

The Circuit Court of Appeals set aside the order of the Commission for the following reasons. (1) It held that the rate base should reflect the 'present fair value' of the ***600** property, that the Commission in determining the 'value' should have considered reproduction cost and trended original cost, and that 'actual legitimate cost' (prudent investment) was not the proper measure of 'fair value' where price levels had changed since the investment. (2) It concluded that the well-drilling costs and overhead items in the amount of some $17,000,000 should have been included in the rate base. (3) It held that accrued depletion and depreciation and the annual allowance for that expense should be computed on the basis of 'present fair value' of the property not on the basis of 'actual legitimate cost'.

****287** The Circuit Court of Appeals also held that the Commission had no power to make findings as to past rates in aid of state regulation. But it concluded that those findings were proper as a step in the process of fixing future rates. Viewed in that light, however, the findings were deemed to be invalidated by the same errors which vitiated the findings on which the rate order was based.

Order Reducing Rates. Congress has provided in s 4(a) of the Natural Gas Act that all natural gas rates subject to the jurisdiction of the Commission 'shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.' Sec. 5(a) gives the Commission the power, after hearing, to determine the 'just and reasonable rate' to be thereafter observed and to fix the rate by order. Sec. 5(a) also empowers the Commission to order a 'decrease where existing rates are unjust * * * unlawful, or are not the lowest reasonable rates.' And Congress has provided in s 19(b) that on review of these rate orders the 'finding of the Commission as to the facts, if supported by substantial evidence, shall be conclusive.' Congress, however, has provided no formula by which the 'just and reasonable' rate is to be determined. It has not filled in the ***601** details of the general prescription [8] of s 4(a) and s 5(a). It has not expressed in a specific rule the fixed principle of 'just and reasonable'.

[1] **[2]** When we sustained the constitutionality of the Natural Gas Act in the Natural Gas Pipeline Co. case, we stated that the 'authority of Congress to regulate the prices of commodities in interstate commerce is at least as great under the Fifth Amendment as is that of the states under the Fourteenth to regulate the prices of commodities in intrastate commerce.' 315 U.S. at page 582, 62 S.Ct. at page 741, 86 L.Ed. 1037. Rate-making is indeed but one species of price-fixing. Munn v. Illinois, 94 U.S. 113, 134, 24 L.Ed. 77. The fixing of prices, like other applications of the police power, may reduce the value of the property which is being regulated. But the fact that the value is reduced does not mean that the regulation is invalid. Block v. Hirsh, 256 U.S. 135, 155—157, 41 S.Ct. 458, 459, 460, 65 L.Ed. 865, 16 A.L.R. 165; Nebbia v. New York, 291 U.S. 502, 523—539, 54 S.Ct. 505, 509—517, 78 L.Ed. 940, 89 A.L.R. 1469, and cases cited. It does, however, indicate that 'fair value' is the end product of the process of rate-making not the starting point as the Circuit Court of Appeals held. The heart of the matter is that rates cannot be made to depend upon 'fair value' when the value of the going enterprise depends on earnings under whatever rates may be anticipated. [9]

***602** **[3]** **[4]** **[5]** **[6]** **[7]** We held in Federal Power Commission v. Natural Gas Pipeline Co., supra, that the Commission was not bound to the use of any single formula or combination of formulae in determining rates. Its rate-making function, moreover, involves the making of 'pragmatic adjustments.' Id., 315 U.S. at page 586, 62 S.Ct. at page 743, 86 L.Ed. 1037. And when the Commission's order is challenged in the courts, the question is whether that order 'viewed in its entirety' meets the requirements of the Act. Id., 315 U.S. at page 586, 62 S.Ct. at page 743, 86 L.Ed. 1037. Under the statutory standard of 'just and reasonable' it is the result reached not the method employed which is controlling. Cf. ****288** Los Angeles Gas & Electric Corp. v. Railroad Commission, 289 U.S. 287, 304, 305, 314, 53 S.Ct. 637, 643, 644, 647, 77 L.Ed. 1180; West Ohio Gas Co. v. Public Utilities Commission (No. 1), 294 U.S. 63, 70, 55 S.Ct. 316, 320, 79 L.Ed. 761; West v. Chesapeake & Potomac Tel. Co., 295 U.S. 662, 692, 693, 55 S.Ct. 894, 906, 907, 79 L.Ed. 1640 (dissenting opinion). It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the Act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important. Moreover, the Commission's order does not become suspect by reason of the fact that it is challenged. It is the product of expert judgment which carries a presumption of validity. And he who would upset the rate order under the Act carries the heavy burden of making a convincing showing that it is invalid because it is unjust and unreasonable in its consequences. Cf. Railroad Commission v. Cumberland Tel. & T. Co., 212 U.S. 414, 29 S.Ct. 357, 53 L.Ed. 577; Lindheimer v. Illinois Bell Tel. Co., supra, 292 U.S. at pages 164, 169, 54 S.Ct. at pages 663, 665, 78 L.Ed. 1182; Railroad Commission v. Pacific Gas & E. Co., 302 U.S. 388, 401, 58 S.Ct. 334, 341, 82 L.Ed. 319.

***603** **[8]** **[9]** The rate-making process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests. Thus we stated in the Natural Gas Pipeline Co. case that 'regulation does not insure that the business shall produce net revenues.' 315 U.S. at page 590, 62 S.Ct. at page 745, 86 L.Ed. 1037. But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. Cf. Chicago & Grand Trunk R. Co. v. Wellman, 143 U.S. 339, 345, 346, 12 S.Ct. 400, 402, 36 L.Ed. 176. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. See State of Missouri ex rel. South-

western Bell Tel. Co. v. Public Service Commission, 262 U.S. 276, 291, 43 S.Ct. 544, 547, 67 L.Ed. 981, 31 A.L.R. 807 (Mr. Justice Brandeis concurring). The conditions under which more or less might be allowed are not important here. Nor is it important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at. For we are of the view that the end result in this case cannot be condemned under the Act as unjust and unreasonable from the investor or company viewpoint.

We have already noted that Hope is a wholly owned subsidiary of the Standard Oil Co. (N.J.). It has no securities outstanding except stock. All of that stock has been owned by Standard since 1908. The par amount presently outstanding is approximately $28,000,000 as compared with the rate base of $33,712,526 established by ***604** the Commission. Of the total outstanding stock $11,000,000 was issued in stock dividends. The balance, or about $17,000,000, was issued for cash or other assets. During the four decades of its operations Hope has paid over $97,000,000 in cash dividends. It had, moreover, accumulated by 1940 an earned surplus of about $8,000,000. It had thus earned the total investment in the company nearly seven times. Down to 1940 it earned over 20% per year on the average annual amount of its capital stock issued for cash or other assets. On an average invested capital of some $23,000,000 Hope's average earnings have been about 12% a year. And during this period it had accumulated in addition reserves for depletion and depreciation of about $46,000,000. Furthermore, during 1939, 1940 and 1941, Hope paid dividends of 10% on its stock. And in the year 1942, during about half of which the lower rates were in effect, it paid dividends of 7 1/2%. From 1939-1942 its earned surplus increased from $5,250,000 to about $13,700,000, i.e., to almost half the par value of its outstanding stock.

As we have noted, the Commission fixed a rate of return which permits Hope to earn $2,191,314 annually. In determining that amount it stressed the importance of maintaining the financial integrity of the ****289** company. It considered the financial history of Hope and a vast array of data bearing on the natural gas industry, related businesses, and general economic conditions. It noted that the yields on better issues of bonds of natural gas companies sold in the last few years were 'close to 3 per cent', 44 P.U.R.,N.S., at page 33. It stated that the company was a 'seasoned enterprise whose risks have been minimized' by adequate provisions for depletion and depreciation (past and present) with 'concurrent high profits', by 'protected established markets, through affiliated distribution companies, in populous and industralized areas', and by a supply of gas locally to meet all requirements, ***605** 'except on certain peak days in the winter, which it is feasible to supplement in the future with gas from other sources.' Id., 44 P.U.R.,N.S., at page 33. The Commission concluded, 'The company's efficient management, established markets, financial record, affiliations, and its prospective business place it in a strong position to attract capital upon favorable terms when it is required.' Id., 44 P.U.R.,N.S., at page 33.

[10] **[11]** **[12]** In view of these various considerations we cannot say that an annual return of $2,191,314 is not 'just and reasonable' within the meaning of the Act. Rates which enable the company to operate successfully, to maintain its financial integrity, to attract capital, and to compensate its investors for the risks assumed certainly cannot be condemned as invalid, even though they might produce only a meager return on the so-called 'fair value' rate base. In that connection it will be recalled that Hope contended for a rate base of $66,000,000 computed on reproduction cost new. The Commission points out that if that rate base were accepted, Hope's average rate of return for the four-year period from 1937-1940 would amount to 3.27%. During that period Hope earned an annual average return of about 9% on the average investment. It asked for no rate increases. Its properties were well maintained and operated. As the Commission says such a modest rate of 3.27% suggests an 'inflation of the base on which the rate has been computed.' Dayton Power & Light Co. v. Public Utilities Commission, 292 U.S. 290, 312, 54 S.Ct. 647, 657, 78 L.Ed. 1267. Cf. Lindheimer v. Illinois Bell Tel. Co., supra, 292 U.S. at page 164, 54 S.Ct. at page 663, 78 L.Ed. 1182. The incongruity between the actual operations and the return computed on the basis of reproduction cost suggests that the Commission was wholly justified in rejecting the latter as the measure of the rate base.

In view of this disposition of the controversy we need not stop to inquire whether the failure of the Commission to add the $17,000,000 of well-drilling and other costs to ***606** the rate base was consistent with the prudent investment theory as developed and applied in particular cases.

[13] **[14]** **[15]** Only a word need be added respecting depletion and depreciation. We held in the Natural Gas Pipeline Co. case that there was no constitutional requirement 'that the owner who embarks in a wasting-asset business of limited life shall receive at the end more than he has put into it.' 315 U.S. at page 593, 62 S.C. at page 746, 86 L.Ed. 1037. The Circuit Court of Appeals did not think that that rule was applicable here because Hope was a utility required to continue its service to the public and not scheduled to

end its business on a day certain as was stipulated to be true of the Natural Gas Pipeline Co. But that distinction is quite immaterial. The ultimate exhaustion of the supply is inevitable in the case of all natural gas companies. Moreover, this Court recognized in Lindheimer v. Illinois Bell Tel. Co., supra, the propriety of basing annual depreciation on cost. [10] By such a procedure the **290 utility is made whole and the integrity of its investment maintained. [11] No more is required. [12] We cannot approve the contrary holding *607 of United Railways & Electric Co. v. West, 280 U.S. 234, 253, 254, 50 S.Ct. 123, 126, 127, 74 L.Ed. 390. Since there are no constitutional requirements more exacting than the standards of the Act, a rate order which conforms to the latter does not run afoul of the former.

The Position of West Virginia. The State of West Virginia, as well as its Public Service Commission, intervened in the proceedings before the Commission and participated in the hearings before it. They have also filed a brief amicus curiae here and have participated in the argument at the bar. Their contention is that the result achieved by the rate order 'brings consequences which are unjust to West Virginia and its citizens' and which 'unfairly depress the value of gas, gas lands and gas leaseholds, unduly restrict development of their natural resources, and arbitrarily transfer their properties to the residents of other states without just compensation therefor.'

West Virginia points out that the Hope Natural Gas Co. holds a large number of leases on both producing and unoperated properties. The owner or grantor receives from the operator or grantee delay rentals as compensation for postponed drilling. When a producing well is successfully brought in, the gas lease customarily continues indefinitely for the life of the field. In that case the operator pays a stipulated gas-well rental or in some cases a gas royalty equivalent to one-eighth of the gas marketed. [13] Both the owner and operator have valuable property interests in the gas which are separately taxable under West Virginia law. The contention is that the reversionary interests in the leaseholds should be represented in the rate proceedings since it is their gas which is being sold in interstate *608 commerce. It is argued, moreover, that the owners of the reversionary interests should have the benefit of the 'discovery value' of the gas leaseholds, not the interstate consumers. Furthermore, West Virginia contends that the Commission in fixing a rate for natural gas produced in that State should consider the effect of the rate order on the economy of West Virginia. It is pointed out that gas is a wasting asset with a rapidly diminishing supply. As a result West Virginia's gas deposits are becoming increasingly valuable. Nevertheless the rate fixed by the Commission reduces that value. And that reduction, it is said, has severe repercussions on the economy of the State. It is argued in the first place that as a result of this rate reduction Hope's West Virginia property taxes may be decreased in view of the relevance which earnings have under West Virginia law in the assessment of property for tax purposes. [14] Secondly, it is pointed out that West Virginia has a production tax [15] on the 'value' of the gas exported from the State. And we are told that for purposes of that tax 'value' becomes under West Virginia law 'practically the substantial equivalent of market value.' Thus West Virginia argues that undervaluation of Hope's gas leaseholds will cost the State many thousands of dollars in taxes. The effect, it is urged, is to impair West Virginia's tax structure for the benefit of Ohio and Pennsylvania consumers. West Virginia emphasizes, moreover, its deep interest in the conservation of its natural resources including its natural gas. It says that a reduction of the value of these leasehold values will jeopardize these conservation policies in three respects: (1) **291 exploratory development of new fields will be discouraged; (2) abandonment of lowyield high-cost marginal wells will be hastened; and (3) secondary recovery of oil will be hampered. *609 Furthermore, West Virginia contends that the reduced valuation will harm one of the great industries of the State and that harm to that industry must inevitably affect the welfare of the citizens of the State. It is also pointed out that West Virginia has a large interest in coal and oil as well as in gas and that these forms of fuel are competitive. When the price of gas is materially cheapened, consumers turn to that fuel in preference to the others. As a result this lowering of the price of natural gas will have the effect of depreciating the price of West Virginia coal and oil.

West Virginia insists that in neglecting this aspect of the problem the Commission failed to perform the function which Congress entrusted to it and that the case should be remanded to the Commission for a modification of its order. [16]

We have considered these contentions at length in view of the earnestness with which they have been urged upon us. We have searched the legislative history of the Natural Gas Act for any indication that Congress entrusted to the Commission the various considerations which West Virginia has advanced here. And our conclusion is that Congress did not.

[16] **[17]** We pointed out in Illinois Natural Gas Co. v. Central Illinois Public Service Co., 314 U.S. 498, 506, 62

S.Ct. 384, 387, 86 L.Ed. 371, that the purpose of the Natural Gas Act was to provide, 'through the exercise of the national power over interstate commerce, an agency for regulating the wholesale distribution to public service companies of natural gas moving interstate, which this Court had declared to be interstate commerce not subject to certain types of state regulation.' As stated in the House Report the 'basic purpose' of this legislation was 'to occupy' the field in which such cases as ***610** State of Missouri v. Kansas Natural Gas Co., 265 U.S. 298, 44 S.Ct. 544, 68 L.Ed. 1027, and Public Utilities Commission v. Attleboro Steam & Electric Co., 273 U.S. 83, 47 S.Ct. 294, 71 L.Ed. 549, had held the States might not act. H.Rep. No. 709, 75th Cong., 1st Sess., p. 2. In accomplishing that purpose the bill was designed to take 'no authority from State commissions' and was 'so drawn as to complement and in no manner usurp State regulatory authority.' Id., p. 2. And the Federal Power Commission was given no authority over the 'production or gathering of natural gas.' s 1(b).

[18] The primary aim of this legislation was to protect consumers against exploitation at the lands of natural gas companies. Due to the hiatus in regulation which resulted from the Kansas Natural Gas Co. case and related decisions state commissions found it difficult or impossible to discover what it cost interstate pipe-line companies to deliver gas within the consuming states; and thus they were thwarted in local regulation. H.Rep., No. 709, supra, p. 3. Moreover, the investigations of the Federal Trade Commission had disclosed that the majority of the pipe-line mileage in the country used to transport natural gas, together with an increasing percentage of the natural gas supply for pipe-line transportation, had been acquired by a handful of holding companies.[17] State commissions, independent producers, and communities having or seeking the service were growing quite helpless against these combinations.[18] These were the types of problems with which those participating in the hearings were pre-occupied.[19] Congress addressed itself to those specific evils.

***611** The Federal Power Commission was given ****292** broad powers of regulation. The fixing of 'just and reasonable' rates (s 4) with the powers attendant thereto[20] was the heart of the new regulatory system. Moreover, the Commission was given certain authority by s 7(a), on a finding that the action was necessary or desirable 'in the public interest,' to require natural gas companies to extend or improve their transportation facilities and to sell gas to any authorized local distributor. By s 7(b) it was given control over the abandonment of facilities or of service. And by s 7(c), as originally enacted, no natural gas company could undertake the construction or extension of any facilities for the transportation of natural gas to a market in which natural gas was already being served by another company, or sell any natural gas in such a market, without obtaining a certificate of public convenience and necessity from the Commission. In passing on such applications for certificates of convenience and necessity the Commission was told by s 7(c), as originally enacted, that it was 'the intention of Congress that natural gas shall be sold in interstate commerce for resale for ultimate public consumption for domestic, commercial, industrial, or any other use at the lowest possible reasonable rate consistent with the maintenance of adequate service in the public interest.' The latter provision was deleted from s 7(c) when that subsection was amended by the Act of February 7, 1942, 56 Stat. 83. By that amendment limited grandfather rights were granted companies desiring to extend their facilities and services over the routes or within the area which they were already serving. Moreover, s 7(c) was broadened so as to require certificates ***612** of public convenience and necessity not only where the extensions were being made to markets in which natural gas was already being sold by another company but in other situations as well.

[19] These provisions were plainly designed to protect the consumer interests against exploitation at the hands of private natural gas companies. When it comes to cases of abandonment or of extensions of facilities or service, we may assume that, apart from the express exemptions[21] contained in s 7, considerations of conservation are material to the issuance of certificates of public convenience and necessity. But the Commission was not asked here for a certificate of public convenience and necessity under s 7 for any proposed construction or extension. It was faced with a determination of the amount which a private operator should be allowed to earn from the sale of natural gas across state lines through an established distribution system. Secs. 4 and 5, not s 7, provide the standards for that determination. We cannot find in the words of the Act or in its history the slightest intimation or suggestion that the exploitation of consumers by private operators through the maintenance of high rates should be allowed to continue provided the producing states obtain indirect benefits from it. That apparently was the Commission's view of the matter, for the same arguments advanced here were presented to the Commission and not adopted by it.

We do not mean to suggest that Congress was unmindful of the interests of the producing states in their natural gas supplies when it drafted the Natural Gas Act. As we have said, the Act does not intrude on the domain traditionally reserved for control by state commissions; and the Federal Power Commission was given no authority over ***613** 'the production or gathering of natural gas.' s 1(b). In addition, Congress recognized the legitimate interests of the States in the conservation of natural gas. By s 11 Congress instructed the Commission to make reports on compacts between two or more States dealing with the conservation, production and transportation of natural gas.[22] The Commission was also ****293** directed to recommend further legislation appropriate or necessary to carry out any proposed compact and 'to aid in the conservation of natural-gas resources within the United States and in the orderly, equitable, and economic production, transportation, and distribution of natural gas.' s 11(a). Thus Congress was quite aware of the interests of the producing states in their natural gas supplies.[23] But it left the protection of ***614** those interests to measures other than the maintenance of high rates to private companies. If the Commission is to be compelled to let the stockholders of natural gas companies have a feast so that the producing states may receive crumbs from that table, the present Act must be redesigned. Such a project raises questions of policy which go beyond our province.

[20] It is hardly necessary to add that a limitation on the net earnings of a natural gas company from its interstate business is not a limitation on the power of the producing state either to safeguard its tax revenues from that industry[24] or to protect the interests of those who sell their gas to the interstate operator.[25] The return which ****294** the Commission ***615** allowed was the net return after all such charges.

It is suggested that the Commission has failed to perform its duty under the Act in that it has not allowed a return for gas production that will be enough to induce private enterprise to perform completely and efficiently its functions for the public. The Commission, however, was not oblivious of those matters. It considered them. It allowed, for example, delay rentals and exploration and development costs in operating expenses.[26] No serious attempt has been made here to show that they are inadequate. We certainly cannot say that they are, unless we are to substitute our opinions for the expert judgment of the administrators to whom Congress entrusted the decision. Moreover, if in light of experience they turn out to be inadequate for development of new sources of supply, the doors of the Commission are open for increased allowances. This is not an order for all time. The Act contains machinery for obtaining rate adjustments. s 4.

[21] **[22]** But it is said that the Commission placed too low a rate on gas for industrial purposes as compared with gas for domestic purposes and that industrial uses should be discouraged. It should be noted in the first place that the rates which the Commission has fixed are Hope's interstate wholesale rates to distributors not interstate rates to industrial users[27] and domestic consumers. We hardly ***616** can assume, in view of the history of the Act and its provisions, that the resales intrastate by the customer companies which distribute the gas to ultimate consumers in Ohio and Pennsylvania are subject to the rate-making powers of the Commission.[28] But in any event those rates are not in issue here. Moreover, we fail to find in the power to fix 'just and reasonable' rates the power to fix rates which will disallow or discourage resales for industrial use. The Committee Report stated that the Act provided 'for regulation along recognized and more or less standardized lines' and that there was 'nothing novel in its provisions'. H.Rep.No.709, supra, p. 3. Yet if we are now to tell the Commission to fix the rates so as to discourage particular uses, we would indeed be injecting into a rate case a 'novel' doctrine which has no express statutory sanction. The same would be true if we were to hold that the wasting-asset nature of the industry required the maintenance of the level of rates so that natural gas companies could make a greater profit on each unit of gas sold. Such theories of rate-making for this industry may or may not be desirable. The difficulty is that s 4(a) and s 5(a) contain only the conventional standards of rate-making for natural gas companies.[29] The ***617** Act of February 7, 1942, by broadening s 7 gave the Commission some additional authority to deal with the conservation aspects of the problem.[30] But s 4(a) and s 5(a) were not changed. If the standard ****295** of 'just and reasonable' is to sanction the maintenance of high rates by a natural gas company because they restrict the use of natural gas for certain purposes, the Act must be further amended.

[23] **[24]** It is finally suggested that the rates charged by Hope are discriminatory as against domestic users and in favor of industrial users. That charge is apparently based on s 4(b) of the Act which forbids natural gas companies from maintaining 'any unreasonable difference in rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.' The power of the Commission to eliminate any such unreasonable differences

or discriminations is plain. s 5(a). The Commission, however, made no findings under s 4(b). Its failure in that regard was not challenged in the petition to review. And it has not been raised or argued here by any party. Hence the problem of discrimination has no proper place in the present decision. It will be time enough to pass on that issue when it is presented to us. Congress has entrusted the administration of the Act to the Commission not to the courts. Apart from the requirements of judicial review it is not ***618** for us to advise the Commission how to discharge its functions.

Findings as to the Lawfulness of Past Rates. As we have noted, the Commission made certain findings as to the lawfulness of past rates which Hope had charged its interstate customers. Those findings were made on the complaint of the City of Cleveland and in aid of state regulation. It is conceded that under the Act the Commission has no power to make reparation orders. And its power to fix rates admittedly is limited to those 'to be thereafter observed and in force.' s 5(a). But the Commission maintains that it has the power to make findings as to the lawfulness of past rates even though it has no power to fix those rates. [31] However that may be, we do not think that these findings were reviewable under s 19(b) of the Act. That section gives any party 'aggrieved by an order' of the Commission a review 'of such order' in the circuit court of appeals for the circuit where the natural gas company is located or has its principal place of business or in the United States Court of Appeals for the District of Columbia. We do not think that the findings in question fall within that category.

[25] **[26]** The Court recently summarized the various types of administrative action or determination reviewable as orders under the Urgent Deficiencies Act of October 22, ***619** 1913, 28 U.S.C. ss 45, 47a, 28 U.S.C.A. ss 45, 47a, and kindred statutory provisions. Rochester Tel. Corp. v. United States, 307 U.S. 125, 59 S.Ct. 754, 83 L.Ed. 1147. It was there pointed out that where 'the order sought to be reviewed does not of itself adversely affect complainant but only affects his rights adversely on the contingency of future administrative action', it is not reviewable. Id., 307 U.S. at page 130, 59 S.Ct. at page 757, 83 L.Ed. 1147. The Court said, 'In view of traditional conceptions of federal judicial power, resort to the courts in these situations is either premature or wholly beyond their province.' ****296** Id., 307 U.S. at page 130, 59 S.Ct. at page 757, 83 L.Ed. 1147. And see United States v. Los Angeles S.L.R. C/O., 273 U.S. 299, 309, 310, 47 S.CT. 413, 414, 415, 71 L.ED. 651; SHANNAHAN V. UNITED STATES, 303 U.S. 596, 58 S.CT. 732, 82 L.ED. 1039. THESE CONSIDERATIONS ARE APPOSITE HERE. THE COMMISSION HAS NO AUTHORITY TO ENFORCE THESE FINDINGS. THEY ARE 'THE EXERCISE SOLELY OF THE FUNCTION OF INVESTIGATION.' UNITED STATES V. LOS ANGELES & S.L.R. CO., SUPRA, 273 U.S. AT PAGE 310, 47 S.CT. AT PAGE 414, 71 L.ED. 651. THEY ARE ONLY A PRELIMINARY, INTERIM STEP TOWARDS POSSIBLE FUTURE ACTION—ACTION NOT BY THE COMMISSION BUT BY WHOLLY INDEPENDENT AGENCIES. THE OUTCOME OF THOSE PROCEEDINGS MAY TURN ON FACTORS OTHER THAN THESE FINDINGS. THESE FINDINGS MAY NEVER RESULT IN THE RESPONDENT FEELING THE PINCH OF ADMINISTRATIVE ACTION.

Reversed.

Mr. Justice ROBERTS took no part in the consideration or decision of this case.

Opinion of Mr. Justice BLACK and Mr. Justice MURPHY.

We agree with the Court's opinion and would add nothing to what has been said but for what is patently a wholly gratuitous assertion as to Constitutional law in the dissent of Mr. Justice FRANKFURTER. We refer to the statement that 'Congressional acquiescence to date in the doctrine of Chicago, etc., R. Co. v. Minnesota, supra (134 U.S. 418, 10 S.Ct. 462, 702, 33 L.Ed. 970), may fairly be claimed.' That was the case in which a majority of this Court was finally induced to expand the meaning ***620** of 'due process' so as to give courts power to block efforts of the state and national governments to regulate economic affairs. The present case does not afford a proper occasion to discuss the soundness of that doctrine because, as stated in Mr. Justice FRANKFURTER'S dissent, 'That issue is not here in controversy.' The salutary practice whereby courts do not discuss issues in the abstract applies with peculiar force to Constitutional questions. Since, however, the dissent adverts to a highly controversial due process doctrine and implies its acceptance by Congress, we feel compelled to say that we do not understand that Congress voluntarily has acquiesced in a Constitutional principle of government that courts, rather than legislative bodies, possess final authority over regulation of economic affairs. Even this Court has not always fully embraced that principle, and we wish to repeat that we have never acquiesced in it, and do not now. See Federal Power Commission v. Natural Gas Pipeline Co., 315 U.S. 575, 599-601, 62 S.Ct. 736, 749, 750, 86 L.Ed. 1037.

Mr. Justice REED, dissenting.

This case involves the problem of rate making under the Natural Gas Act. Added importance arises from the obvious fact that the principles stated are generally applicable to all federal agencies which are entrusted with the determination of rates for utilities. Because my views differ somewhat from those of my brethren, it may be of some value to set them out in a summary form.

The Congress may fix utility rates in situations subject to federal control without regard to any standard except the constitutional standards of due process and for taking private property for public use without just compensation. Wilson v. New, 243 U.S. 332, 350, 37 S.Ct. 298, 302, 61 L.Ed. 755, L.R.A.1917E, 938, Ann.Cas.1918A, 1024. A Commission, however, does not have this freedom of action. Its powers are limited not only by the constitutional standards but also by the standards of the delegation. Here the standard added by the Natural Gas Act is that the rate be 'just ***621** and reasonable.'[1] Section 6[2] ****297** throws additional light on the meaning of these words.

When the phrase was used by Congress to describe allowable rates, it had relation to something ascertainable. The rates were not left to the whim of the Commission. The rates fixed would produce an annual return and that annual return was to be compared with a theoretical just and reasonable return, all risks considered, on the fair value of the property used and useful in the public service at the time of the determination.

Such an abstract test is not precise. The agency charged with its determination has a wide range before it could properly be said by a court that the agency had disregarded statutory standards or had confiscated the property of the utility for public use. Cf. Chicago, M. & St. P.R. Co. v. Minnesota, 134 U.S. 418, 461—466, 10 S.Ct. 462, 702, 703—705, 33 L.Ed. 970, dissent. This is as Congress intends. Rates are left to an experienced agency particularly competent by training to appraise the amount required.

The decision as to a reasonable return had not been a source of great difficulty, for borrowers and lenders reached such agreements daily in a multitude of situations; and although the determination of fair value had been troublesome, its essentials had been worked out in fairness to investor and consumer by the time of the enactment ***622** of this Act. Cf. Los Angeles G. & E. Corp. v. Railroad Comm., 289 U.S. 287, 304 et seq., 53 S.Ct. 637, 643 et seq., 77 L.Ed. 1180. The results were well known to Congress and had that body desired to depart from the traditional concepts of fair value and earnings, it would have stated its intention plainly. Helvering v. Griffiths, 318 U.S. 371, 63 S.Ct. 636.

It was already clear that when rates are in dispute, 'earnings produced by rates do not afford a standard for decision.' 289 U.S. at page 305, 53 S.Ct. at page 644, 77 L.Ed. 1180. Historical cost, prudent investment and reproduction cost[3] were all relevant factors in determining fair value. Indeed, disregarding the pioneer investor's risk, if prudent investment and reproduction cost were not distorted by changes in price levels or technology, each of them would produce the same result. The realization from the risk of an investment in a speculative field, such as natural gas utilities, should be reflected in the present fair value.[4] The amount of evidence to be admitted on any point was of course in the agency's reasonable discretion, and it was free to give its own weight to these or other factors and to determine from all the evidence its own judgment as to the necessary rates.

***623** I agree with the Court in not imposing a rule of prudent investment alone in determining the rate base. This leaves the Commission free, as I understand it, to use any available evidence for its finding of fair value, including both prudent investment and the cost of installing at the present time an efficient system for furnishing the needed utility service.

My disagreement with the Court arises primarily from its view that it makes no ****298** difference how the Commission reached the rate fixed so long as the result is fair and reasonable. For me the statutory command to the Commission is more explicit. Entirely aside from the constitutional problem of whether the Congress could validly delegate its rate making power to the Commission, in toto and without standards, it did legislate in the light of the relation of fair and reasonable to fair value and reasonable return. The Commission must therefore make its findings in observance of that relationship.

The Federal Power Commission did not, as I construe their action, disregard its statutory duty. They heard the evidence relating to historical and reproduction cost and to the reasonable rate of return and they appraised its weight. The evidence of reproduction cost was rejected as unpersuasive, but from the other evidence they found a rate base, which is to me a determination of fair value. On that base the earnings allowed seem fair and reasonable. So far as the Commission went in appraising the property employed in the service, I find nothing in the result which indicates confiscation, unfairness or unreasonableness. Good

administration of rate making agencies under this method would avoid undue delay and render revaluations unnecessary except after violent fluctuations of price levels. Rate making under this method has been subjected to criticism. But until Congress changes the standards for the agencies, these rate making bodies should continue the conventional theory of rate ***624** making. It will probably be simpler to improve present methods than to devise new ones.

But a major error, I think was committed in the disregard by the Commission of the investment in exploratory operations and other recognized capital costs. These were not considered by the Commission because they were charged to operating expenses by the company at a time when it was unregulated. Congress did not direct the Commission in rate making to deduct from the rate base capital investment which had been recovered during the unregulated period through excess earnings. In my view this part of the investment should no more have been disregarded in the rate base than any other capital investment which previously had been recovered and paid out in dividends or placed to surplus. Even if prudent investment throughout the life of the property is accepted as the formula for figuring the rate base, it seems to me illogical to throw out the admittedly prudent cost of part of the property because the earnings in the unregulated period had been sufficient to return the prudent cost to the investors over and above a reasonable return. What would the answer be under the theory of the Commission and the Court, if the only prudent investment in this utility had been the seventeen million capital charges which are now disallowed?

For the reasons heretofore stated, I should affirm the action of the Circuit Court of Appeals in returning the proceeding to the Commission for further consideration and should direct the Commission to accept the disallowed capital investment in determining the fair value for rate making purposes.

Mr. Justice FRANKFURTER, dissenting.

My brother JACKSON has analyzed with particularity the economic and social aspects of natural gas as well as ***625** the difficulties which led to the enactment of the Natural Gas Act, especially those arising out of the abortive attempts of States to regulate natural gas utilities. The Natural Gas Act of 1938 should receive application in the light of this analysis, and Mr. Justice JACKSON has, I believe, drawn relevant inferences regarding the duty of the Federal Power Commission in fixing natural gas rates. His exposition seems to me unanswered, and I shall say only a few words to emphasize my basic agreement with him.

For our society the needs that are met by public utilities are as truly public services as the traditional governmental functions of police and justice. They are not less so when these services are rendered by private enterprise under governmental regulation. Who ultimately determines the ways of regulation, is the decisive aspect in the public supervision of privately-owned utilities. Foreshadowed nearly sixty years ago, Railroad Commission Cases (Stone v. Farmers' Loan & Trust Co.), 116 U.S. 307, 331, 6 S.Ct. 334, 344, 388, 1191, 29 L.Ed. 636, it was decided more than fifty ****299** years ago that the final say under the Constitution lies with the judiciary and not the legislature. Chicago, etc., R. Co. v. Minnesota , 134 U.S. 418, 10 S.Ct. 462, 702, 33 L.Ed. 970.

While legal issues touching the proper distribution of governmental powers under the Constitution may always be raised, Congressional acquiescence to date in the doctrine of Chicago, etc., R. Co. v. Minnesota, supra, may fairly be claimed. But in any event that issue is not here in controversy. As pointed out in the opinions of my brethren, Congress has given only limited authority to the Federal Power Commission and made the exercise of that authority subject to judicial review. The Commission is authorized to fix rates chargeable for natural gas. But the rates that it can fix must be 'just and reasonable'. s 5 of the Natural Gas Act, 15 U.S.C. s 717d, 15 U.S.C.A. s 717d. Instead of making the Commission's rate determinations final, Congress ***626** specifically provided for court review of such orders. To be sure, 'the finding of the Commission as to the facts, if supported by substantial evidence' was made 'conclusive', s 19 of the Act, 15 U.S.C. s 717r; 15 U.S.C.A. s 717r. But obedience of the requirement of Congress that rates be 'just and reasonable' is not an issue of fact of which the Commission's own determination is conclusive. Otherwise, there would be nothing for a court to review except questions of compliance with the procedural provisions of the Natural Gas Act. Congress might have seen fit so to cast its legislation. But it has not done so. It has committed to the administration of the Federal Power Commission the duty of applying standards of fair dealing and of reasonableness relevant to the purposes expressed by the Natural Gas Act. The requirement that rates must be 'just and reasonable' means just and reasonable in relation to appropriate standards. Otherwise Congress would have directed the Commission to fix such rates as in the judgment of the Commission are just and reasonable; it would not have also provided that such determinations by the Commission are subject to court review.

To what sources then are the Commission and the courts to go for ascertaining the standards relevant to the regulation of natural gas rates? It is at this point that Mr. Justice JACKSON'S analysis seems to me pertinent. There appear to be two alternatives. Either the fixing of natural gas rates must be left to the unguided discretion of the Commission so long as the rates it fixes do not reveal a glaringly had prophecy of the ability of a regulated utility to continue its service in the future. Or the Commission's rate orders must be founded on due consideration of all the elements of the public interest which the production and distribution of natural gas involve just because it is natural gas. These elements are reflected in the Natural Gas Act, if that Act be applied as an entirety. See, for ***627** instance, ss 4(a)(b)(c)(d), 6, and 11, 15 U.S.C. ss 717c(a)(b)(c)(d), 717e, and 717j, 15 U.S.C.A. ss 717c(a—d), 717e, 717j. Of course the statute is not concerned with abstract theories of ratemaking. But its very foundation is the 'public interest', and the public interest is a texture of multiple strands. It includes more than contemporary investors and contemporary consumers. The needs to be served are not restricted to immediacy, and social as well as economic costs must be counted.

It will not do to say that it must all be left to the skill of experts. Expertise is a rational process and a rational process implies expressed reasons for judgment. It will little advance the public interest to substitute for the hodge-podge of the rule in Smyth v. Ames, 169 U.S. 466, 18 S.Ct. 418, 42 L.Ed. 819, an encouragement of conscious obscurity or confusion in reaching a result, on the assumption that so long as the result appears harmless its basis is irrelevant. That may be an appropriate attitude when state action is challenged as unconstitutional. Cf. Driscoll v. Edison Light & Power Co., 307 U.S. 104, 59 S.Ct. 715, 83 L.Ed. 1134. But it is not to be assumed that it was the design of Congress to make the accommodation of the conflicting interests exposed in Mr. Justice JACKSON'S opinion the occasion for a blind clash of forces or a partial assessment of relevant factors, either before the Commission or here.

The objection to the Commission's action is not that the rates it granted were too low but that the range of its vision was too narrow. And since the issues before the Commission involved no less than the ****300** total public interest, the proceedings before it should not be judged by narrow conceptions of common law pleading. And so I conclude that the case should be returned to the Commission. In order to enable this Court to discharge its duty of reviewing the Commission's order, the Commission should set forth with explicitness the criteria by which it is guided ***628** in determining that rates are 'just and reasonable', and it should determine the public interest that is in its keeping in the perspective of the considerations set forth by Mr. Justice JACKSON.

By Mr. Justice JACKSON.

Certainly the theory of the court below that ties rate-making to the fair-value-reproduction-cost formula should be overruled as in conflict with Federal Power Commission v. Natural Gas Pipeline Co. [1] But the case should, I think, be the occasion for reconsideration of our rate-making doctrine as applied to natural gas and should be returned to the Commission for further consideration in the light thereof.

The Commission appears to have understood the effect of the two opinions in the Pipeline case to be at least authority and perhaps direction to fix natural gas rates by exclusive application of the 'prudent investment' rate base theory. This has no warrant in the opinion of the Chief Justice for the Court, however, which released the Commission from subservience to 'any single formula or combination of formulas' provided its order, 'viewed in its entirety, produces no arbitrary result.' 315 U.S. at page 586, 62 S.Ct. at page 743, 86 L.Ed. 1037. The minority opinion I understood to advocate the 'prudent investment' theory as a sufficient guide in a natural gas case. The view was expressed in the court below that since this opinion was not expressly controverted it must have been approved. [2] I disclaim this imputed ***629** approval with some particularity, because I attach importance at the very beginning of federal regulation of the natural gas industry to approaching it as the performance of economic functions, not as the performance of legalistic rituals.

I.

Solutions of these cases must consider eccentricities of the industry which gives rise to them and also to the Act of Congress by which they are governed.

The heart of this problem is the elusive, exhaustible, and irreplaceable nature of natural gas itself. Given sufficient money, we can produce any desired amount of railroad, bus, or steamship transportation, or communications facilities, or capacity for generation of electric energy, or for the manufacture of gas of a kind. In the service of such utilities one customer has little concern with the amount taken by another, one's waste will not deprive another, a volume of service and be created equal to demand, and today's demands will not exhaust or lessen capacity to serve tomorrow. But

the wealth of Midas and the wit of man cannot produce or reproduce a natural gas field. We cannot even reproduce the gas, for our manufactured product has only about half the heating value per unit of nature's own. [3]

****301** Natural gas in some quantity is produced in twenty-four states. It is consumed in only thirty-five states, and is ***630** available only to about 7,600,000 consumers. [4] Its availability has been more localized than that of any other utility service because it has depended more on the caprice of nature.

The supply of the Hope Company is drawn from that old and rich and vanishing field that flanks the Appalachian mountains. Its center of production is Pennsylvania and West Virginia, with a fringe of lesser production in New York, Ohio, Kentucky, Tennessee, and the north end of Alabama. Oil was discovered in commercial quantities at a depth of only 69 1/2 feet near Titusville, Pennsylvania, in 1859. Its value then was about $16 per barrel. [5] The oil branch of the petroleum industry went forward at once, and with unprecedented speed. The area productive of oil and gas was roughed out by the drilling of over 19,000 'wildcat' wells, estimated to have cost over $222,000,000. Of these, over 18,000 or 94.9 per cent, were 'dry holes.' About five per cent, or 990 wells, made discoveries of commercial importance, 767 of them resulting chiefly in oil and 223 in gas only. [6] Prospecting for many years was a search for oil, and to strike gas was a misfortune. Waste during this period and even later is appalling. Gas was regarded as having no commercial value until about 1882, in which year the total yield was valued only at about $75,000. [7] Since then, contrary to oil, which has become cheaper gas in this field has pretty steadily advanced in price.

While for many years natural gas had been distributed on a small scale for lighting, [8] its acceptance was slow, ***631** facilities for its utilization were primitive, and not until 1885 did it take on the appearance of a substantial industry. [9] Soon monopoly of production or markets developed. [10] To get gas from the mountain country, where it was largely found, to centers of population, where it was in demand, required very large investment. By ownership of such facilities a few corporate systems, each including several companies, controlled access to markets. Their purchases became the dominating factor in giving a market value to gas produced by many small operators. Hope is the market for over 300 such operators. By 1928 natural gas in the Appalachian field commanded an average price of 21.1 cents per m.c.f. at points of production and was bringing 45.7 cents at points of consumption. [11] The companies which controlled markets, however, did not rely on gas purchases alone. They acquired and held in fee or leasehold great acreage in territory proved by 'wildcat' drilling. These large marketing system companies as well as many small independent owners and operators have carried on the commercial development of proved territory. The development risks appear from the estimate that up to 1928, 312,318 proved area wells had been sunk in the Appalachian field of which 48,962, or 15.7 per cent, failed to produce oil or gas in commercial quantity. [12]

***632** With the source of supply thus tapped to serve centers of large demand, like Pittsburgh, Buffalo, Cleveland, Youngstown, Akron, and other industrial communities, the distribution of natural gas fast became big business. Its advantages as a ****302** fuel and its price commended it, and the business yielded a handsome return. All was merry and the goose hung high for consumers and gas companies alike until about the time of the first. World War. Almost unnoticed by the consuming public, the whole Appalachian field passed its peak of production and started to decline. Pennsylvania, which to 1928 had given off about 38 per cent of the natural gas from this field, had its peak in 1905; Ohio, which had produced 14 per cent, had its peak in 1915; and West Virginia, greatest producer of all, with 45 per cent to its credit, reached its peak in 1917. [13]

Western New York and Eastern Ohio, on the fringe of the field, had some production but relied heavily on imports from Pennsylvania and West Virginia. Pennsylvania, a producing and exporting state, was a heavy consumer and supplemented her production with imports from West Virginia. West Virginia was a consuming state, but the lion's share of her production was exported. Thus the interest of the states in the North Appalachian supply was in conflict.

Competition among localities to share in the failing supply and the helplessness of state and local authorities in the presence of state lines and corporate complexities is a part of the background of federal intervention in the industry. [14] West Virginia took the boldest measure. It legislated a priority in its entire production in favor of its own inhabitants. That was frustrated by an injunction ***633** from this Court. [15] Throughout the region clashes in the courts and conflicting decisions evidenced public anxiety and confusion. It was held that the New York Public Service Commission did not have power to classify consumers and restrict their use of

gas.[16] That Commission held that a company could not abandon a part of its territory and still serve the rest.[17] Some courts admonished the companies to take action to protect consumers.[18] Several courts held that companies, regardless of failing supply, must continue to take on customers, but such compulsory additions were finally held to be within the Public Service Commission's discretion.[19] There were attempts to throw up franchises and quit the service, and municipalities resorted to the courts with conflicting results.[20] Public service commissions of consuming states were handicapped, for they had no control of the supply.[21]

****303** ***634** Shortages during World War I occasioned the first intervention in the natural gas industry by the Federal Government. Under Proclamation of President Wilson the United States Fuel Administrator took control, stopped extensions, classified consumers and established a priority for domestic over industrial use.[22] After the war federal control was abandoned. Some cities once served with natural gas became dependent upon mixed gas of reduced heating value and relatively higher price.[23]

Utilization of natural gas of highest social as well as economic return is domestic use for cooking and water ***635** heating, followed closely by use for space heating in homes. This is the true public utility aspect of the enterprise, and its preservation should be the first concern of regulation. Gas does the family cooking cheaper than any other fuel.[24] But its advantages do not end with dollars and cents cost. It is delivered without interruption at the meter as needed and is paid for after it is used. No money is tied up in a supply, and no space is used for storage. It requires no handling, creates no dust, and leaves no ash. It responds to thermostatic control. It ignites easily and immediately develops its maximum heating capacity. These incidental advantages make domestic life more liveable.

Industrial use is induced less by these qualities than by low cost in competition with other fuels. Of the gas exported from West Virginia by the Hope Company a very substantial part is used by industries. This wholesale use speeds exhaustion of supply and displaces other fuels. Coal miners and the coal industry, a large part of whose costs are wages, have complained of unfair competition from low-priced industrial gas produced with relatively little labor cost.[25]

Gas rate structures generally have favored industrial users. In 1932, in Ohio, the average yield on gas for domestic consumption was 62.1 cents per m.c.f. and on industrial, ***636** 38.7. In Pennsylvania, the figures were 62.9 against 31.7. West Virginia showed the least spread, domestic consumers paying 36.6 cents; and industrial, 27.7.[26] Although this spread is less than ****304** in other parts of the United States,[27] it can hardly be said to be self-justifying. It certainly is a very great factor in hastening decline of the natural gas supply.

About the time of World War I there were occasional and short-lived efforts by some hard-pressed companies to reverse this discrimination and adopt graduated rates, giving a low rate to quantities adequate for domestic use and graduating it upward to discourage industrial use.[28] ***637** These rates met opposition from industrial sources, of course, and since diminished revenues from industrial sources tended to increase the domestic price, they met little popular or commission favor. The fact is that neither the gas companies nor the consumers nor local regulatory bodies can be depended upon to conserve gas. Unless federal regulation will take account of conservation, its efforts seem, as in this case, actually to constitute a new threat to the life of the Appalachian supply.

II.

Congress in 1938 decided upon federal regulation of the industry. It did so after an exhaustive investigation of all aspects including failing supply and competition for the use of natural gas intensified by growing scarcity.[29] Pipelines from the Appalachian area to markets were in the control of a handful of holding company systems.[30] This created a highly concentrated control of the producers' market and of the consumers' supplies. While holding companies dominated both production and distribution they segregated those activities in separate ***638** subsidiaries,[31] the effect of which, if not the purpose, was to isolate ****305** some end of the business from the reach of any one state commission. The cost of natural gas to consumers moved steadily upwards over the years, out of proportion to prices of oil, which, except for the element of competition, is produced under somewhat comparable conditions. The public came to feel that the companies were exploiting the growing scarcity of local gas. The problems of this region had much to do with creating the demand for federal regulation.

The Natural Gas Act declared the natural gas business to be 'affected with a public interest,' and its regulation 'necessary in the public interest.'[32] Originally, and at the

time this proceeding was commenced and tried, it also declared 'the intention of Congress that natural gas shall be sold in interstate commerce for resale for ultimate public consumption for domestic, commercial, industrial, or any other use at the lowest possible reasonable rate consistent with the maintenance of adequate service in the public interest.' [33] While this was later dropped, there is nothing to indicate that it was not and is not still an accurate statement of purpose of the Act. Extension or improvement of facilities may be ordered when 'necessary or desirable in the public interest,' abandonment of facilities may be ordered when the supply is 'depleted to the extent that the continuance of service is unwarranted, or that the present or future public convenience or necessity ***639** permit' abandonment and certain extensions can only be made on finding of 'the present or future public convenience and necessity.' [34] The Commission is required to take account of the ultimate use of the gas. Thus it is given power to suspend new schedules as to rates, charges, and classification of services except where the schedules are for the sale of gas 'for resale for industrial use only,' [35] which gives the companies greater freedom to increase rates on industrial gas than on domestic gas. More particularly, the Act expressly forbids any undue preference or advantage to any person or 'any unreasonable difference in rates * * * either as between localities or as between classes of service.' [36] And the power of the Commission expressly includes that to determine the 'just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force.' [37]

In view of the Court's opinion that the Commission in administering the Act may ignore discrimination, it is interesting that in reporting this Bill both the Senate and the House Committees on Interstate Commerce pointed out that in 1934, on a nationwide average the price of natural gas per m.c.f. was 74.6 cents for domestic use, 49.6 cents for commercial use, and 16.9 for industrial use. [38] I am not ready to think that supporters of a bill called attention to the striking fact that householders were being charged five times as much for their gas as industrial users only as a situation which the Bill would do nothing to remedy. On the other hand the Act gave to the Commission what the Court aptly describes as 'broad powers of regulation.'

***640 III.**

This proceeding was initiated by the Cities of Cleveland and Akron. They alleged that the price charged by Hope for natural gas 'for resale to domestic, commercial and small industrial consumers in Cleveland and elsewhere is excessive, unjust, unreasonable, greatly in excess of the price charged by Hope to nonaffiliated companies at wholesale for resale to domestic, commercial and small industrial consumers, and greatly in excess of the price charged by Hope to East Ohio for resale to certain favored industrial consumers in Ohio, and therefore is further unduly discriminatory between consumers and between classes of service' (italics supplied). The company answered admitting differences in prices to affiliated and nonaffiliated companies and justifying them by differences in conditions of delivery. ****306** As to the allegation that the contract price is 'greatly in excess of the price charged by Hope to East Ohio for resale to certain favored industrial consumers in Ohio,' Hope did not deny a price differential, but alleged that industrial gas was not sold to 'favored consumers' but was sold under contract and schedules filed with and approved by the Public Utilities Commission of Ohio, and that certain conditions of delivery made it not 'unduly discriminatory.'

The record shows that in 1940 Hope delivered for industrial consumption 36,523,792 m.c.f. and for domestic and commercial consumption, 50,343,652 m.c.f. I find no separate figure for domestic consumption. It served 43,767 domestic consumers directly, 511,521 through the East Ohio Gas Company, and 154,043 through the Peoples Natural Gas Company, both affiliates owned by the same parent. Its special contracts for industrial consumption, so far as appear, are confined to about a dozen big industries.

***641** Hope is responsible for discrimination as exists in favor of these few industrial consumers. It controls both the resale price and use of industrial gas by virtue of the very interstate sales contracts over which the Commission is exercising its jurisdiction.

Hope's contract with East Ohio Company is an example. Hope agrees to deliver, and the Ohio Company to take, '(a) all natural gas requisite for the supply of the domestic consumers of the Ohio Company; (b) such amounts of natural gas as may be requisite to fulfill contracts made with the consent and approval of the Hope Company by the Ohio Company, or companies which it supplies with natural gas, for the sale of gas upon special terms and conditions for manufacturing purposes.' The Ohio company is required to read domestic customers' meters once a month and meters of industrial customers daily and to furnish all meter readings to Hope. The Hope Company is to have access to meters of all consumers and to all of the Ohio Company's accounts. The domestic

consumers of the Ohio Company are to be fully supplied in preference to consumers purchasing for manufacturing purposes and 'Hope Company can be required to supply gas to be used for manufacturing purposes only where the same is sold under special contracts which have first been submitted to and approved in writing by the Hope Company and which expressly provide that natural gas will be supplied thereunder only in so far as the same is not necessary to meet the requirements of domestic consumers supplied through pipe lines of the Ohio Company.' This basic contract was supplemented from time to time, chiefly as to price. The last amendment was in a letter from Hope to East Ohio in 1937. It contained a special discount on industrial gas and a schedule of special industrial contracts, Hope reserving the right to make eliminations therefrom and agreeing that others might be added from time to ***642** time with its approval in writing. It said, 'It is believed that the price concessions contained in this letter, while not based on our costs, are under certain conditions, to our mutual advantage in maintaining and building up the volumes of gas sold by us (italics supplied).'[39]

****307** The Commission took no note of the charges of discrimination and made no disposition of the issue tendered on this point. It ordered a flat reduction in the price per m.c.f. of all gas delivered by Hope in interstate commerce. It made no limitation, condition, or provision as to what classes of consumers should get the benefit of the reduction. While the cities have accepted and are defending the reduction, it is my view that the discrimination of which they have complained is perpetuated and increased by the order of the Commission and that it violates the Act in so doing.

The Commission's opinion aptly characterizes its entire objective by saying that 'bona fide investment figures now become all-important in the regulation of rates.' It should be noted that the all-importance of this theory is not the result of any instruction from Congress. When the Bill to regulate gas was first before Congress it contained ***643** the following: 'In determining just and reasonable rates the Commission shall fix such rate as will allow a fair return upon the actual legitimate prudent cost of the property used and useful for the service in question.' H.R. 5423, 74th Cong., 1st Sess. Title III, s 312(c). Congress rejected this language. See H.R. 5423, s 213 (211(c)), and H.R. Rep. No. 1318, 74th Cong., 1st Sess. 30.

The Commission contends nevertheless that the 'all important' formula for finding a rate base is that of prudent investment. But it excluded from the investment base an amount actually and admittedly invested of some $17,000,000. It did so because it says that the Company recouped these expenditures from customers before the days of regulation from earnings above a fair return. But it would not apply all of such 'excess earnings' to reduce the rate base as one of the Commissioners suggested. The reason for applying excess earnings to reduce the investment base roughly from $69,000,000 to $52,000,000 but refusing to apply them to reduce it from that to some $18,000,000 is not found in a difference in the character of the earnings or in their reinvestment. The reason assigned is a difference in bookkeeping treatment many years before the Company was subject to regulation. The $17,000,000, reinvested chiefly in well drilling, was treated on the books as expense. (The Commission now requires that drilling costs be carried to capital account.) The allowed rate base thus actually was determined by the Company's bookkeeping, not its investment. This attributes a significance to formal classification in account keeping that seems inconsistent with rational rate regulation.[40] Of ***644** course, the ****308** Commission would not and should not allow a rate base to be inflated by bookkeeping which had improperly capitalized expenses. I have doubts about resting public regulation upon any rule that is to be used or not depending on which side it favors.

***645** The Company on the other hand, has not put its gas fields into its calculations on the present-value basis, although that, it contends, is the only lawful rule for finding a rate base. To do so would result in a rate higher than it has charged or proposes as a matter of good business to charge.

The case before us demonstrates the lack of rational relationship between conventional rate-base formulas and natural gas production and the extremities to which regulating bodies are brought by the effort to rationalize them. The Commission and the Company each stands on a different theory, and neither ventures to carry its theory to logical conclusion as applied to gas fields.

IV.

This order is under judicial review not because we interpose constitutional theories between a State and the business it seeks to regulate, but because Congress put upon the federal courts a duty toward administration of a new federal regulatory Act. If we are to hold that a given rate is reasonable just because the Commission has said it was reasonable, review becomes a costly, time-consuming pageant of no

practical value to anyone. If on the other hand we are to bring judgment of our own to the task, we should for the guidance of the regulators and the regulated reveal something of the philosophy, be it legal or economic or social, which guides us. We need not be slaves to a formula but unless we can point out a rational way of reaching our conclusions they can only be accepted as resting on intuition or predilection. I must admit that I possess no instinct jby which to know the 'reasonable' from the 'unreasonable' in prices and must seek some conscious design for decision.

The Court sustains this order as reasonable, but what makes it so or what could possibly make it otherwise, ***646** I cannot learn. It holds that: 'it is the result reached not the method employed which is controlling'; 'the fact that the method employed to reach that result may contain infirmities is not then important' and it is not 'important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at.' The Court does lean somewhat on considerations of capitalization and dividend history and requirements for dividends on outstanding stock. But I can give no real weight to that for it is generally and I think deservedly in discredit as any guide in rate cases. [41]

Our books already contain so much talk of methods of rationalizing rates that we must appear ambiguous if we announce results without our working methods. We are confronted with regulation of a unique type of enterprise which I think requires considered rejection of much conventional utility doctrine and adoption of concepts of 'just and reasonable' rates and practices and of the 'public interest' that will take account of the peculiarities of the business.

The Court rejects the suggestions of this opinion. It says that the Committees in reporting the bill which became the Act said it provided 'for regulation along recognized and more or less standardized lines' and that there was 'nothing novel in its provisions.' So saying it sustains a rate calculated on a novel variation of a rate base theory which itself had at the time of enactment of the legislation been recognized only in dissenting opinions. Our difference seems to be between unconscious innovation, [42] and the purposeful ****309** and deliberate innovation I ***647** would make to meet the necessities of regulating the industry before us.

Hope's business has two components of quite divergent character. One, while not a conventional common-carrier undertaking, is essentially a transportation enterprise consisting of conveying gas from where it is produced to point of delivery to the buyer. This is a relatively routine operation not differing substantially from many other utility operations. The service is produced by an investment in compression and transmission facilities. Its risks are those of investing in a tested means of conveying a discovered supply of gas to a known market. A rate base calculated on the prudent investment formula would seem a reasonably satisfactory measure for fixing a return from that branch of the business whose service is roughly proportionate to the capital invested. But it has other consequences which must not be overlooked. It gives marketability and hence 'value' to gas owned by the company and gives the pipeline company a large power over the marketability and hence 'value' of the production of others.

The other part of the business—to reduce to possession an adequate supply of natural gas—is of opposite character, being more erratic and irregular and unpredictable in relation to investment than any phase of any other utility business. A thousand feet of gas captured and severed from real estate for delivery to consumers is recognized under our law as property of much the same nature as a ton of coal, a barrel of oil, or a yard of sand. The value to be allowed for it is the real battleground between the investor and consumer. It is from this part of the business that the chief difference between the parties as to a proper rate base arises.

It is necessary to a 'reasonable' price for gas that it be anchored to a rate base of any kind? Why did courts in the first place begin valuing 'rate bases' in order to 'value' something else? The method came into vogue ***648** in fixing rates for transportation service which the public obtained from common carriers. The public received none of the carriers' physical property but did make some use of it. The carriage was often a monopoly so there were no open market criteria as to reasonableness. The 'value' or 'cost' of what was put to use in the service by the carrier was not a remote or irrelevant consideration in making such rates. Moreover the difficulty of appraising an intangible service was thought to be simplified if it could be related to physical property which was visible and measurable and the items of which might have market value. The court hoped to reason from the known to the unknown. But gas fields turn this method topsy turvy. Gas itself is tangible, possessible, and does have a market and a price in the field. The value of the rate base is more elusive than that of gas. It consists of intangibles—leaseholds and freeholds—operated and unoperated—of little use in themselves except as rights to reach and capture gas. Their value lies almost wholly in predictions of discovery, and of price of gas when captured, and bears little relation to

cost of tools and supplies and labor to develop it. Gas is what Hope sells and it can be directly priced more reasonably and easily and accurately than the components of a rate base can be valued. Hence the reason for resort to a roundabout way of rate base price fixing does not exist in the case of gas in the field.

But if found, and by whatever method found, a rate base is little help in determining reasonableness of the price of gas. Appraisal of present value of these intangible rights to pursue fugitive gas depends on the value assigned to the gas when captured. The 'present fair value' rate base, generally in ill repute, [43] is not even ****310** urged by the gas company for valuing its fields.

***649** The prudent investment theory has relative merits in fixing rates for a utility which creates its service merely by its investment. The amount and quality of service rendered by the usual utility will, at least roughly, be measured by the amount of capital it puts into the enterprise. But it has no rational application where there is no such relationship between investment and capacity to serve. There is no such relationship between investment and amount of gas produced. Let us assume that Doe and Roe each produces in West Virginia for delivery to Cleveland the same quantity of natural gas per day. Doe, however, through luck or foresight or whatever it takes, gets his gas from investing $50,000 in leases and drilling. Roe drilled poorer territory, got smaller wells, and has invested $250,000. Does anybody imagine that Roe can get or ought to get for his gas five times as much as Doe because he has spent five times as much? The service one renders to society in the gas business is measured by what he gets out of the ground, not by what he puts into it, and there is little more relation between the investment and the results than in a game of poker.

Two-thirds of the gas Hope handles it buys from about 340 independent producers. It is obvious that the principle of rate-making applied to Hope's own gas cannot be applied, and has not been applied, to the bulk of the gas Hope delivers. It is not probable that the investment of any two of these producers will bear the same ratio to their investments. The gas, however, all goes to the same use, has the same utilization value and the same ultimate price.

To regulate such an enterprise by undiscriminatingly transplanting any body of rate doctrine conceived and ***650** adapted to the ordinary utility business can serve the 'public interest' as the Natural Gas Act requires, if at all, only by accident. Mr. Justice Brandeis, the pioneer juristic advocate of the prudent investment theory for man-made utilities, never, so far as I am able to discover, proposed its application to a natural gas case. On the other hand, dissenting in Commonwealth of Pennsylvania v. West Virginia, he reviewed the problems of gas supply and said, 'In no other field of public service regulation is the controlling body confronted with factors so baffling as in the natural gas industry, and in none is continuous supervision and control required in so high a degree.' 262 U.S. 553, 621, 43 S.Ct. 658, 674, 67 L.Ed. 1117, 32 A.L.R. 300. If natural gas rates are intelligently to be regulated we must fit our legal principles to the economy of the industry and not try to fit the industry to our books.

As our decisions stand the Commission was justified in believing that it was required to proceed by the rate base method even as to gas in the field. For this reason the Court may not merely wash its hands of the method and rationale of rate making. The fact is that this Court, with no discussion of its fitness, simply transferred the rate base method to the natural gas industry. It happened in Newark Natural Gas & Fuel Co. v. City of Newark, Ohio, 1917, 242 U.S. 405, 37 S.Ct. 156, 157, 61 L.Ed. 393, Ann.Cas.1917B, 1025, in which the company wanted 25 cents per m.c.f., and under the Fourteenth Amendment challenged the reduction to 18 cents by ordinance. This Court sustained the reduction because the court below 'gave careful consideration to the questions of the value of the property * * * at the time of the inquiry,' and whether the rate 'would be sufficient to provide a fair return on the value of the property.' The Court said this method was 'based upon principles thoroughly established by repeated secisions of this court,' citing many cases, not one of which involved natural gas or a comparable wasting natural resource. Then came issues as to state power to ***651** regulate as affected by the commerce clause. Public Utilities Commission v. Landon, 1919, 249 U.S. 236, 39 S.Ct. 268, 63 L.Ed. 577; Pennsylvania Gas Co. v. Public Service Commission, 1920, 252 U.S. 23, 40 S.Ct. 279, 64 L.Ed. 434. These questions settled, the Court again was called upon in natural gas cases to consider state rate-making claimed to be invalid under the Fourteenth Amendment. United Fuel Gas Co. v. Railroad Commission of Kentucky, 1929, 278 U.S. 300, 49 S.Ct. 150, 73 L.Ed. 390; United Fuel Gas Company v. Public Service Commission of West Virginia, 1929, 278 U.S. 322, 49 S.Ct. 157, 73 L.Ed. 402. Then, as now, the differences were 'due ****311** chiefly to the difference in value ascribed by each to the gas rights and leaseholds.' 278 U.S. 300, 311, 49 S.Ct. 150, 153, 73 L.Ed. 390. No one seems to have questioned that the rate base method must be pursued and the controversy was at what rate base must be used. Later

the 'value' of gas in the field was questioned in determining the amount a regulated company should be allowed to pay an affiliate therefor—a state determination also reviewed under the Fourteenth Amendment. Dayton Power & Light Co. v. Public Utilities Commission of Ohio, 1934, 292 U.S. 290, 54 S.Ct. 647, 78 L.Ed. 1267; Columbus Gas & Fuel Co. v. Public Utilities Commission of Ohio, 1934, 292 U.S. 398, 54 S.Ct. 763, 78 L.Ed. 1327, 91 A.L.R. 1403. In both cases, one of which sustained, and one of which struck down a fixed rate the Court assumed the rate base method, as the legal way of testing reasonableness of natural gas prices fixed by public authority, without examining its real relevancy to the inquiry.

Under the weight of such precedents we cannot expect the Commission to initiate economically intelligent methods of fixing gas prices. But the Court now faces a new plan of federal regulation based on the power to fix the price at which gas shall be allowed to move in interstate commerce. I should now consider whether these rules devised under the Fourteenth Amendment are the exclusive tests of a just and reasonable rate under the federal statute, inviting reargument directed to that point ***652** if necessary. As I see it now I would be prepared to hold that these rules do not apply to a natural gas case arising under the Natural Gas Act.

Such a holding would leave the Commission to fix the price of gas in the field as one would fix maximum prices of oil or milk or coal, or any other commodity. Such a price is not calculated to produce a fair return on the synthetic value of a rate base of any individual producer, and would not undertake to assure a fair return to any producer. The emphasis would shift from the producer to the product, which would be regulated with an eye to average or typical producing conditions in the field.

Such a price fixing process on economic lines would offer little temptation to the judiciary to become back seat drivers of the price fixing machine. The unfortunate effect of judicial intervention in this field is to divert the attention of those engaged in the process from what is economically wise to what is legally permissible. It is probable that price reductions would reach economically unwise and self-defeating limits before they would reach constitutional ones. Any constitutional problems growing out of price fixing are quite different than those that have heretofore been considered to inhere in rate making. A producer would have difficulty showing the invalidity of such a fixed price so long as he voluntarily continued to sell his product in interstate commerce. Should he withdraw and other authority be invoked to compel him to part with his property, a different problem would be presented.

Allowance in a rate to compensate for gas removed from gas lands, whether fixed as of point of production or as of point of delivery, probably best can be measured by a functional test applied to the whole industry. For good or ill we depend upon private enterprise to exploit these natural resources for public consumption. The function which an allowance for gas in the field should perform ***653** for society in such circumstances is to be enough and no more than enough to induce private enterprise completely and efficiently to utilize gas resources, to acquire for public service any available gas or gas rights and to deliver gas at a rate and for uses which will be in the future as well as in the present public interest.

The Court fears that 'if we are now to tell the Commission to fix the rates so as to discourage particular uses, we would indeed be injecting into a rate case a 'novel' doctrine * * *.' With due deference I suggest that there is nothing novel in the idea that any change in price of a service or commodity reacts to encourage or discourage its use. The question is not whether such consequences will or will not follow; the question is whether effects must be suffered blindly or may be intelligently selected, whether price control shall have targets at which it deliberately aims or shall be handled like a gun in the hands of one who does not know it is loaded.

We should recognize 'price' for what it is—a tool, a means, an expedient. In public ****312** hands it has much the same economic effects as in private hands. Hope knew that a concession in industrial price would tend to build up its volume of sales. It used price as an expedient to that end. The Commission makes another cut in that same price but the Court thinks we should ignore the effect that it will have on exhaustion of supply. The fact is that in natural gas regulation price must be used to reconcile the private property right society has permitted to vest in an important natural resource with the claims of society upon it—price must draw a balance between wealth and welfare.

To carry this into techniques of inquiry is the task of the Commissioner rather than of the judge, and it certainly is no task to be solved by mere bookkeeping but requires the best economic talent available. There would doubtless be inquiry into the price gas is bringing in the ***654** field, how far that price is established by arms' length bargaining and how far it may be influenced by agreements in restraint of trade or monopolistic influences. What must Hope really pay to get and to replace gas it delivers under this order? If it should get more or less than that for its own, how much and why? How far are such prices influenced by pipe line access to markets

and if the consumers pay returns on the pipe lines how far should the increment they cause go to gas producers? East Ohio is itself a producer in Ohio. [44] What do Ohio authorities require Ohio consumers to pay for gas in the field? Perhaps these are reasons why the Federal Government should put West Virginia gas at lower or at higher rates. If so what are they? Should East Ohio be required to exploit its half million acres of unoperated reserve in Ohio before West Virginia resources shall be supplied on a devalued basis of which that State complains and for which she threatens measures of self keep? What is gas worth in terms of other fuels it displaces?

A price cannot be fixed without considering its effect on the production of gas. Is it an incentive to continue to exploit vast unoperated reserves? Is it conducive to deep drilling tests the result of which we may know only after trial? Will it induce bringing gas from afar to supplement or even to substitute for Appalachian gas? [45] Can it be had from distant fields as cheap or cheaper? If so, that competitive potentiality is certainly a relevant consideration. Wise regulation must also consider, as a private buyer would, what alternatives the producer has ***655** if the price is not acceptable. Hope has intrastate business and domestic and industrial customers. What can it do by way of diverting its supply to intrastate sales? What can it do by way of disposing of its operated or reserve acreage to industrial concerns or other buyers? What can West Virginia do by way of conservation laws, severance or other taxation, if the regulated rate offends? It must be borne in mind that while West Virginia was prohibited from giving her own inhabitants a priority that discriminated against interstate commerce, we have never yet held that a good faith conservation act, applicable to her own, as well as to others, is not valid. In considering alternatives, it must be noted that federal regulation is very incomplete, expressly excluding regulation of 'production or gathering of natural gas,' and that the only present way to get the gas seems to be to call it forth by price inducements. It is plain that there is a downward economic limit on a safe and wise price.

But there is nothing in the law which compels a commission to fix a price at that 'value' which a company might give to its product by taking advantage of scarcity, or monopoly of supply. The very purpose of fixing maximum prices is to take away from the seller his opportunity to get all that otherwise the market would award him for his goods. This is a constitutional use of the power to fix maximum prices, ****313** Block v. Hirsh, 256 U.S. 135, 41 S.Ct. 458, 65 L.Ed. 865, 16 A.L.R. 165; Marcus Brown Holding Co. v. Feldman, 256 U.S. 170, 41 S.Ct. 465, 65 L.Ed. 877; International Harvester Co. v. Kentucky, 234 U.S. 216, 34 S.Ct. 853, 58 L.Ed. 1284; Highland v. Russell Car & Snow Plow Co., 279 U.S. 253, 49 S.Ct. 314, 73 L.Ed. 688, just as the fixing of minimum prices of goods in interstate commerce is constitutional although it takes away from the buyer the advantage in bargaining which market conditions would give him. United States v. Darby, 312 U.S. 100, 657, 61 S.Ct. 451, 85 L.Ed. 609, 132 A.L.R. 1430; Mulford v. Smith, 307 U.S. 38, 59 S.Ct. 648, 83 L.Ed. 1092; United States v. Rock Royal Co-operative, Inc., 307 U.S. 533, 59 S.Ct. 993, 83 L.Ed. 1446; Sunshine Anthracite Coal Co. v. Adkins, 310 U.S. 381, 60 S.Ct. 907, 84 L.Ed. 1263. The Commission has power to fix ***656** a price that will be both maximum and minimum and it has the incidental right, and I think the duty, to choose the economic consequences it will promote or retard in production and also more importantly in consumption, to which I now turn.

If we assume that the reduction in company revenues is warranted we then come to the question of translating the allowed return into rates for consumers or classes of consumers. Here the Commission fixed a single rate for all gas delivered irrespective of its use despite the fact that Hope has established what amounts to two rates—a high one for domestic use and a lower one for industrial contracts. [46] The Commission can fix two prices for interstate gas as readily as one—a price for resale to domestic users and another for resale to industrial users. This is the pattern Hope itself has established in the very contracts over which the Commission is expressly given jurisdiction. Certainly the Act is broad enough to permit two prices to be fixed instead of one, if the concept of the 'public interest' is not unduly narrowed.

The Commission's concept of the public interest in natural gas cases which is carried today into the Court's opinion was first announced in the opinion of the minority in the Pipeline case. It enumerated only two 'phases of the public interest: (1) the investor interest; (2) the consumer interest,' which it emphasized to the exclusion of all others. 315 U.S. 575, 606, 62 S.Ct. 736, 753, 86 L.Ed. 1037. This will do well enough in dealing with railroads or utilities supplying manufactured gas, electric, power, a communications service or transportation, where utilization of facilities does not impair their future usefulness. Limitation of supply, however, brings into a natural gas case another phase of the public interest that to my mind overrides both the owner ***657** and the consumer of that interest. Both producers and industrial consumers have served their immediate private interests at the expense of the long-range public interest. The public interest, of course, requires stopping unjust enrichment of the owner.

But it also requires stopping unjust impoverishment of future generations. The public interest in the use by Hope's half million domestic consumers is quite a different one from the public interest in use by a baker's dozen of industries.

Prudent price fixing it seems to me must at the very threshold determine whether any part of an allowed return shall be permitted to be realized from sales of gas for resale for industrial use. Such use does tend to level out daily and seasonal peaks of domestic demand and to some extent permits a lower charge for domestic service. But is that a wise way of making gas cheaper when, in comparison with any substitute, gas is already a cheap fuel? The interstate sales contracts provide that at times when demand is so great that there is not enough gas to go around domestic users shall first be served. Should the operation of this preference await the day of actual shortage? Since the propriety of a preference seems conceded, should it not operate to prevent the coming of a shortage as well as to mitigate its effects? Should industrial use jeopardize tomorrow's service to householders any more than today's? If, however, it is decided to cheapen domestic use by resort to industrial sales, should they be limited to the few uses ****314** for which gas has special values or extend also to those who use it only because it is cheaper than competitive fuels?[47] And how much cheaper should industrial ***658** gas sell than domestic gas, and how much advantage should it have over competitive fuels? If industrial gas is to contribute at all to lowering domestic rates, should it not be made to contribute the very maximum of which it is capable, that is, should not its price be the highest at which the desired volume of sales can be realized?

If I were to answer I should say that the household rate should be the lowest that can be fixed under commercial conditions that will conserve the supply for that use. The lowest probable rate for that purpose is not likely to speed exhaustion much, for it still will be high enough to induce economy, and use for that purpose has more nearly reached the saturation point. On the other hand the demand for industrial gas at present rates already appears to be increasing. To lower further the industrial rate is merely further to subsidize industrial consumption and speed depletion. The impact of the flat reduction ***659** of rates ordered here admittedly will be to increase the industrial advantages of gas over competing fuels and to increase its use. I think this is not, and there is no finding by the Commission that it is, in the public interest.

There is no justification in this record for the present discrimination against domestic users of gas in favor of industrial users. It is one of the evils against which the Natural Gas Act was aimed by Congress and one of the evils complained of here by Cleveland and Akron. If Hope's revenues should be cut by some $3,600,000 the whole reduction is owing to domestic users. If it be considered wise to raise part of Hope's revenues by industrial purpose sales, the utmost possible revenue should be raised from the least consumption of gas. If competitive relationships to other fuels will permit, the industrial price should be substantially advanced, not for the benefit of the Company, but the increased revenues from the advance should be applied to reduce domestic rates. For in my opinion the ‘public interest’ requires that the great volume of gas now being put to uneconomic industrial use should either be saved for its more important future domestic use or the present domestic user should have the full benefit of its exchange value in reducing his present rates.

Of course the Commission's power directly to regulate does not extend to the fixing of rates at which the local company shall sell to consumers. Nor is such power required to accomplish the purpose. As already pointed out, the very contract the Commission is altering classifies the gas according to the purposes for which it is to be resold and provides differentials between the two classifications. It would only be necessary for the Commission to order ****315** that all gas supplied under paragraph (a) of Hope's contract with the East Ohio Company shall be ***660** at a stated price fixed to give to domestic service the entire reduction herein and any further reductions that may prove possible by increasing industrial rates. It might further provide that gas delivered under paragraph (b) of the contract for industrial purposes to those industrial customers Hope has approved in writing shall be at such other figure as might be found consistent with the public interest as herein defined. It is too late in the day to contend that the authority of a regulatory commission does not extend to a consideration of public interests which it may not directly regulate and a conditioning of its orders for their protection. Interstate Commerce Commission v. Railway Labor Executives Ass'n, 315 U.S. 373, 62 S.Ct. 717, 86 L.Ed. 904; United States v. Lowden, 308 U.S. 225, 60 S.Ct. 248, 84 L.Ed. 208.

Whether the Commission will assert its apparently broad statutory authorization over prices and discriminations is, of course, its own affair, not ours. It is entitled to its own notion of the ‘public interest’ and its judgment of policy must prevail. However, where there is ground for thinking that views of this Court may have constrained the Commission to accept the rate-base method of decision and a particular single formula as ‘all important’ for a rate base, it is appropriate

to make clear the reasons why I, at least, would not be so understood. The Commission is free to face up realistically to the nature and peculiarity of the resources in its control, to foster their duration in fixing price, and to consider future interests in addition to those of investors and present consumers. If we return this case it may accept or decline the proffered freedom. This problem presents the Commission an unprecedented opportunity if it will boldly make sound economic considerations, instead of legal and accounting theories, the foundation of federal policy. I would return the case to the Commission and thereby be clearly quit of what now may appear to be some responsibility for perpetrating a shortsighted pattern of natural gas regulation.

Parallel Citations

51 P.U.R.(NS) 193, 64 S.Ct. 281, 88 L.Ed. 333

Footnotes

1 Hope produces about one-third of its annual gas requirements and purchases the rest under some 300 contracts.

2 These five companies are the East Ohio Gas Co., the Peoples Natural Gas Co., the River Gas Co., the Fayette County Gas Co., and the Manufacturers Light & Heat Co. The first three of these companies are, like Hope, subsidiaries of Standard Oil Co. (N.J.). East Ohio and River distribute gas in Ohio, the other three in Pennsylvania. Hope's approximate sales in m.c.f. for 1940 may be classified as follows:

Local West Virginia sales	11,000,000
East Ohio	40,000,000
Peoples	10,000,000
River	400,000
Fayette	860,000
Manufacturers	2,000,000

Local West Virginia

Hope's natural gas is processed by Hope Construction & Refining Co., an affiliate, for the extraction of gasoline and butane. Domestic Coke Corp., another affiliate, sells coke-oven gas to Hope for boiler fuel.

3 These required minimum reductions of 7¢ per m.c.f. from the 36.5¢ and 35.5¢ rates previously charged East Ohio and Peoples, respectively, and 3¢ per m.c.f. from the 31.5¢ rate previously charged Fayette and Manufacturers.

4 The book reserve for interstate plant amounted at the end of 1938 to about $18,000,000 more than the amount determined by the Commission as the proper reserve requirement. The Commission also noted that 'twice in the past the company has transferred amounts aggregating $7,500,000 from the depreciation and depletion reserve to surplus. When these latter adjustments are taken into account, the excess becomes $25,500,000, which has been exacted from the ratepayers over and above the amount required to cover the consumption of property in the service rendered and thus to keep the investment unimpaired.' 44 P.U.R.,N.S., at page 22.

5 That contention was based on the fact that 'every single dollar in the depreciation and depletion reserves' was taken 'from gross operating revenues whose only source was the amounts charged customers in the past for natural gas. It is, therefore, a fact that the depreciation and depletion reserves have been contributed by the customers and do not represent any investment by Hope.' Id., 44 P.U.R.,N.S., at page 40. And see Railroad Commission v. Cumberland Tel. & T. Co., 212 U.S. 414, 424, 425, 29 S.Ct. 357, 361, 362, 53 L.Ed. 577; 2 Bonbright, Valuation of Property (1937), p. 1139.

6 The Commission noted that the case was 'free from the usual complexities involved in the estimate of gas reserves because the geologists for the company and the Commission presented estimates of the remaining recoverable gas reserves which were about one per cent apart.' 44 P.U.R.,N.S., at pages 19, 20.

The Commission utilized the 'straight-line-basis' for determining the depreciation and depletion reserve requirements. It used estimates of the average service lives of the property by classes based in part on an inspection of the physical condition of the property. And studies were made of Hope's retirement experience and maintenance policies over the years. The average service lives of the various classes of property were converted into depreciation rates and then applied to the cost of the property to ascertain the portion of the cost which had expired in rendering the service.

The record in the present case shows that Hope is on the lookout for new sources of supply of natural gas and is contemplating an extension of its pipe line into Louisiana for that purpose. The Commission recognized in fixing the rates of depreciation that much material may be used again when various present sources of gas supply are exhausted, thus giving that property more than scrap value at the end of its present use.

7 See Uniform System of Accounts prescribed for Natural Gas Companies effective January 1, 1940, Account No. 332.1.

8 Sec. 6 of the Act comes the closest to supplying any definite criteria for rate making. It provides in subsection (a) that, 'The Commission may investigate the ascertain the actual legitimate cost of the property of every natural-gas company, the depreciation therein, and, when found necessary for rate-making purposes, other facts which bear on the determination of such cost or depreciation and the fair value of such property.' Subsection (b) provides that every natural-gas company on request shall file with the Commission a statement of the 'original cost' of its property and shall keep the Commission informed regarding the 'cost' of all additions, etc.

9 We recently stated that the meaning of the word 'value' is to be gathered 'from the purpose for which a valuation is being made. Thus the question in a valuation for rate making is how much a utility will be allowed to earn. The basic question in a valuation for reorganization purposes is how much the enterprise in all probability can earn.' Institutional Investors v. Chicago, M., St. P. & P.R. Co., 318 U.S. 523, 540, 63 S.Ct. 727, 738.

10 Chief Justice Hughes said in that case (292 U.S. at pages 168, 169, 54 S.Ct. at page 665, 78 L.Ed. 1182): 'If the predictions of service life were entirely accurate and retirements were made when and as these predictions were precisely fulfilled, the depreciation reserve would represent the consumption of capital, on a cost basis, according to the method which spreads that loss over the respective service periods. But if the amounts charged to operating expenses and credited to the account for depreciation reserve are excessive, to that extent subscribers for the telephone service are required to provide, in effect, capital contributions, not to make good losses incurred by the utility in the service rendered and thus to keep its investment unimpaired, but to secure additional plant and equipment upon which the utility expects a return.'

11 See Mr. Justice Brandeis (dissenting) in United Railways & Electric Co. v. West, 280 U.S. 234, 259—288, 50 S.Ct. 123, 128—138, 74 L.Ed. 390, for an extended analysis of the problem.

12 It should be noted that the Act provides no specific rule governing depletion and depreciation. Sec. 9(a) merely states that the Commission 'may from time to time ascertain and determine, and by order fix, the proper and adequate rates of depreciation and amortization of the several classes of property of each natural-gas company used or useful in the production, transportation, or sale of natural gas.'

13 See Simonton, The Nature of the Interest of the Grantee Under an Oil and Gas Lease (1918), 25 W.Va.L.Quar. 295.

14 West Penn Power Co. v. Board of Review, 112 W.Va. 442, 164 S.E. 862.

15 W.Va.Rev.Code of 1943, ch. 11. Art. 13, ss 2a, 3a.

16 West Virginia suggests as a possible solution (1) that a 'going concern value' of the company's tangible assets be included in the rate base and (2) that the fair market value of gas delivered to customers be added to the outlay for operating expenses and taxes.

17 S.Doc. 92, Pt. 84-A, ch. XII, Final Report, Federal Trade Commission to the Senate pursuant to S.Res.No. 83, 70th Cong., 1st Sess.

18 S.Doc. 92, Pt. 84-A, chs. XII, XIII, op. cit., supra, note 17.

19 See Hearings on H.R. 11662, Subcommittee of House Committee on Interstate & Foreign Commerce, 74th Cong., 2d Sess.; Hearings on H.R. 4008, House Committee on Interstate & Foreign Commerce, 75th Cong., 1st Sess.

20 The power to investigate and ascertain the 'actual legitimate cost' of property (s 6), the requirement as to books and records (s 8), control over rates of depreciation (s 9), the requirements for periodic and special reports (s 10), the broad powers of investigation (s 14) are among the chief powers supporting the rate making function.

21 Apart from the grandfather clause contained in s 7(c), there is the provision of s 7(f) that a natural gas company may enlarge or extend its facilities with the 'service area' determined by the Commission without any further authorization.

22 See P.L. 117, approved July 7, 1943, 57 Stat. 383 containing an 'Interstate Compact to Conserve Oil and Gas' between Oklahoma, Texas, New Mexico, Illinois, Colorado, and Kansas.

23 As we have pointed out, s 7(c) was amended by the Act of February 7, 1942, 56 Stat. 83, so as to require certificates of public convenience and necessity not only where the extensions were being made to markets in which natural gas was already being sold by another company but to other situations as well. Considerations of conservation entered into the proposal to give the Act that broader scope. H.Rep.No. 1290, 77th Cong. 1st Sess., pp. 2, 3. And see Annual Report, Federal Power Commission (1940) pp. 79, 80; Baum, The Federal Power Commission and State Utility Regulation (1942), p. 261.

The bill amending s 7(c) originally contained a subsection (h) reading as follows: 'Nothing contained in this section shall be construed to affect the authority of a State within which natural gas is produced to authorize or require the construction or extension of facilities for the transportation and sale of such gas within such State: Provided, however, That the Commission, after a hearing upon complaint or upon its own motion, may by order forbid any intrastate construction or extension by any natural-gas company which it shall find will prevent such company from rendering adequate service to its customers in interstate or foreign commerce in territory already being served.' See Hearings on H.R. 5249, House

Committee on Interstate & Foreign Commerce, 77th Cong., 1st Sess., pp. 7, 11, 21, 29, 32, 33. In explanation of its deletion the House Committee Report stated, pp. 4, 5: 'The increasingly important problems raised by the desire of several States to regulate the use of the natural gas produced therein in the interest of consumers within such States, as against the Federal power to regulate interstate commerce in the interest of both interstate and intrastate consumers, are deemed by the committee to warrant further intensive study and probably a more retailed and comprehensive plan for the handling thereof than that which would have been provided by the stricken subsection.'

24 We have noted that in the annual operating expenses of some $16,000.000 the Commission included West Virginia and federal taxes. And in the net increase of $421,160 over 1940 operating expenses allowed by the Commission was some $80,000 for increased West Virginia property taxes. The adequacy of these amounts has not been challenged here.

25 The Commission included in the aggregate annual operating expenses which it allowed some $8,500,000 for gas purchased. It also allowed about $1,400,000 for natural gas production and about $600,000 for exploration and development.

It is suggested, however, that the Commission in ascertaining the cost of Hope's natural gas production plant proceeded contrary to s 1(b) which provides that the Act shall not apply to 'the production or gathering of natural gas'. But such valuation, like the provisions for operating expenses, is essential to the rate-making function as customarily performed in this country. Cf. Smith, The Control of Power Rates in the United States and England (1932), 159 The Annals 101. Indeed s 14(b) of the Act gives the Commission the power to 'determine the propriety and reasonableness of the inclusion in operating expenses, capital, or surplus of all delay rentals or other forms of rental or compensation for unoperated lands and leases.'

26 See note 25, supra.

27 The Commission has expressed doubts over its power to fix rates on 'direct sales to industries' from interstate pipelines as distinguished from 'sales for resale to the industrial customers of distributing companies.' Annual Report, Federal Power Commission (1940), p. 11.

28 Sec. 1(b) of the Act provides: 'The provisions of this Act shall apply to the transportation of natural gas in interstate commerce, to the sale in interstate commerce of natural gas for resale for ultimate public consumption for domestic, commercial, industrial, or any other use, and to natural-gas companies engaged in such transportation or sale, but shall not apply to any other transportation or sale of natural gas or to the local distribution of natural gas or to the facilities used for such distribution or to the production or gathering of natural gas.' And see s 2(6), defining a 'natural-gas company', and H.Rep.No. 709, supra, pp. 2, 3.

29 The wasting-asset characteristic of the industry was recognized prior to the Act as requiring the inclusion of a depletion allowance among operating expenses. See Columbus Gas & Fuel Co. v. Public Utilities Commission, 292 U.S. 398, 404, 405, 54 S.Ct. 763, 766, 767, 78 L.Ed. 1327, 91 A.L.R. 1403. But no such theory of rate-making for natural gas companies as is now suggested emerged from the cases arising during the earlier period of regulation.

30 The Commission has been alert to the problems of conservation in its administration of the Act. It has indeed suggested that it might be wise to restrict the use of natural gas 'by functions rather than by areas.' Annual Report (1940) p. 79.

The Commission stated in that connection that natural gas was particularly adapted to certain industrial uses. But it added that the general use of such gas 'under boilers for the production of steam' is 'under most circumstances of very questionable social economy.' Ibid.

31 The argument is that s 4(a) makes 'unlawful' the charging of any rate that is not just and reasonable. And s 14(a) gives the Commission power to investigate any matter 'which it may find necessary or proper in order to determine whether any person has violated' any provision of the Act. Moreover, s 5(b) gives the Commission power to investigate and determine the cost of production or transportation of natural gas in cases where it has 'no authority to establish a rate governing the transportation or sale of such natural gas.' And s 17(c) directs the Commission to 'make available to the several State commissions such information and reports as may be of assistance in State regulation of natural-gas companies.' For a discussion of these points by the Commission see 44 P.U.R.,N.S., at pages 34, 35.

1 Natural Gas Act, s 4(a), 52 Stat. 821, 822, 15 U.S.C. s 717c(a), 15 U.S.C.A. s 717c(a).

2 52 Stat. 821, 824, 15 U.S.C. s 717e, 15 U.S.C.A. s 717e:

'(a) The Commission may investigate and ascertain the actual legitimate cost of the property of every natural-gas company, the depreciation therein, and, when found necessary for rate-making purposes, other facts which bear on the determination of such cost or depreciation and the fair value of such property.

'(b) Every natural-gas company upon request shall file with the Commission an inventory of all or any part of its property and a statement of the original cost thereof, and shall keep the Commission informed regarding the cost of all additions, betterments, extensions, and new construction.'

3 'Reproduction cost' has been variously defined, but for rate making purposes the most useful sense seems to be, the minimum amount necessary to create at the time of the inquiry a modern plant capable of rendering equivalent service. See I Bonbright, Valuation of Property (1937) 152. Reproduction cost as the cost of building a replica of an obsolescent plant is not of real significance.

'Prudent investment' is not defined by the Court. It may mean the sum originally put in the enterprise, either with or without additional amounts from excess earnings reinvested in the business.

4 It is of no more than bookkeeping significance whether the Commission allows a rate of return commensurate with the risk of the original investment or the lower rate based on current risk and a capitalization reflecting the established earning power of a successful company and the probable cost of duplicating its services. Cf. American T. & T. Co. v. United States, 299 U.S. 232, 57 S.Ct. 170, 81 L.Ed. 142. But the latter is the traditional method.

1 315 U.S. 575, 62 S.Ct. 736, 86 L.Ed. 1037.

2 Judge Dobie, dissenting below, pointed out that the majority opinion in the Pipeline case 'contains no express discussion of the Prudent Investment Theory' and that the concurring opinion contained a clear one, and said, 'It is difficult for me to believe that the majority of the Supreme Court, believing otherwise, would leave such a statement unchallenged.' (134 F.2d 287, 312.) The fact that two other Justices had as matter of record in our books long opposed the reproduction cost theory of rate bases and had commented favorably on the prudent investment theory may have influenced that conclusion. See opinion of Mr. Justice Frankfurter in Driscoll v. Edison Light & Power Co., 307 U.S. 104, 122, 59 S.Ct. 715, 724, 83 L.Ed. 1134, and my brief as Solicitor General in that case. It should be noted, however, that these statements were made, not in a natural gas case, but in an electric power case—a very important distinction, as I shall try to make plain.

3 Natural gas from the Appalachian field averages about 1050 to 1150 B.T.U. content, while by-product manufactured gas is about 530 to 540. Moody's Manual of Public Utilities (1943) 1350; Youngberg, Natural Gas (1930) 7.

4 Sen.Rep. No. 1162, 75th Cong., 1st Sess., 2.

5 Arnold and Kemnitzer, Petroleum in the United States and Possessions (1931) 78.

6 Id. at 62-63.

7 Id. at 61.

8 At Fredonia, New York, in 1821, natural gas was conveyed from a shallow well to some thirty people. The lighthouse at Barcelona Harbor, near what is now Westfield, New York, was at about that time and for many years afterward lighted by gas that issued from a crevice. Report on Utility Corporations by Federal Trade Commission, Sen.Doc. 92, Pt. 84-A, 70th Cong., 1st Sess., 8-9.

9 In that year Pennsylvania enacted 'An Act to provide for the incorporation and regulation of natural gas companies.' Penn.Laws 1885, No. 32, 15 P.S. s 1981 et seq.

10 See Steptoe and Hoffheimer's Memorandum for Governor Cornwell of West Virginia (1917) 25 West Virginia Law Quarterly 257; see also Report on Utility Corporations by Federal Trade Commission, Sen.Doc. No. 92, Pt. 84-A, 70th Cong., 1st Sess.

11 Arnold and Kemnitzer, Petroleum in the United States and Possessions (1931) 73.

12 Id. at 63.

13 Id. at 64.

14 See Report on Utility Corporations by Federal Trade Commission, Sen.Doc. No. 92, Pt. 84-A, 70th Cong., 1st Sess.

15 Commonwealth of Pennsylvania v. West Virginia, 262 U.S. 553, 43 S.Ct. 658, 67 L.Ed. 1117, 32 A.L.R. 300. For conditions there which provoked this legislation, see 25 West Virginia Law Quarterly 257.

16 People ex rel. Pavilion Natural Gas Co. v. Public Service Commission, 188 App.Div. 36, 176 N.Y.S. 163.

17 Village of Falconer v. Pennsylvania Gas Company, 17 State Department Reports, N.Y., 407.

18 See, for example, Public Service Commission v. Iroquois Natural Gas Co., 108 Misc. 696, 178 N.Y.S. 24; Park Abbott Realty Co. v. Iroquois Natural Gas Co., 102 Misc. 266, 168 N.Y.S. 673; Public Service Commission v. Iroquois Natural Gas Co., 189 App.Div. 545, 179 N.Y.S. 230.

19 People ex rel. Pennsylvania Gas Co. v. Public Service Commission, 196 App.Div. 514, 189 N.Y.S. 478.

20 East Ohio Gas Co. v. Akron, 81 Ohio St. 33, 90 N.E. 40, 26 L.R.A., N.S., 92, 18 Ann.Cas. 332; Village of New-comerstown v. Consolidated Gas Co., 100 Ohio St. 494, 127 N.E. 414; Gress v. Village of Ft. Laramie, 100 Ohio St. 35, 125 N.E. 112, 8 A.L.R. 242; City of Jamestown v. Pennsylvania Gas Co., D.C., 263 F. 437; Id., D.C., 264 F. 1009. See, also, United Fuel Gas Co. v. Railroad Commission, 278 U.S. 300, 308, 49 S.Ct. 150, 152, 73 L.Ed. 390.

21 The New York Public Service Commission said: 'While the transportation of natural gas through pipe lines from one state to another state is interstate commerce * * *, Congress has not taken over the regulation of that particular industry. Indeed,

it has expressly excepted it from the operation of the Interstate Commerce Commissions Law (Interstate Commerce Commissions Law, section 1). It is quite clear, therefore, that this Commission can not require a Pennsylvania corporation producing gas in Pennsylvania to transport it and deliver it in the State of New York, and that the Interstate Commerce Commission is likewise powerless. If there exists such a power, and it seems that there does, it is a power vested in Congress and by it not yet exercised. There is no available source of supply for the Crystal City Company at present except through purchasing from the Porter Gas Company. It is possible that this Commission might fix a price at which the Potter Gas Company should sell if it sold at all, but as the Commission can not require it to supply gas in the State of New York, the exercise of such a power to fix the price, if such power exists, would merely say, sell at this price or keep out of the State.' Lane v. Crystal City Gas Co., 8 New York Public Service Comm.Reports, Second District, 210, 212.

22 Proclamation by the President of September 16, 1918; Rules and Regulations of H. A. Garfield, Fuel Administrator, September 24, 1918.

23 For example, the Iroquois Gas Corporation which formerly served Buffalo, New York, with natural gas ranging from 1050 to 1150 b.t.u. per cu. ft., now mixes a by-product gas of between 530 and 540 b.t.u. in proportions to provide a mixed gas of about 900 b.t.u. per cu. ft. For space heating or water heating its charges range from 65 cents for the first m.c.f. per month to 55 cents for all above 25 m.c.f. per month. Moody's Manual of Public Utilities (1943) 1350.

24 The United States Fuel Administration made the following cooking value comparisons, based on tests made in the Department of Home Economics of Ohio State University:
Natural gas at 1.12 per M. is equivalent to coal at $6.50 per ton.
Natural gas at 2.00 per M. is equivalent to gasoline at 27¢ per gal.
Natural gas at 2.20 per M. is equivalent to electricity at 3¢ per k.w.h.
Natural gas at 2.40 per M. is equivalent to coal oil at 15¢ per gal.
Use and Conservation of Natural Gas, issued by U.S. Fuel Administration (1918) 5.

25 See Brief on Behalf jof Legislation Imposing an Excise Tax on Natural Gas, submitted to N.R.A. by the United Mine Workers of America and the National Coal Association.

26 Brief of National Gas Association and United Mine Workers, supra, note 26, pp. 35, 36, compiled from Bureau of Mines Reports.

27 From the source quoted in the preceding note the spread elsewhere is shown to be:

State	Industrial	Domestic
Illinois.....	29.2	1.678
Louisiana.....	10.4	59.7
Oklahoma.....	11.2	41.5
Texas.....	13.1	59.7
Alabama.....	17.8	1.227
Georgia.....	22.9	1.043

28 In Corning, New York, rates were initiated by the Crystal City Gas Company as follows: 70¢ for the first 5,000 cu. ft. per month; 80¢ from 5,000 to 12,000; $1 for all over 12,000. The Public Service Commission rejected these rates and fixed a flat rate of 58¢ per m.c.f. Lane v. Crystal City Gas Co., 8 New York Public Service Comm. Reports, Second District, 210. The Pennsylvania Gas Company (National Fuel Gas Company group) also attempted a sliding scale rate for New York consumers, net per month as follows: First 5,000 feet, 35¢; second 5,000 feet, 45¢; third 5,000 feet, 50¢; all above 15,000, 55¢. This was eventually abandoned, however. The company's present scale in Pennsylvania appears to be reversed to the following net monthly rate; first 3 m.c.f., 75¢; next 4 m.c.f., 60¢; next 8 m.c.f., 55¢; over 15 m.c.f., 50¢ . Moody's Manual of Public Utilities (1943) 1350. In New York it now serves a mixed gas.
For a study of effect of sliding scale rates in reducing consumption see 11 Proceedings of Natural Gas Association of America (1919) 287.

29 See Report on Utility Corporations by Federal Trade Commission, Sen. Doc. 92, Pt. 84-A, 70th Cong., 1st Sess.

30 Four holding company systems control over 55 per cent of all natural gas transmission lines in the United States. They are Columbia Gas and Electric Corporation, Cities Service Co., Electric Bond and Share Co., and Standard Oil Co. of New Jersey. Columbia alone controls nearly 25 per cent, and fifteen companies account for over 80 per cent of the total. Report on Utility Corporations by Federal Trade Commission, Sen. Doc. 92, Pt. 84-A, 70th Cong., 1st Sess., 28.
In 1915, so it was reported to the Governor of West Virginia, 87 per cent of the total gas production of that state was under control of eight companies. Steptoe and Hoffheimer, Legislative Regulation of Natural Gas Supply in West Virginia, 17 West Virginia Law Quarterly 257, 260. Of these, three were subsidiaries of the Columbia system and others were

subsidiaries of larger systems. In view of inter-system sales and interlocking interests it may be doubted whether there is much real competition among these companies.

31 This pattern with its effects on local regulatory efforts will be observed in our decisions. See United Fuel Gas Co. v. Railroad Commission, 278 U.S. 300, 49 S.Ct. 150, 73 L.Ed. 390; United Fuel Gas Co. v. Public Service Commission, 278 U.S. 322, 49 S.Ct. 157, 73 L.Ed. 402; Dayton Power & Light v. Public Utilities Commission, 292 U.S. 290, 54 S.Ct. 647, 78 L.Ed. 1267; Columbus Gas & Fuel Co. v. Public Utilities Commission, 292 U.S. 398, 54 S.Ct. 763, 78 L.Ed. 1327, 91 A.L.R. 1403, and the present case.

32 15 U.S.C. s 717(a), 15 U.S.C.A. s 717(a). (Italics supplied throughout this paragraph.)

33 s 7(c), 52 Stat. 825, 15 U.S.C.A. s 717f(c).

34 15 U.S.C. s 717f, 15 U.S.C.A. s 717f.

35 Id., s 717c(e).

36 Id., s 717c(b).

37 Id., s 717d(a).

38 Sen. Rep. No. 1162, 75th Cong., 1st Sess. 2.

39 The list of East Ohio Gas Company's special industrial contracts thus expressly under Hope's control and their demands are as follows:

40 To make a fetish of mere accounting is to shield from examination the deeper causes, forces, movements, and conditions which should govern rates. Even as a recording of current transactions, bookkeeping is hardly an exact science. As a representation of the condition and trend of a business, it uses symbols of certainty to express values that actually are in constant flux. It may be said that in commercial or investment banking or any business extending credit success depends on knowing what not to believe in accounting. Few concerns go into bankruptcy or reorganization whose books do not show them solvent and often even profitable. If one cannot rely on accountancy accurately to disclose past or current conditions of a business, the fallacy of using it as a sole guide to future price policy ought to be apparent. However, our quest for certitude is so ardent that we pay an irrational reverence to a technique which uses symbols of certainty, even though experience again and again warns us that they are delusive. Few writers have ventured to challenge this American idolatry, but see Hamilton, Cost as a standard for Price, 4 Law and Contemporary Problems 321, 323-25. He observes that 'As the apostle would put it, accountancy is all things to all men. * * * Its purpose determines the character of a system of accounts.' He analyzes the hypothetical character of accounting and says 'It was no eternal mold for pecuniary verities handed down from on high. It was—like logic or algebra, or the device of analogy in the law—an ingenious contrivance of the human mind to serve a limited and practical purpose.' 'Accountancy is far from being a pecuniary expression of all that is industrial reality. It is an instrument, highly selective in its application, in the service of the institution of money making.' As to capital account he observes 'In an enterprise in lusty competition with others of its kind, survival is the thing and the system of accounts has its focus in solvency. * * * Accordingly depreciation, obsolescence, and other factors which carry no immediate threat are matters of lesser concern and the capital account is likely to be regarded as a secondary phenomenon. * * * But in an enterprise, such as a public utility, where continued survival seems assured, solvency is likely to be taken for granted. * * * A persistent and ingenious attention is likely to be directed not so much to securing the upkeep of the physical property as to making it certain that capitalization fails in not one whit to give full recognition to every item that should go into the account.'

41 See 2 Bonbright, Valuation of Property (1937) 1112.

42 Bonbright says, '* * * the vice of traditional law lies, not in its adoption of excessively rigid concepts of value and rules of valuation, but rather in its tendency to permit shifts in meaning that are inept, or else that are ill-defined because the judges that make them will not openly admit that they are doing so.' Id., 1170.

43 'The attempt to regulate rates by reference to a periodic or occasional reappraisal of the properties has now been tested long enough to confirm the worst fears of its critics. Unless its place is taken by some more promising scheme of rate control, the days of private ownership under government regulation may be numbered.' 2 Bonbright, Valuation of Property (1937) 1190.

44 East Ohio itself owns natural gas rights in 550,600 acres, 518,526 of which are reserved and 32,074 operated, by 375 wells. Moody's Manual of Public Utilities (1943) 5.

45 Hope has asked a certificate of convenience and necessity to lay 1140 miles of 22-inch pipeline from Hugoton gas fields in southwest Kansas to West Virginia to carry 285 million cu. ft. of natural gas per day. The cost was estimated at $51,000,000. Moody's Manual of Public Utilities (1943) 1760.

46 I find little information as to the rates for industries in the record and none at all in such usual sources as Moody's Manual.

47 The Federal Power Commission has touched upon the problem of conservation in connection with an application for a certificate permitting construction of a 1500-mile pipeline from southern Texas to New York City and says: 'The Natural Gas Act as presently drafted does not enable the Commission to treat fully the serious implications of such a problem. The question should be raised as to whether the proposed use of natural gas would not result in displacing a less valuable fuel and create hardships in the industry already supplying the market, while at the same time rapidly depleting the country's natural-gas reserves. Although, for a period of perhaps 20 years, the natural gas could be so priced as to appear to offer an apparent saving in fuel costs, this would mean simply that social costs which must eventually be paid had been ignored. 'Careful study of the entire problem may lead to the conclusion that use of natural gas should be restricted by functions rather than by areas. Thus, it is especially adapted to space and water heating in urban homes and other buildings and to the various industrial heat processes which require concentration of heat, flexibility of control, and uniformity of results. Industrial uses to which it appears particularly adapted include the treating and annealing of metals, the operation of kilns in the ceramic, cement, and lime industries, the manufacture of glass in its various forms, and use as a raw material in the chemical industry. General use of natural gas under boilers for the production of steam is, however, under most circumstances of very questionable social economy.' Twentieth Annual Report of the Federal Power Commission (1940) 79.

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P.U.R. 1923D 11, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176
(Cite as: P.U.R. 1923D 11, 43 S.Ct. 675)

Supreme Court of the United States
BLUEFIELD WATERWORKS & IMPROVEMENT CO.
v.
PUBLIC SERVICE COMMISSION OF WEST VIRGINIA et al.
No. 256.

Argued January 22, 1923.
Decided June 11, 1923.

In Error to the Supreme Court of Appeals of West Virginia.

Proceedings by the Bluefield Waterworks & Improvement Company against the Public Service Commission of the State of West Virginia and others to suspend and set aside an order of the Commission fixing rates. From a judgment of the Supreme Court of West Virginia, dismissing the petition, and denying the relief (89 W. Va. 736, 110 S. E. 205), the Waterworks Company bring error. Reversed.

West Headnotes

Constitutional Law 92 298(1.5)

92 Constitutional Law
92XII Due Process of Law
92k298 Regulation of Charges and Prices
92k298(1.5) k. Public Utilities in General. Most Cited Cases
Rates which are not sufficient to yield a reasonable return on the value of the property used in public service at the time it is being so used to render the service are unjust, unreasonable, and confiscatory, and their enforcement deprives the public utility company of its property, in violation of the Fourteenth Amendment of the Constitution.

Constitutional Law 92 298(3)

92 Constitutional Law
92XII Due Process of Law
92k298 Regulation of Charges and Prices
92k298(3) k. Water and Irrigation Companies. Most Cited Cases
Under the due process clause of the Fourteenth Amendment of the Constitution, U.S.C.A., a waterworks company is entitled to the independent judgment of the court as to both law and facts, where the question is whether the rates fixed by a public service commission are confiscatory.

Waters and Water Courses 405 203(10)

405 Waters and Water Courses
405IX Public Water Supply
405IX(A) Domestic and Municipal Purposes
405k203 Water Rents and Other Charges
405k203(10) k. Reasonableness of Charges. Most Cited Cases
It was error for a state public service commission, in arriving at the value of the property used in public service, for the purpose of fixing the rates, to fail to give proper weight to the greatly increased cost of construction since the war.

Waters and Water Courses 405 203(10)

405 Waters and Water Courses
405IX Public Water Supply
405IX(A) Domestic and Municipal Purposes
405k203 Water Rents and Other Charges
405k203(10) k. Reasonableness of Charges. Most Cited Cases
A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties, but it has no constitutional right to such profits as are realized or anticipated in highly profitable enterprises or speculative ventures.

Waters and Water Courses 405 203(10)

405 Waters and Water Courses
405IX Public Water Supply
405IX(A) Domestic and Municipal Purposes
405k203 Water Rents and Other Charges
405k203(10) k. Reasonableness

(Cite as: P.U.R. 1923D 11, 43 S.Ct. 675)

of Charges. Most Cited Cases
Since the investors take into account the result of past operations as well as present rates in determining whether they will invest, a waterworks company which had been earning a low rate of returns through a long period up to the time of the inquiry is entitled to return of more than 6 per cent. on the value of its property used in the public service, in order to justly compensate it for the use of its property.

Federal Courts 170B 504.1

170B Federal Courts
170BVII Supreme Court
170BVII(E) Review of Decisions of State Courts
170Bk504 Nature of Decisions or Questions Involved
170Bk504.1 k. In General. Most Cited Cases
(Formerly 106k394(6))
A proceeding in a state court attacking an order of a public service commission fixing rates, on the ground that the rates were confiscatory and the order void under the federal Constitution, is one where there is drawn in question the validity of authority exercised under the state, on the ground of repugnancy to the federal Constitution, and therefore is reviewable by writ of error.

****675 *680** Messrs. Alfred G. Fox and Jos. M. Sanders, both of Bluefield, W. Va., for plaintiff in error.
Mr. Russell S. Ritz, of Bluefield, W. Va., for defendants in error.

***683** Mr. Justice BUTLER delivered the opinion of the Court.
Plaintiff in error is a corporation furnishing water to the city of Bluefield, W. Va., ****676** and its inhabitants. September 27, 1920, the Public Service Commission of the state, being authorized by statute to fix just and reasonable rates, made its order prescribing rates. In accordance with the laws of the state (section 16, c. 15-O, Code of West Virginia [sec. 651]), the company instituted proceedings in the Supreme Court of Appeals to suspend and set aside the order. The petition alleges that the order is repugnant to the Fourteenth Amendment, and deprives the company of its property without just compensation and without due process of law, and denies it equal protection of the laws. A final judgment was entered, denying the company relief and dismissing its petition. The case is here on writ of error.

[1] 1. The city moves to dismiss the writ of error for the reason, as it asserts, that there was not drawn in question the validity of a statute or an authority exercised under the state, on the ground of repugnancy to the federal Constitution.

The validity of the order prescribing the rates was directly challenged on constitutional grounds, and it was held valid by the highest court of the state. The prescribing of rates is a legislative act. The commission is an instrumentality of the state, exercising delegated powers. Its order is of the same force as would be a like enactment by the Legislature. If, as alleged, the prescribed rates are confiscatory, the order is void. Plaintiff in error is entitled to bring the case here on writ of error and to have that question decided by this court. The motion to dismiss will be denied. See ***684**Oklahoma Natural Gas Co. v. Russell, 261 U. S. 290, 43 Sup. Ct. 353, 67 L. Ed. 659, decided March 5, 1923, and cases cited; also Ohio Valley Co. v. Ben Avon Borough, 253 U. S. 287, 40 Sup. Ct. 527, 64 L. Ed. 908.

2. The commission fixed $460,000 as the amount on which the company is entitled to a return. It found that under existing rates, assuming some increase of business, gross earnings for 1921 would be $80,000 and operating expenses $53,000 leaving $27,000, the equivalent of 5.87 per cent., or 3.87 per cent. after deducting 2 per cent. allowed for depreciation. It held existing rates insufficient to the extent of 10,000. Its order allowed the company to add 16 per cent. to all bills, excepting those for public and private fire protection. The total of the bills so to be increased amounted to $64,000; that is, 80 per cent. of the revenue was authorized to be increased 16 per cent., equal to an increase of 12.8 per cent. on the total, amounting to $10,240.

As to value: The company claims that the value of the property is greatly in excess of $460,000. Reference to the evidence is necessary. There was submitted to the commission evidence of value which it summarized substantially as follows:

a. Estimate by company's engineer

(Cite as: P.U.R. 1923D 11, 43 S.Ct. 675)

	on. basis of reproduction new, less. depreciation, at prewar prices.	$ 624,548 00
b.	Estimate by company's engineer on. basis of reproduction new, less. depreciation, at 1920 prices.	1,194,663 00
c.	Testimony of company's engineer. fixing present fair value for rate. making purposes.	900,000 00
d.	Estimate by commissioner's engineer on. basis of reproduction new, less. depreciation at 1915 prices, plus. additions since December 31, 1915, at. actual cost, excluding Bluefield. Valley waterworks, water rights,. and going value.	397,964 38
e.	Report of commission's statistician. showing investment cost less. depreciation.	365,445 13
f.	Commission's valuation, as fixed in. case No. 368 ($360,000), plus gross. additions to capital since made. ($92,520.53).	452,520 53

***685** It was shown that the prices prevailing in 1920 were nearly double those in 1915 and pre-war time. The company did not claim value as high as its estimate of cost of construction in 1920. Its valuation engineer testified that in his opinion the value of the property was $900,000-a figure between the cost of construction in 1920, less depreciation, and the cost of construction in 1915 and before the war, less depreciation.

The commission's application of the evidence may be stated briefly as follows:

As to 'a,' supra: The commission deducted $204,000 from the estimate (details printed in the margin), [FN1] leaving approximately $421,000, which it contrasted with the estimate of its own engineer, $397,964.38 (see 'd,' supra). It found that there should be included $25,000 for the Bluefield Valley waterworks plant in Virginia, 10 per cent. for going value, and $10,000 for working capital. If these be added to $421,000, there results $500,600. This may be compared with the commission's final figure, $460,000.

FN1

Difference in depreciation allowed.	$ 49,000
Preliminary organization and development. cost.	14,500
Bluefield Valley waterworks plant.	25,000
Water rights.	50,000
Excess overhead costs.	39,000
Paving over mains.	28,500
	$204,000

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***686** As to 'b' and 'c,' supra: These were given no weight by the commission in arriving at its final figure, $460,000. It said:
'Applicant's plant was originally constructed more than twenty years ago, and has been added to from time to time as the progress and development of the community required. For this reason, it would be unfair to its consumers to use as a basis for present fair value the abnormal prices prevailing during the recent war period; but, when, as in this case, a part of the plant has been constructed or added to during that period, in fairness to the applicant, consideration must be given to the cost of such expenditures made to meet the demands of the public.'

****677** As to 'd,' supra: The commission, taking $400,000 (round figures), added $25,000 for Bluefield Valley waterworks plant in Virginia, 10 per cent. for going value, and $10,000 for working capital, making $477,500. This may be compared with its final figure, $460,000.

As to 'e,' supra: The commission, on the report of its statistician, found gross investment to be $500,402.53. Its engineer, applying the straight line method, found 19 per cent. depreciation. It applied 81 per cent. to gross investment and added 10 per cent. for going value and $10,000 for working capital, producing $455,500. FN2 This may be compared with its final figure, $460,000.

'The books of the company show a total gross investment,

FN2 As to 'e': $365,445.13 represents investment cost less depreciation. The gross investment was found to be $500,402.53, indicating a deduction on account of depreciation of $134,957.40, about 27 per cent., as against 19 per cent. found by the commission's engineer.

As to 'f,' supra: It is necessary briefly to explain how this figure, $452,520.53, was arrived at. Case No. 368 was a proceeding initiated by the application of the company for higher rates, April 24, 1915. The commission made a valuation as of January 1, 1915. There were presented two estimates of reproduction cost less depreciation, one by a valuation engineer engaged by the company, ***687** and the other by a valuation engineer engaged by the city, both 'using the same method.' An inventory made by the company's engineer was accepted as correct by the city and by the commission. The method 'was that generally employed by courts and commissions in arriving at the value of public utility properties under this method.' and in both estimates 'five year average unit prices' were applied. The estimate of the company's engineer was $540,000 and of the city's engineer, $392,000. The principal differences as given by the commission are shown in the margin. FN3 The commission disregarded both estimates and arrived at $360,000. It held that the best basis of valuation was the net investment, i. e., the total cost of the property less depreciation. It said:

FN3

		Company Engineer.	City Engineer.
1.	Preliminary costs.	$14,455	$1,000
2.	Water rights.	50,000	Nothing
3.	Cutting pavements over mains.	27,744	233
4.	Pipe lines from gravity springs.	22,072	15,442
5.	Laying cast iron street mains.	19,252	15,212
6.	Reproducing Ada springs.	18,558	13,027
7.	Superintendence and engineering.	20,515	13,621
8.	General contingent cost.	16,415	5,448
		$189,011	$63,983

since its organization, of $407,882, and that there has been charged off for depreciation from year to year the total sum of $83,445, leaving a net investment of

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$324,427. * * * From an examination of the books * * * it appears that the records of the company have been remarkably well kept and preserved. It therefore seems that, when a plant is developed under these conditions, the net investment, which, of course, means the total gross investment less depreciation, is the very best basis of valuation for rate making purposes and that the other methods above referred to should ***688** be used only when it is impossible to arrive at the true investment. Therefore, after making due allowance for capital necessary for the conduct of the business and considering the plant as a going concern, it is the opinion of the commission that the fair value for the purpose of determining reasonable and just rates in this case of the property of the applicant company, used by it in the public service of supplying water to the city of Bluefield and its citizens, is the sum of $360,000, which sum is hereby fixed and determined by the commission to be the fair present value for the said purpose of determining the reasonable and just rates in this case.'

In its report in No. 368, the commission did not indicate the amounts respectively allowed for going value or working capital. If 10 per cent. be added for the former, and $10,000 for the latter (as fixed by the commission in the present case), there is produced $366,870, to be compared with $360,000, found by the commission in its valuation as of January 1, 1915. To this it added $92,520.53, expended since, producing $452,520.53. This may be compared with its final figure, $460,000.

The state Supreme Court of Appeals holds that the valuing of the property of a public utility corporation and prescribing rates are purely legislative acts, not subject to judicial review, except in so far as may be necessary to determine whether such rates are void on constitutional or other grounds, and that findings of fact by the commission based on evidence to support them will not be reviewed by the court. City of Bluefield v. Waterworks, 81 W. Va. 201, 204, 94 S. E. 121; Coal & Coke Co. v. Public Service Commission, 84 W. Va. 662, 678, 100 S. E. 557, 7 A. L. R. 108; Charleston v. Public Service Commission, 86 W. Va. 536, 103 S. E. 673.

In this case (89 W. Va. 736, 738, 110 S. E. 205, 206) it said:
'From the written opinion of the commission we find that it ascertained the value of the petitioner's property for rate making [then quoting the commission] 'after ***689** maturely and carefully considering the various methods presented for the ascertainment of fair value and giving such weight as seems proper to every element involved and all the facts and circumstances disclosed by the record.''

[2] [3] The record clearly shows that the commission, in arriving at its final figure, did not accord proper, if any, weight to the greatly enhanced costs of construction in 1920 over those prevailing about 1915 and before the war, as established by uncontradicted ****678** evidence; and the company's detailed estimated cost of reproduction new, less depreciation, at 1920 prices, appears to have been wholly disregarded. This was erroneous. Missouri ex rel. Southwestern Bell Telephone Co. v. Public Service Commission of Missouri, 262 U. S. 276, 43 Sup. Ct. 544, 67 L. Ed. 981, decided May 21, 1923. Plaintiff in error is entitled under the due process clause of the Fourteenth Amendment to the independent judgment of the court as to both law and facts. Ohio Valley Co. v. Ben Avon Borough, 253 U. S. 287, 289, 40 Sup. Ct. 527, 64 L. Ed. 908, and cases cited.

We quote further from the court's opinion (89 W. Va. 739, 740, 110 S. E. 206):
'In our opinion the commission was justified by the law and by the facts in finding as a basis for rate making the sum of $460,000.00. * * * In our case of Coal & Coke Ry. Co. v. Conley, 67 W. Va. 129, it is said: 'It seems to be generally held that, in the absence of peculiar and extraordinary conditions, such as a more costly plant than the public service of the community requires, or the erection of a plant at an actual, though extravagant, cost, or the purchase of one at an exorbitant or inflated price, the actual amount of money invested is to be taken as the basis, and upon this a return must be allowed equivalent to that which is ordinarily received in the locality in which the business is done, upon capital invested in similar enterprises. In addition to this, consideration must be given to the nature of the investment, a higher rate ***690** being regarded as justified by the risk incident to a hazardous investment.'
'That the original cost considered in connection with the history and growth of the utility and the value of the services rendered constitute the principal elements to be considered in connection with rate making, seems to be supported by nearly all the authorities.'

[4] The question in the case is whether the rates prescribed in the commission's order are confiscatory and therefore beyond legislative power. Rates which are not sufficient to yield a reasonable return on the value of the property used at the time it is being used to render the service are unjust, unreasonable and confiscatory, and their enforcement deprives the public utility company of its property in violation of the Fourteenth Amendment. This is so well settled by numerous decisions of this court that citation of the cases is scarcely necessary:

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'What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience.' Smyth v. Ames (1898) 169 U. S. 467, 547, 18 Sup. Ct. 418, 434 (42 L. Ed. 819).
'There must be a fair return upon the reasonable value of the property at the time it is being used for the public. * * * And we concur with the court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding the rates. If the property, which legally enters into the consideration of the question of rates, has increased in value since it was acquired, the company is entitled to the benefit of such increase.' Willcox v. Consolidated Gas Co. (1909) 212 U. S. 19, 41, 52, 29 Sup. Ct. 192, 200 (53 L. Ed. 382, 15 Ann. Cas. 1034, 48 L. R. A. [N. S.] 1134).
'The ascertainment of that value is not controlled by artificial rules. It is not a matter of formulas, but there must be a reasonable judgment having its basis in a proper consideration of all relevant facts.' Minnesota Rate Cases (1913) 230 U. S. 352, 434, 33 Sup. Ct. 729, 754 (57 L. Ed. 1511, 48 L. R. A. [N. S.] 1151, Ann. Cas. 1916A, 18).
***691** 'And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property.' Smyth v. Ames, 169 U. S., 546, 547, 18 Sup. Ct. 434, 42 L. Ed. 819.
'* * * The making of a just return for the use of the property involves the recognition of its fair value if it be more than its cost. The property is held in private ownership and it is that property, and not the original cost of it, of which the owner may not be deprived without due process of law.'

Minnesota Rate Cases, 230 U. S. 454, 33 Sup. Ct. 762, 57 L. Ed. 1511, 48 L. R. A. (N. S.) 1151, Ann. Cas. 1916A, 18.

In Missouri ex rel. Southwestern Bell Telephone Co., v. Public Service Commission of Missouri, supra, applying the principles of the cases above cited and others, this court said:
'Obviously, the commission undertook to value the property without according any weight to the greatly enhanced costs of material, labor, supplies, etc., over those prevailing in 1913, 1914, and 1916. As matter of common knowledge, these increases were large. Competent witnesses estimated them as 45 to 50 per centum. * * * It is impossible to ascertain what will amount to a fair return upon properties devoted to public service, without giving consideration to the cost of labor, supplies, etc., at the time the investigation is made. An honest and intelligent forecast of probable future values, made upon a view of all the relevant circumstances, is essential. If the highly important element of present costs is wholly disregarded, such a forecast becomes impossible. Estimates for to-morrow cannot ignore prices of to-day.'

[5] ***692** It is clear that the court also failed to give proper consideration to the higher cost of construction in 1920 over that in 1915 and before the war, and failed to give weight to cost of reproduction less depreciation on the basis of 1920 prices, or to the testimony of the company's valuation engineer, based on present and past costs of construction, that the property in his opinion, was worth $900,000. The final figure, $460,000, was arrived ****679** at substantially on the basis of actual cost, less depreciation, plus 10 per cent. for going value and $10,000 for working capital. This resulted in a valuation considerably and materially less than would have been reached by a fair and just consideration of all the facts. The valuation cannot be sustained. Other objections to the valuation need not be considered.

3. Rate of return: The state commission found that the company's net annual income should be approximately $37,000, in order to enable it to earn 8 per cent. for return and depreciation upon the value of its property as fixed by it. Deducting 2 per cent. for depreciation, there remains 6 per cent. on $460,000, amounting to $27,600 for return. This was approved by the state court.

[6] The company contends that the rate of return is too low and confiscatory. What annual rate will constitute just compensation depeds upon many circumstances, and must be determined by the exercise of a fair and enlightened judgment, having regard to all relevant facts. A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding, risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in ***693** highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A

rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.

In 1909, this court, in Willcox v. Consolidated Gas Co., 212 U. S. 19, 48-50, 29 Sup. Ct. 192, 53 L. Ed. 382, 15 Ann. Cas. 1034, 48 L. R. A. (N. S.) 1134, held that the question whether a rate yields such a return as not to be confiscatory depends upon circumstances, locality and risk, and that no proper rate can be established for all cases; and that, under the circumstances of that case, 6 per cent. was a fair return on the value of the property employed in supplying gas to the city of New York, and that a rate yielding that return was not confiscatory. In that case the investment was held to be safe, returns certain and risk reduced almost to a minimum-as nearly a safe and secure investment as could be imagined in regard to any private manufacturing enterprise.

In 1912, in Cedar Rapids Gas Co. v. Cedar Rapids, 223 U. S. 655, 670, 32 Sup. Ct. 389, 56 L. Ed. 594, this court declined to reverse the state court where the value of the plant considerably exceeded its cost, and the estimated return was over 6 per cent.

In 1915, in Des Moines Gas Co. v. Des Moines, 238 U. S. 153, 172, 35 Sup. Ct. 811, 59 L. Ed. 1244, this court declined to reverse the United States District Court in refusing an injunction upon the conclusion reached that a return of 6 per cent. per annum upon the value would not be confiscatory.

In 1919, this court in Lincoln Gas Co. v. Lincoln, 250 U. S. 256, 268, 39 Sup. Ct. 454, 458 (63 L. Ed. 968), declined on the facts of that case to approve a finding that no rate yielding as much as 6 per cent. ***694** on the invested capital could be regarded as confiscatory. Speaking for the court, Mr. Justice Pitney said:
'It is a matter of common knowledge that, owing principally to the World War, the costs of labor and supplies of every kind have greatly advanced since the ordinance was adopted, and largely since this cause was last heard in the court below. And it is equally well known that annual returns upon capital and enterprise the world over have materially increased, so that what would have been a proper rate of return for capital invested in gas plants and similar public utilities a few years ago furnishes no safe criterion for the present or for the future.'

In 1921, in Brush Electric Co. v. Galveston, the United States District Court held 8 per cent. a fair rate of return. FN4

FN4 This case was affirmed by this court June 4, 1923, 262 U. S. 443, 43 Sup. Ct. 606, 67 L. Ed. 1076.

In January, 1923, in City of Minneapolis v. Rand, the Circuit Court of Appeals of the Eighth Circuit (285 Fed. 818, 830) sustained, as against the attack of the city on the ground that it was excessive, 7 1/2 per cent., found by a special master and approved by the District Court as a fair and reasonable return on the capital investment-the value of the property.

[7] Investors take into account the result of past operations, especially in recent years, when determining the terms upon which they will invest in such an undertaking. Low, uncertain, or irregular income makes for low prices for the securities of the utility and higher rates of interest to be demanded by investors. The fact that the company may not insist as a matter of constitutional right that past losses be made up by rates to be applied in the present and future tends to weaken credit, and the fact that the utility is protected against being compelled to serve for confiscatory rates tends to support it. In ***695** this case the record shows that the rate of return has been low through a long period up to the time of the inquiry by the commission here involved. For example, the average rate of return on the total cost of the property from 1895 to 1915, inclusive, was less than 5 per cent.; from 1911 to 1915, inclusive, about 4.4 per cent., without allowance for depreciation. In 1919 the net operating income was approximately $24,700, leaving $15,500, approximately, or 3.4 per cent. on $460,000 fixed by the commission, after deducting 2 per cent. for depreciation. In 1920, the net operating income was approximately $25,465, leaving $16,265 for return, after allowing for depreciation. Under the facts and circumstances indicated by the record, we think that a rate of return of 6 per cent. upon the value of the property is substantially too low to constitute just compensation for the use of the property employed to render the service.

The judgment of the Supreme Court of Appeals of West Virginia is reversed.

Mr. Justice BRANDEIS concurs in the judgment of reversal, for the reasons stated by him in Missouri ex rel. Southwestern Bell Telephone Co. v. Public Service Commission of Missouri, supra.
U.S. 1923
Bluefield Waterworks & Imp. Co. v. Public Service Commission of W. Va.
P.U.R. 1923D 11, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176

P.U.R. 1923D 11, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176
(Cite as: P.U.R. 1923D 11, 43 S.Ct. 675)

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There are only six companies in the Water Utility Industry. That's because almost all of the water systems in the United States are run by local governments, cities, or states. Such entities do not issue equity that trades on any exchanges. All of the water utilities reported on here are investor owned. Each provides water services to residential, commercial, and industrial customers. The combined market capitalization of these equities doesn't account for too much as *American Water Works* is the sole large cap stock.

Since our last report in early January, stocks in this sector have performed very poorly. Indeed, this once high-flying segment now has one of the lowest rankings of the 93 industries followed by *Value Line*.

The water infrastructure in the United States is antiquated. For a period of 20 to 25 years, water companies neglected to reinvest sufficient capital to properly maintain their pipeline networks. As a result, they are all now involved in major projects to replace old leaky pipes.

Regulators determine returns that utilities can earn on their ratebase. Fortunately, the authorities and the water companies have had a constructive relationship. This is in contrast to many state regulators that have difficult dealings with electric utilities.

Theses equities are not cyclical. Instead, they have very predictable income streams. Such an attribute may appeal to accounts looking for certainty. Moreover, for the first time in many years, we think that water utility stocks are worth owning. It should be noted that our previous negative stance on the group had nothing to do with how the companies operated. Our problem was with the Industry's valuation.

Out Of Favor

Up until a year or two ago, shares of water utilities stopped trading like electric and gas utility stocks. Conservative investors would typically own a utility for a high yield and good dividend growth prospects. For some reason, perhaps due to scarcity, the multiple that Wall Street was willing to pay for the earnings of this group soared. While investors are willing to accept less potential profit for better defined returns, the price-earnings ratios of the group became extremely rich, in our opinion. Looking at the figures in the array of the following companies a trend can be seen. From about 2008 to 2015, water equities had price-earnings ratios that were close to the market median. From 2016 up until 2022, this ratio rose to an average about 1.5 times the market P/E. This percentage began to fall in most cases in 2022 and continued to do so last year. With the exception of *American Water Works* and *American States Water*, these companies' stocks are now only commanding a P/E that is marginally higher than the market.

Construction Projects

As we previously mentioned, the Industry is in the midst of a long-term building program that is aimed at modernizing pipelines and wastewater facilities. According to some estimates, the average pipeline in this country is between 60 and 70 years old. Thus, the construction to replace old pipes and valves ought to continue for the next several decades. This is why we monitor the regulatory climate in the states where a utility operates. We see no major red flags in sight, at this particular time. Problems could arise if inflation were to accelerate, however. When the costs of operating and maintaining a water system increase, the customers bills have to be hiked to recover these added expenses. Regulators must approve these hikes. It should be noted that these authorities are appointed by politicians. Elected officials do not like hearing from their constituents how expensive their water bills are, no matter how justified any increase might be. Also, to our knowledge, no politician has yet to be elected to office using the slogan "Let's raise water prices sky high because we want to be fair to utilities and its investors."

INDUSTRY TIMELINESS: 90 (of 93)

Consolidation Results In Synergies

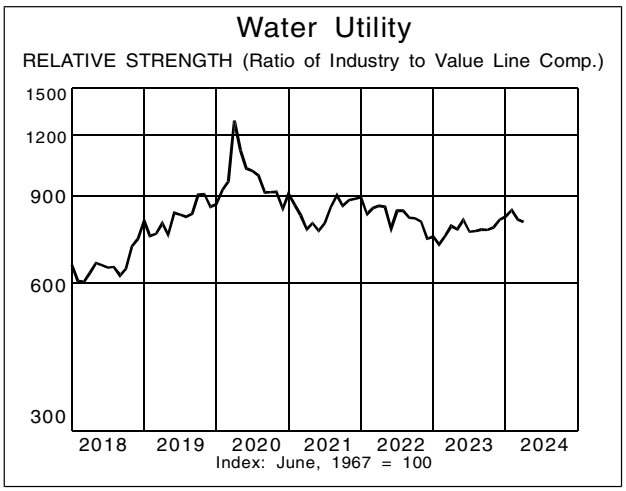
In the U.S., there are literally tens of thousands of separate water districts that are run by government agencies. Many of these small districts are highly inefficient and undercapitalized. *American Water Works* and *Essential Utilities* have been gradually buying up certain of these entities and merging them into their operations. The end result is that they can reduce costs substantially, while improving the service to the service area. This is why regulators mostly do not have a problem with acquisitions in this space. In any case, activity could accelerate here because the smaller districts do not have the funds required to upgrade their assets and to be in compliance with EPA mandates.

Conclusion

None of the six stocks in this Industry are for investors with a short-term horizon. By Timeliness rank, two stocks have a (3) Average, three stocks carry a 4 (Below Average), and one has a 5 (Lowest). However, at their current prices these stocks now have above average capital appreciation potential over the next three to five years. Also, the current yields on the equities are higher than the median in our universe. What's more, dividend growth prospects are strong, which could make them more appealing on a total return basis.

As always, we recommend that subscribers read each individual report before making commitments.

James A. Flood



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U.S. Capital Markets Performance
by Asset Class 1926–2022

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Roger G. Ibbotson

reinvested into the same asset class in the subsequent months of the year. The income return is thus used in the estimation of the equity risk premium because it represents the truly riskless portion of the return.

Arithmetic vs. Geometric Mean

The equity risk premium data presented in this book are arithmetic average risk premiums as opposed to geometric average risk premiums. The arithmetic average equity risk premium can be demonstrated to be most appropriate when discounting future cash flows. For use as the expected equity risk premium in either the CAPM or the building-block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number.

This is because both the CAPM and the building-block approach are additive models, in which the cost of capital is the sum of its parts. The geometric average is more appropriate for reporting past performance because it represents the compound average return.

Appropriate Historical Period

The equity risk premium can be estimated using any historical time period. For the U.S., market data exist at least as far back as the late 1800s. Therefore, it is possible to estimate the equity risk premium using data that covers roughly the past 125 years.

Our equity risk premium covers 1926 to the present. The original data source for the time series comprising the equity risk premium is the Center for Research in Security Prices. CRSP chose to begin its analysis of market returns with 1926 for two main reasons. CRSP determined that 1926 was approximately when quality financial data became available. They also made a conscious effort to include the period of extreme market volatility from the late 1920s and early 1930s; 1926 was chosen because it includes one full business cycle of data before the market crash of 1929.

Implicit in using history to forecast the future is the assumption that investors' expectations for future outcomes conform to past results. This method assumes that the price of taking on risk changes only slowly, if at all, over time. This "future equals the past" assumption is most applicable to a random time-series variable. A time-series variable is random if its value in one period is independent of its value in other periods.

Choosing an Appropriate Historical Period

The estimate of the equity risk premium depends on the length of the data series studied. A proper estimate of the equity risk premium requires a data series long enough to give a reliable average without being unduly influenced by very good and very poor short-term returns. When calculated using a long data series, the historical equity risk premium is relatively stable. Furthermore, because an average of the realized

equity risk premium is quite volatile when calculated using a short history, using a long series makes it less likely that the analyst can justify any number he or she wants. The magnitude of how shorter periods can affect the result will be explored later in this chapter.

Some analysts estimate the expected equity risk premium using a shorter, more recent period on the basis that recent events are more likely to be repeated in the near future; furthermore, they believe that the 1920s, 1930s, and 1940s contain too many unusual events. This view is suspect because all periods contain unusual events. Some of the most unusual events of the last 100 years took place quite recently, including the inflation of the late 1970s and early 1980s, the October 1987 stock market crash, the collapse of the high-yield bond market, the major contraction and consolidation of the thrift industry, the collapse of the Soviet Union, the development of the European Economic Community, the attacks of Sept. 11, 2001, the global financial crisis of 2008–2009, and most recently, the market crash in the first quarter of 2020 that was precipitated by the spread of the COVID-19 virus.

It is even difficult for economists to predict the economic environment of the future. For example, if one were analyzing the stock market in 1987 before the crash, it would be statistically improbable to predict the impending short-term volatility without considering the stock market crash and market volatility of the 1929–1931 period.

Without an appreciation of the 1920s and 1930s, no one would believe that such events could happen. The 97-year period starting with 1926 represents what can happen: It includes high and low returns, volatile and quiet markets, war and peace, inflation and deflation, and prosperity and depression. Restricting attention to a shorter historical period underestimates the amount of change that could occur in a long future period. Finally, because historical event-types (not specific events) tend to repeat themselves, long-run capital market return studies can reveal a great deal about the future. Investors probably expect unusual events to occur from time to time, and their return expectations reflect this.

A Look at the Historical Results

It is interesting to look at the realized returns and realized equity risk premium in the context of the above discussion. Exhibit 10.10 shows the average stock market return and the average (arithmetic mean) realized long-horizon equity risk premium over various historical periods. The exhibit shows that using a longer historical period provides a more stable estimate of the equity risk premium. The reason is that any unique period will not be weighted heavily in an average covering a longer historical period. It better represents the probability of these unique events occurring over a long period of time.

Appendix A-1

Large-Capitalization Stocks: Total Return
From 1926 to 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1926	0.0000	-0.0385	-0.0575	0.0253	0.0179	0.0457	0.0479	0.0248	0.0252	-0.0284	0.0347	0.0196	1926	0.1162
1927	-0.0193	0.0537	0.0087	0.0201	0.0607	-0.0067	0.0670	0.0515	0.0450	-0.0502	0.0721	0.0279	1927	0.3749
1928	-0.0040	-0.0125	0.1101	0.0345	0.0197	-0.0385	0.0141	0.0803	0.0259	0.0168	0.1292	0.0049	1928	0.4361
1929	0.0583	-0.0019	-0.0012	0.0176	-0.0362	0.1140	0.0471	0.1028	-0.0476	-0.1973	-0.1246	0.0282	1929	-0.0842
1930	0.0639	0.0259	0.0812	-0.0080	-0.0096	-0.1625	0.0386	0.0141	-0.1282	-0.0855	-0.0089	-0.0706	1930	-0.2490
1931	0.0502	0.1193	-0.0675	-0.0935	-0.1279	0.1421	-0.0722	0.0182	-0.2973	0.0896	-0.0798	-0.1400	1931	-0.4334
1932	-0.0271	0.0570	-0.1158	-0.1997	-0.2196	-0.0022	0.3815	0.3869	-0.0346	-0.1349	-0.0417	0.0565	1932	-0.0819
1933	0.0087	-0.1772	0.0353	0.4256	0.1683	0.1338	-0.0862	0.1206	-0.1118	-0.0855	0.1127	0.0253	1933	0.5399
1934	0.1069	-0.0322	0.0000	-0.0251	-0.0736	0.0229	-0.1132	0.0611	-0.0033	-0.0286	0.0942	-0.0010	1934	-0.0144
1935	-0.0411	-0.0341	-0.0286	0.0980	0.0409	0.0699	0.0850	0.0280	0.0256	0.0777	0.0474	0.0394	1935	0.4767
1936	0.0670	0.0224	0.0268	-0.0751	0.0545	0.0333	0.0701	0.0151	0.0031	0.0775	0.0134	-0.0029	1936	0.3392
1937	0.0390	0.0191	-0.0077	-0.0809	-0.0024	-0.0504	0.1045	-0.0483	-0.1403	-0.0981	-0.0866	-0.0459	1937	-0.3503
1938	0.0152	0.0674	-0.2487	0.1447	-0.0330	0.2503	0.0744	-0.0226	0.0166	0.0776	-0.0273	0.0401	1938	0.3112
1939	-0.0674	0.0390	-0.1339	-0.0027	0.0733	-0.0612	0.1105	-0.0648	0.1673	-0.0123	-0.0398	0.0270	1939	-0.0041
1940	-0.0336	0.0133	0.0124	-0.0024	-0.2289	0.0809	0.0341	0.0350	0.0123	0.0422	-0.0316	0.0009	1940	-0.0978
1941	-0.0463	-0.0060	0.0071	-0.0612	0.0183	0.0578	0.0579	0.0010	-0.0068	-0.0657	-0.0284	-0.0407	1941	-0.1159
1942	0.0161	-0.0159	-0.0652	-0.0400	0.0796	0.0221	0.0337	0.0164	0.0290	0.0678	-0.0021	0.0549	1942	0.2034
1943	0.0737	0.0583	0.0545	0.0035	0.0552	0.0223	-0.0526	0.0171	0.0263	-0.0108	-0.0654	0.0617	1943	0.2590
1944	0.0171	0.0042	0.0195	-0.0100	0.0505	0.0543	-0.0193	0.0157	-0.0008	0.0023	0.0133	0.0374	1944	0.1975
1945	0.0158	0.0683	-0.0441	0.0902	0.0195	-0.0007	-0.0180	0.0641	0.0438	0.0322	0.0396	0.0116	1945	0.3644
1946	0.0714	-0.0641	0.0480	0.0393	0.0288	-0.0370	-0.0239	-0.0674	-0.0997	-0.0060	-0.0027	0.0457	1946	-0.0807
1947	0.0255	-0.0077	-0.0149	-0.0363	0.0014	0.0554	0.0381	-0.0203	-0.0111	0.0238	-0.0175	0.0233	1947	0.0571
1948	-0.0379	-0.0388	0.0793	0.0292	0.0879	0.0054	-0.0508	0.0158	-0.0276	0.0710	-0.0961	0.0346	1948	0.0550
1949	0.0039	-0.0296	0.0328	-0.0179	-0.0258	0.0014	0.0650	0.0219	0.0263	0.0340	0.0175	0.0486	1949	0.1879
1950	0.0197	0.0199	0.0070	0.0486	0.0509	-0.0548	0.0119	0.0443	0.0592	0.0093	0.0169	0.0513	1950	0.3171
1951	0.0637	0.0157	-0.0156	0.0509	-0.0299	-0.0228	0.0711	0.0478	0.0013	-0.0103	0.0096	0.0424	1951	0.2402
1952	0.0181	-0.0282	0.0503	-0.0402	0.0343	0.0490	0.0196	-0.0071	-0.0176	0.0020	0.0571	0.0382	1952	0.1837
1953	-0.0049	-0.0106	-0.0212	-0.0237	0.0077	-0.0134	0.0273	-0.0501	0.0034	0.0540	0.0204	0.0053	1953	-0.0099
1954	0.0536	0.0111	0.0325	0.0516	0.0418	0.0031	0.0589	-0.0275	0.0851	-0.0167	0.0909	0.0534	1954	0.5262
1955	0.0197	0.0098	-0.0030	0.0396	0.0055	0.0841	0.0622	-0.0025	0.0130	-0.0284	0.0827	0.0015	1955	0.3156
1956	-0.0347	0.0413	0.0710	-0.0004	-0.0593	0.0409	0.0530	-0.0328	-0.0440	0.0066	-0.0050	0.0370	1956	0.0656
1957	-0.0401	-0.0264	0.0215	0.0388	0.0437	0.0004	0.0131	-0.0505	-0.0602	-0.0302	0.0231	-0.0395	1957	-0.1078

Appendix A-1

Large-Capitalization Stocks: Total Return
From 1926 to 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1958	0.0445	-0.0141	0.0328	0.0337	0.0212	0.0279	0.0449	0.0176	0.0501	0.0270	0.0284	0.0535	1958	0.4336
1959	0.0053	0.0049	0.0020	0.0402	0.0240	-0.0022	0.0363	-0.0102	-0.0443	0.0128	0.0186	0.0292	1959	0.1196
1960	-0.0700	0.0147	-0.0123	-0.0161	0.0326	0.0211	-0.0234	0.0317	-0.0590	-0.0007	0.0465	0.0479	1960	0.0047
1961	0.0645	0.0319	0.0270	0.0051	0.0239	-0.0275	0.0342	0.0243	-0.0184	0.0298	0.0447	0.0046	1961	0.2689
1962	-0.0366	0.0209	-0.0046	-0.0607	-0.0811	-0.0803	0.0652	0.0208	-0.0465	0.0064	0.1086	0.0153	1962	-0.0873
1963	0.0506	-0.0239	0.0370	0.0500	0.0193	-0.0188	-0.0022	0.0535	-0.0097	0.0339	-0.0046	0.0262	1963	0.2280
1964	0.0283	0.0147	0.0165	0.0075	0.0162	0.0178	0.0195	-0.0118	0.0301	0.0096	0.0005	0.0056	1964	0.1648
1965	0.0345	0.0031	-0.0133	0.0356	-0.0030	-0.0473	0.0147	0.0272	0.0334	0.0289	-0.0031	0.0106	1965	0.1245
1966	0.0062	-0.0131	-0.0205	0.0220	-0.0492	-0.0146	-0.0120	-0.0725	-0.0053	0.0494	0.0095	0.0002	1966	-0.1006
1967	0.0798	0.0072	0.0409	0.0437	-0.0477	0.0190	0.0468	-0.0070	0.0342	-0.0276	0.0065	0.0278	1967	0.2398
1968	-0.0425	-0.0261	0.0110	0.0834	0.0161	0.0105	-0.0172	0.0164	0.0400	0.0087	0.0531	-0.0402	1968	0.1106
1969	-0.0068	-0.0426	0.0359	0.0229	0.0026	-0.0542	-0.0587	0.0454	-0.0236	0.0459	-0.0297	-0.0177	1969	-0.0850
1970	-0.0743	0.0558	0.0044	-0.0875	-0.0578	-0.0466	0.0769	0.0478	0.0362	-0.0083	0.0506	0.0597	1970	0.0386
1971	0.0432	0.0117	0.0394	0.0389	-0.0391	0.0033	-0.0387	0.0388	-0.0044	-0.0392	0.0002	0.0888	1971	0.1430
1972	0.0206	0.0277	0.0083	0.0068	0.0197	-0.0194	0.0048	0.0369	-0.0025	0.0118	0.0481	0.0142	1972	0.1900
1973	-0.0149	-0.0352	0.0008	-0.0383	-0.0163	-0.0040	0.0407	-0.0341	0.0427	0.0017	-0.1109	0.0198	1973	-0.1469
1974	-0.0072	-0.0007	-0.0205	-0.0359	-0.0302	-0.0113	-0.0742	-0.0864	-0.1152	0.1681	-0.0488	-0.0156	1974	-0.2647
1975	0.1272	0.0638	0.0254	0.0510	0.0477	0.0477	-0.0644	-0.0176	-0.0312	0.0653	0.0282	-0.0081	1975	0.3723
1976	0.1217	-0.0084	0.0337	-0.0078	-0.0111	0.0443	-0.0048	-0.0018	0.0258	-0.0186	-0.0041	0.0561	1976	0.2393
1977	-0.0473	-0.0182	-0.0105	0.0042	-0.0196	0.0494	-0.0124	-0.0172	0.0016	-0.0390	0.0316	0.0075	1977	-0.0716
1978	-0.0574	-0.0203	0.0294	0.0902	0.0092	-0.0138	0.0583	0.0301	-0.0032	-0.0872	0.0215	0.0196	1978	0.0657
1979	0.0443	-0.0321	0.0596	0.0063	-0.0217	0.0435	0.0134	0.0577	0.0043	-0.0640	0.0475	0.0214	1979	0.1861
1980	0.0622	-0.0001	-0.0972	0.0462	0.0515	0.0316	0.0696	0.0101	0.0294	0.0202	0.1065	-0.0302	1980	0.3250
1981	-0.0418	0.0174	0.0400	-0.0193	0.0026	-0.0063	0.0021	-0.0577	-0.0493	0.0540	0.0413	-0.0256	1981	-0.0492
1982	-0.0131	-0.0559	-0.0052	0.0452	-0.0341	-0.0150	-0.0178	0.1214	0.0125	0.1151	0.0404	0.0193	1982	0.2155
1983	0.0372	0.0229	0.0369	0.0788	-0.0087	0.0389	-0.0295	0.0150	0.0138	-0.0116	0.0211	-0.0052	1983	0.2256
1984	-0.0056	-0.0352	0.0173	0.0095	-0.0554	0.0217	-0.0124	0.1104	0.0002	0.0039	-0.0112	0.0263	1984	0.0627
1985	0.0779	0.0122	0.0007	-0.0009	0.0578	0.0157	-0.0015	-0.0085	-0.0313	0.0462	0.0686	0.0484	1985	0.3173
1986	0.0056	0.0747	0.0558	-0.0113	0.0532	0.0169	-0.0559	0.0742	-0.0827	0.0577	0.0243	-0.0255	1986	0.1867
1987	0.1347	0.0395	0.0289	-0.0089	0.0087	0.0505	0.0507	0.0373	-0.0219	-0.2154	-0.0824	0.0761	1987	0.0525
1988	0.0421	0.0466	-0.0309	0.0111	0.0086	0.0459	-0.0038	-0.0339	0.0426	0.0278	-0.0143	0.0174	1988	0.1661
1989	0.0732	-0.0249	0.0233	0.0519	0.0405	-0.0057	0.0903	0.0195	-0.0041	-0.0232	0.0204	0.0240	1989	0.3169

Appendix A-1

Large-Capitalization Stocks: Total Return
From 1926 to 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1990	-0.0671	0.0129	0.0265	-0.0249	0.0975	-0.0067	-0.0032	-0.0904	-0.0487	-0.0043	0.0646	0.0279	1990	-0.0310
1991	0.0436	0.0715	0.0242	0.0024	0.0431	-0.0458	0.0466	0.0237	-0.0167	0.0134	-0.0403	0.1144	1991	0.3047
1992	-0.0186	0.0130	-0.0194	0.0294	0.0049	-0.0149	0.0409	-0.0205	0.0118	0.0035	0.0341	0.0123	1992	0.0762
1993	0.0084	0.0136	0.0211	-0.0242	0.0268	0.0029	-0.0040	0.0379	-0.0077	0.0207	-0.0095	0.0121	1993	0.1008
1994	0.0340	-0.0271	-0.0436	0.0128	0.0164	-0.0245	0.0328	0.0410	-0.0245	0.0225	-0.0364	0.0148	1994	0.0132
1995	0.0259	0.0390	0.0295	0.0294	0.0400	0.0232	0.0332	0.0025	0.0422	-0.0036	0.0439	0.0193	1995	0.3758
1996	0.0340	0.0093	0.0096	0.0147	0.0258	0.0038	-0.0442	0.0211	0.0563	0.0276	0.0756	-0.0198	1996	0.2296
1997	0.0625	0.0078	-0.0411	0.0597	0.0609	0.0448	0.0796	-0.0560	0.0548	-0.0334	0.0463	0.0172	1997	0.3336
1998	0.0111	0.0721	0.0512	0.0101	-0.0172	0.0406	-0.0106	-0.1446	0.0641	0.0813	0.0606	0.0576	1998	0.2858
1999	0.0418	-0.0311	0.0400	0.0387	-0.0236	0.0555	-0.0312	-0.0049	-0.0274	0.0633	0.0203	0.0589	1999	0.2104
2000	-0.0502	-0.0189	0.0978	-0.0301	-0.0205	0.0247	-0.0156	0.0621	-0.0528	-0.0042	-0.0788	0.0049	2000	-0.0910
2001	0.0355	-0.0912	-0.0634	0.0777	0.0067	-0.0243	-0.0098	-0.0626	-0.0808	0.0191	0.0767	0.0088	2001	-0.1189
2002	-0.0146	-0.0193	0.0376	-0.0606	-0.0074	-0.0712	-0.0780	0.0066	-0.1087	0.0880	0.0589	-0.0587	2002	-0.2210
2003	-0.0262	-0.0150	0.0097	0.0824	0.0527	0.0128	0.0176	0.0195	-0.0106	0.0566	0.0088	0.0524	2003	0.2868
2004	0.0184	0.0139	-0.0151	-0.0157	0.0137	0.0194	-0.0331	0.0040	0.0108	0.0153	0.0405	0.0340	2004	0.1088
2005	-0.0244	0.0210	-0.0177	-0.0190	0.0318	0.0014	0.0372	-0.0091	0.0081	-0.0167	0.0378	0.0003	2005	0.0491
2006	0.0265	0.0027	0.0124	0.0134	-0.0288	0.0014	0.0062	0.0238	0.0258	0.0326	0.0190	0.0140	2006	0.1579
2007	0.0151	-0.0196	0.0112	0.0443	0.0349	-0.0166	-0.0310	0.0150	0.0374	0.0159	-0.0418	-0.0069	2007	0.0549
2008	-0.0600	-0.0325	-0.0043	0.0487	0.0130	-0.0843	-0.0084	0.0145	-0.0891	-0.1679	-0.0718	0.0106	2008	-0.3700
2009	-0.0843	-0.1065	0.0876	0.0957	0.0559	0.0020	0.0756	0.0361	0.0373	-0.0186	0.0600	0.0193	2009	0.2646
2010	-0.0360	0.0310	0.0603	0.0158	-0.0799	-0.0523	0.0701	-0.0451	0.0892	0.0380	0.0001	0.0668	2010	0.1506
2011	0.0237	0.0343	0.0004	0.0296	-0.0113	-0.0167	-0.0203	-0.0543	-0.0703	0.1093	-0.0022	0.0102	2011	0.0211
2012	0.0448	0.0432	0.0329	-0.0063	-0.0601	0.0412	0.0139	0.0225	0.0258	-0.0185	0.0058	0.0091	2012	0.1600
2013	0.0518	0.0136	0.0375	0.0193	0.0234	-0.0134	0.0509	-0.0290	0.0314	0.0460	0.0305	0.0253	2013	0.3239
2014	-0.0346	0.0457	0.0084	0.0074	0.0235	0.0207	-0.0138	0.0400	-0.0140	0.0244	0.0269	-0.0025	2014	0.1369
2015	-0.0300	0.0575	-0.0158	0.0096	0.0129	-0.0194	0.0210	-0.0603	-0.0247	0.0844	0.0030	-0.0158	2015	0.0138
2016	-0.0496	-0.0013	0.0678	0.0039	0.0180	0.0026	0.0369	0.0014	0.0002	-0.0182	0.0370	0.0198	2016	0.1196
2017	0.0190	0.0397	0.0012	0.0103	0.0141	0.0062	0.0206	0.0031	0.0206	0.0233	0.0307	0.0111	2017	0.2183
2018	0.0573	-0.0369	-0.0254	0.0038	0.0241	0.0062	0.0372	0.0326	0.0057	-0.0684	0.0204	-0.0903	2018	-0.0438
2019	0.0801	0.0321	0.0194	0.0405	-0.0635	0.0705	0.0144	-0.0158	0.0187	0.0217	0.0363	0.0302	2019	0.3149
2020	-0.0004	-0.0823	-0.1235	0.1282	0.0476	0.0199	0.0564	0.0719	-0.0380	-0.0266	0.1095	0.0384	2020	0.1840
2021	-0.0101	0.0276	0.0438	0.0534	0.0070	0.0233	0.0238	0.0304	-0.0465	0.0701	-0.0069	0.0448	2021	0.2871
2022	-0.0517	-0.0299	0.0371	-0.0872	0.0018	-0.0825	0.0922	-0.0408	-0.0921	0.0810	0.0559	-0.0576	2022	-0.1811

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Long-term Government Bonds: Income Returns
From 1926 to 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1926	0.0031	0.0028	0.0032	0.0030	0.0028	0.0033	0.0031	0.0031	0.0030	0.0030	0.0031	0.0030	1926	0.0373
1927	0.0030	0.0027	0.0029	0.0027	0.0028	0.0027	0.0027	0.0029	0.0027	0.0028	0.0027	0.0027	1927	0.0341
1928	0.0027	0.0025	0.0027	0.0026	0.0027	0.0027	0.0027	0.0029	0.0027	0.0030	0.0027	0.0029	1928	0.0322
1929	0.0029	0.0027	0.0028	0.0034	0.0030	0.0029	0.0032	0.0030	0.0032	0.0031	0.0026	0.0031	1929	0.0347
1930	0.0029	0.0026	0.0029	0.0027	0.0027	0.0029	0.0028	0.0026	0.0029	0.0027	0.0026	0.0028	1930	0.0332
1931	0.0028	0.0026	0.0029	0.0027	0.0026	0.0028	0.0027	0.0027	0.0027	0.0029	0.0031	0.0032	1931	0.0333
1932	0.0032	0.0032	0.0031	0.0030	0.0028	0.0028	0.0028	0.0028	0.0026	0.0027	0.0026	0.0027	1932	0.0369
1933	0.0027	0.0023	0.0027	0.0025	0.0028	0.0025	0.0026	0.0026	0.0025	0.0026	0.0025	0.0028	1933	0.0312
1934	0.0029	0.0024	0.0027	0.0025	0.0025	0.0024	0.0024	0.0024	0.0023	0.0027	0.0025	0.0025	1934	0.0318
1935	0.0025	0.0021	0.0022	0.0023	0.0023	0.0022	0.0024	0.0023	0.0023	0.0023	0.0024	0.0024	1935	0.0281
1936	0.0024	0.0023	0.0024	0.0022	0.0022	0.0024	0.0023	0.0023	0.0021	0.0023	0.0022	0.0022	1936	0.0277
1937	0.0021	0.0020	0.0022	0.0023	0.0022	0.0025	0.0024	0.0023	0.0023	0.0023	0.0024	0.0023	1937	0.0266
1938	0.0023	0.0021	0.0023	0.0022	0.0022	0.0021	0.0021	0.0022	0.0021	0.0022	0.0021	0.0022	1938	0.0264
1939	0.0021	0.0019	0.0021	0.0019	0.0020	0.0018	0.0019	0.0018	0.0019	0.0023	0.0020	0.0019	1939	0.0240
1940	0.0020	0.0018	0.0019	0.0018	0.0019	0.0019	0.0020	0.0019	0.0018	0.0018	0.0018	0.0017	1940	0.0223
1941	0.0016	0.0016	0.0018	0.0017	0.0017	0.0016	0.0016	0.0016	0.0016	0.0016	0.0014	0.0016	1941	0.0194
1942	0.0021	0.0019	0.0021	0.0020	0.0019	0.0021	0.0021	0.0021	0.0020	0.0021	0.0020	0.0021	1942	0.0246
1943	0.0020	0.0019	0.0021	0.0020	0.0019	0.0021	0.0021	0.0021	0.0020	0.0020	0.0021	0.0021	1943	0.0244
1944	0.0021	0.0020	0.0021	0.0020	0.0022	0.0020	0.0021	0.0021	0.0020	0.0021	0.0020	0.0020	1944	0.0246
1945	0.0021	0.0018	0.0020	0.0019	0.0019	0.0019	0.0018	0.0019	0.0018	0.0019	0.0018	0.0018	1945	0.0234
1946	0.0017	0.0015	0.0016	0.0017	0.0018	0.0016	0.0019	0.0017	0.0018	0.0019	0.0018	0.0019	1946	0.0204
1947	0.0018	0.0016	0.0018	0.0017	0.0017	0.0019	0.0018	0.0017	0.0018	0.0018	0.0017	0.0021	1947	0.0213
1948	0.0020	0.0019	0.0022	0.0020	0.0018	0.0021	0.0019	0.0021	0.0020	0.0019	0.0021	0.0020	1948	0.0240
1949	0.0020	0.0018	0.0019	0.0018	0.0020	0.0019	0.0017	0.0019	0.0017	0.0018	0.0017	0.0017	1949	0.0225
1950	0.0018	0.0016	0.0018	0.0016	0.0019	0.0017	0.0018	0.0018	0.0017	0.0019	0.0018	0.0018	1950	0.0212
1951	0.0020	0.0017	0.0019	0.0020	0.0021	0.0020	0.0023	0.0021	0.0019	0.0023	0.0021	0.0022	1951	0.0238
1952	0.0023	0.0021	0.0023	0.0022	0.0020	0.0022	0.0022	0.0021	0.0023	0.0023	0.0021	0.0024	1952	0.0266
1953	0.0023	0.0021	0.0025	0.0024	0.0024	0.0027	0.0025	0.0025	0.0025	0.0023	0.0024	0.0024	1953	0.0284
1954	0.0023	0.0022	0.0025	0.0022	0.0020	0.0025	0.0022	0.0023	0.0022	0.0021	0.0023	0.0023	1954	0.0279
1955	0.0022	0.0022	0.0024	0.0022	0.0025	0.0023	0.0023	0.0027	0.0024	0.0025	0.0024	0.0024	1955	0.0275
1956	0.0025	0.0023	0.0023	0.0026	0.0026	0.0023	0.0026	0.0026	0.0025	0.0029	0.0027	0.0028	1956	0.0299
1957	0.0029	0.0025	0.0026	0.0029	0.0029	0.0025	0.0033	0.0030	0.0031	0.0031	0.0029	0.0029	1957	0.0344

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Long-term Government Bonds: Income Returns
From 1926 to 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1958	0.0027	0.0025	0.0027	0.0026	0.0024	0.0027	0.0027	0.0027	0.0032	0.0032	0.0028	0.0033	1958	0.0327
1959	0.0031	0.0031	0.0035	0.0033	0.0033	0.0036	0.0035	0.0035	0.0034	0.0035	0.0035	0.0036	1959	0.0401
1960	0.0035	0.0037	0.0036	0.0032	0.0037	0.0034	0.0032	0.0034	0.0032	0.0033	0.0032	0.0033	1960	0.0426
1961	0.0033	0.0030	0.0031	0.0031	0.0034	0.0032	0.0033	0.0033	0.0032	0.0034	0.0032	0.0031	1961	0.0383
1962	0.0037	0.0032	0.0033	0.0033	0.0032	0.0030	0.0034	0.0034	0.0030	0.0035	0.0031	0.0032	1962	0.0400
1963	0.0032	0.0029	0.0031	0.0034	0.0033	0.0030	0.0036	0.0033	0.0034	0.0034	0.0032	0.0036	1963	0.0389
1964	0.0035	0.0032	0.0037	0.0035	0.0032	0.0038	0.0035	0.0035	0.0034	0.0034	0.0035	0.0035	1964	0.0415
1965	0.0033	0.0032	0.0038	0.0033	0.0033	0.0038	0.0034	0.0037	0.0035	0.0034	0.0037	0.0037	1965	0.0419
1966	0.0038	0.0034	0.0040	0.0036	0.0041	0.0039	0.0038	0.0043	0.0041	0.0040	0.0038	0.0039	1966	0.0449
1967	0.0040	0.0034	0.0039	0.0035	0.0043	0.0039	0.0043	0.0042	0.0040	0.0045	0.0045	0.0044	1967	0.0459
1968	0.0050	0.0042	0.0043	0.0049	0.0046	0.0042	0.0048	0.0042	0.0044	0.0045	0.0043	0.0049	1968	0.0550
1969	0.0050	0.0046	0.0047	0.0055	0.0047	0.0055	0.0052	0.0048	0.0055	0.0057	0.0049	0.0060	1969	0.0595
1970	0.0056	0.0052	0.0056	0.0054	0.0055	0.0064	0.0059	0.0057	0.0056	0.0055	0.0058	0.0053	1970	0.0674
1971	0.0051	0.0046	0.0056	0.0048	0.0047	0.0056	0.0052	0.0055	0.0050	0.0047	0.0051	0.0050	1971	0.0632
1972	0.0050	0.0047	0.0049	0.0048	0.0055	0.0049	0.0051	0.0049	0.0047	0.0052	0.0048	0.0045	1972	0.0587
1973	0.0054	0.0051	0.0056	0.0057	0.0058	0.0055	0.0061	0.0062	0.0055	0.0063	0.0056	0.0060	1973	0.0651
1974	0.0061	0.0055	0.0059	0.0068	0.0068	0.0061	0.0072	0.0065	0.0071	0.0070	0.0062	0.0067	1974	0.0727
1975	0.0068	0.0060	0.0066	0.0067	0.0067	0.0070	0.0068	0.0065	0.0073	0.0072	0.0061	0.0075	1975	0.0799
1976	0.0065	0.0061	0.0071	0.0064	0.0059	0.0073	0.0065	0.0069	0.0064	0.0061	0.0066	0.0063	1976	0.0789
1977	0.0059	0.0057	0.0065	0.0061	0.0067	0.0062	0.0059	0.0067	0.0061	0.0063	0.0063	0.0062	1977	0.0714
1978	0.0069	0.0060	0.0069	0.0063	0.0075	0.0069	0.0073	0.0070	0.0065	0.0073	0.0071	0.0068	1978	0.0790
1979	0.0079	0.0065	0.0074	0.0076	0.0077	0.0071	0.0076	0.0073	0.0068	0.0082	0.0083	0.0083	1979	0.0886
1980	0.0083	0.0084	0.0099	0.0100	0.0087	0.0086	0.0084	0.0081	0.0097	0.0097	0.0091	0.0108	1980	0.0997
1981	0.0094	0.0088	0.0111	0.0101	0.0104	0.0109	0.0109	0.0110	0.0114	0.0117	0.0113	0.0100	1981	0.1155
1982	0.0108	0.0103	0.0124	0.0112	0.0101	0.0120	0.0114	0.0112	0.0100	0.0091	0.0095	0.0093	1982	0.1350
1983	0.0087	0.0081	0.0089	0.0085	0.0091	0.0090	0.0088	0.0103	0.0096	0.0095	0.0094	0.0094	1983	0.1038
1984	0.0103	0.0092	0.0098	0.0104	0.0103	0.0106	0.0116	0.0106	0.0094	0.0108	0.0091	0.0098	1984	0.1174
1985	0.0096	0.0082	0.0094	0.0102	0.0097	0.0080	0.0094	0.0085	0.0088	0.0089	0.0081	0.0086	1985	0.1125
1986	0.0079	0.0073	0.0071	0.0063	0.0062	0.0070	0.0066	0.0063	0.0065	0.0069	0.0059	0.0070	1986	0.0898
1987	0.0064	0.0059	0.0066	0.0065	0.0066	0.0075	0.0073	0.0075	0.0075	0.0079	0.0075	0.0078	1987	0.0792
1988	0.0072	0.0071	0.0072	0.0070	0.0078	0.0076	0.0071	0.0083	0.0076	0.0076	0.0070	0.0075	1988	0.0897
1989	0.0080	0.0069	0.0079	0.0070	0.0080	0.0070	0.0068	0.0066	0.0065	0.0072	0.0064	0.0064	1989	0.0881

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Long-term Government Bonds: Income Returns
From 1926 to 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Jan–Dec*
1990	0.0073	0.0066	0.0071	0.0075	0.0075	0.0068	0.0074	0.0071	0.0069	0.0081	0.0071	0.0072	1990	0.0819
1991	0.0071	0.0064	0.0064	0.0076	0.0068	0.0063	0.0076	0.0068	0.0068	0.0065	0.0060	0.0068	1991	0.0822
1992	0.0061	0.0059	0.0067	0.0065	0.0061	0.0067	0.0063	0.0060	0.0058	0.0057	0.0061	0.0063	1992	0.0726
1993	0.0059	0.0055	0.0063	0.0057	0.0052	0.0062	0.0054	0.0056	0.0050	0.0049	0.0053	0.0055	1993	0.0717
1994	0.0055	0.0049	0.0058	0.0057	0.0063	0.0061	0.0060	0.0066	0.0061	0.0066	0.0064	0.0066	1994	0.0659
1995	0.0070	0.0059	0.0064	0.0058	0.0065	0.0054	0.0056	0.0057	0.0052	0.0057	0.0051	0.0049	1995	0.0760
1996	0.0054	0.0048	0.0052	0.0059	0.0058	0.0054	0.0062	0.0057	0.0060	0.0058	0.0052	0.0056	1996	0.0618
1997	0.0056	0.0051	0.0059	0.0059	0.0058	0.0059	0.0058	0.0049	0.0058	0.0054	0.0047	0.0054	1997	0.0664
1998	0.0048	0.0044	0.0052	0.0049	0.0048	0.0052	0.0049	0.0048	0.0044	0.0042	0.0045	0.0045	1998	0.0583
1999	0.0042	0.0040	0.0053	0.0048	0.0045	0.0055	0.0051	0.0054	0.0052	0.0050	0.0056	0.0055	1999	0.0557
2000	0.0057	0.0051	0.0054	0.0047	0.0056	0.0052	0.0052	0.0050	0.0046	0.0053	0.0048	0.0045	2000	0.0650
2001	0.0049	0.0042	0.0045	0.0047	0.0050	0.0047	0.0052	0.0046	0.0041	0.0048	0.0041	0.0046	2001	0.0553
2002	0.0048	0.0043	0.0043	0.0054	0.0049	0.0044	0.0051	0.0044	0.0042	0.0040	0.0040	0.0045	2002	0.0559
2003	0.0041	0.0038	0.0040	0.0040	0.0039	0.0036	0.0038	0.0042	0.0046	0.0041	0.0039	0.0047	2003	0.0480
2004	0.0042	0.0038	0.0043	0.0039	0.0040	0.0048	0.0043	0.0045	0.0040	0.0038	0.0041	0.0043	2004	0.0502
2005	0.0041	0.0035	0.0041	0.0039	0.0040	0.0036	0.0034	0.0040	0.0035	0.0039	0.0039	0.0039	2005	0.0469
2006	0.0040	0.0036	0.0039	0.0039	0.0048	0.0044	0.0045	0.0043	0.0039	0.0042	0.0039	0.0036	2006	0.0468
2007	0.0043	0.0038	0.0039	0.0042	0.0041	0.0040	0.0046	0.0042	0.0037	0.0043	0.0039	0.0037	2007	0.0486
2008	0.0040	0.0034	0.0037	0.0035	0.0037	0.0040	0.0039	0.0036	0.0039	0.0037	0.0036	0.0033	2008	0.0445
2009	0.0024	0.0030	0.0035	0.0029	0.0033	0.0038	0.0036	0.0036	0.0034	0.0033	0.0035	0.0034	2009	0.0347
2010	0.0036	0.0033	0.0040	0.0038	0.0034	0.0037	0.0031	0.0032	0.0026	0.0027	0.0032	0.0032	2010	0.0425
2011	0.0035	0.0032	0.0036	0.0034	0.0036	0.0032	0.0032	0.0034	0.0026	0.0022	0.0024	0.0022	2011	0.0382
2012	0.0022	0.0020	0.0022	0.0025	0.0023	0.0018	0.0020	0.0018	0.0017	0.0021	0.0019	0.0019	2012	0.0247
2013	0.0022	0.0022	0.0022	0.0026	0.0023	0.0024	0.0030	0.0028	0.0029	0.0029	0.0027	0.0031	2013	0.0290
2014	0.0032	0.0026	0.0029	0.0028	0.0028	0.0025	0.0027	0.0026	0.0023	0.0025	0.0023	0.0022	2014	0.0341
2015	0.0020	0.0015	0.0021	0.0019	0.0020	0.0023	0.0024	0.0022	0.0021	0.0021	0.0022	0.0022	2015	0.0247
2016	0.0021	0.0020	0.0018	0.0017	0.0020	0.0018	0.0014	0.0016	0.0015	0.0016	0.0018	0.0022	2016	0.0230
2017	0.0024	0.0021	0.0023	0.0021	0.0024	0.0021	0.0022	0.0022	0.0019	0.0022	0.0021	0.0020	2017	0.0267
2018	0.0024	0.0022	0.0024	0.0025	0.0025	0.0023	0.0025	0.0025	0.0022	0.0030	0.0028	0.0027	2018	0.0282
2019	0.0025	0.0022	0.0023	0.0023	0.0023	0.0018	0.0021	0.0019	0.0015	0.0016	0.0016	0.0018	2019	0.0255
2020	0.0020	0.0015	0.0013	0.0009	0.0009	0.0009	0.0010	0.0008	0.0010	0.0009	0.0011	0.0011	2020	0.0153
2021	0.0011	0.0012	0.0018	0.0019	0.0018	0.0017	0.0016	0.0015	0.0014	0.0015	0.0017	0.0015	2021	0.0173
2022	0.0017	0.0017	0.0020	0.0021	0.0028	0.0028	0.0027	0.0029	0.0029	0.0035	0.0036	0.0033	2022	0.0261

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ORIGINAL ARTICLE

New approach to estimating the cost of common equity capital for public utilities

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Abstract The regulatory process for setting public utilities' allowed rate of return on common equity has generally used the Gordon DCF, CAPM and Risk Premium specifications to estimate the cost of common equity. Despite the widely known problems with these models, there has been little movement to adopt more recently developed asset pricing models to provide additional evidence for estimating the cost of capital. This paper presents, validates empirically and applies a general yet simple consumption-based asset pricing specification to model the risk-return relationship for stocks and estimate the cost of common equity for public utilities. The model is not necessarily superior to other models in its practical results, yet these results do indicate that it should be used to provide additional estimates of the cost of common equity. Additionally, the model raises doubts as to whether assets such as utility stocks are a consumption (business cycle) hedge.

Keywords Public utilities · Cost of capital · GARCH · Consumption asset pricing model

JEL Classification G12 · L94 · L95

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1 Introduction

Following electricity deregulation with the National Energy Policy Act of 1992, the estimation of the cost of common equity capital remains a critical component of the utility rate-of-return regulatory process. Since the cost of common equity is not observable in capital markets, it must be inferred from asset pricing models. The models that are commonly applied in regulatory proceedings are the Gordon (1974) Discounted Cash Flow (DCF), the Capital Asset Pricing (CAPM) and Risk Premium Models. There are other tools used to estimate the cost of common equity such as comparable earnings or earnings-to-price ratios, but they are not asset pricing models. The empirical literature on the CAPM is vast {Fama and French (2004)} and the CAPM is used by a number of US regulatory jurisdictions. The DCF model has not been empirically tested to the same extent as the CAPM, yet it is considered by many US regulatory jurisdictions.

The purpose of this paper is to present, test empirically and apply a recently developed general consumption-based asset pricing model that estimates the risk-return relationship directly from asset pricing data and, when estimated with recently developed time series methods, produces a prediction of the equity risk premium that is driven by its predicted volatility. The predicted risk premium is then added to a risk-free rate of return to provide an estimate of the cost of common equity. We predict two forms of the equity risk premium with the model, the risk premium net of the risk-free rate and the equity-to-debt risk premium (equity risk premium net of the relevant bond yield for the company's stock). Either can be applied to predict the common equity cost of capital for a public utility. Although the model is tested and applied to public utilities for rate of return regulation, it can be used to estimate the cost of capital for any stock. Section 2 reviews the asset pricing models typically used in public utility rate cases and the generalized consumption asset pricing model we propose to estimate the cost of common equity. Section 3 discusses the data and the empirical testing of the consumption asset pricing model. Section 4 reviews the application of the model and compares it with the DCF and CAPM results. Section 5 is the conclusion.

2 DCF, CAPM and consumption asset pricing model

2.1 DCF and CAPM approaches

The standard DCF model frequently used in estimative the cost rate of common equity in regulatory proceedings is defined by the following equation:

$$k = D_0 (1 + g) / P_0 + g,$$

where k is the expected return on common equity; D_0 is the current dividend per share; g is the expected dividend per share growth rate; and P_0 is the current market price.

The DCF was developed by Gordon (1974) specifically for regulatory purposes. Underlying the DCF model is the theory that the present value of an expected future stream of net cash flows during the investment holding period can be determined

by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate) over the investment holding period. Mathematically, the expected dividend yield ($D_0(1+g)/P_0$) on market price plus an expected growth rate equals the capitalization rate, i.e., the expected return on common equity.

The standard DCF contains several restrictive assumptions, the most contentious of which during utility cost of capital proceedings is typically that dividends per share (DPS), book value per share (BVPS), earnings per share (EPS) as well as market price grow at the same rate in perpetuity. There is also considerable contention over the proper proxy for g, prospective or historical growth in DPS, BVPS, EPS and market price and over what time period. In addition, although the standard DCF described above is a single stage annual growth model, there is considerable discussion over the use of multiple stage growth models during regulatory proceedings. Some analysts use the discrete version and others use the continuous version of the DCF model. Solving these models for k, the cost of common equity, results in differing equations to solve for k. The equation above is from the discrete version. The continuous version uses the current dividend yield and is not adjusted by g, which results in a lower estimate for k. Because of these and other restrictive assumptions that require numerous subjective judgments in application, it is often difficult for regulatory commissions to reconcile the frequently large disparities in rates of return on common equity recommended by various parties in a public utility rate case.

The CAPM model is defined by the following equation:

$$k = R_f + \beta \left(R_m - R_f\right),$$

where k is the expected return on common equity; R_f is the expected risk-free rate of return; β is the expected beta; and R_m is the expected market return.

CAPM theory defines risk as the co-variability of a security's returns with the market's returns or β, also known as systematic or market risk, with the market beta being defined as 1.0. Because CAPM theory assumes that all investors hold perfectly diversified portfolios, they are presumed to be exposed only to systematic risk and the market (according to the model) will not reward them a risk premium for unsystematic or non-market risk. In other words, the CAPM presumes that investors require compensation only for systematic or market risks which are due to macroeconomic and other events that affect the returns on all assets. Mathematically, the CAPM is applied by adding a forward-looking risk-free rate of return to an expected market equity risk premium adjusted proportionately by the expected beta to reflect the systematic risk.

As with the DCF, there is considerable contention during regulatory cost of capital proceedings as to the proper proxies for all components of the CAPM: the R_f, the R_m, as well as β. In addition, the CAPM assumption that the market will only reward investors for systematic or market risk is extremely restrictive when estimating the expected return on common equity for a single asset such as a single jurisdictional regulated operating utility. Additionally, this assumption requires that the investor have a perfectly diversified portfolio, that is, one with no unsystematic risk. Since

this assumption is not applicable, estimating the cost of common equity capital for a single utility's common equity undoubtedly will not reflect the risk actually faced by the imperfectly diversified investor.

As will be discussed in the next section, our application of the risk premium approach, the consumption asset pricing model and GARCH[1] rest on minimal assumptions and restrictions and therefore requires considerably less judgment in its application.

2.2 Risk premium approach, consumption asset pricing models, and GARCH

A widely used model to estimate the cost of common equity capital for public utilities is the risk premium approach. This approach often estimates the expected rate of return as the long-term historic mean of the realized risk premium above an historic yield plus the current yield of the relevant bond applicable to a specific utility or peer group of utilities. Litigants in public utility rate proceedings debate the choice of inputs to estimate the risk premium as well as how far back to reach into history to collect data for calculating an average that is representative of a forward-looking premium.

It is surprising that, as popular as the risk premium method is in public utility rate cases, the intuitively appealing general consumption-based asset pricing model, with its minimal assumptions and strong theoretical foundation, has not been applied to estimate the cost of common equity capital for public utilities. The model provides projections of the conditional expected risk premium on an asset based on its relation to its predicted conditional volatility. This model generalizes the well known special case asset pricing models such as the Merton (1973) intertemporal capital asset pricing model, Campbell (1993) intertemporal asset pricing model, and the habit-persistence model of Campbell and Cochrane (1999), which are special cases of the general model. The relation of the model to their specialized cases can be found in Cochrane (2006) and Cochrane (2007). The approach of consumption asset pricing models is to make investment decisions that maximize investors' utility from the consumption that they ultimately desire, not returns.

Even if the model is not used to project directly the expected risk premium, it can, at a minimum, be used to verify that the risk premia data chosen for estimating the cost of capital is empirically validated by fitting the model well. The model can be used to predict the equity risk premia net of the risk-free rate (equity risk premium) or to predict the equity-to-debt risk premium for a firm. We perform both of these empirical tests in this paper. The general consumption-based asset pricing model developed in Michelfelder and Pilotte (2011) and based on Cochrane (2004) provides the relationship of the ex ante risk premium to an asset's own volatility in return:

$$E_t[R_{i,t+1}] - R_{f,t} = -\frac{vol_t[M_{t+1}]}{E_t\left[M_{t+1}\right]} vol_t[R_{i,t+1}] corr_t[M_{t+1}, R_{i,t+1}]. \quad (1)$$

[1] GARCH refers to the generalized autoregressive conditional heteroskedasticity regression model which is discussed below.

where vol_t is the conditional volatility, $corr_t$ is the conditional correlation, and M_{t+1} is the stochastic discount factor (SDF).

The SDF is the intertemporal marginal rate of substitution in consumption, or, $M_{t+1} = \beta \frac{U_{c,t+1}}{U_{c,t}}$, where the U_c's are the marginal utilities of consumption in the next period, $t+1$, and the current period, t, and β is the discount factor for period t to $t+1$. Equation 1 shows that the algebraic sign of the relation between the expected risk premium and the conditional volatility of an asset's risk premium is determined by the correlation between the asset's return and the SDF. That is, the direction of the relation between the asset return and the ratio of intertemporal marginal utilities in consumption inversely determines the relation between the expected risk premium and conditional volatility. When the correlation is equal to negative one, the asset's conditional expected risk premium is perfectly positively correlated with its conditional volatility. A positive relation between the conditionally expected risk premium and volatility obtains when $-1 < corr_t < 0$. A negative relation obtains when $0 < corr_t < 1$. For an asset that represents a perfect hedge against shocks to the marginal utility of consumption, with $corr_t = 1$, there will be a perfect negative correlation between the conditionally expected risk premium and its volatility.[2] Therefore, estimates of the relation between the first two conditional moments of a public utility stock's returns provide a direct test of the effectiveness of a public utility stock, or any asset, as a consumption hedging asset. In Eq. 1, $vol_t[M_{t+1}]/E_t[M_{t+1}]$ is the slope of the mean-variance frontier. If this slope changes over time, the estimated relation between the stock's risk and return will vary over time. This model can also be viewed simplistically as the projected expected risk premium as a function of its own projected risk, given information available at time t.

Note that the model allows for the expected risk premium to be negative if the asset hedges shocks to the marginal utility of consumption. Investors are willing to accept an expected rate of return lower than the risk-free rate of return if the pattern of volatility is such that returns are expected to rise with expected reductions in consumption. Simply, investors are willing to *pay* a premium for a higher level of returns volatility that has the desired pattern of returns. These desired returns patterns have a tendency to offset drops in consumption. Therefore, this model shows that investors may not be averse to volatility, but rather to the timing of expected changes in returns.

Summarizing, several conclusions can be drawn from the general model of asset pricing. First, the sign of the relation between a stock's risk premium and conditional volatility depends on the extent to which the stock serves as an intertemporal hedge against shocks to the marginal utility of consumption. Second, the relation between stock risk and return may be time-varying depending on changes in the slope of the mean-variance frontier. Third, hedging assets have desired patterns of volatility that result in expected rates of return that are less than the risk-free rate. We do not expect

[2] A hedging asset is one that has a positive increase in returns that is coincident with a positive shock in the ratio of intertemporal marginal utilities of consumption. Note that if we assume a concave utility function in consumption, as consumption declines, the marginal utility of consumption rises relative to last period marginal utility. If we think of a decline in consumption as a contraction in the business cycle, the hedging asset delivers positive changes in returns when the business cycle is moving into a contraction, and therefore the asset is a business cycle hedge.

that public utility stocks serve as a hedging asset as they are not viewed as defensive stocks (they do not rise in value during downturns in the stock market) due to asymmetric regulation and returns as discussed in detail in Kolbe and Tye (1990). Under asymmetric regulation, utility regulators have a tendency to allow the return on equity to fall below the allowed return during downturns in the business cycle and to reduce the return should it rise above the allowed return during expansions. Therefore we expect that the parameter estimates of the return-risk relationship to be positive as utility stocks are hypothesized to not be hedges.

We use the GARCH model to estimate the general asset pricing model since the GARCH model accommodates ARCH effects that improve the efficiency of the parameter estimates. It also provides a volatility forecasting model for the conditional volatility of the asset's risk premium. The conditional volatility projection is used, in turn to predict the expected risk premium. We also use the GARCH-in-Mean model (GARCH-M) since it specifies that the conditional expected risk premium is a linear function of its conditional volatility. There is a vast body of literature that estimates asset pricing models with the GARCH and GARCH-M methods and therefore we will not attempt to summarize them here.

The GARCH-M model was initially developed and tested by Engle et al. (1987) to estimate the relationship between US Treasury and corporate bond risk premia and their expected volatilities. The GARCH-M model is specified as:

$$R_{t+1} - R_{f,t+1} = \alpha\sigma_{t+1}^2 + \varepsilon_{t+1} \tag{2}$$

$$\sigma_{t+1}^2 = \beta_0 + \beta_1\sigma_t^2 + \beta_2\varepsilon_t^2 + \eta_{t+1} \tag{3}$$

$$\varepsilon_t \,|\psi_{t-1} \sim T(0, \sigma_t^2) \tag{4}$$

where R_{t+1} is the expected total return on the public utility stock index or individual utility stock; $R_{f,t+1}$ is the risk-free rate of return or the yield on an index of public utility bonds of a specified bond rating for the equity-to-debt premium; σ_{t+1}^2 is the conditional or predicted variance of the risk premium that is conditioned on past information (ψ_{t-1}); and ε_t is the error term that is conditional on ψ_{t-1}.

The conditional distribution of the error term is specified as the non-unitary variance T-distribution due to the thick-tailed distribution of the risk premia data. If the error distribution is thick-tailed, using an approximating distribution that accommodates thick tails improves the efficiency of the estimates. The parameter, α, is the return-to-risk coefficient as specified in Eq. 1 as:

$$\alpha = -\frac{vol_t[M_{t+1}]}{E_t\left[M_{t+1}\right]} corr_t[M_{t+1}, R_{i,t+1}] \tag{5}$$

Note that the coefficient will be positive if the conditional correlation between the SDF and the asset return is negative, indicating that the stock is not a hedging asset. Recall that the SDF is the ratio of intertemporal marginal utilities. Assuming a concave utility function, an upward shock in the ratio implies falling consumption, therefore an associated rise (positive correlation) in the return (R_i) would offset the reduction

in consumption, thereby causing the sign of α to be negative. The parameter, α, is also the ratio of risk premium to variance, or, the Sharpe ratio.

The intercept in Eq. 2 is restricted to zero as specified by the general asset pricing model specification. The restriction on the intercept equal to zero has been found to be robust in producing consistently positive and significant relationships between equity risk premia and risk in GARCH-M models. This is discussed in Lanne and Saikkonen (2006) and Lanne and Luoto (2007). We have found the same results in our modeling in this paper, although we have excluded these results for brevity (available upon request). Therefore we specify the prior assumption that the intercept or the "excess" return, i.e., the return not associated with risk to be equal to zero and drop the intercept from the model.

The consumption asset pricing model is estimated in the empirical section of the paper and applied in the applications section of the paper. The model is tested to (1) determine if equity-to-debt risk premium indices for utilities of differing risk specified by differing bond ratings are validated by the asset pricing model and therefore have some empirical support for risk premium prediction and application to utility cost of capital estimation, (2) determine whether equity risk premia can be predicted and fit the model and therefore be used to estimate the cost of common equity, (3) empirically test the consumption asset pricing model, and (4) ascertain whether utility stocks are assets that hedge shocks to the marginal utility of consumption.

If utility stocks are hedging assets then the cost of common equity should reflect a downward adjustment to a specified risk-free rate to reflect investors' preferences for a hedge and the compensation that they are willing to pay for it.

3 Data and empirical results

We use portfolios as represented by public utility stock and bond indices to estimate the conditional return-risk relationship for the equity-to-debt premium. The equity-to-debt risk premium data employed for estimating Eq. 1 with the GARCH-M conditional return-risk regressions are monthly total returns on the Standard and Poor's Public Utilities Stock Index (utility portfolio), and the monthly Moody's Public Utility Aa, A, and Baa yields for the debt cost. We also obtained equity risk premia for the utility portfolio using the Fama-French specified risk-free rate of return, which is the holding period return on a 1-month US Treasury Bill. The data range from January 1928 to December 2007 with 960 observations. The return-risk relationships for the equity-to-debt premia are risk-differentiated by their own bond rating.

As a check, we also estimate Eq. 1 with the GARCH-M for large common stock returns using the monthly Ibbotson Large Company Common Stocks Portfolio total returns and the Ibbotson US Long-Term Government income returns as the risk-free rate. Additionally, as another check, we do the same for the University of Chicago's Center for Research in Security Prices value-weighted stock index (CRSP) using the Fama-French risk-free rate. This is the Fama-French specification of the market equity risk premium. The data range from January 1926 to December 2007 with 984 observations for the Large Company Common Stock estimation and the data ranges

Table 1 Descriptive statistics: public utility and large company common stocks equity-to-debt and equity risk premia

Utility bond rating	Mean	Std. Dev.	Skewness	Kurtosis	JB
Aa	0.0037	0.0568	0.0744	10.07	2,001.2***
A	0.0035	0.0568	0.0632	10.06	1,991.8***
Baa	0.0031	0.0568	0.0375	10.02	1,973.6***
Ibbotson					
Large common stocks	0.0054	0.0554	0.4300	12.84	3,954.7***
CRSP value-weighted stock index	0.0062	0.0544	0.2309	10.92	2,519.1***

The public utility equity-to-debt risk premia monthly time series is from January 1928 to December 2007 with 960 observations. The equity risk premium monthly time series for the Large Common Stocks and the CRSP index are January 1926 to December 2007 with 984 observations, and January 1926 to December 2007 with 984 observations, respectively. The public utility stocks equity-to-debt risk premia are calculated as the total return on the S&P Public Utilities Index of stocks minus the Moody's Public Utility Aa, A, and Baa Indices yields to maturity. The Large Company Common Stock equity risk premia are the monthly total returns on the Ibbotson Large Company Common Stocks Portfolio minus the Ibbotson Long-Term US Government Bonds Portfolio income yield. The CRSP equity risk premia, or the Fama-French market risk premia are the CRSP total returns on the value-weighted equity index minus the 1-month holding period return on a 1 month Treasury Bill. The Jarque-Bera (JB) statistic is a goodness-of-fit measure of the departure of the distribution of a data series from normality, based on the levels of skewness and excess kurtosis. The JB statistic is χ^2 distributed with 2° of freedom. *** Significant at 0.01 level, one-tailed test

from January 1928 to January 2007 with 960 observations (same as the utilities) for the CRSP estimation.

Table 1 displays the descriptive statistics for these data. We have estimated the mean, standard deviation, skewness and kurtosis parameters, as well as the Jarque-Bera (JB) statistic to test the distribution of the data. The means of the utility equity-to-debt risk premia fall as the risk (bond rating) declines. This is consistent with the notion that larger yields are subtracted from stock returns the lower the bond rating. Intertemporally, there is an inverse relationship between risk premia and interest rates (See Brigham et al. (1985) and Harris et al. (2003)). The mean for risk premia will have a tendency to be larger during low interest rate periods.

Not surprisingly, large company common stocks have the highest mean risk premia as the majority of these firms are not rate-of-return regulated firms with a ceiling on their ROE's close to their cost of capital. Interestingly, the standard deviations of the utility stock returns are similar and slightly higher than large company common stocks. Skewness coefficients are small and positive except for Ibbotson large company common stock returns and CRSP returns that have large positive skewness. This suggests that large unregulated stocks have a tendency to have more and larger positive shocks in returns than do utilities that are rate of return regulated. The kurtosis values show that all of the risk premia are thick-tail distributed. This is also found in the significant JB statistics that test the null hypothesis that the data are normally distributed. The null hypothesis is rejected for all assets. The high kurtosis, low skewness, and significant JB statistics show that the risk premia data are substantially thick-tailed, except for non-utility stocks that are both skewed and thick-tailed. Therefore, robust estimation methods are required to produce efficient regression estimates with non-normal data. Additionally, although not shown but available upon request, the serial correlation and

ARCH Lagrange Multiplier tests show that residuals from OLS regressions of risk premia on volatilities follow an ARCH process. Therefore, the GARCH-M method will improve the efficiency of the estimates. We specify the regression error distribution as a non-unitary variance T-distribution so that thick-tails could be accommodated in the estimation and therefore produce increasingly efficient parameter estimates.

We used maximum likelihood estimation with the likelihood function specified with the non-unitary-variance T-distribution as the approximating distribution of the residuals to accommodate the thick-tailed nature of the error distribution. The equations are estimated as a system using the Marquardt iterative optimization algorithm. The chosen software for estimating the model was EViews© version 6.0 (2007).

Table 2 shows the GARCH-M estimations for the consumption asset pricing Eq. 1. We have estimated Eq. 1 for the utility equity risk premia using the Fama-French risk-free rate in addition to the equity-to-debt risk premia risk-differentiated by bond ratings and the two measures of the market equity risk premium. The chosen measure of volatility is the variance of risk premium (in contrast to other such measures such as the standard deviation or the log of variance. Although these results are not shown for brevity, they are robust to these other measures of volatility). The slope, which is the predicted return-to-predicted risk coefficient and Sharpe ratio, is positive and significant at the 99% level for all assets except the utility stock returns with Baa bonds, which is significant at the 95% level. Given that all slopes are positive, public utility stocks are not found to hedge shocks to the marginal utility of consumption. Note that the reward-to-risk slope rises as bond rating rises. This suggests that lower risk utility stocks provide a higher incremental risk-premium for an increase in conditional volatility. This is consistent with other studies that find that lower risk assets, such as shorter maturity bonds, have higher Sharpe Ratios than long-term bonds and stocks. See Pilotte and Sterbenz (2006) and Michelfelder and Pilotte (2011).

The variance equation shows that all GARCH coefficients (β's) are significant at the 1% level and the sums of β_1 and β_2 are close to, but less than 1.0, indicating that the residuals of the risk premium equation follow a GARCH process and that the persistence of a volatility shock on returns and stock prices for utility stocks is temporary. The estimates of the non-unitary variance T-distribution degrees of freedom parameter are low and statistically significant, indicating that the residuals are well approximated by the T. Similar values for the log-likelihood functions (Log-L) show that each of the regressions has a similar goodness-of-fit. Chi-squared distributed likelihood ratio tests (not shown but available upon request) that compare the goodness of fit among the T and normal specifications of the likelihood function of the GARCH-M regressions show that the T has a significantly better fit than the normal distribution.

The GARCH-M results for the large company common stocks portfolio are similar to those of the utility stocks. Not surprisingly, large company common stocks do not hedge shocks to the marginal utility of consumption and volatility shocks temporarily affect their valuations. The exception is that the return-risk slope is substantially higher than utility stock slopes. This is partially due to the risk-free nature of the risk-free rates used with the non-utility equity risk premia compared to the

Table 2 Estimation of return-risk relation: public utility and large company common stocks

Utility bond rating	α	β_0	β_1	β_2	Log-L	T dist. D.F.
Aa	1.5183*** (0.5308)	0.0000** (0.0000)	0.8791*** (0.0230)	0.1031*** (0.0219)	1,604.4	9.9254*** (3.0272)
A	1.4536*** (0.5308)	0.0000** (0.0000)	0.8790*** (0.0230)	0.1033*** (0.0220)	1,605.0	9.9381*** (3.0408)
Baa	1.3318** (0.5303)	0.0000** (0.0000)	0.8789*** (0.0229)	0.1040*** (0.0220)	1,605.2	10.0*** (3.0540)
Fama-French R_f	2.1428*** (0.5318)	0.0000** (0.0000)	0.8811*** (0.0232)	0.0979*** (0.0212)	1,601.0	9.8773*** (2.9700)
Ibbotson						
Large company common stocks	2.7753*** (0.5513)	0.0001*** (0.0000)	0.8381*** (0.0269)	0.1186*** (0.0332)	1,620.8	8.8457*** (2.1613)
CRSP value-weighted stock index	3.3873*** (0.5673)	0.0001*** (0.0000)	0.8330*** (0.0270)	0.1149*** (0.0358)	1,598.9	8.8571*** (1.9505)

The results below are the GARCH-in-Mean regressions for the risk premium ($R_{t+1} - R_{f,t+1}$) on the conditional variance of the risk premium (σ^2_{t+1}) in the mean equation. The intercept in the mean equation is restricted to be equal to zero. The public utility equity-to-debt risk premia monthly time series is from January 1928 to December 2007 with 960 observations. The equity risk premium monthly time series for the Large Company Common Stocks and the CRSP index are January 1926 to December 2007 with 984 observations, and January 1926 to December 2007 with 984 observations, respectively. The public utility stocks equity-to-debt risk premia are calculated as the total return on the S&P Public Utilities Index of stocks minus the Moody's Public Utility Aa, A, and Baa Indices yields to maturity. The Large Company Common Stock equity risk premia are the monthly total returns on the Ibbotson Large Company Common Stocks Portfolio minus the Ibbotson Long-Term US Government Bonds Portfolio income yield. The CRSP equity risk premia, or the Fama-French market risk premia are the CRSP total returns on the value-weighted equity index minus the 1-month holding period return on a 1 month Treasury Bill. The estimated model is:

$$R_{t+1} - R_{f,t+1} = \alpha\sigma^2_{t+1} + \varepsilon_{t+1} \text{ where } \alpha = -\frac{vol_t[M_{t+1}]}{E_t[M_{t+1}]} corr_t[M_{t+1}, R_{i,t+1}]$$

$$\sigma^2_{t+1} = \beta_0 + \beta_1\sigma^2_t + \beta_2\varepsilon^2_t + \eta_{t+1}$$

The conditional distribution of the error term is the non-unitary variance T-distribution to accommodate the kurtosis of the risk premia and error term. Standard errors are in parentheses. ***, **, * denote significance at the 0.01, 0.05, and 0.10 levels, respectively for two-tail tests

utility bond yields that reflect risk. The utility stocks slope value of 2.1428 using the Fama-French risk-free rate is closer to the higher CRSP value of 3.3873 that is also based on the Fama-French risk-free rate. This is inconsistent with previous results herein and in other papers that find that Sharpe Ratios are lower for higher risk assets unless this finding can be interpreted as utility stocks having more risk than non-regulated stocks. The standard deviations on Table 1 suggest that utility stock return volatilities are as high as the stock returns of non-regulated firms. However, similar model estimates of portfolios of common stocks yield unstable results, such as negative as well as positive return-risk slopes when the intercept is not restricted to zero. See Campbell (1987), Glosten et al. (1993), Harvey (2001), and Whitelaw (1994).

Stock market results are highly sensitive to empirical model specification. Many studies do not consider the impact of a zero-intercept prior restriction on the stability of their results. This simple innovation has led to more consistent results in modeling stock market risk-return relationships, and therefore we have included it in this paper.

The estimation of the consumption asset pricing model for utility stock equity-debt risk premia shows that the use of bond-rating risk-differentiated risk premia are validated as their risk-return relationships are well-fitted by theoretical and empirical models of risk and return. Therefore, these data impound good representations of the risk and reward relationship.

One concern is the intertemporal stability of the alphas. Figure 1 plots the utility stock portfolio alpha (using the Fama-French R_f to calculate the premium) and its standard error for 240 month rolling regressions of the model estimated with GARCH-M in the same manner as described above to review the intertemporal stability of the alpha. A 20-year period was used for each estimation to trade off timeliness with sufficient observation of up and down stock market regimes and business cycles. This resulted in 720 estimated alphas from 1947 to 2007. The results show that the utility alpha is stable to the extent that the algebraic sign is always positive and generally significant, therefore the nature of utility stocks are assets that are not and have never been hedges during the second half of the twentieth century up to the present. The value of the alpha does change substantially. The mean of the alpha is 4.40 with a range from -0.11 (insignificantly different from 0) to 11.66. As a comparison, the alpha for the CRSP value-weighted stock index was also estimated with rolling regressions in the same manner and for the same time period. Figure 2 is a plot of the CRSP alpha and standard error. Note that the general stock market alpha is similar to that of utility stocks. They are all positive and almost all statistically significant and follow a strikingly similar cycle. Figure 3 plots both the utility and stock market alphas and demonstrates the similarity. The correlation coefficient between the utility and stock market alphas is 0.88. Recalling that the alpha is a Sharpe Ratio, we see that return to risk ratio does change substantially. This is consistent with the results in Pilotte and Sterbenz (2006).

One other interesting observation is that the standard errors of the alphas are highly stable over the study period and are very similar in magnitude regardless of the size of the corresponding alpha. Whereas the alpha follows a cyclical pattern, the volatility in alpha is highly stationary around a constant, long-run mean.

The GARCH-M model estimations of the consumption asset pricing model were specified with variance as the measure of volatility. We also performed the same model estimations with alternative specifications of volatility such as the standard deviation and the log of variance and the results were not sensitive to this specification.

4 Application

We apply the model in this section to compare the cost of common equity capital estimates with the DCF and CAPM models. Using EViews© Version 6.0, we estimated the model coefficients (α, $\beta's$) over rolling 24 month periods ending December 2008.

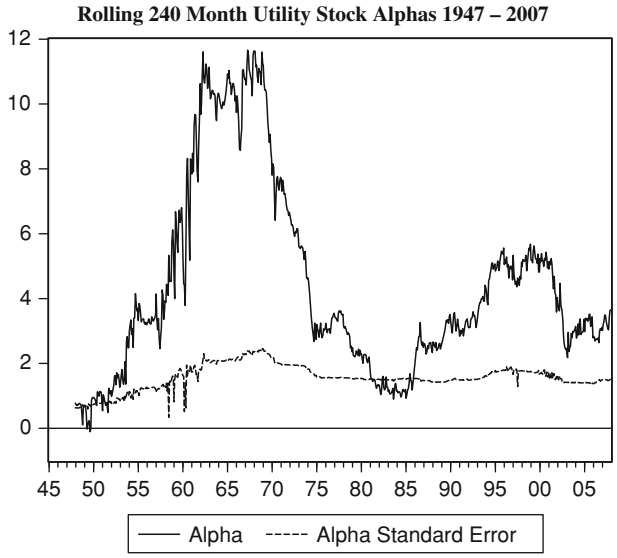


Fig. 1 Rolling 240 month utility stock alphas 1947–2007

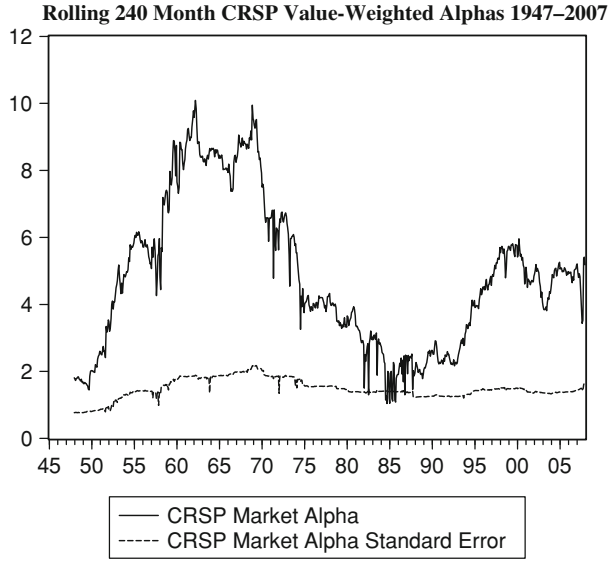


Fig. 2 Rolling 240 month CRSP value-weighted alphas 1947–2007

We repeated the estimation over 5, 10, 15, 20 and 79 year periods.[3] Predicted monthly variances (σ^2_{t+1}) were generated from these estimations to produce predicted risk premiums that were calculated by multiplying the predicted variance by the "α" slope

[3] We did not include the results of the 10 and 15 year estimations to abbreviate the amount of empirical results presented since they added no material insights beyond those already presented.

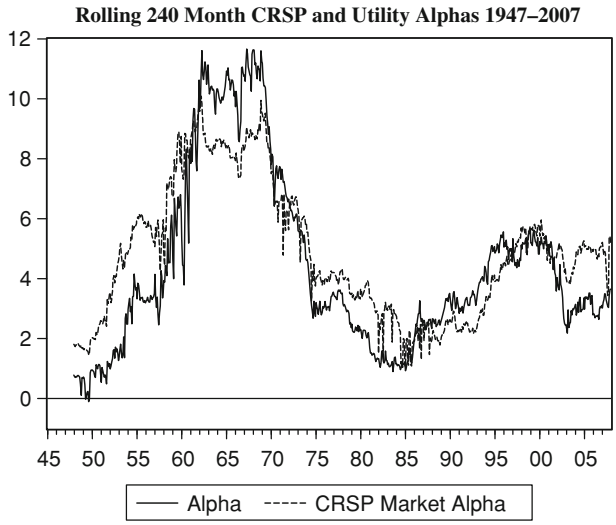


Fig. 3 Rolling 240 month CRSP and utility alphas 1947–2007

Table 3 Estimates of expected risk premia

	Mean (%)		Range (%)		Standard deviation (%)	
	Average	Spot	Average	Spot	Average	Spot
Ibbotson Associates data						
79-years	9.59	5.76	8.74–9.96	2.62–22.60	0.32	5.24
20-years	6.77	6.94	4.99–8.50	2.24–28.95	0.95	6.88
5-years	4.20	10.25	−98.49–11.62	−100.00–39.65	22.00	26.61
S&P Utility Index						
79-years	5.28	2.90	4.30–5.28	1.65–8.15	0.32	1.60
20-years	3.93	3.51	2.78–5.03	2.18–6.88	0.57	1.11
5-years	31.82	326.63	7.77–156.97	6.12–6465.74	31.47	1283.51

coefficient. To test the stability of the predicted risk premia over time, the predicted risk premia were calculated using either the predicted variance over each entire time period or the last monthly (spot) predicted variance. Table 3 presents the mean predicted risk premia, the range of predicted premia and the standard deviations for each time period. It is clear from the results that the risk premia are more stable over the rolling 24 month period when calculated using the average predicted variance compared with using the spot variance. Secondly, the 20 and 79 year means are substantially more stable and reasonable in magnitude than the 5 year means.

Next, given the lessons from the analyses above, we apply the model to mechanically[4] estimate the cost of common equity for 8 utility companies using the model and

[4] The term "mechanically" in this context means that the resulting values have been developed in a consistent manner with the same inputs across all utility stocks but no subjective judgment was used to develop final values for each specific utility stock application.

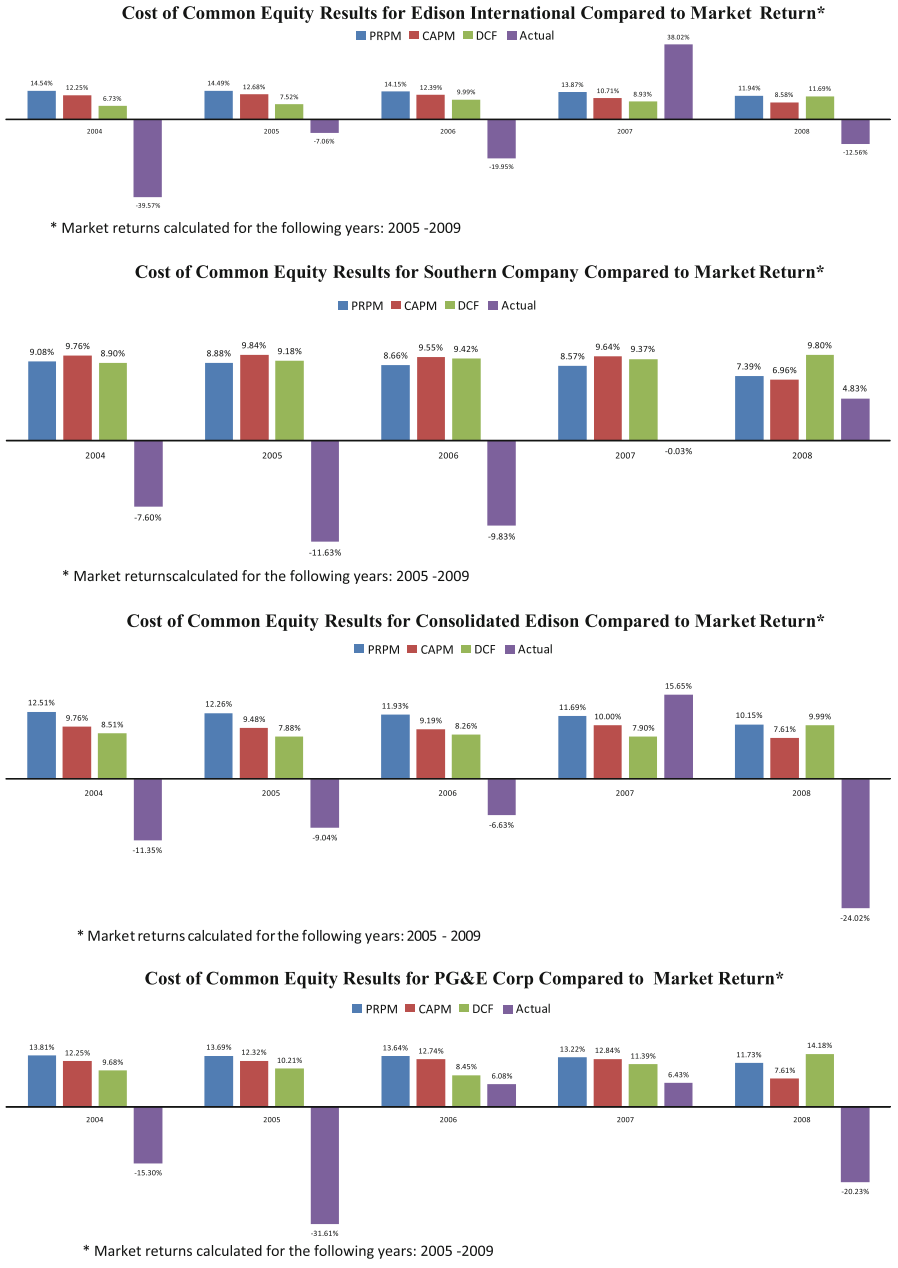
the DCF and CAPM as comparisons. We also calculated the realized market return for comparison. Two publicly-traded electric, electric and gas combination, gas, and water utilities respectively were chosen for the application. The Gordon (1974) DCF and CAPM models are used in many utility regulatory jurisdictions in the US.

The DCF was applied using a dividend yield, D_0/P_0, derived by dividing the year-end indicated dividend per share (D_0) by the year-end spot market price (P_0). The dividend yield is grown by the year-end I/B/E/S five year projected earnings per share growth rate (g) to derive $D_0(1+g)/P_0$. The one-year predicted dividend yield is then added to the I/B/E/S five-year projected EPS growth rate to obtain the DCF estimate of the cost of common equity capital, k. This study was conducted for the 5 years ending 2008.

The CAPM was applied by multiplying the Value Line beta (β) available at year-end for each company by the long-term historic arithmetic mean market risk premium ($R_m - R_f$). $R_m - R_f$ is derived as the spread of the total return of large company common stocks over the income return on long-term government bonds from the Ibbotson SBBI 2009 Valuation Yearbook. The resulting company-specific market equity risk premium is then added to a projected consensus estimate of the yield on 30-year U.S. Treasury rate provided by Blue Chip Financial Forecasts as the risk-free rate (R_f) to obtain the CAPM result. This study was also conducted over the 5 years ending 2008.

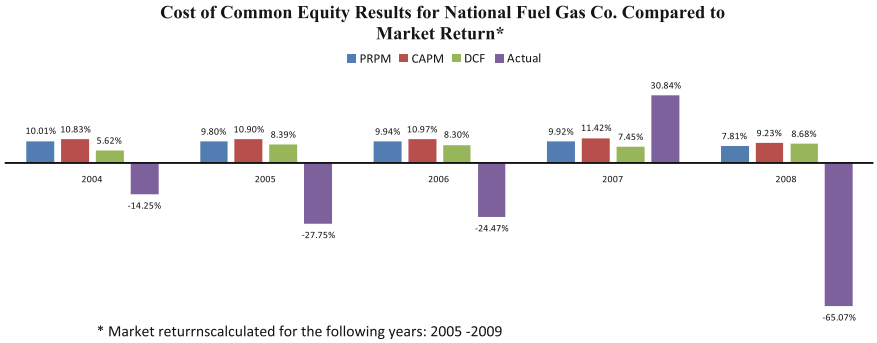
Figures 4–11 show the histograms of the cost of common equity capital estimations for each of the eight public utility stocks and the realized market returns in the forthcoming year. The consumption asset pricing model appears to track more consistently with the CAPM than with the DCF which seems to produce generally lower values than the other methods. The consumption asset pricing model results are similar to the CAPM. The model and the CAPM compete as the best predictor of the rate of return on the book value of common equity (not shown but available upon request), but none of the expected returns were good predictors of market returns. That does not infer that they were not good predictors of *expected* market returns. These results are an initial indicator that the consumption asset pricing model provides reasonable and stable results. This paper does not suggest at this early juncture that the consumption asset pricing model is superior to the CAPM or DCF, although it is based on far less restrictive assumptions than these other models. For example, both the DCF and CAPM assume that markets are efficient. Many assume that the DCF requires that the market-to-book ratio to always equal one, whereas the long-term value for the Standard and Poor's 500 is equal to 2.34. The CAPM assumes that investors demand higher returns for higher volatility and that the minimum required return is the risk-free rate, whereas the consumption asset pricing model allows for investors to require returns less than the risk-free rate for stocks that may have relatively higher volatility but are hedging assets that have desirable return fluctuation patterns that offset downturns in the business cycle. Unlike the CAPM, the model prices the risk to which investors are actually exposed, whether it's systematic risk or not. Some investors are diversified and some are not; the model prices whatever risk to which the aggregate of investors of the specific stock is exposed.

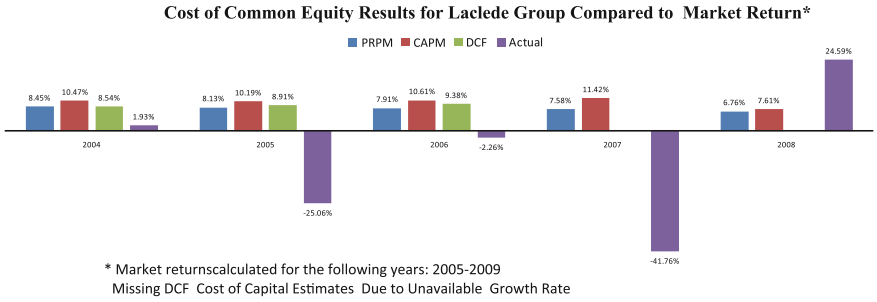
We find that the consumption asset pricing model should be used in combination with other cost of common equity pricing models as additional information in the devel-

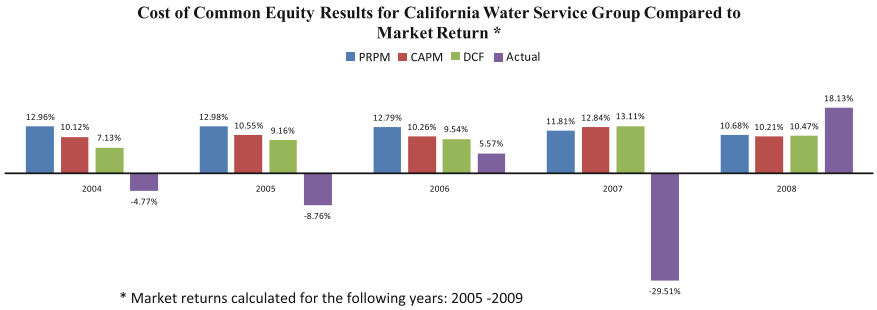


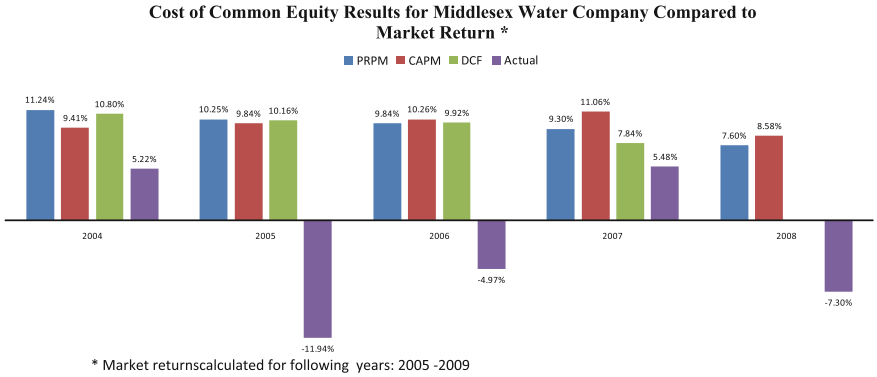
Figs. 4–11 Comparison of the cost of common equity estimates and market

opment of a cost of common equity capital recommendation. Practitioners may find the modeling methods and the use of relatively advanced econometric methods rather cumbersome. The software for performing these estimations is readily available from EViews© and SAS©; two commonly available software packages at utilities, consult-









Figs. 4–11 continued

ing firms and financial firms. Recent Ph.D. and M.S. holding members of research departments of investment and consulting firms have ready access to the model and methods discussed in this paper, although it will require years for these tools, like any "new" technology, to diffuse into standard use. Another problem is that the model requires a substantial time series history on stock returns data to develop stable estimates of risk premia This is problematic especially for the electric and gas utility industries that have consolidated with many mergers in the recent past. This problem can be addressed by developing and predicting the value-weighted risk premium of a portfolio of similar stocks such as electric utilities that have nuclear generating assets. The specific stock in question would be included in the returns index with a weight based on market capitalization that would go to 0 when the stock price history is no longer existent reaching back into the past.

5 Conclusion

The purpose of this paper is to introduce, test empirically and apply a general consumption based asset pricing model that is based on a minimum of assumptions and restrictions that can be used to predict the risk premium to be applied in estimating the cost of common equity for public utilities in regulatory proceedings. The results support the simple consumption-based asset pricing model that predicts the ex ante risk premium with a conditionally predicted volatility in risk premium. The estimates of the cost of common equity from the consumption asset pricing model compare well with rates of return on the book value of common equity and with the CAPM, although both the model and the CAPM results are substantially higher than the DCF. This is quite common in the practice of the cost of common equity in the utility industry. The results of the model are stable and consistent over time. Therefore the model should be considered as it provides additional evidence on the cost of common equity in general and specifically in public utility regulatory proceedings. Secondly, the use of bond-rated yields to predict risk differentiated equity-to-debt risk premia is supported by the empirical evidence and therefore should be applied in estimating the cost of common equity. Finally, the robust empirical evidence on the positive risk-return relationship also shows that utility stocks are not a consumption hedge and are not good hedging securities against contractions in the economy. The model and estimation methodology presented in this paper provide a relatively simple tool to determine whether any asset is a hedge to adverse changes in the business cycle through the level of consumption in the economy.

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MODERN REGULATORY FINANCE

ROGER A. MORIN, PhD

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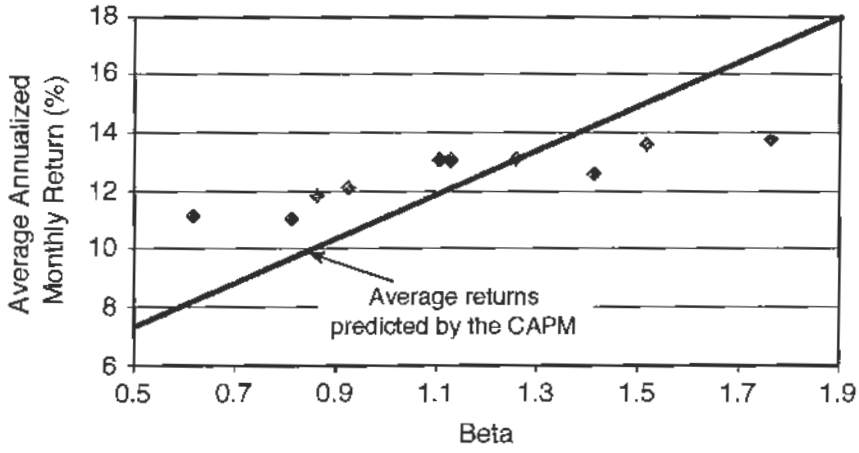
on low-beta stocks are higher than predicted by the CAPM, and realized returns on high-beta stocks are lower than predicted by the CAPM. Stocks with the lowest beta estimates had average returns of 11.1% per year, but the CAPM says the expected return was 8.3% per year. Stocks with the highest beta estimates had average returns of 13.7% per year, but the CAPM says the expected return was 16.8% per year.

Figure 7-1
Average Returns vs Beta Over An Extended Time Period (1928-2003)



Brealey, Myers, and Allen (2017), among many others,[9] provide more recent empirical evidence very similar to the relationship depicted in Figure 7-1. In fact, Brealey, Myers and Allen (2017) extend previous analyses to the end of 2014, and provide a similar chart to that presented by Fama and French (2004). The upward-sloping line on Figure 7-1 represents the relationship between beta and return that is implied by the CAPM and each dot represents the observed return for a particular portfolio. Clearly, the low-beta portfolios still earn higher returns than the CAPM would imply. Goyal (2011) also found a security market line flatter than that predicted by the CAPM.[10] With few exceptions, the empirical studies agree that the implied intercept term exceeds the risk-free rate and the slope term is less than predicted by the CAPM. That is, low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. This is one of the most well-known results in finance, and is particularly pertinent for public utilities whose betas are typically less than 1.00.

9. For a summary of the empirical evidence on the CAPM, see Jensen (1972) and Ross (1978). The major empirical tests of the CAPM were published by Friend and Blume (1975), Black, Jensen, and Scholes (1972), Miller and Scholes (1972), Blume and Friend (1973), Blume and Husic (1973), Fama and Macbeth (1972), Basu (1977), Reinganum (1981B), Litzenberger and Ramaswamy (1979), Banz (1981), Gibbons (1982), Stambaugh (1982), Shanken (1985), Black (1993), and Brealey, Myers, and Allen (2017). Evidence in the Canadian context is available in Morin (1980, 1981).

10. Goyal, Amit, "Empirical Cross-Sectional Asset Pricing: A Survey," Swiss Society for Financial Market Research, 2011. Published online: December 2011.

constant α, which must be estimated econometrically from market data.[21] Table 7-3 drawn from Villadsen, Vilbert, et. al. (2017) summarizes the empirical evidence on the magnitude of alpha.[22]

For an alpha in the range of 1% – 2% and for reasonable values of the MRP and the risk-free rate, Equation 7-5 reduces to the following more pragmatic form:

$$K = R_F + 0.25\ (R_M - R_F) + 0.75\ b(R_M - R_F) \qquad (7\text{-}6)$$

Using reasonable data inputs for the risk-free rate and the MRP, Equation 7-6 produces results that are indistinguishable from the ECAPM of Equation 7-5.[23]

An alpha range of 1% - 2% is somewhat lower than that estimated empirically. The use of a lower value for alpha leads to a lower estimate of the cost of capital for low-beta stocks such as regulated utilities. This is because the use of a long-term risk-free rate rather than a short-term risk-free rate already incorporates some of the desired effect of using the ECAPM. That is, the long-term risk-free rate version of the CAPM has a higher intercept and a flatter slope than the short-term risk-free version which has been tested. Thus, it is reasonable to apply a conservative alpha adjustment.

21. The technique is formally applied by Litzenberger, Ramaswamy, and Sosin (1980) to public utilities in order to rectify the CAPM's basic shortcomings. Not only do they summarize the criticisms of the CAPM insofar as they affect public utilities, bnt they also describe the econometric intricacies involved and the methods of circumventing the statistical problems. Essentially, the average monthly returns over a lengthy time period on a large cross-section of securities gronped into portfolios, are related to their corresponding betas by statistical regression techniques; that is, Equation 6-4 is estimated from market data. The utility's beta value is substituted into the equation to produce the cost of equity figure. Their results demonstrate how the standard CAPM underestimates the cost of equity of pnblic utilities because of ntilities' high dividend yield and return skewness.

22. Table 7-3 is drawn from Villadsen, B., Vilbert, M. J., Harris, D., and Kolbe, A. L., "Risk and Return for Regulated Industries," The Brattle Group, Elsevier Academic Press, 2017.

23. Typical of the empirical evidence on the validity of the CAPM is a study by Morin (1989) who found that the relationship between the expected return on a security and beta over the period 1926-1984 was given by:

$$\text{Return} = 0.0829 + 0.0520$$

Given that the risk-free rate over the estimation period was approximately 6% and that the MRP was 8% during the period of study, the intercept of the observed relationship between return and beta exceeds the risk-free rate by about 2%, or 1/4 of 8%, and that the slope of the relationship is close to 3/4 of 8%. Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:

$$K = R_F + x\ (R_M - R_F) + (1 - x)\ b(R_M - R_F)$$

where x is a fraction to be determined empirically. The value of x that best explains the observed relationship Return = 0.0829 + 0.0520 is between 0.25 and 0.30. If x = 0.25, the equation becomes:

$$K = R_F + 0.25\ (R_M - R_F) + 0.75\ b(R_M - R_F)$$

between the portfolio's annual rate of return and the government bond yield. To illustrate, let us say that the following hypothetical relationship between the risk premium and the portfolios' betas is obtained for the period 1931 – 2019:

$$\text{Risk Premium} = 4.21\% + (3.94\% \times \text{Beta})$$

Using the utility's beta of 0.60, for example, the risk premium for the hypothetical utility is:

$$4.21\% + (3.94\% \times 0.60) = 6.6\%$$

A long-term cost of equity capital estimate for the company is obtained by adding the risk premium of 6.6% to the current yield on long-term Treasury bonds or to the projected long-term yield implied by the closing prices on the Treasury bond futures contract traded on the Chicago Board of Trade. The latter measures the consensus long-term interest rate expectation of investors.[24] If the yield on long-term Treasury bonds is 4%, then the cost of equity implied by the observed risk-return relationship is 10.6%. A similar procedure could be developed based on the standard deviation of return rather than on beta as risk measure.

ECAPM And Double-Counting

As previously discussed in Chapter 4, Value Line and Bloomberg beta estimates are adjusted betas in keeping with investment practices and in keeping with the academic literature on the subject. The adjusted betas reported by *Value Line* give 2/3 weight to the "raw" or calculated beta and 1/3 weight to the market beta of 1.0. The definition of Adjusted Beta used by Value Line is as follows:

$$\text{Adjusted Beta} = 0.3333 + 0.6666 \times \text{Raw Beta}$$

Because of this adjustment, some critics of the ECAPM argue that the use of Value Line adjusted betas in the traditional CAPM amounts to using an ECAPM. This is incorrect. The use of adjusted betas in a CAPM analysis is not equivalent to the ECAPM. Betas are adjusted because of the regression tendency of betas to converge toward 1.0 over time. We have seen that numerous empirical studies have determined that the SML described by the CAPM formula at *any given moment* in time is not as steeply sloped as the predicted SML. The slope of the SML should

24. The average market forecasts of rates in the form of interest rate Treasury securities futures contracts data can be used as a proxy for the expected risk-free rate.

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The Capital Asset Pricing Model: Theory and Evidence

Eugene F. Fama and Kenneth R. French

The capital asset pricing model (CAPM) of William Sharpe (1964) and John Lintner (1965) marks the birth of asset pricing theory (resulting in a Nobel Prize for Sharpe in 1990). Four decades later, the CAPM is still widely used in applications, such as estimating the cost of capital for firms and evaluating the performance of managed portfolios. It is the centerpiece of MBA investment courses. Indeed, it is often the only asset pricing model taught in these courses.[1]

The attraction of the CAPM is that it offers powerful and intuitively pleasing predictions about how to measure risk and the relation between expected return and risk. Unfortunately, the empirical record of the model is poor—poor enough to invalidate the way it is used in applications. The CAPM's empirical problems may reflect theoretical failings, the result of many simplifying assumptions. But they may also be caused by difficulties in implementing valid tests of the model. For example, the CAPM says that the risk of a stock should be measured relative to a comprehensive "market portfolio" that in principle can include not just traded financial assets, but also consumer durables, real estate and human capital. Even if we take a narrow view of the model and limit its purview to traded financial assets, is it

[1] Although every asset pricing model is a capital asset pricing model, the finance profession reserves the acronym CAPM for the specific model of Sharpe (1964), Lintner (1965) and Black (1972) discussed here. Thus, throughout the paper we refer to the Sharpe-Lintner-Black model as the CAPM.

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legitimate to limit further the market portfolio to U.S. common stocks (a typical choice), or should the market be expanded to include bonds, and other financial assets, perhaps around the world? In the end, we argue that whether the model's problems reflect weaknesses in the theory or in its empirical implementation, the failure of the CAPM in empirical tests implies that most applications of the model are invalid.

We begin by outlining the logic of the CAPM, focusing on its predictions about risk and expected return. We then review the history of empirical work and what it says about shortcomings of the CAPM that pose challenges to be explained by alternative models.

The Logic of the CAPM

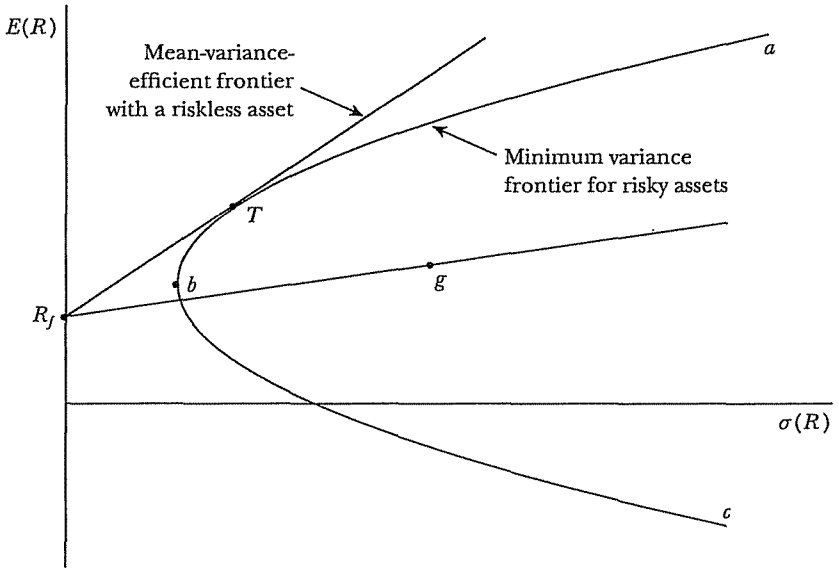
The CAPM builds on the model of portfolio choice developed by Harry Markowitz (1959). In Markowitz's model, an investor selects a portfolio at time $t - 1$ that produces a stochastic return at t. The model assumes investors are risk averse and, when choosing among portfolios, they care only about the mean and variance of their one-period investment return. As a result, investors choose "mean-variance-efficient" portfolios, in the sense that the portfolios 1) minimize the variance of portfolio return, given expected return, and 2) maximize expected return, given variance. Thus, the Markowitz approach is often called a "mean-variance model."

The portfolio model provides an algebraic condition on asset weights in mean-variance-efficient portfolios. The CAPM turns this algebraic statement into a testable prediction about the relation between risk and expected return by identifying a portfolio that must be efficient if asset prices are to clear the market of all assets.

Sharpe (1964) and Lintner (1965) add two key assumptions to the Markowitz model to identify a portfolio that must be mean-variance-efficient. The first assumption is *complete agreement*: given market clearing asset prices at $t - 1$, investors agree on the joint distribution of asset returns from $t - 1$ to t. And this distribution is the true one—that is, it is the distribution from which the returns we use to test the model are drawn. The second assumption is that there is *borrowing and lending at a risk-free rate*, which is the same for all investors and does not depend on the amount borrowed or lent.

Figure 1 describes portfolio opportunities and tells the CAPM story. The horizontal axis shows portfolio risk, measured by the standard deviation of portfolio return; the vertical axis shows expected return. The curve *abc*, which is called the minimum variance frontier, traces combinations of expected return and risk for portfolios of risky assets that minimize return variance at different levels of expected return. (These portfolios do not include risk-free borrowing and lending.) The tradeoff between risk and expected return for minimum variance portfolios is apparent. For example, an investor who wants a high expected return, perhaps at point a, must accept high volatility. At point T, the investor can have an interme-

Figure 1
Investment Opportunities



diate expected return with lower volatility. If there is no risk-free borrowing or lending, only portfolios above b along abc are mean-variance-efficient, since these portfolios also maximize expected return, given their return variances.

Adding risk-free borrowing and lending turns the efficient set into a straight line. Consider a portfolio that invests the proportion x of portfolio funds in a risk-free security and $1 - x$ in some portfolio g. If all funds are invested in the risk-free security—that is, they are loaned at the risk-free rate of interest—the result is the point R_f in Figure 1, a portfolio with zero variance and a risk-free rate of return. Combinations of risk-free lending and positive investment in g plot on the straight line between R_f and g. Points to the right of g on the line represent borrowing at the risk-free rate, with the proceeds from the borrowing used to increase investment in portfolio g. In short, portfolios that combine risk-free lending or borrowing with some risky portfolio g plot along a straight line from R_f through g in Figure 1.[2]

[2] Formally, the return, expected return and standard deviation of return on portfolios of the risk-free asset f and a risky portfolio g vary with x, the proportion of portfolio funds invested in f, as

$$R_p = xR_f + (1 - x)R_g,$$

$$E(R_p) = xR_f + (1 - x)E(R_g),$$

$$\sigma(R_p) = (1 - x)\sigma(R_g),\ x \leq 1.0,$$

which together imply that the portfolios plot along the line from R_f through g in Figure 1.

To obtain the mean-variance-efficient portfolios available with risk-free borrowing and lending, one swings a line from R_f in Figure 1 up and to the left as far as possible, to the tangency portfolio T. We can then see that all efficient portfolios are combinations of the risk-free asset (either risk-free borrowing or lending) and a single risky tangency portfolio, T. This key result is Tobin's (1958) "separation theorem."

The punch line of the CAPM is now straightforward. With complete agreement about distributions of returns, all investors see the same opportunity set (Figure 1), and they combine the same risky tangency portfolio T with risk-free lending or borrowing. Since all investors hold the same portfolio T of risky assets, it must be the value-weight market portfolio of risky assets. Specifically, each risky asset's weight in the tangency portfolio, which we now call M (for the "market"), must be the total market value of all outstanding units of the asset divided by the total market value of all risky assets. In addition, the risk-free rate must be set (along with the prices of risky assets) to clear the market for risk-free borrowing and lending.

In short, the CAPM assumptions imply that the market portfolio M must be on the minimum variance frontier if the asset market is to clear. This means that the algebraic relation that holds for any minimum variance portfolio must hold for the market portfolio. Specifically, if there are N risky assets,

$$\text{(Minimum Variance Condition for } M) \quad E(R_i) = E(R_{ZM}) + [E(R_M) - E(R_{ZM})]\beta_{iM}, \; i = 1, \ldots, N.$$

In this equation, $E(R_i)$ is the expected return on asset i, and β_{iM}, the market beta of asset i, is the covariance of its return with the market return divided by the variance of the market return,

$$\text{(Market Beta)} \quad \beta_{iM} = \frac{\text{cov}(R_i, R_M)}{\sigma^2(R_M)}.$$

The first term on the right-hand side of the minimum variance condition, $E(R_{ZM})$, is the expected return on assets that have market betas equal to zero, which means their returns are uncorrelated with the market return. The second term is a risk premium—the market beta of asset i, β_{iM}, times the premium per unit of beta, which is the expected market return, $E(R_M)$, minus $E(R_{ZM})$.

Since the market beta of asset i is also the slope in the regression of its return on the market return, a common (and correct) interpretation of beta is that it measures the sensitivity of the asset's return to variation in the market return. But there is another interpretation of beta more in line with the spirit of the portfolio model that underlies the CAPM. The risk of the market portfolio, as measured by the variance of its return (the denominator of β_{iM}), is a weighted average of the covariance risks of the assets in M (the numerators of β_{iM} for different assets).

Thus, β_{iM} is the covariance risk of asset i in M measured relative to the average covariance risk of assets, which is just the variance of the market return.[3] In economic terms, β_{iM} is proportional to the risk each dollar invested in asset i contributes to the market portfolio.

The last step in the development of the Sharpe-Lintner model is to use the assumption of risk-free borrowing and lending to nail down $E(R_{ZM})$, the expected return on zero-beta assets. A risky asset's return is uncorrelated with the market return—its beta is zero—when the average of the asset's covariances with the returns on other assets just offsets the variance of the asset's return. Such a risky asset is riskless in the market portfolio in the sense that it contributes nothing to the variance of the market return.

When there is risk-free borrowing and lending, the expected return on assets that are uncorrelated with the market return, $E(R_{ZM})$, must equal the risk-free rate, R_f. The relation between expected return and beta then becomes the familiar Sharpe-Lintner CAPM equation,

$$\text{(Sharpe-Lintner CAPM)} \quad E(R_i) = R_f + [E(R_M) - R_f]\beta_{iM}, \; i = 1, \ldots, N.$$

In words, the expected return on any asset i is the risk-free interest rate, R_f, plus a risk premium, which is the asset's market beta, β_{iM}, times the premium per unit of beta risk, $E(R_M) - R_f$.

Unrestricted risk-free borrowing and lending is an unrealistic assumption. Fischer Black (1972) develops a version of the CAPM without risk-free borrowing or lending. He shows that the CAPM's key result—that the market portfolio is mean-variance-efficient—can be obtained by instead allowing unrestricted short sales of risky assets. In brief, back in Figure 1, if there is no risk-free asset, investors select portfolios from along the mean-variance-efficient frontier from a to b. Market clearing prices imply that when one weights the efficient portfolios chosen by investors by their (positive) shares of aggregate invested wealth, the resulting portfolio is the market portfolio. The market portfolio is thus a portfolio of the efficient portfolios chosen by investors. With unrestricted short selling of risky assets, portfolios made up of efficient portfolios are themselves efficient. Thus, the market portfolio is efficient, which means that the minimum variance condition for M given above holds, and it is the expected return-risk relation of the Black CAPM.

The relations between expected return and market beta of the Black and Sharpe-Lintner versions of the CAPM differ only in terms of what each says about $E(R_{ZM})$, the expected return on assets uncorrelated with the market. The Black version says only that $E(R_{ZM})$ must be less than the expected market return, so the

[3] Formally, if x_{iM} is the weight of asset i in the market portfolio, then the variance of the portfolio's return is

$$\sigma^2(R_M) = Cov(R_M, R_M) = Cov\left(\sum_{i=1}^{N} x_{iM}R_i, R_M\right) = \sum_{i=1}^{N} x_{iM}Cov(R_i, R_M).$$

premium for beta is positive. In contrast, in the Sharpe-Lintner version of the model, $E(R_{ZM})$ must be the risk-free interest rate, R_f, and the premium per unit of beta risk is $E(R_M) - R_f$.

The assumption that short selling is unrestricted is as unrealistic as unrestricted risk-free borrowing and lending. If there is no risk-free asset and short sales of risky assets are not allowed, mean-variance investors still choose efficient portfolios—points above b on the abc curve in Figure 1. But when there is no short selling of risky assets and no risk-free asset, the algebra of portfolio efficiency says that portfolios made up of efficient portfolios are not typically efficient. This means that the market portfolio, which is a portfolio of the efficient portfolios chosen by investors, is not typically efficient. And the CAPM relation between expected return and market beta is lost. This does not rule out predictions about expected return and betas with respect to other efficient portfolios—if theory can specify portfolios that must be efficient if the market is to clear. But so far this has proven impossible.

In short, the familiar CAPM equation relating expected asset returns to their market betas is just an application to the market portfolio of the relation between expected return and portfolio beta that holds in any mean-variance-efficient portfolio. The efficiency of the market portfolio is based on many unrealistic assumptions, including complete agreement and either unrestricted risk-free borrowing and lending or unrestricted short selling of risky assets. But all interesting models involve unrealistic simplifications, which is why they must be tested against data.

Early Empirical Tests

Tests of the CAPM are based on three implications of the relation between expected return and market beta implied by the model. First, expected returns on all assets are linearly related to their betas, and no other variable has marginal explanatory power. Second, the beta premium is positive, meaning that the expected return on the market portfolio exceeds the expected return on assets whose returns are uncorrelated with the market return. Third, in the Sharpe-Lintner version of the model, assets uncorrelated with the market have expected returns equal to the risk-free interest rate, and the beta premium is the expected market return minus the risk-free rate. Most tests of these predictions use either cross-section or time-series regressions. Both approaches date to early tests of the model.

Tests on Risk Premiums

The early cross-section regression tests focus on the Sharpe-Lintner model's predictions about the intercept and slope in the relation between expected return and market beta. The approach is to regress a cross-section of average asset returns on estimates of asset betas. The model predicts that the intercept in these regressions is the risk-free interest rate, R_f, and the coefficient on beta is the expected return on the market in excess of the risk-free rate, $E(R_M) - R_f$.

Two problems in these tests quickly became apparent. First, estimates of beta

for individual assets are imprecise, creating a measurement error problem when they are used to explain average returns. Second, the regression residuals have common sources of variation, such as industry effects in average returns. Positive correlation in the residuals produces downward bias in the usual ordinary least squares estimates of the standard errors of the cross-section regression slopes.

To improve the precision of estimated betas, researchers such as Blume (1970), Friend and Blume (1970) and Black, Jensen and Scholes (1972) work with portfolios, rather than individual securities. Since expected returns and market betas combine in the same way in portfolios, if the CAPM explains security returns it also explains portfolio returns.[4] Estimates of beta for diversified portfolios are more precise than estimates for individual securities. Thus, using portfolios in cross-section regressions of average returns on betas reduces the critical errors in variables problem. Grouping, however, shrinks the range of betas and reduces statistical power. To mitigate this problem, researchers sort securities on beta when forming portfolios; the first portfolio contains securities with the lowest betas, and so on, up to the last portfolio with the highest beta assets. This sorting procedure is now standard in empirical tests.

Fama and MacBeth (1973) propose a method for addressing the inference problem caused by correlation of the residuals in cross-section regressions. Instead of estimating a single cross-section regression of average monthly returns on betas, they estimate month-by-month cross-section regressions of monthly returns on betas. The times-series means of the monthly slopes and intercepts, along with the standard errors of the means, are then used to test whether the average premium for beta is positive and whether the average return on assets uncorrelated with the market is equal to the average risk-free interest rate. In this approach, the standard errors of the average intercept and slope are determined by the month-to-month variation in the regression coefficients, which fully captures the effects of residual correlation on variation in the regression coefficients, but sidesteps the problem of actually estimating the correlations. The residual correlations are, in effect, captured via repeated sampling of the regression coefficients. This approach also becomes standard in the literature.

Jensen (1968) was the first to note that the Sharpe-Lintner version of the

[4] Formally, if x_{ip}, $i = 1, \ldots, N$, are the weights for assets in some portfolio p, the expected return and market beta for the portfolio are related to the expected returns and betas of assets as

$$E(R_p) = \sum_{i=1}^{N} x_{ip} E(R_i), \text{ and } \beta_{pM} = \sum_{i=1}^{N} x_{ip} \beta_{pM}.$$

Thus, the CAPM relation between expected return and beta,

$$E(R_i) = E(R_f) + [E(R_M) - E(R_f)]\beta_{iM},$$

holds when asset i is a portfolio, as well as when i is an individual security.

relation between expected return and market beta also implies a time-series regression test. The Sharpe-Lintner CAPM says that the expected value of an asset's excess return (the asset's return minus the risk-free interest rate, $R_{it} - R_{ft}$) is completely explained by its expected CAPM risk premium (its beta times the expected value of $R_{Mt} - R_{ft}$). This implies that "Jensen's alpha," the intercept term in the time-series regression,

$$\text{(Time-Series Regression)} \quad R_{it} - R_{ft} = \alpha_i + \beta_{iM}(R_{Mt} - R_{ft}) + \varepsilon_{it},$$

is zero for each asset.

The early tests firmly reject the Sharpe-Lintner version of the CAPM. There is a positive relation between beta and average return, but it is too "flat." Recall that, in cross-section regressions, the Sharpe-Lintner model predicts that the intercept is the risk-free rate and the coefficient on beta is the expected market return in excess of the risk-free rate, $E(R_M) - R_f$. The regressions consistently find that the intercept is greater than the average risk-free rate (typically proxied as the return on a one-month Treasury bill), and the coefficient on beta is less than the average excess market return (proxied as the average return on a portfolio of U.S. common stocks minus the Treasury bill rate). This is true in the early tests, such as Douglas (1968), Black, Jensen and Scholes (1972), Miller and Scholes (1972), Blume and Friend (1973) and Fama and MacBeth (1973), as well as in more recent cross-section regression tests, like Fama and French (1992).

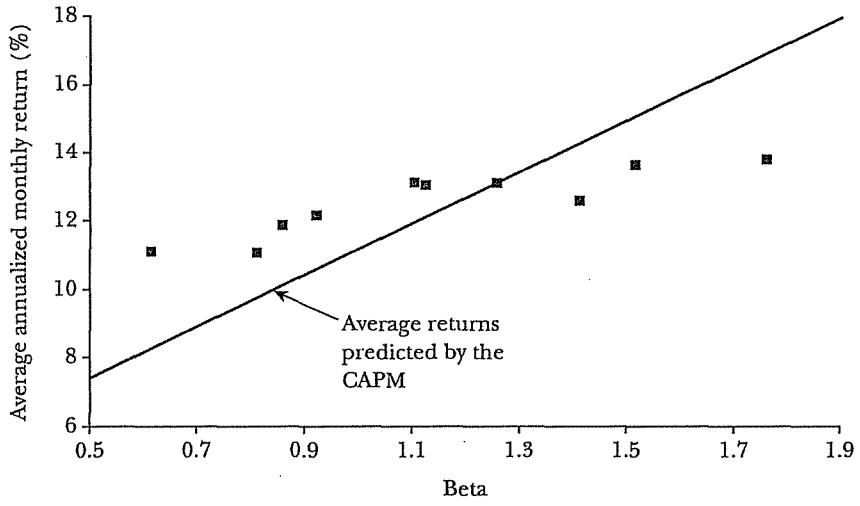
The evidence that the relation between beta and average return is too flat is confirmed in time-series tests, such as Friend and Blume (1970), Black, Jensen and Scholes (1972) and Stambaugh (1982). The intercepts in time-series regressions of excess asset returns on the excess market return are positive for assets with low betas and negative for assets with high betas.

Figure 2 provides an updated example of the evidence. In December of each year, we estimate a preranking beta for every NYSE (1928–2003), AMEX (1963–2003) and NASDAQ (1972–2003) stock in the CRSP (Center for Research in Security Prices of the University of Chicago) database, using two to five years (as available) of prior monthly returns.[5] We then form ten value-weight portfolios based on these preranking betas and compute their returns for the next twelve months. We repeat this process for each year from 1928 to 2003. The result is 912 monthly returns on ten beta-sorted portfolios. Figure 2 plots each portfolio's average return against its postranking beta, estimated by regressing its monthly returns for 1928–2003 on the return on the CRSP value-weight portfolio of U.S. common stocks.

The Sharpe-Lintner CAPM predicts that the portfolios plot along a straight

[5] To be included in the sample for year t, a security must have market equity data (price times shares outstanding) for December of $t - 1$, and CRSP must classify it as ordinary common equity. Thus, we exclude securities such as American Depository Receipts (ADRs) and Real Estate Investment Trusts (REITs).

Figure 2
Average Annualized Monthly Return versus Beta for Value Weight Portfolios Formed on Prior Beta, 1928–2003



line, with an intercept equal to the risk-free rate, R_f, and a slope equal to the expected excess return on the market, $E(R_M) - R_f$. We use the average one-month Treasury bill rate and the average excess CRSP market return for 1928–2003 to estimate the predicted line in Figure 2. Confirming earlier evidence, the relation between beta and average return for the ten portfolios is much flatter than the Sharpe-Lintner CAPM predicts. The returns on the low beta portfolios are too high, and the returns on the high beta portfolios are too low. For example, the predicted return on the portfolio with the lowest beta is 8.3 percent per year; the actual return is 11.1 percent. The predicted return on the portfolio with the highest beta is 16.8 percent per year; the actual is 13.7 percent.

Although the observed premium per unit of beta is lower than the Sharpe-Lintner model predicts, the relation between average return and beta in Figure 2 is roughly linear. This is consistent with the Black version of the CAPM, which predicts only that the beta premium is positive. Even this less restrictive model, however, eventually succumbs to the data.

Testing Whether Market Betas Explain Expected Returns

The Sharpe-Lintner and Black versions of the CAPM share the prediction that the market portfolio is mean-variance-efficient. This implies that differences in expected return across securities and portfolios are entirely explained by differences in market beta; other variables should add nothing to the explanation of expected return. This prediction plays a prominent role in tests of the CAPM. In the early work, the weapon of choice is cross-section regressions.

In the framework of Fama and MacBeth (1973), one simply adds predetermined explanatory variables to the month-by-month cross-section regressions of

returns on beta. If all differences in expected return are explained by beta, the average slopes on the additional variables should not be reliably different from zero. Clearly, the trick in the cross-section regression approach is to choose specific additional variables likely to expose any problems of the CAPM prediction that, because the market portfolio is efficient, market betas suffice to explain expected asset returns.

For example, in Fama and MacBeth (1973) the additional variables are squared market betas (to test the prediction that the relation between expected return and beta is linear) and residual variances from regressions of returns on the market return (to test the prediction that market beta is the only measure of risk needed to explain expected returns). These variables do not add to the explanation of average returns provided by beta. Thus, the results of Fama and MacBeth (1973) are consistent with the hypothesis that their market proxy—an equal-weight portfolio of NYSE stocks—is on the minimum variance frontier.

The hypothesis that market betas completely explain expected returns can also be tested using time-series regressions. In the time-series regression described above (the excess return on asset i regressed on the excess market return), the intercept is the difference between the asset's average excess return and the excess return predicted by the Sharpe-Lintner model, that is, beta times the average excess market return. If the model holds, there is no way to group assets into portfolios whose intercepts are reliably different from zero. For example, the intercepts for a portfolio of stocks with high ratios of earnings to price and a portfolio of stocks with low earning-price ratios should both be zero. Thus, to test the hypothesis that market betas suffice to explain expected returns, one estimates the time-series regression for a set of assets (or portfolios) and then jointly tests the vector of regression intercepts against zero. The trick in this approach is to choose the left-hand-side assets (or portfolios) in a way likely to expose any shortcoming of the CAPM prediction that market betas suffice to explain expected asset returns.

In early applications, researchers use a variety of tests to determine whether the intercepts in a set of time-series regressions are all zero. The tests have the same asymptotic properties, but there is controversy about which has the best small sample properties. Gibbons, Ross and Shanken (1989) settle the debate by providing an F-test on the intercepts that has exact small-sample properties. They also show that the test has a simple economic interpretation. In effect, the test constructs a candidate for the tangency portfolio T in Figure 1 by optimally combining the market proxy and the left-hand-side assets of the time-series regressions. The estimator then tests whether the efficient set provided by the combination of this tangency portfolio and the risk-free asset is reliably superior to the one obtained by combining the risk-free asset with the market proxy alone. In other words, the Gibbons, Ross and Shanken statistic tests whether the market proxy is the tangency portfolio in the set of portfolios that can be constructed by combining the market portfolio with the specific assets used as dependent variables in the time-series regressions.

Enlightened by this insight of Gibbons, Ross and Shanken (1989), one can see

a similar interpretation of the cross-section regression test of whether market betas suffice to explain expected returns. In this case, the test is whether the additional explanatory variables in a cross-section regression identify patterns in the returns on the left-hand-side assets that are not explained by the assets' market betas. This amounts to testing whether the market proxy is on the minimum variance frontier that can be constructed using the market proxy and the left-hand-side assets included in the tests.

An important lesson from this discussion is that time-series and cross-section regressions do not, strictly speaking, test the CAPM. What is literally tested is whether a specific proxy for the market portfolio (typically a portfolio of U.S. common stocks) is efficient in the set of portfolios that can be constructed from it and the left-hand-side assets used in the test. One might conclude from this that the CAPM has never been tested, and prospects for testing it are not good because 1) the set of left-hand-side assets does not include all marketable assets, and 2) data for the true market portfolio of all assets are likely beyond reach (Roll, 1977; more on this later). But this criticism can be leveled at tests of any economic model when the tests are less than exhaustive or when they use proxies for the variables called for by the model.

The bottom line from the early cross-section regression tests of the CAPM, such as Fama and MacBeth (1973), and the early time-series regression tests, like Gibbons (1982) and Stambaugh (1982), is that standard market proxies seem to be on the minimum variance frontier. That is, the central predictions of the Black version of the CAPM, that market betas suffice to explain expected returns and that the risk premium for beta is positive, seem to hold. But the more specific prediction of the Sharpe-Lintner CAPM that the premium per unit of beta is the expected market return minus the risk-free interest rate is consistently rejected.

The success of the Black version of the CAPM in early tests produced a consensus that the model is a good description of expected returns. These early results, coupled with the model's simplicity and intuitive appeal, pushed the CAPM to the forefront of finance.

Recent Tests

Starting in the late 1970s, empirical work appears that challenges even the Black version of the CAPM. Specifically, evidence mounts that much of the variation in expected return is unrelated to market beta.

The first blow is Basu's (1977) evidence that when common stocks are sorted on earnings-price ratios, future returns on high E/P stocks are higher than predicted by the CAPM. Banz (1981) documents a size effect: when stocks are sorted on market capitalization (price times shares outstanding), average returns on small stocks are higher than predicted by the CAPM. Bhandari (1988) finds that high debt-equity ratios (book value of debt over the market value of equity, a measure of leverage) are associated with returns that are too high relative to their market betas.

Finally, Statman (1980) and Rosenberg, Reid and Lanstein (1985) document that stocks with high book-to-market equity ratios (B/M, the ratio of the book value of a common stock to its market value) have high average returns that are not captured by their betas.

There is a theme in the contradictions of the CAPM summarized above. Ratios involving stock prices have information about expected returns missed by market betas. On reflection, this is not surprising. A stock's price depends not only on the expected cash flows it will provide, but also on the expected returns that discount expected cash flows back to the present. Thus, in principle, the cross-section of prices has information about the cross-section of expected returns. (A high expected return implies a high discount rate and a low price.) The cross-section of stock prices is, however, arbitrarily affected by differences in scale (or units). But with a judicious choice of scaling variable X, the ratio X/P can reveal differences in the cross-section of expected stock returns. Such ratios are thus prime candidates to expose shortcomings of asset pricing models—in the case of the CAPM, shortcomings of the prediction that market betas suffice to explain expected returns (Ball, 1978). The contradictions of the CAPM summarized above suggest that earnings-price, debt-equity and book-to-market ratios indeed play this role.

Fama and French (1992) update and synthesize the evidence on the empirical failures of the CAPM. Using the cross-section regression approach, they confirm that size, earnings-price, debt-equity and book-to-market ratios add to the explanation of expected stock returns provided by market beta. Fama and French (1996) reach the same conclusion using the time-series regression approach applied to portfolios of stocks sorted on price ratios. They also find that different price ratios have much the same information about expected returns. This is not surprising given that price is the common driving force in the price ratios, and the numerators are just scaling variables used to extract the information in price about expected returns.

Fama and French (1992) also confirm the evidence (Reinganum, 1981; Stambaugh, 1982; Lakonishok and Shapiro, 1986) that the relation between average return and beta for common stocks is even flatter after the sample periods used in the early empirical work on the CAPM. The estimate of the beta premium is, however, clouded by statistical uncertainty (a large standard error). Kothari, Shanken and Sloan (1995) try to resuscitate the Sharpe-Lintner CAPM by arguing that the weak relation between average return and beta is just a chance result. But the strong evidence that other variables capture variation in expected return missed by beta makes this argument irrelevant. If betas do not suffice to explain expected returns, the market portfolio is not efficient, and the CAPM is dead in its tracks. Evidence on the size of the market premium can neither save the model nor further doom it.

The synthesis of the evidence on the empirical problems of the CAPM provided by Fama and French (1992) serves as a catalyst, marking the point when it is generally acknowledged that the CAPM has potentially fatal problems. Research then turns to explanations.

One possibility is that the CAPM's problems are spurious, the result of data dredging—publication-hungry researchers scouring the data and unearthing contradictions that occur in specific samples as a result of chance. A standard response to this concern is to test for similar findings in other samples. Chan, Hamao and Lakonishok (1991) find a strong relation between book-to-market equity (B/M) and average return for Japanese stocks. Capaul, Rowley and Sharpe (1993) observe a similar B/M effect in four European stock markets and in Japan. Fama and French (1998) find that the price ratios that produce problems for the CAPM in U.S. data show up in the same way in the stock returns of twelve non-U.S. major markets, and they are present in emerging market returns. This evidence suggests that the contradictions of the CAPM associated with price ratios are not sample specific.

Explanations: Irrational Pricing or Risk

Among those who conclude that the empirical failures of the CAPM are fatal, two stories emerge. On one side are the behavioralists. Their view is based on evidence that stocks with high ratios of book value to market price are typically firms that have fallen on bad times, while low B/M is associated with growth firms (Lakonishok, Shleifer and Vishny, 1994; Fama and French, 1995). The behavioralists argue that sorting firms on book-to-market ratios exposes investor overreaction to good and bad times. Investors overextrapolate past performance, resulting in stock prices that are too high for growth (low B/M) firms and too low for distressed (high B/M, so-called value) firms. When the overreaction is eventually corrected, the result is high returns for value stocks and low returns for growth stocks. Proponents of this view include DeBondt and Thaler (1987), Lakonishok, Shleifer and Vishny (1994) and Haugen (1995).

The second story for explaining the empirical contradictions of the CAPM is that they point to the need for a more complicated asset pricing model. The CAPM is based on many unrealistic assumptions. For example, the assumption that investors care only about the mean and variance of one-period portfolio returns is extreme. It is reasonable that investors also care about how their portfolio return covaries with labor income and future investment opportunities, so a portfolio's return variance misses important dimensions of risk. If so, market beta is not a complete description of an asset's risk, and we should not be surprised to find that differences in expected return are not completely explained by differences in beta. In this view, the search should turn to asset pricing models that do a better job explaining average returns.

Merton's (1973) intertemporal capital asset pricing model (ICAPM) is a natural extension of the CAPM. The ICAPM begins with a different assumption about investor objectives. In the CAPM, investors care only about the wealth their portfolio produces at the end of the current period. In the ICAPM, investors are concerned not only with their end-of-period payoff, but also with the opportunities

they will have to consume or invest the payoff. Thus, when choosing a portfolio at time $t - 1$, ICAPM investors consider how their wealth at t might vary with future *state variables,* including labor income, the prices of consumption goods and the nature of portfolio opportunities at t, and expectations about the labor income, consumption and investment opportunities to be available after t.

Like CAPM investors, ICAPM investors prefer high expected return and low return variance. But ICAPM investors are also concerned with the covariances of portfolio returns with state variables. As a result, optimal portfolios are "multifactor efficient," which means they have the largest possible expected returns, given their return variances and the covariances of their returns with the relevant state variables.

Fama (1996) shows that the ICAPM generalizes the logic of the CAPM. That is, if there is risk-free borrowing and lending or if short sales of risky assets are allowed, market clearing prices imply that the market portfolio is multifactor efficient. Moreover, multifactor efficiency implies a relation between expected return and beta risks, but it requires additional betas, along with a market beta, to explain expected returns.

An ideal implementation of the ICAPM would specify the state variables that affect expected returns. Fama and French (1993) take a more indirect approach, perhaps more in the spirit of Ross's (1976) arbitrage pricing theory. They argue that though size and book-to-market equity are not themselves state variables, the higher average returns on small stocks and high book-to-market stocks reflect unidentified state variables that produce undiversifiable risks (covariances) in returns that are not captured by the market return and are priced separately from market betas. In support of this claim, they show that the returns on the stocks of small firms covary more with one another than with returns on the stocks of large firms, and returns on high book-to-market (value) stocks covary more with one another than with returns on low book-to-market (growth) stocks. Fama and French (1995) show that there are similar size and book-to-market patterns in the covariation of fundamentals like earnings and sales.

Based on this evidence, Fama and French (1993, 1996) propose a three-factor model for expected returns,

$$\text{(Three-Factor Model)} \quad E(R_{it}) - R_{ft} = \beta_{iM}[E(R_{Mt}) - R_{ft}] + \beta_{is}E(SMB_t) + \beta_{ih}E(HML_t).$$

In this equation, SMB_t (small minus big) is the difference between the returns on diversified portfolios of small and big stocks, HML_t (high minus low) is the difference between the returns on diversified portfolios of high and low B/M stocks, and the betas are slopes in the multiple regression of $R_{it} - R_{ft}$ on $R_{Mt} - R_{ft}$, SMB_t and HML_t.

For perspective, the average value of the market premium $R_{Mt} - R_{ft}$ for 1927–2003 is 8.3 percent per year, which is 3.5 standard errors from zero. The

average values of SMB_t, and HML_t are 3.6 percent and 5.0 percent per year, and they are 2.1 and 3.1 standard errors from zero. All three premiums are volatile, with annual standard deviations of 21.0 percent ($R_{Mt} - R_{ft}$), 14.6 percent (SMB_t) and 14.2 percent (HML_t) per year. Although the average values of the premiums are large, high volatility implies substantial uncertainty about the true expected premiums.

One implication of the expected return equation of the three-factor model is that the intercept α_i in the time-series regression,

$$R_{it} - R_{ft} = \alpha_i + \beta_{iM}(R_{Mt} - R_{ft}) + \beta_{is}SMB_t + \beta_{ih}HML_t + \varepsilon_{it},$$

is zero for all assets i. Using this criterion, Fama and French (1993, 1996) find that the model captures much of the variation in average return for portfolios formed on size, book-to-market equity and other price ratios that cause problems for the CAPM. Fama and French (1998) show that an international version of the model performs better than an international CAPM in describing average returns on portfolios formed on scaled price variables for stocks in 13 major markets.

The three-factor model is now widely used in empirical research that requires a model of expected returns. Estimates of α_i from the time-series regression above are used to calibrate how rapidly stock prices respond to new information (for example, Loughran and Ritter, 1995; Mitchell and Stafford, 2000). They are also used to measure the special information of portfolio managers, for example, in Carhart's (1997) study of mutual fund performance. Among practitioners like Ibbotson Associates, the model is offered as an alternative to the CAPM for estimating the cost of equity capital.

From a theoretical perspective, the main shortcoming of the three-factor model is its empirical motivation. The small-minus-big (SMB) and high-minus-low (HML) explanatory returns are not motivated by predictions about state variables of concern to investors. Instead they are brute force constructs meant to capture the patterns uncovered by previous work on how average stock returns vary with size and the book-to-market equity ratio.

But this concern is not fatal. The ICAPM does not require that the additional portfolios used along with the market portfolio to explain expected returns "mimic" the relevant state variables. In both the ICAPM and the arbitrage pricing theory, it suffices that the additional portfolios are well diversified (in the terminology of Fama, 1996, they are multifactor minimum variance) and that they are sufficiently different from the market portfolio to capture covariation in returns and variation in expected returns missed by the market portfolio. Thus, adding diversified portfolios that capture covariation in returns and variation in average returns left unexplained by the market is in the spirit of both the ICAPM and the Ross's arbitrage pricing theory.

The behavioralists are not impressed by the evidence for a risk-based explanation of the failures of the CAPM. They typically concede that the three-factor model captures covariation in returns missed by the market return and that it picks

up much of the size and value effects in average returns left unexplained by the CAPM. But their view is that the average return premium associated with the model's book-to-market factor—which does the heavy lifting in the improvements to the CAPM—is itself the result of investor overreaction that happens to be correlated across firms in a way that just looks like a risk story. In short, in the behavioral view, the market tries to set CAPM prices, and violations of the CAPM are due to mispricing.

The conflict between the behavioral irrational pricing story and the rational risk story for the empirical failures of the CAPM leaves us at a timeworn impasse. Fama (1970) emphasizes that the hypothesis that prices properly reflect available information must be tested in the context of a model of expected returns, like the CAPM. Intuitively, to test whether prices are rational, one must take a stand on what the market is trying to do in setting prices—that is, what is risk and what is the relation between expected return and risk? When tests reject the CAPM, one cannot say whether the problem is its assumption that prices are rational (the behavioral view) or violations of other assumptions that are also necessary to produce the CAPM (our position).

Fortunately, for some applications, the way one uses the three-factor model does not depend on one's view about whether its average return premiums are the rational result of underlying state variable risks, the result of irrational investor behavior or sample specific results of chance. For example, when measuring the response of stock prices to new information or when evaluating the performance of managed portfolios, one wants to account for known patterns in returns and average returns for the period examined, whatever their source. Similarly, when estimating the cost of equity capital, one might be unconcerned with whether expected return premiums are rational or irrational since they are in either case part of the opportunity cost of equity capital (Stein, 1996). But the cost of capital is forward looking, so if the premiums are sample specific they are irrelevant.

The three-factor model is hardly a panacea. Its most serious problem is the momentum effect of Jegadeesh and Titman (1993). Stocks that do well relative to the market over the last three to twelve months tend to continue to do well for the next few months, and stocks that do poorly continue to do poorly. This momentum effect is distinct from the value effect captured by book-to-market equity and other price ratios. Moreover, the momentum effect is left unexplained by the three-factor model, as well as by the CAPM. Following Carhart (1997), one response is to add a momentum factor (the difference between the returns on diversified portfolios of short-term winners and losers) to the three-factor model. This step is again legitimate in applications where the goal is to abstract from known patterns in average returns to uncover information-specific or manager-specific effects. But since the momentum effect is short-lived, it is largely irrelevant for estimates of the cost of equity capital.

Another strand of research points to problems in both the three-factor model and the CAPM. Frankel and Lee (1998), Dechow, Hutton and Sloan (1999), Piotroski (2000) and others show that in portfolios formed on price ratios like

book-to-market equity, stocks with higher expected cash flows have higher average returns that are not captured by the three-factor model or the CAPM. The authors interpret their results as evidence that stock prices are irrational, in the sense that they do not reflect available information about expected profitability.

In truth, however, one can't tell whether the problem is bad pricing or a bad asset pricing model. A stock's price can always be expressed as the present value of expected future cash flows discounted at the expected return on the stock (Campbell and Shiller, 1989; Vuolteenaho, 2002). It follows that if two stocks have the same price, the one with higher expected cash flows must have a higher expected return. This holds true whether pricing is rational or irrational. Thus, when one observes a positive relation between expected cash flows and expected returns that is left unexplained by the CAPM or the three-factor model, one can't tell whether it is the result of irrational pricing or a misspecified asset pricing model.

The Market Proxy Problem

Roll (1977) argues that the CAPM has never been tested and probably never will be. The problem is that the market portfolio at the heart of the model is theoretically and empirically elusive. It is not theoretically clear which assets (for example, human capital) can legitimately be excluded from the market portfolio, and data availability substantially limits the assets that are included. As a result, tests of the CAPM are forced to use proxies for the market portfolio, in effect testing whether the proxies are on the minimum variance frontier. Roll argues that because the tests use proxies, not the true market portfolio, we learn nothing about the CAPM.

We are more pragmatic. The relation between expected return and market beta of the CAPM is just the minimum variance condition that holds in any efficient portfolio, applied to the market portfolio. Thus, if we can find a market proxy that is on the minimum variance frontier, it can be used to describe differences in expected returns, and we would be happy to use it for this purpose. The strong rejections of the CAPM described above, however, say that researchers have not uncovered a reasonable market proxy that is close to the minimum variance frontier. If researchers are constrained to reasonable proxies, we doubt they ever will.

Our pessimism is fueled by several empirical results. Stambaugh (1982) tests the CAPM using a range of market portfolios that include, in addition to U.S. common stocks, corporate and government bonds, preferred stocks, real estate and other consumer durables. He finds that tests of the CAPM are not sensitive to expanding the market proxy beyond common stocks, basically because the volatility of expanded market returns is dominated by the volatility of stock returns.

One need not be convinced by Stambaugh's (1982) results since his market proxies are limited to U.S. assets. If international capital markets are open and asset prices conform to an international version of the CAPM, the market portfolio

should include international assets. Fama and French (1998) find, however, that betas for a global stock market portfolio cannot explain the high average returns observed around the world on stocks with high book-to-market or high earnings-price ratios.

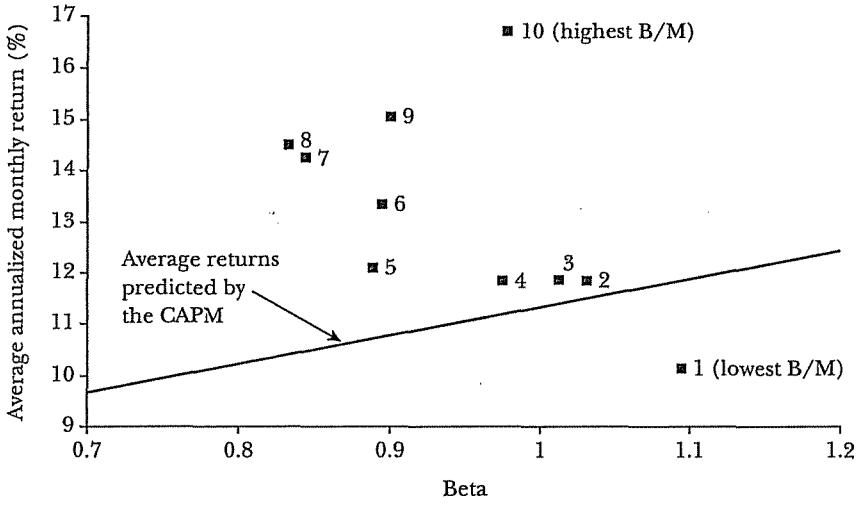
A major problem for the CAPM is that portfolios formed by sorting stocks on price ratios produce a wide range of average returns, but the average returns are not positively related to market betas (Lakonishok, Shleifer and Vishny, 1994; Fama and French, 1996, 1998). The problem is illustrated in Figure 3, which shows average returns and betas (calculated with respect to the CRSP value-weight portfolio of NYSE, AMEX and NASDAQ stocks) for July 1963 to December 2003 for ten portfolios of U.S. stocks formed annually on sorted values of the book-to-market equity ratio (B/M).[6]

Average returns on the B/M portfolios increase almost monotonically, from 10.1 percent per year for the lowest B/M group (portfolio 1) to an impressive 16.7 percent for the highest (portfolio 10). But the positive relation between beta and average return predicted by the CAPM is notably absent. For example, the portfolio with the lowest book-to-market ratio has the highest beta but the lowest average return. The estimated beta for the portfolio with the highest book-to-market ratio and the highest average return is only 0.98. With an average annualized value of the riskfree interest rate, R_f, of 5.8 percent and an average annualized market premium, $R_M - R_f$, of 11.3 percent, the Sharpe-Lintner CAPM predicts an average return of 11.8 percent for the lowest B/M portfolio and 11.2 percent for the highest, far from the observed values, 10.1 and 16.7 percent. For the Sharpe-Lintner model to "work" on these portfolios, their market betas must change dramatically, from 1.09 to 0.78 for the lowest B/M portfolio and from 0.98 to 1.98 for the highest. We judge it unlikely that alternative proxies for the market portfolio will produce betas and a market premium that can explain the average returns on these portfolios.

It is always possible that researchers will redeem the CAPM by finding a reasonable proxy for the market portfolio that is on the minimum variance frontier. We emphasize, however, that this possibility cannot be used to justify the way the CAPM is currently applied. The problem is that applications typically use the same

[6] Stock return data are from CRSP, and book equity data are from Compustat and the Moody's Industrials, Transportation, Utilities and Financials manuals. Stocks are allocated to ten portfolios at the end of June of each year t (1963 to 2003) using the ratio of book equity for the fiscal year ending in calendar year $t - 1$, divided by market equity at the end of December of $t - 1$. Book equity is the book value of stockholders' equity, plus balance sheet deferred taxes and investment tax credit (if available), minus the book value of preferred stock. Depending on availability, we use the redemption, liquidation or par value (in that order) to estimate the book value of preferred stock. Stockholders' equity is the value reported by Moody's or Compustat, if it is available. If not, we measure stockholders' equity as the book value of common equity plus the par value of preferred stock or the book value of assets minus total liabilities (in that order). The portfolios for year t include NYSE (1963–2003), AMEX (1963–2003) and NASDAQ (1972–2003) stocks with positive book equity in $t - 1$ and market equity (from CRSP) for December of $t - 1$ and June of t. The portfolios exclude securities CRSP does not classify as ordinary common equity. The breakpoints for year t use only securities that are on the NYSE in June of year t.

Figure 3
Average Annualized Monthly Return versus Beta for Value Weight Portfolios Formed on B/M, 1963–2003



market proxies, like the value-weight portfolio of U.S. stocks, that lead to rejections of the model in empirical tests. The contradictions of the CAPM observed when such proxies are used in tests of the model show up as bad estimates of expected returns in applications; for example, estimates of the cost of equity capital that are too low (relative to historical average returns) for small stocks and for stocks with high book-to-market equity ratios. In short, if a market proxy does not work in tests of the CAPM, it does not work in applications.

Conclusions

The version of the CAPM developed by Sharpe (1964) and Lintner (1965) has never been an empirical success. In the early empirical work, the Black (1972) version of the model, which can accommodate a flatter tradeoff of average return for market beta, has some success. But in the late 1970s, research begins to uncover variables like size, various price ratios and momentum that add to the explanation of average returns provided by beta. The problems are serious enough to invalidate most applications of the CAPM.

For example, finance textbooks often recommend using the Sharpe-Lintner CAPM risk-return relation to estimate the cost of equity capital. The prescription is to estimate a stock's market beta and combine it with the risk-free interest rate and the average market risk premium to produce an estimate of the cost of equity. The typical market portfolio in these exercises includes just U.S. common stocks. But empirical work, old and new, tells us that the relation between beta and average return is flatter than predicted by the Sharpe-Lintner version of the CAPM. As a

result, CAPM estimates of the cost of equity for high beta stocks are too high (relative to historical average returns) and estimates for low beta stocks are too low (Friend and Blume, 1970). Similarly, if the high average returns on value stocks (with high book-to-market ratios) imply high expected returns, CAPM cost of equity estimates for such stocks are too low.[7]

The CAPM is also often used to measure the performance of mutual funds and other managed portfolios. The approach, dating to Jensen (1968), is to estimate the CAPM time-series regression for a portfolio and use the intercept (Jensen's alpha) to measure abnormal performance. The problem is that, because of the empirical failings of the CAPM, even passively managed stock portfolios produce abnormal returns if their investment strategies involve tilts toward CAPM problems (Elton, Gruber, Das and Hlavka, 1993). For example, funds that concentrate on low beta stocks, small stocks or value stocks will tend to produce positive abnormal returns relative to the predictions of the Sharpe-Lintner CAPM, even when the fund managers have no special talent for picking winners.

The CAPM, like Markowitz's (1952, 1959) portfolio model on which it is built, is nevertheless a theoretical tour de force. We continue to teach the CAPM as an introduction to the fundamental concepts of portfolio theory and asset pricing, to be built on by more complicated models like Merton's (1973) ICAPM. But we also warn students that despite its seductive simplicity, the CAPM's empirical problems probably invalidate its use in applications.

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[7] The problems are compounded by the large standard errors of estimates of the market premium and of betas for individual stocks, which probably suffice to make CAPM estimates of the cost of equity rather meaningless, even if the CAPM holds (Fama and French, 1997; Pastor and Stambaugh, 1999). For example, using the U.S. Treasury bill rate as the risk-free interest rate and the CRSP value-weight portfolio of publicly traded U.S. common stocks, the average value of the equity premium $R_{Mt} - R_{ft}$ for 1927–2003 is 8.3 percent per year, with a standard error of 2.4 percent. The two standard error range thus runs from 3.5 percent to 13.1 percent, which is sufficient to make most projects appear either profitable or unprofitable. This problem is, however, hardly special to the CAPM. For example, expected returns in all versions of Merton's (1973) ICAPM include a market beta and the expected market premium. Also, as noted earlier the expected values of the size and book-to-market premiums in the Fama-French three-factor model are also estimated with substantial error.

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Size as a Predictor of Equity Returns

The size effect is based on the empirical observation that companies of smaller size are associated with greater risk and, therefore, have greater cost of capital. The "size" of a company is one of the most important risk elements to consider when developing cost of equity capital estimates for use in valuing a business simply because size has been shown to be a *predictor* of equity returns. In other words, there is a significant (negative) relationship between size and historical equity returns – as size *decreases*, returns tend to *increase*, and vice versa.[1]

Traditionally, researchers have used market value of equity (market capitalization, or simply "market cap") as a measure of size in conducting historical rate of return studies. However, as we discuss later in this chapter, market cap is not the only measure of size that can be used to predict return, nor is it necessarily the best measure of size to use.

Much of the research of the size effect relies on the data provided by the Center for Research in Security Prices (CRSP) databases at the University of Chicago. The CRSP database includes U.S. equity total returns (capital appreciation plus dividends) going back to 1926.

The CRSP databases enabled researchers to look at stocks with different characteristics and analyze how their returns differed. One of the first characteristics that researchers analyzed was large-market-capitalization (large-cap) companies versus small-market-capitalization (small-cap) companies.

For example, a 1981 study by Rolf Banz examined the returns of New York Stock Exchange (NYSE) small-cap companies compared to the returns of NYSE large-cap companies over the period 1926–1975.[2] What Banz found was that the returns of small-cap companies were *greater* than the returns for large-cap companies. Banz's 1981 study is often cited as the first comprehensive study of the size effect.

Possible Explanations for the Greater Returns of Smaller Companies

Some valuation analysts treat small firms as equivalent to scaled-down large firms. This is likely an erroneous assumption.

There are theoretical reasons for the greater returns of smaller companies (i.e., the "size effect"), which might include: (i) small stocks are less liquid (with higher associated

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2 Rolf W. Banz, "The Relationship between Return and Market Value of Common Stocks", *Journal of Financial Economics* (March 1981): 3–18. This paper is often cited as the first comprehensive study of the size effect.

F I F T H E D I T I O N

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9 Capital Budgeting and Risk

Long before the development of modern theories linking risk and expected return, smart financial managers adjusted for risk in capital budgeting. They realized intuitively that, other things being equal, risky projects are less desirable than safe ones. Therefore financial managers demanded a higher rate of return from risky projects, or they based their decisions on conservative estimates of the cash flows.

Various rules of thumb are often used to make these risk adjustments. For example, many companies estimate the rate of return required by investors in their securities and use the **company cost of capital** to discount the cash flows on all new projects. Since investors require a higher rate of return from a very risky company, such a firm will have a higher company cost of capital and will set a higher discount rate for its new investment opportunities. For example, in Table 8-1 we estimated that investors expected a rate of return of .163 or about 16.5 percent from Microsoft common stock. Therefore, according to the company cost of capital rule, Microsoft should have been using a 16.5 percent discount rate to compute project net present values.[1]

This is a step in the right direction. Even though we can't measure risk or the expected return on risky securities with absolute precision, it is still reasonable to assert that Microsoft faced more risk than the average firm and, therefore, should have demanded a higher rate of return from its capital investments.

But the company cost of capital rule can also get a firm into trouble if the new projects are more or less risky than its existing business. Each project should be evaluated at its *own* opportunity cost of capital. This is a clear implication of the value-additivity principle introduced in Chapter 7. For a firm composed of assets A and B, the firm value is

$$\text{Firm value} = PV(AB) = PV(A) + PV(B) = \text{sum of separate asset values}$$

Here PV(A) and PV(B) are valued just as if they were mini-firms in which stockholders could invest directly. Investors would value A by discounting its forecasted cash flows at a rate reflecting the risk of A. They would value B by discounting at a rate reflecting the risk of B. The two discount rates will, in general, be different.

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[1]Microsoft did not use any significant amount of debt financing. Thus its cost of capital is the rate of return investors expect on its common stock. The complications caused by debt are discussed later in this chapter.

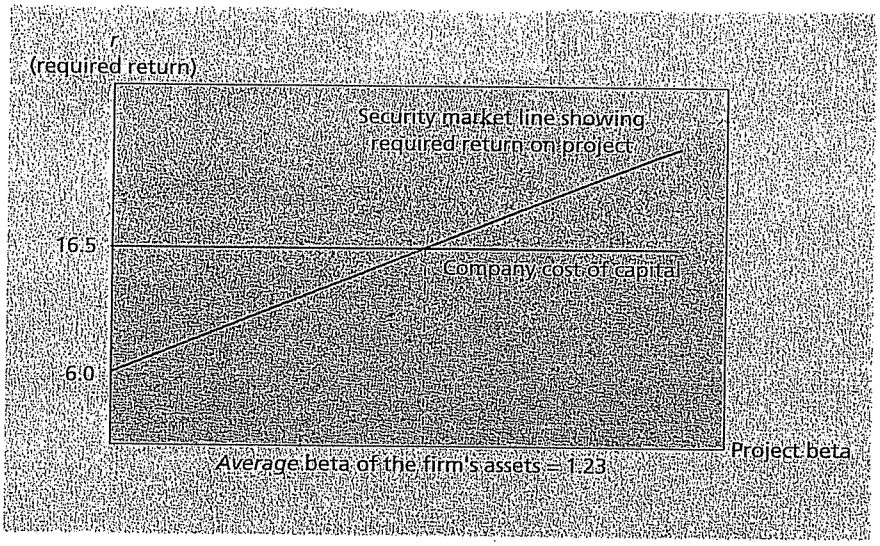

Figure 9-1 A comparison between the company cost of capital rule and the required return under the capital asset pricing model. Microsoft's company cost of capital is about 16.5 percent. This is the correct discount rate only if the project beta is 1.23. In general, the correct discount rate increases as project beta increases. Microsoft should accept projects with rates of return above the security market line relating required return to beta.

If the firm considers investing in a third project C, it should also value C as if C were a mini-firm. That is, the firm should discount the cash flows of C at the expected rate of return that investors would demand to make a separate investment in C. *The true cost of capital depends on the use to which the capital is put.*

This means that Microsoft should accept any project that more than compensates for the *project's beta.* In other words, Microsoft should accept any project lying above the upward-sloping line that links expected return to risk in Figure 9-1. If the project has a high risk, Microsoft needs a higher prospective return than if the project has a low risk. Now contrast this with the company cost of capital rule, which is to accept any project *regardless of its risk* as long as it offers a higher return than the *company's* cost of capital. In terms of Figure 9-1, the rule tells Microsoft to accept any project above the horizontal cost-of-capital line, i.e., any project offering a return of more than 16.5 percent.

It is clearly silly to suggest that Microsoft should demand the same rate of return from a very safe project as from a very risky one. If Microsoft used the company cost of capital rule, it would reject many good low-risk projects and accept many poor high-risk projects. It is also silly to suggest that just because Duke Power has a low company cost of capital, it is justified in accepting projects that Microsoft would reject. If you followed such a rule to its seemingly logical conclusion, you would think it possible to enlarge the company's investment opportunities by investing a large sum in Treasury bills. That would make the common stock safe and create a low company cost of capital.[2]

The notion that each company has some individual discount rate or cost of capital is widespread, but far from universal. Many firms require different returns from different categories of investment. For example, discount rates might be set as follows:

[2]If the present value of an asset depended on the identity of the company that bought it, present values would not add up. Remember, a good project is a good project is a good project.

Category	Discount Rate
Speculative ventures	30%
New products	20%
Expansion of existing business	15% (company cost of capital)
Cost improvement, known technology	10%

The capital asset pricing model is widely used by large corporations to estimate the discount rate. It states

$$\text{Expected project return} = r = r_f + (\text{project beta})(r_m - r_f)$$

To calculate this, you have to figure out the project beta. Before thinking about the betas of individual projects, we will look at some problems you would encounter in using beta to estimate a company's cost of capital. It turns out that beta is difficult to measure accurately for an individual firm: Much greater accuracy can be achieved by looking at an average of similar companies. But then we have to define *similar*. Among other things, we will find that a firm's borrowing policy affects its stock beta. It would be misleading, e.g., to average the betas of Chrysler, which has been a heavy borrower, and General Motors, which has generally borrowed less.

The company cost of capital is the correct discount rate for projects that have the same risk as the company's existing business but *not* for those projects that are safer or riskier than the company's average. The problem is to judge the relative risks of the projects available to the firm. To handle that problem, we will need to dig a little deeper and look at what features make some investments riskier than others. After you know *why* AT&T stock has less market risk than, say, Ford Motor, you will be in a better position to judge the relative risks of capital investment opportunities.

There is still another complication: Project betas can shift over time. Some projects are safer in youth than in old age; others are riskier. In this case, what do we mean by *the* project beta? There may be a separate beta for each year of the project's life. To put it another way, can we jump from the capital asset pricing model, which looks out one period into the future, to the discounted-cash-flow formula that we developed in Chapters 2 and 6 for valuing long-lived assets? Most of the time it is safe to do so, but you should be able to recognize and deal with the exceptions.

We will use the capital asset pricing model, or CAPM, throughout this chapter. But don't infer that the CAPM is the last word on risk and return. The principles and procedures covered in this chapter work just as well with other models such as arbitrage pricing theory (APT). For example, we could have started with an APT estimate of the expected rate of return on Microsoft stock; the discussion of company and project costs of capital would have followed exactly.

9-1 MEASURING BETAS

Suppose that you were considering an across-the-board expansion by your firm. Such an investment would have about the same degree of risk as the existing business. Therefore you should discount the projected flows at the company cost of capital. To estimate that, you could begin by estimating the beta of the company's stock.

An obvious way to measure the beta of the stock is to look at how its price has responded in the past to market movements. For example, in Figure 9-2*a* and *b* we have plotted monthly rates of return from AT&T and Hewlett-Packard against mar-

Thus we could view the project as offering an expected payoff of .5(1500) + .5(0) = 750, or $750,000, at $t = 1$ on a $125,000 investment at $t = 0$. Of course, the certainty equivalent of the payoff is less than $750,000, but the difference would have to be very large to justify rejecting the project. For example, if the certainty equivalent is half the forecasted cash flow and the risk-free rate is 7 percent, the project is worth $225,500:

$$\text{NPV} = C_0 + \frac{\text{CEQ}_1}{1 + r_f}$$
$$= -125 + \frac{.5(750)}{1.07} = 225.5, \text{ or } \$225{,}500$$

This is not bad for a $125,000 investment—and quite a change from the negative NPV that management got by discounting all future cash flows at 25 percent.

A Common Mistake

You sometimes hear people say that because distant cash flows are "riskier," they should be discounted at a higher rate than earlier cash flows. That is quite wrong: Using the same risk-adjusted discount rate for each year's cash flow implies a larger deduction for risk from the later cash flows. The reason is that the discount rate compensates for the risk borne *per period*. The more distant the cash flows, the greater the number of periods and the larger the *total* risk adjustment.

It makes sense to use a single risk-adjusted discount rate as long as the project has the same market risk at each point in its life. But look out for exceptions like the electric mop project, where market risk changes as time passes.

9-6 SUMMARY

In Chapter 8 we set out some basic principles for valuing risky assets. In this chapter we have shown you how to apply these principles to practical situations.

The problem is easiest when you believe that the project has the same market risk as the company's existing assets. In this case, the required return equals the required return on a portfolio of the company's securities. This is called the *company cost of capital.*

Capital asset pricing theory states that the required return on any asset depends on its risk. In this chapter we have defined risk as beta and used the capital asset pricing model to calculate expected returns.

The most common way to estimate the beta of a stock is to figure out how the stock price has responded to market changes in the past. Of course, this will give you only an estimate of the stock's true beta. You may get a more reliable figure if you calculate an industry beta for a group of similar companies.

Suppose that you now have an estimate of the stock's beta. Can you plug that into the capital asset pricing model to find the company's cost of capital? No, the stock beta may reflect both business and financial risk. Whenever a company borrows money, it increases the beta (and the expected return) of its stock. Remember, the company cost of capital is the expected return on a portfolio of all the firm's securities, not just the common stock. You can calculate it by estimating the expected return on each of the securities and then taking a weighted average of these separate returns. Or you can calculate the beta of the portfolio of securities and then plug this *asset beta* into the capital asset pricing model.

The company cost of capital is the correct discount rate for projects that have the same risk as the company's existing business. Many firms, however, use the company cost of capital to discount the forecasted cash flows on all new projects. This is a dangerous procedure. In principle, each project should be evaluated at its own opportunity cost of capital; the true cost of capital depends on the use to which the capital is put. If we wish to estimate the cost of capital for a particular project, it is *project risk* that counts. Of course the company cost of capital is fine as a discount rate for average-risk projects. It is also a useful starting point for estimating discount rates for safer or riskier projects.

We cannot give you a neat formula that will allow you to estimate project betas, but we can give you some clues. First, avoid adding fudge factors to discount rates to offset worries about bad project outcomes. Adjust cash-flow forecasts to give due weight to bad outcomes as well as good; *then* ask whether the chance of bad outcomes adds to the project's market risk. Second, you can often identify the characteristics of a high- or low-beta project even when the project beta cannot be calculated directly. For example, you can try to figure out how much the cash flows are affected by the overall performance of the economy: Cyclical investments are generally high-beta investments. You can also look at the project's operating leverage: Fixed production charges work like fixed debt charges; i.e., they increase beta.

There is one more fence to jump. Most projects produce cash flows for several years. Firms generally use the same risk-adjusted rate r to discount each of these cash flows. When they do this, they are implicitly assuming that cumulative risk increases at a constant rate as you look further into the future. That assumption is usually reasonable. It is precisely true when the project's future beta will be constant, i.e., when risk *per period* is constant.

But exceptions sometimes prove the rule. Be on the alert for projects where risk clearly does *not* increase steadily. In these cases, you should break the project into segments within which the same discount rate can be reasonably used. Or you should use the certainty-equivalent version of the DCF model, which allows separate risk adjustments to each period's cash flow.

APPENDIX: USING THE CAPITAL ASSET PRICING MODEL TO CALCULATE CERTAINTY EQUIVALENTS

When calculating present value, you can take account of risk in either of two ways. You can discount the expected cash flow C_1 by the risk-adjusted discount rate r:

$$PV = \frac{C_1}{1 + r}$$

Alternatively, you can discount the certainty-equivalent cash flow CEQ_1 by the risk-free rate of interest r_f:

$$PV = \frac{CEQ_1}{1 + r_f}$$

In this appendix we show how you can derive CEQ_1 from the capital asset pricing model.

We know from our present value formula that $1 + r$ equals the expected dollar payoff on the asset divided by its present value:

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traded, then we cannot calculate the firm's beta. For the privately owned firm, we might use the so-called "pure play" CAPM technique. This involves finding a firm in the same line of business that does have public equity, estimating its beta, and then using this beta as a proxy for that of the small business in question.

To illustrate the pure play approach, again consider BTG. The firm is not publicly traded, so we cannot estimate its beta. However, data are available on more established firms, such as Genentech and Genetic Industries, so we could use their betas as representative of the biological and genetic engineering industry. Of course, these firms' betas would have to be subjectively modified to reflect their larger sizes and more established positions, as well as to take account of the differences in the nature of their products and their capital structures as compared to those of BTG. Still, as long as there are public companies in similar lines of business available for comparison, the estimates of their betas can be used to help estimate the cost of capital of a firm whose equity is not publicly traded. Note that a "liquidity premium" as discussed in Chapter 3 would also have to be added to reflect the illiquidity of the small, nonpublic firm's stock.

Flotation Costs for Small Issues

When external equity capital is raised, flotation costs increase the cost of equity capital beyond what it would be for internal funds. These external flotation costs are especially significant for smaller firms, and they can substantially affect capital budgeting decisions involving external equity funds. To illustrate this point, consider a firm that is expected to pay constant dividends forever, and hence whose growth rate is zero. In this case, if F is the percentage flotation cost, then the cost of equity capital is $k_e = D_1/[P_0(1 - F)]$. The higher the flotation cost, the higher the cost of external equity.

How big is F? According to the latest Securities and Exchange Commission data, the average flotation cost of large common stock offerings (more than $50 million) is only about 4 percent. For a firm that is expected to provide a 15 percent dividend yield (that is, $D_1/P_0 = 15\%$), the cost of equity is 15%/(1 − 0.04), or 15.6 percent. However, the SEC's data on small stock offerings (less than $1 million) show that flotation costs for such issues average about 21 percent. Thus, the cost of equity capital in the preceding example would be 15%/(1 − 0.21), or about 19 percent. When we compare this to the 15.6 percent for large offerings, it is clear that a small firm would have to earn considerably more on the same project than a large firm. Small firms are therefore at a substantial disadvantage because of the effects of flotation costs.

The Small-Firm Effect

A number of researchers have observed that portfolios of small-firm stocks have earned consistently higher average returns than those of large-firm stocks; this is called the "small-firm effect." On the surface, it would seem to be advantageous to the small firm to provide average returns in the stock market that are higher than those of large firms. In reality, it is bad news for the small firm; what the small-firm effect means is that the capital market demands higher returns on stocks of small firms than on otherwise similar stocks of large firms. Therefore, the cost of equity capital is higher for small firms. This compounds the high flotation cost problem noted above.

It may be argued that stocks of small firms are riskier than those of large ones and that this accounts for the differences in returns. It is true that academic research usually finds that betas are higher on average for small firms than for large ones. However, the larger returns for small firms remain larger even after adjusting for the effects of their higher risks as reflected in their beta coefficients.

The small-firm effect is an anomaly in the sense that it is not consistent with the CAPM theory. Still, higher returns reflect a higher cost of capital, so we must conclude that smaller firms do have higher capital costs than otherwise similar larger firms. The manager of a small firm should take this factor into account when estimating his or her firm's cost of equity capital. In general, the cost of equity capital appears to be about four percentage points higher for small firms (those with market values of less than $20 million) than for large, New York Stock Exchange firms with similar risk characteristics.

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EPS Estimates

Earnings Date	*AMC 5/7/24
Current Quarter	0.59
EPS Last Quarter	0.55
Last EPS Surprise	3.77%
ABR	3.00

Earnings ESP	0.00%
Current Year	3.01
Next Year	3.30
EPS (TTM)	2.77
P/E (F1)	23.34

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	AWR	IND	S&P
Current Qtr (03/2024)	9.26	1.82	14.20
Next Qtr (06/2024)	1.20	56.87	11.23
Current Year (12/2024)	5.61	16.80	17.08
Next Year (12/2025)	9.63	8.00	8.00
Past 5 Years	8.90	15.50	8.10
Next 5 Years	6.30	10.00	NA
PE	23.34	20.30	20.46
PEG Ratio	3.70	2.03	NA

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Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

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Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	119.00M	138.00M	544.00M	588.00M
# of Estimates	1	1	1	1
High Estimate	119.00M	138.00M	544.00M	588.00M
Low Estimate	119.00M	138.00M	544.00M	588.00M
Year ago Sales	161.42M	157.40M	595.70M	544.00M
Year over Year Growth Est.	-26.28%	-12.33%	-8.68%	8.09%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.59	0.84	3.01	3.30
# of Estimates	1	1	2	2
Most Recent Consensus	0.59	0.84	2.99	3.29
High Estimate	0.59	0.84	3.03	3.31
Low Estimate	0.59	0.84	2.99	3.29
Year ago EPS	0.54	0.83	2.85	3.01
Year over Year Growth Est.	9.26%	1.20%	5.61%	9.63%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0

Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.59	0.84	3.01	3.30
7 Days Ago	0.59	0.84	3.01	3.30
30 Days Ago	0.59	0.84	3.01	3.30
60 Days Ago	0.59	0.84	3.01	3.30
90 Days Ago	0.58	0.84	2.96	3.30

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.59	0.84	3.01	3.30
Zacks Consensus Estimate	0.59	0.84	3.01	3.30
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.55	0.85	0.83	0.54	NA
Estimate	0.53	0.82	0.79	0.54	NA
Difference	0.02	0.03	0.04	0.00	0.02
Surprise	3.77%	3.66%	5.06%	0.00%	3.12%

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Earnings Date	*AMC 5/1/24
Current Quarter	0.99
EPS Last Quarter	0.88
Last EPS Surprise	4.76%
ABR	2.30

Earnings ESP	0.34%
Current Year	5.24
Next Year	5.68
EPS (TTM)	4.89
P/E (F1)	23.33

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	AWK	IND	S&P
Current Qtr (03/2024)	8.79	1.82	14.20
Next Qtr (06/2024)	3.47	56.87	11.23
Current Year (12/2024)	6.94	16.80	17.08
Next Year (12/2025)	8.40	8.00	8.00
Past 5 Years	8.10	15.50	8.10
Next 5 Years	8.00	10.00	NA
PE	23.33	20.30	20.46
PEG Ratio	2.92	2.03	NA

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Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

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Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	950.21M	1.09B	4.27B	4.49B
# of Estimates	3	3	3	3
High Estimate	996.00M	1.13B	4.43B	4.68B
Low Estimate	905.91M	1.05B	4.12B	4.36B
Year ago Sales	938.00M	1.10B	4.23B	4.27B
Year over Year Growth Est.	1.30%	-0.29%	0.82%	5.12%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.99	1.49	5.24	5.68
# of Estimates	3	3	5	5
Most Recent Consensus	0.97	1.49	5.25	5.70
High Estimate	1.00	1.50	5.25	5.72
Low Estimate	0.97	1.48	5.22	5.65
Year ago EPS	0.91	1.44	4.90	5.24
Year over Year Growth Est.	8.79%	3.47%	6.94%	8.40%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	1	1	1
Up Last 30 Days	0	1	2	2
Up Last 60 Days	1	2	3	3

Down Last 7 Days	1	0	0	0
Down Last 30 Days	1	0	0	0
Down Last 60 Days	1	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.99	1.49	5.24	5.68
7 Days Ago	1.00	1.48	5.22	5.66
30 Days Ago	1.00	1.48	5.22	5.66
60 Days Ago	1.00	1.47	5.20	5.64
90 Days Ago	0.99	1.46	5.17	5.62

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.99	1.50	5.24	5.69
Zacks Consensus Estimate	0.99	1.49	5.24	5.68
Earnings ESP	0.34%	0.67%	-0.13%	0.05%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.88	1.66	1.44	0.91	NA
Estimate	0.84	1.55	1.27	0.92	NA
Difference	0.04	0.11	0.17	-0.01	0.08
Surprise	4.76%	7.10%	13.39%	-1.09%	6.04%

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EPS Estimates

Exp Earnings Date	5/14/24
Current Quarter	0.42
EPS Last Quarter	0.34
Last EPS Surprise	NA
ABR	1.00

Earnings ESP	0.00%
Current Year	1.99
Next Year	2.10
EPS (TTM)	1.66
P/E (F1)	17.64

% EPS Growth Estimates	ARTNA	IND	S&P
Current Qtr (03/2024)	7.69	NA	NA
Next Qtr (06/2024)	25.00	NA	NA
Current Year (12/2024)	19.16	16.80	17.08
Next Year (12/2025)	5.53	8.00	8.00
Past 5 Years	-1.60	15.50	8.10
Next 5 Years	NA	10.00	NA
PE	17.64	20.30	20.46
PEG Ratio	NA	2.03	NA

Learn More About Estimate Research

See Brokerage Recommendations

Premium Research for ARTNA

Zacks Rank Sell 4

Zacks Industry Rank	Top 33% (84 out of 251)
Zacks Sector Rank	Top 13% (2 out of 16)
Style Scores	
D Value | **F** Growth | **A** Momentum | **F** VGM	
Earnings ESP	0.00%
Research Report for ARTNA	Snapshot

(= Change in last 30 days)

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Research for ARTNA

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	24.00M	27.00M	105.00M	109.00M
# of Estimates	1	1	1	1
High Estimate	24.00M	27.00M	105.00M	109.00M
Low Estimate	24.00M	27.00M	105.00M	109.00M
Year ago Sales	22.50M	25.25M	98.86M	105.00M
Year over Year Growth Est.	6.67%	6.93%	6.21%	3.81%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.42	0.55	1.99	2.10
# of Estimates	1	1	1	1

Most Recent Consensus	0.42	0.55	1.99	2.10
High Estimate	0.42	0.55	1.99	2.10
Low Estimate	0.42	0.55	1.99	2.10
Year ago EPS	0.39	0.44	1.67	1.99
Year over Year Growth Est.	7.69%	25.00%	19.16%	5.53%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	1	0	0
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	1	0	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.42	0.55	1.99	2.10
7 Days Ago	0.42	0.55	1.99	2.10
30 Days Ago	0.42	0.55	1.99	2.10
60 Days Ago	0.43	0.54	2.00	2.10
90 Days Ago	0.43	0.54	2.00	2.10

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.42	0.55	1.99	2.10
Zacks Consensus Estimate	0.42	0.55	1.99	2.10
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.34	0.49	0.44	0.39	NA
Estimate	NA	0.48	0.37	0.50	NA
Difference	NA	0.01	0.07	-0.11	-0.01
Surprise	NA	2.08%	18.92%	-22.00%	-0.33%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/25/24
Current Quarter	0.41
EPS Last Quarter	1.21
Last EPS Surprise	476.19%
ABR	2.60

Earnings ESP	-7.32%
Current Year	2.86
Next Year	2.38
EPS (TTM)	2.50
P/E (F1)	16.95

% EPS Growth Estimates	CWT	IND	S&P
Current Qtr (06/2024)	141.18	1.82	14.20
Next Qtr (09/2024)	80.00	56.87	11.23
Current Year (12/2024)	214.29	16.80	17.08
Next Year (12/2025)	-16.78	8.00	8.00
Past 5 Years	-7.70	15.50	8.10
Next 5 Years	NA	10.00	NA
PE	16.95	20.30	20.46
PEG Ratio	NA	2.03	NA

Learn More About Estimate Research

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See Earnings Report Transcript

Premium Research for CWT

Zacks Rank Strong Buy 1

Zacks Industry Rank	Top 33% (84 out of 251)
Zacks Sector Rank	Top 13% (2 out of 16)
Style Scores	
D Value | **C** Growth | **C** Momentum | **D** VGM	
Earnings ESP	-7.32%
Research Reports for CWT	Analyst | Snapshot

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Research for CWT

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	206.33M	267.16M	885.10M	931.76M
# of Estimates	1	1	1	1
High Estimate	206.33M	267.16M	885.10M	931.76M
Low Estimate	206.33M	267.16M	885.10M	931.76M
Year ago Sales	194.04M	254.98M	794.63M	885.10M
Year over Year Growth Est.	6.33%	4.78%	11.38%	5.27%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.41	1.08	2.86	2.38

# of Estimates	2	2	3	3
Most Recent Consensus	0.38	1.11	3.26	2.36
High Estimate	0.44	1.11	3.26	2.40
Low Estimate	0.38	1.04	2.25	2.36
Year ago EPS	0.17	0.60	0.91	2.86
Year over Year Growth Est.	141.18%	80.00%	214.29%	-16.67%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	2	1
Up Last 30 Days	0	0	2	1
Up Last 60 Days	1	1	2	2
Down Last 7 Days	1	1	0	0
Down Last 30 Days	1	1	0	0
Down Last 60 Days	1	1	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.41	1.08	2.86	2.38
7 Days Ago	0.44	1.10	2.25	2.38
30 Days Ago	0.44	1.10	2.25	2.38
60 Days Ago	0.44	1.04	2.25	2.37
90 Days Ago	0.44	1.04	2.25	2.37

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.38	1.11	3.16	2.36
Zacks Consensus Estimate	0.41	1.08	2.86	2.38
Earnings ESP	-7.32%	3.26%	10.62%	-0.84%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	1.21	0.52	0.60	0.17	NA
Estimate	0.21	1.50	0.54	0.91	NA
Difference	1.00	-0.98	0.06	-0.74	-0.17
Surprise	476.19%	-65.33%	11.11%	-81.32%	85.16%

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EPS Estimates

Earnings Date	*AMC 5/2/24
Current Quarter	0.76
EPS Last Quarter	0.50
Last EPS Surprise	2.04%
ABR	1.33

Earnings ESP	0.00%
Current Year	2.00
Next Year	2.11
EPS (TTM)	1.86
P/E (F1)	18.28

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	WTRG	IND	S&P
Current Qtr (03/2024)	5.56	1.82	14.20
Next Qtr (06/2024)	8.82	56.87	11.23
Current Year (12/2024)	7.53	16.80	17.08
Next Year (12/2025)	5.50	8.00	8.00
Past 5 Years	5.60	15.50	8.10
Next 5 Years	5.80	10.00	NA
PE	18.28	20.30	20.46
PEG Ratio	3.18	2.03	NA

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Research for WTRG

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	747.44M	452.33M	2.19B	2.35B
# of Estimates	2	2	2	2
High Estimate	749.88M	454.66M	2.25B	2.39B
Low Estimate	745.00M	450.00M	2.14B	2.31B
Year ago Sales	726.45M	436.70M	2.05B	2.19B
Year over Year Growth Est.	2.89%	3.58%	6.83%	7.06%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.76	0.37	2.00	2.11
# of Estimates	2	2	4	4
Most Recent Consensus	0.75	0.37	1.98	2.10
High Estimate	0.76	0.37	2.01	2.13
Low Estimate	0.75	0.37	1.98	2.08
Year ago EPS	0.72	0.34	1.86	2.00
Year over Year Growth Est.	5.56%	8.82%	7.53%	5.63%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	1	1
Up Last 60 Days	0	1	0	0
Down Last 7 Days	0	0	1	0

Down Last 30 Days	0	0	1	0
Down Last 60 Days	1	0	2	1

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.76	0.37	2.00	2.11
7 Days Ago	0.76	0.37	2.05	2.11
30 Days Ago	0.76	0.37	2.04	2.11
60 Days Ago	0.77	0.37	2.05	2.12
90 Days Ago	0.79	0.37	2.00	2.12

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.76	0.37	2.00	2.10
Zacks Consensus Estimate	0.76	0.37	2.00	2.11
Earnings ESP	0.00%	0.00%	0.00%	-0.36%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.50	0.30	0.34	0.72	NA
Estimate	0.49	0.29	0.34	0.74	NA
Difference	0.01	0.01	0.00	-0.02	0.00
Surprise	2.04%	3.45%	0.00%	-2.70%	0.70%

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EPS Estimates

Earnings Date	*AMC 5/8/24
Current Quarter	0.04
EPS Last Quarter	0.07
Last EPS Surprise	40.00%
ABR	1.00

Earnings ESP	0.00%
Current Year	0.31
Next Year	0.34
EPS (TTM)	0.28
P/E (F1)	40.97

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	GWRS	IND	S&P
Current Qtr (03/2024)	33.33	1.82	14.20
Next Qtr (06/2024)	28.57	56.87	11.23
Current Year (12/2024)	19.23	16.80	17.08
Next Year (12/2025)	9.68	8.00	8.00
Past 5 Years	15.90	15.50	8.10
Next 5 Years	15.00	10.00	NA
PE	40.97	20.30	20.46
PEG Ratio	2.73	2.03	NA

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Research for GWRS

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	11.70M	13.70M	53.05M	56.80M
# of Estimates	2	2	2	2
High Estimate	12.00M	14.00M	54.00M	60.00M
Low Estimate	11.40M	13.40M	52.10M	53.60M
Year ago Sales	13.13M	13.00M	53.03M	53.05M
Year over Year Growth Est.	-10.89%	5.38%	0.04%	7.07%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.04	0.09	0.31	0.34
# of Estimates	2	2	2	2
Most Recent Consensus	0.04	0.09	0.31	0.34
High Estimate	0.04	0.10	0.35	0.39
Low Estimate	0.03	0.08	0.27	0.29
Year ago EPS	0.03	0.07	0.26	0.31
Year over Year Growth Est.	33.33%	28.57%	19.23%	9.68%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	1	0

Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.04	0.09	0.31	0.34
7 Days Ago	0.04	0.09	0.31	0.34
30 Days Ago	0.04	0.09	0.31	0.34
60 Days Ago	0.04	0.10	0.30	0.39
90 Days Ago	0.04	0.10	0.30	0.39

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.04	0.09	0.31	0.34
Zacks Consensus Estimate	0.04	0.09	0.31	0.34
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.07	0.11	0.07	0.03	NA
Estimate	0.05	0.08	0.08	0.02	NA
Difference	0.02	0.03	-0.01	0.01	0.01
Surprise	40.00%	37.50%	-12.50%	50.00%	28.75%

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EPS Estimates

Exp Earnings Date	5/6/24
Current Quarter	0.45
EPS Last Quarter	0.32
Last EPS Surprise	-30.43%
ABR	1.00

Earnings ESP	0.00%
Current Year	2.28
Next Year	2.40
EPS (TTM)	1.76
P/E (F1)	22.12

% EPS Growth Estimates	MSEX	IND	S&P
Current Qtr (03/2024)	36.36	1.82	14.20
Next Qtr (06/2024)	20.00	56.87	11.23
Current Year (12/2024)	29.55	16.80	17.08
Next Year (12/2025)	5.26	8.00	8.00
Past 5 Years	-0.30	15.50	8.10
Next 5 Years	NA	10.00	NA
PE	22.12	20.30	20.46
PEG Ratio	NA	2.03	NA

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Research for MSEX

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	42.00M	47.00M	182.00M	191.00M
# of Estimates	1	1	1	1
High Estimate	42.00M	47.00M	182.00M	191.00M
Low Estimate	42.00M	47.00M	182.00M	191.00M
Year ago Sales	38.16M	42.80M	166.27M	182.00M
Year over Year Growth Est.	10.06%	9.81%	9.46%	4.95%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.45	0.66	2.28	2.40
# of Estimates	1	1	1	1
Most Recent Consensus	0.45	0.66	2.28	2.40
High Estimate	0.45	0.66	2.28	2.40
Low Estimate	0.45	0.66	2.28	2.40
Year ago EPS	0.33	0.55	1.76	2.28
Year over Year Growth Est.	36.36%	20.00%	29.55%	5.26%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0

Down Last 60 Days	0	0	1	1

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.45	0.66	2.28	2.40
7 Days Ago	0.45	0.66	2.28	2.40
30 Days Ago	0.45	0.66	2.28	2.40
60 Days Ago	0.45	0.66	2.43	2.57
90 Days Ago	0.45	0.66	2.43	2.57

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.45	0.66	2.28	2.40
Zacks Consensus Estimate	0.45	0.66	2.28	2.40
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.32	0.56	0.55	0.33	NA
Estimate	0.46	0.88	0.55	0.41	NA
Difference	-0.14	-0.32	0.00	-0.08	-0.14
Surprise	-30.43%	-36.36%	0.00%	-19.51%	-21.58%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/29/24
Current Quarter	0.57
EPS Last Quarter	0.36
Last EPS Surprise	2.86%
ABR	2.33

Earnings ESP	0.00%
Current Year	2.75
Next Year	2.98
EPS (TTM)	2.66
P/E (F1)	19.54

% EPS Growth Estimates	SJW	IND	S&P
Current Qtr (06/2024)	-1.72	1.82	14.20
Next Qtr (09/2024)	9.73	56.87	11.23
Current Year (12/2024)	2.61	16.80	17.08
Next Year (12/2025)	8.36	8.00	8.00
Past 5 Years	4.20	15.50	8.10
Next 5 Years	7.50	10.00	NA
PE	19.54	20.30	20.46
PEG Ratio	2.60	2.03	NA

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Research for SJW

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	165.10M	213.07M	694.39M	722.48M
# of Estimates	2	2	2	2
High Estimate	166.00M	213.14M	694.78M	728.00M
Low Estimate	164.19M	213.00M	694.00M	716.96M
Year ago Sales	156.89M	204.84M	670.36M	694.39M
Year over Year Growth Est.	5.23%	4.02%	3.58%	4.05%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.57	1.24	2.75	2.98
# of Estimates	2	2	3	3
Most Recent Consensus	0.61	1.20	2.75	3.01
High Estimate	0.61	1.27	2.76	3.08
Low Estimate	0.53	1.20	2.74	2.93
Year ago EPS	0.58	1.13	2.68	2.75
Year over Year Growth Est.	-1.72%	9.73%	2.61%	8.36%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	0	0	0
Down Last 60 Days	1	1	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.57	1.24	2.75	2.98
7 Days Ago	0.57	1.24	2.75	2.98
30 Days Ago	0.57	1.24	2.75	2.98
60 Days Ago	0.58	1.24	2.76	2.98
90 Days Ago	0.58	1.22	2.77	2.93

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.57	1.24	2.75	2.98
Zacks Consensus Estimate	0.57	1.24	2.75	2.98
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	0.36	0.59	1.13	0.58	NA
Estimate	0.35	0.60	0.94	0.58	NA
Difference	0.01	-0.01	0.19	0.00	0.05
Surprise	2.86%	-1.67%	20.21%	0.00%	5.35%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	5/7/24
Current Quarter	0.29
EPS Last Quarter	0.42
Last EPS Surprise	16.67%
ABR	1.00

Earnings ESP	0.00%
Current Year	1.61
Next Year	1.69
EPS (TTM)	1.66
P/E (F1)	22.06

% EPS Growth Estimates	YORW	IND	S&P
Current Qtr (03/2024)	11.54	1.82	14.20
Next Qtr (06/2024)	0.00	56.87	11.23
Current Year (12/2024)	-3.01	16.80	17.08
Next Year (12/2025)	4.97	8.00	8.00
Past 5 Years	9.50	15.50	8.10
Next 5 Years	NA	10.00	NA
PE	22.06	20.30	20.46
PEG Ratio	NA	2.03	NA

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Premium Research for YORW

Zacks Rank Buy 2

Zacks Industry Rank	Top 33% (84 out of 251)
Zacks Sector Rank	Top 13% (2 out of 16)
Style Scores	
D Value | D Growth | D Momentum | F VGM	
Earnings ESP	0.00%
Research Report for YORW	Snapshot

(= Change in last 30 days)

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Research for YORW

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	17.00M	19.00M	74.00M	78.00M
# of Estimates	1	1	1	1
High Estimate	17.00M	19.00M	74.00M	78.00M
Low Estimate	17.00M	19.00M	74.00M	78.00M
Year ago Sales	15.40M	18.77M	71.03M	74.00M
Year over Year Growth Est.	10.39%	1.23%	4.18%	5.41%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.29	0.45	1.61	1.69
# of Estimates	1	1	1	1

Most Recent Consensus	0.29	0.45	1.61	1.69
High Estimate	0.29	0.45	1.61	1.69
Low Estimate	0.29	0.45	1.61	1.69
Year ago EPS	0.26	0.45	1.66	1.61
Year over Year Growth Est.	11.54%	0.00%	-3.01%	4.97%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	1
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	1	1	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.29	0.45	1.61	1.69
7 Days Ago	0.29	0.45	1.61	1.69
30 Days Ago	0.29	0.45	1.61	1.69
60 Days Ago	0.30	0.48	1.61	1.68
90 Days Ago	0.30	0.48	1.61	1.68

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.29	0.45	1.61	1.69
Zacks Consensus Estimate	0.29	0.45	1.61	1.69
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.42	0.53	0.45	0.26	NA
Estimate	0.36	0.46	0.44	0.26	NA
Difference	0.06	0.07	0.01	0.00	0.04
Surprise	16.67%	15.22%	2.27%	0.00%	8.54%

Annual Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/25/24
Current Quarter	2.86
EPS Last Quarter	2.31
Last EPS Surprise	2.21%
ABR	1.89

Earnings ESP	0.59%
Current Year	11.13
Next Year	12.09
EPS (TTM)	10.96
P/E (F1)	14.51

% EPS Growth Estimates	ABBV	IND	S&P
Current Qtr (06/2024)	-1.72	230.35	14.20
Next Qtr (09/2024)	-1.36	266.22	11.23
Current Year (12/2024)	0.18	4.10	17.08
Next Year (12/2025)	8.63	16.00	8.00
Past 5 Years	8.20	3.00	8.10
Next 5 Years	7.00	12.00	NA
PE	14.51	19.40	20.46
PEG Ratio	2.07	1.62	NA

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Research for ABBV

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	NA	14.16B	54.96B	58.24B
# of Estimates	NA	8	9	8
High Estimate	NA	14.34B	55.84B	59.12B
Low Estimate	NA	13.88B	54.25B	57.18B
Year ago Sales	13.87B	13.93B	54.32B	54.96B
Year over Year Growth Est.	NA	1.64%	1.19%	5.97%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.86	2.91	11.13	12.09
# of Estimates	9	8	8	10
Most Recent Consensus	2.84	2.90	11.06	11.86
High Estimate	3.07	2.97	11.35	12.62
Low Estimate	2.62	2.81	10.99	11.74
Year ago EPS	2.91	2.95	11.11	11.13
Year over Year Growth Est.	-1.72%	-1.36%	0.18%	8.63%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	2	0	1	2
Up Last 30 Days	3	2	2	3
Up Last 60 Days	3	2	2	4
Down Last 7 Days	0	2	0	1

Down Last 30 Days	3	2	6	4
Down Last 60 Days	3	2	6	4

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	2.86	2.91	11.13	12.09
7 Days Ago	2.79	2.91	11.10	12.13
30 Days Ago	2.79	2.90	11.17	12.20
60 Days Ago	2.79	2.90	11.17	12.12
90 Days Ago	2.82	2.90	11.29	12.35

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	2.88	2.92	11.13	12.14
Zacks Consensus Estimate	2.86	2.91	11.13	12.09
Earnings ESP	0.59%	0.46%	0.00%	0.39%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	2.31	2.79	2.95	2.91	NA
Estimate	2.26	2.76	2.86	2.79	NA
Difference	0.05	0.03	0.09	0.12	0.07
Surprise	2.21%	1.09%	3.15%	4.30%	2.69%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/18/24
Current Quarter	1.10
EPS Last Quarter	0.98
Last EPS Surprise	2.08%
ABR	1.53

Earnings ESP	-0.05%
Current Year	4.62
Next Year	5.12
EPS (TTM)	4.39
P/E (F1)	23.22

% EPS Growth Estimates	ABT	IND	S&P
Current Qtr (06/2024)	1.85	20.48	14.20
Next Qtr (09/2024)	6.14	46.82	11.23
Current Year (12/2024)	4.05	18.10	17.08
Next Year (12/2025)	10.82	24.60	8.00
Past 5 Years	9.00	4.00	8.10
Next 5 Years	9.00	10.90	NA
PE	23.22	NA	20.46
PEG Ratio	2.58	NA	NA

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Premium Research for ABT

Zacks Rank Hold 3

Zacks Industry Rank	Bottom 41% (147 out of 251)
Zacks Sector Rank	Top 31% (5 out of 16)
Style Scores	
C Value | **D** Growth | **B** Momentum | **C** VGM	
Earnings ESP	-0.05%
Research Reports for ABT	Analyst | Snapshot

(= Change in last 30 days)

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Research for ABT

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	10.35B	10.55B	41.66B	44.53B
# of Estimates	6	6	6	6
High Estimate	10.40B	10.59B	41.74B	44.71B
Low Estimate	10.29B	10.51B	41.60B	44.33B
Year ago Sales	9.98B	10.14B	40.11B	41.66B
Year over Year Growth Est.	3.78%	4.06%	3.86%	6.89%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.10	1.21	4.62	5.12
# of Estimates	8	6	9	8

Most Recent Consensus	1.10	1.21	4.62	5.15
High Estimate	1.12	1.22	4.63	5.15
Low Estimate	1.09	1.20	4.60	5.07
Year ago EPS	1.08	1.14	4.44	4.62
Year over Year Growth Est.	1.85%	6.14%	4.05%	10.74%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	1	5	1
Up Last 60 Days	1	1	5	1
Down Last 7 Days	0	0	0	0
Down Last 30 Days	2	3	2	3
Down Last 60 Days	2	3	2	3

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.10	1.21	4.62	5.12
7 Days Ago	1.10	1.21	4.62	5.12
30 Days Ago	1.11	1.21	4.62	5.13
60 Days Ago	1.11	1.21	4.62	5.13
90 Days Ago	1.12	1.20	4.62	5.12

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.10	1.21	4.62	5.11
Zacks Consensus Estimate	1.10	1.21	4.62	5.12
Earnings ESP	-0.05%	0.07%	0.12%	-0.03%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	0.98	1.19	1.14	1.08	NA
Estimate	0.96	1.19	1.10	1.04	NA
Difference	0.02	0.00	0.04	0.04	0.03
Surprise	2.08%	0.00%	3.64%	3.85%	2.39%

Quarterly Estimates By Analyst

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EPS Estimates

Earnings Date	*AMC 5/7/24
Current Quarter	3.87
EPS Last Quarter	4.58
Last EPS Surprise	23.78%
ABR	1.57

Earnings ESP	-1.91%
Current Year	15.67
Next Year	16.81
EPS (TTM)	15.51
P/E (F1)	11.19

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	AIZ	IND	S&P
Current Qtr (03/2024)	40.73	-48.62	14.20
Next Qtr (06/2024)	2.57	-59.12	11.23
Current Year (12/2024)	1.16	12.30	17.08
Next Year (12/2025)	7.28	15.70	8.00
Past 5 Years	20.20	8.70	8.10
Next 5 Years	5.00	10.10	NA
PE	11.19	5.50	20.46
PEG Ratio	2.22	0.54	NA

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Research for AIZ

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.82B	2.88B	11.64B	12.05B
# of Estimates	4	4	4	4
High Estimate	2.85B	2.92B	11.82B	12.43B
Low Estimate	2.80B	2.84B	11.38B	11.56B
Year ago Sales	2.65B	2.75B	11.20B	11.64B
Year over Year Growth Est.	6.10%	4.79%	3.96%	3.49%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	3.87	3.99	15.67	16.81
# of Estimates	5	4	5	5
Most Recent Consensus	4.12	3.98	15.70	16.35
High Estimate	4.12	4.10	16.00	17.15
Low Estimate	3.77	3.91	15.40	16.35
Year ago EPS	2.75	3.89	15.49	15.67
Year over Year Growth Est.	40.73%	2.57%	1.16%	7.28%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	1	2	1
Up Last 60 Days	1	1	2	1
Down Last 7 Days	0	0	0	0

Down Last 30 Days	1	1	1	1
Down Last 60 Days	1	1	1	1

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	3.87	3.99	15.67	16.81
7 Days Ago	3.87	3.99	15.67	16.81
30 Days Ago	3.93	4.08	16.02	17.26
60 Days Ago	3.93	4.08	16.02	17.26
90 Days Ago	3.83	3.85	15.12	16.21

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	3.80	3.95	15.65	16.70
Zacks Consensus Estimate	3.87	3.99	15.67	16.81
Earnings ESP	-1.91%	-1.19%	-0.13%	-0.65%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	4.58	4.29	3.89	2.75	NA
Estimate	3.70	2.48	2.60	2.25	NA
Difference	0.88	1.81	1.29	0.50	1.12
Surprise	23.78%	72.98%	49.62%	22.22%	42.15%

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EPS Estimates

Earnings Date	*AMC 5/9/24
Current Quarter	1.61
EPS Last Quarter	1.69
Last EPS Surprise	6.29%
ABR	2.05

Earnings ESP	0.00%
Current Year	6.76
Next Year	7.36
EPS (TTM)	6.21
P/E (F1)	15.06

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	AKAM	IND	S&P
Current Qtr (03/2024)	15.00	16.98	14.20
Next Qtr (06/2024)	8.72	-2.34	11.23
Current Year (12/2024)	9.03	19.60	17.08
Next Year (12/2025)	8.88	23.50	8.00
Past 5 Years	9.90	10.30	8.10
Next 5 Years	7.30	22.40	NA
PE	15.06	2.00	20.46
PEG Ratio	2.06	0.09	NA

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Research for AKAM

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	989.22M	1.00B	4.09B	4.41B
# of Estimates	7	8	6	7
High Estimate	994.00M	1.02B	4.12B	4.50B
Low Estimate	985.05M	985.80M	4.06B	4.35B
Year ago Sales	915.70M	935.72M	3.81B	4.09B
Year over Year Growth Est.	8.03%	6.92%	7.18%	7.97%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.61	1.62	6.76	7.36
# of Estimates	9	7	9	9
Most Recent Consensus	1.59	1.59	6.63	7.32
High Estimate	1.67	1.65	6.91	7.60
Low Estimate	1.59	1.59	6.63	7.22
Year ago EPS	1.40	1.49	6.20	6.76
Year over Year Growth Est.	15.00%	8.72%	9.03%	8.99%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	1	1	2	2

Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.61	1.62	6.76	7.36
7 Days Ago	1.61	1.62	6.76	7.36
30 Days Ago	1.61	1.62	6.76	7.36
60 Days Ago	1.61	1.62	6.74	7.34
90 Days Ago	1.57	1.62	6.67	7.54

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.61	1.62	6.76	7.36
Zacks Consensus Estimate	1.61	1.62	6.76	7.36
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	1.69	1.63	1.49	1.40	NA
Estimate	1.59	1.51	1.41	1.32	NA
Difference	0.10	0.12	0.08	0.08	0.10
Surprise	6.29%	7.95%	5.67%	6.06%	6.49%

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EPS Estimates

Exp Earnings Date	7/25/24
Current Quarter	1.06
EPS Last Quarter	1.00
Last EPS Surprise	1.01%
ABR	3.00

Earnings ESP	0.00%
Current Year	4.08
Next Year	4.38
EPS (TTM)	3.88
P/E (F1)	20.69

% EPS Growth Estimates	AOS	IND	S&P
Current Qtr (06/2024)	4.95	71.43	14.20
Next Qtr (09/2024)	8.89	2.79	11.23
Current Year (12/2024)	7.09	19.70	17.08
Next Year (12/2025)	7.35	14.40	8.00
Past 5 Years	10.20	6.30	8.10
Next 5 Years	9.00	11.50	NA
PE	20.69	17.60	20.46
PEG Ratio	2.30	1.53	NA

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Premium Research for AOS

Zacks Rank Hold 3

Zacks Industry Rank	Top 38% (95 out of 251)
Zacks Sector Rank	Top 25% (4 out of 16)
Style Scores	
C Value | B Growth | B Momentum | B VGM	
Earnings ESP	0.00%
Research Reports for AOS	Analyst | Snapshot

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Research for AOS

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	997.08M	980.22M	3.99B	4.18B
# of Estimates	5	5	5	5
High Estimate	1.02B	990.00M	4.04B	4.23B
Low Estimate	974.00M	972.58M	3.97B	4.15B
Year ago Sales	960.80M	937.50M	3.85B	3.99B
Year over Year Growth Est.	3.78%	4.56%	3.61%	4.78%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.06	0.98	4.08	4.38
# of Estimates	6	5	7	6

Most Recent Consensus	1.07	0.99	4.13	4.45
High Estimate	1.07	1.00	4.13	4.45
Low Estimate	1.03	0.96	4.01	4.24
Year ago EPS	1.01	0.90	3.81	4.08
Year over Year Growth Est.	4.95%	8.89%	7.09%	7.50%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	1	0	2	2
Up Last 30 Days	2	2	4	4
Up Last 60 Days	2	2	5	5
Down Last 7 Days	2	3	2	2
Down Last 30 Days	2	2	1	1
Down Last 60 Days	2	2	1	1

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.06	0.98	4.08	4.38
7 Days Ago	1.07	1.00	4.09	4.40
30 Days Ago	1.08	0.98	4.07	4.39
60 Days Ago	1.08	0.98	4.07	4.38
90 Days Ago	1.08	0.96	4.07	4.39

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.06	0.98	4.09	4.41
Zacks Consensus Estimate	1.06	0.98	4.08	4.38
Earnings ESP	0.00%	0.46%	0.45%	0.65%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	1.00	0.97	0.90	1.01	NA
Estimate	0.99	0.96	0.79	0.91	NA
Difference	0.01	0.01	0.11	0.10	0.06
Surprise	1.01%	1.04%	13.92%	10.99%	6.74%

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EPS Estimates

Earnings Date	*BMO 5/24/24
Current Quarter	1.22
EPS Last Quarter	1.41
Last EPS Surprise	24.78%
ABR	2.09

Earnings ESP	-1.28%
Current Year	5.39
Next Year	5.87
EPS (TTM)	5.18
P/E (F1)	25.13

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	BAH	IND	S&P
Current Qtr (03/2024)	20.79	1.01	14.20
Next Qtr (06/2024)	2.04	-0.41	11.23
Current Year (03/2024)	18.20	21.30	5.37
Next Year (03/2025)	8.91	9.70	11.11
Past 5 Years	15.80	10.20	8.10
Next 5 Years	12.60	12.60	NA
PE	25.13	21.20	22.74
PEG Ratio	2.00	1.68	NA

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Premium Research for BAH

Zacks Rank

Buy 2

Zacks Industry Rank	Top 5% (13 out of 251)
Zacks Sector Rank	Top 44% (7 out of 16)
Style Scores	
B Value | D Growth | B Momentum | C VGM	
Earnings ESP	-1.28%
Research Reports for BAH	Analyst | Snapshot

(= Change in last 30 days)

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Research for BAH

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Zacks Consensus Estimate	2.72B	2.85B	10.61B	11.42B
# of Estimates	10	8	10	10
High Estimate	2.76B	2.93B	10.65B	11.85B
Low Estimate	2.67B	2.76B	10.56B	11.08B
Year ago Sales	2.43B	2.65B	9.26B	10.61B
Year over Year Growth Est.	11.86%	7.24%	14.62%	7.64%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)

Zacks Consensus Estimate	1.22	1.50	5.39	5.87
# of Estimates	11	7	11	11
Most Recent Consensus	1.21	1.52	5.38	6.25
High Estimate	1.48	1.60	5.65	6.25
Low Estimate	1.13	1.36	5.30	5.39
Year ago EPS	1.01	1.47	4.56	5.39
Year over Year Growth Est.	20.79%	2.04%	18.20%	9.04%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	1	1	2
Up Last 60 Days	1	1	1	2
Down Last 7 Days	0	0	0	0
Down Last 30 Days	1	0	1	0
Down Last 60 Days	1	0	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Current	1.22	1.50	5.39	5.87
7 Days Ago	1.22	1.50	5.39	5.87
30 Days Ago	1.21	1.48	5.36	5.81
60 Days Ago	1.21	1.47	5.36	5.79
90 Days Ago	1.18	1.44	5.24	5.72

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Most Accurate Estimate	1.20	1.52	5.38	5.85
Zacks Consensus Estimate	1.22	1.50	5.39	5.87
Earnings ESP	-1.28%	1.63%	-0.21%	-0.40%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	1.41	1.29	1.47	1.01	NA
Estimate	1.13	1.31	1.25	0.92	NA
Difference	0.28	-0.02	0.22	0.09	0.14
Surprise	24.78%	-1.53%	17.60%	9.78%	12.66%

Quarterly Estimates By Analyst

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EPS Estimates

Earnings Date	*BMO 5/2/24
Current Quarter	0.61
EPS Last Quarter	0.88
Last EPS Surprise	2.33%
ABR	2.33

Earnings ESP	0.00%
Current Year	2.89
Next Year	3.20
EPS (TTM)	2.70
P/E (F1)	14.06

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	BAX	IND	S&P
Current Qtr (03/2024)	3.39	20.48	14.20
Next Qtr (06/2024)	21.82	46.82	11.23
Current Year (12/2024)	11.15	18.10	17.08
Next Year (12/2025)	10.73	24.60	8.00
Past 5 Years	-2.50	4.00	8.10
Next 5 Years	6.40	10.90	NA
PE	14.06	NA	20.46
PEG Ratio	2.19	NA	NA

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Premium Research for BAX

Zacks Rank

Hold 3

Zacks Industry Rank Bottom 41% (147 out of 251)

Zacks Sector Rank Top 31% (5 out of 16)

Style Scores

A Value | **D** Growth | **D** Momentum | **C** VGM

Earnings ESP 0.00%

Research Reports for BAX Analyst | Snapshot

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Research for BAX

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	3.55B	3.76B	15.10B	15.68B
# of Estimates	7	7	7	7
High Estimate	3.59B	3.78B	15.13B	15.74B
Low Estimate	3.53B	3.72B	15.08B	15.63B
Year ago Sales	3.65B	3.71B	14.95B	15.10B
Year over Year Growth Est.	-2.73%	1.55%	1.04%	3.79%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)

Zacks Consensus Estimate	0.61	0.67	2.89	3.20
# of Estimates	9	7	9	9
Most Recent Consensus	0.61	0.64	2.85	3.15
High Estimate	0.62	0.73	2.93	3.37
Low Estimate	0.59	0.63	2.85	3.11
Year ago EPS	0.59	0.55	2.60	2.89
Year over Year Growth Est.	3.39%	21.82%	11.15%	10.74%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.61	0.67	2.89	3.20
7 Days Ago	0.61	0.67	2.89	3.20
30 Days Ago	0.61	0.67	2.89	3.20
60 Days Ago	0.61	0.67	2.89	3.20
90 Days Ago	0.63	0.71	2.94	3.34

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.61	0.67	2.89	3.20
Zacks Consensus Estimate	0.61	0.67	2.89	3.20
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.88	0.68	0.55	0.59	NA
Estimate	0.86	0.66	0.59	0.48	NA
Difference	0.02	0.02	-0.04	0.11	0.03
Surprise	2.33%	3.03%	-6.78%	22.92%	5.38%

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EPS Estimates

Earnings Date	*BMO 5/3/24
Current Quarter	0.94
EPS Last Quarter	0.82
Last EPS Surprise	-5.75%
ABR	1.00

Earnings ESP	4.26%
Current Year	4.10
Next Year	4.59
EPS (TTM)	3.35
P/E (F1)	33.96

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	BCPC	IND	S&P
Current Qtr (03/2024)	34.29	172.44	14.20
Next Qtr (06/2024)	6.45	-14.14	11.23
Current Year (12/2024)	22.39	15.40	17.08
Next Year (12/2025)	11.95	19.10	8.00
Past 5 Years	2.90	4.00	8.10
Next 5 Years	11.00	12.80	NA
PE	33.96	16.80	20.46
PEG Ratio	3.09	1.31	NA

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Research for BCPC

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	234.12M	239.17M	971.81M	1.03B
# of Estimates	1	1	1	1
High Estimate	234.12M	239.17M	971.81M	1.03B
Low Estimate	234.12M	239.17M	971.81M	1.03B
Year ago Sales	232.54M	231.25M	922.44M	971.81M
Year over Year Growth Est.	0.68%	3.42%	5.35%	6.29%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.94	0.99	4.10	4.59
# of Estimates	2	2	1	1
Most Recent Consensus	0.98	1.00	4.10	4.59
High Estimate	0.98	1.00	4.10	4.59
Low Estimate	0.90	0.97	4.10	4.59
Year ago EPS	0.70	0.93	3.35	4.10
Year over Year Growth Est.	34.29%	6.45%	22.39%	11.95%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	1	1	1	1

Down Last 30 Days	1	1	1	1
Down Last 60 Days	1	1	1	1

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.94	0.99	4.10	4.59
7 Days Ago	0.95	0.99	4.14	4.64
30 Days Ago	0.95	0.99	4.14	4.64
60 Days Ago	0.95	0.99	4.14	4.64
90 Days Ago	0.89	0.94	3.59	3.95

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.98	1.00	4.10	4.59
Zacks Consensus Estimate	0.94	0.99	4.10	4.59
Earnings ESP	4.26%	1.52%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.82	0.90	0.93	0.70	NA
Estimate	0.87	0.91	0.80	0.78	NA
Difference	-0.05	-0.01	0.13	-0.08	0.00
Surprise	-5.75%	-1.10%	16.25%	-10.26%	-0.22%

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EPS Estimates

Earnings Date	*BMO 5/2/24
Current Quarter	2.96
EPS Last Quarter	2.68
Last EPS Surprise	12.13%
ABR	1.47

Earnings ESP	0.00%
Current Year	12.94
Next Year	14.32
EPS (TTM)	11.92
P/E (F1)	18.04

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	BDX	IND	S&P
Current Qtr (03/2024)	3.50	211.53	14.20
Next Qtr (06/2024)	16.55	797.92	11.23
Current Year (09/2024)	5.98	10.70	17.08
Next Year (09/2025)	10.66	17.20	8.00
Past 5 Years	2.60	12.80	8.10
Next 5 Years	9.40	11.50	NA
PE	18.04	125.30	20.46
PEG Ratio	1.93	10.90	NA

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Premium Research for BDX

Zacks Rank	**Buy 2**
Zacks Industry Rank	Top 34% (85 out of 251)
Zacks Sector Rank	Top 31% (5 out of 16)
Style Scores	
B Value | C Growth | F Momentum | C VGM	
Earnings ESP	0.00%
Research Reports for BDX	Analyst | Snapshot

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Research for BDX

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Zacks Consensus Estimate	5.03B	5.14B	20.29B	21.48B
# of Estimates	8	8	8	8
High Estimate	5.05B	5.17B	20.33B	21.64B
Low Estimate	5.00B	5.10B	20.19B	21.40B
Year ago Sales	4.82B	4.88B	19.37B	20.29B
Year over Year Growth Est.	4.33%	5.42%	4.75%	5.86%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)

Zacks Consensus Estimate	2.96	3.45	12.94	14.32
# of Estimates	10	8	11	10
Most Recent Consensus	2.95	3.49	12.89	14.25
High Estimate	2.99	3.62	13.03	14.59
Low Estimate	2.92	3.37	12.89	14.06
Year ago EPS	2.86	2.96	12.21	12.94
Year over Year Growth Est.	3.50%	16.55%	5.98%	10.67%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	1	1
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Current	2.96	3.45	12.94	14.32
7 Days Ago	2.96	3.45	12.94	14.32
30 Days Ago	2.96	3.45	12.94	14.32
60 Days Ago	2.96	3.45	12.94	14.31
90 Days Ago	3.00	3.46	12.83	14.21

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Most Accurate Estimate	2.96	3.45	12.94	14.32
Zacks Consensus Estimate	2.96	3.45	12.94	14.32
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	2.68	3.42	2.96	2.86	NA
Estimate	2.39	3.42	2.89	2.75	NA
Difference	0.29	0.00	0.07	0.11	0.12
Surprise	12.13%	0.00%	2.42%	4.00%	4.64%

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EPS Estimates

Earnings Date	*AMC 5/6/24
Current Quarter	0.67
EPS Last Quarter	1.01
Last EPS Surprise	7.45%
ABR	1.67

Earnings ESP	0.00%
Current Year	3.14
Next Year	3.44
EPS (TTM)	3.03
P/E (F1)	30.91

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	BWXT	IND	S&P
Current Qtr (03/2024)	-4.29	89.32	14.20
Next Qtr (06/2024)	12.31	-1.97	11.23
Current Year (12/2024)	3.97	5.80	17.08
Next Year (12/2025)	9.55	18.50	8.00
Past 5 Years	5.10	6.20	8.10
Next 5 Years	10.00	15.20	NA
PE	30.91	24.50	20.46
PEG Ratio	3.09	1.61	NA

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Research for BWXT

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	600.59M	641.82M	2.61B	2.79B
# of Estimates	2	2	2	2
High Estimate	621.54M	648.83M	2.61B	2.81B
Low Estimate	579.64M	634.82M	2.61B	2.77B
Year ago Sales	568.36M	612.45M	2.50B	2.61B
Year over Year Growth Est.	5.67%	4.80%	4.65%	6.80%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.67	0.73	3.14	3.44
# of Estimates	3	2	3	3
Most Recent Consensus	NA	NA	NA	NA
High Estimate	0.71	0.75	3.16	3.59
Low Estimate	0.62	0.72	3.10	3.25
Year ago EPS	0.70	0.65	3.02	3.14
Year over Year Growth Est.	-4.29%	12.31%	3.97%	9.66%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	1	0	1	1

Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.67	0.73	3.14	3.44
7 Days Ago	0.67	0.73	3.14	3.44
30 Days Ago	0.67	0.73	3.14	3.44
60 Days Ago	0.65	0.72	3.15	3.48
90 Days Ago	0.65	0.76	3.15	3.49

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.67	0.73	3.14	3.44
Zacks Consensus Estimate	0.67	0.73	3.14	3.44
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	1.01	0.67	0.65	0.70	NA
Estimate	0.94	0.66	0.59	0.65	NA
Difference	0.07	0.01	0.06	0.05	0.05
Surprise	7.45%	1.52%	10.17%	7.69%	6.71%

Annual Estimates By Analyst

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EPS Estimates

Exp Earnings Date	8/14/24
Current Quarter	5.86
EPS Last Quarter	5.74
Last EPS Surprise	3.99%
ABR	1.42

Earnings ESP	1.60%
Current Year	20.32
Next Year	22.79
EPS (TTM)	19.76
P/E (F1)	19.94

% EPS Growth Estimates	CACI	IND	S&P
Current Qtr (06/2024)	10.57	122.97	14.20
Next Qtr (09/2024)	18.81	-23.42	11.23
Current Year (06/2024)	7.91	12.60	17.08
Next Year (06/2025)	12.16	19.80	8.00
Past 5 Years	17.70	13.60	8.10
Next 5 Years	10.30	14.00	NA
PE	19.94	19.80	20.46
PEG Ratio	1.93	1.41	NA

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Research for CACI

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Zacks Consensus Estimate	1.88B	1.86B	7.48B	7.72B
# of Estimates	7	5	7	7
High Estimate	1.94B	1.90B	7.56B	7.91B
Low Estimate	1.74B	1.82B	7.33B	7.54B
Year ago Sales	1.70B	1.85B	6.70B	7.48B
Year over Year Growth Est.	10.51%	0.60%	11.58%	3.28%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Zacks Consensus Estimate	5.86	5.18	20.32	22.79
# of Estimates	8	5	9	9
Most Recent Consensus	5.97	5.86	20.38	23.20
High Estimate	6.10	5.32	20.55	23.43
Low Estimate	5.30	5.01	19.96	22.38
Year ago EPS	5.30	4.36	18.83	20.32
Year over Year Growth Est.	10.57%	18.81%	7.91%	12.19%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Up Last 7 Days	1	0	5	6
Up Last 30 Days	2	1	5	6
Up Last 60 Days	2	1	5	6
Down Last 7 Days	2	3	1	0

Down Last 30 Days	2	2	1	0
Down Last 60 Days	2	2	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Current	5.86	5.18	20.32	22.79
7 Days Ago	5.91	5.36	20.27	22.62
30 Days Ago	5.90	5.34	20.24	22.56
60 Days Ago	5.90	5.34	20.24	22.56
90 Days Ago	5.82	5.35	20.18	22.53

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Most Accurate Estimate	5.95	5.21	20.36	22.87
Zacks Consensus Estimate	5.86	5.18	20.32	22.79
Earnings ESP	1.60%	0.62%	0.23%	0.33%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	5.74	4.36	4.36	5.30	NA
Estimate	5.52	4.50	4.52	4.85	NA
Difference	0.22	-0.14	-0.16	0.45	0.09
Surprise	3.99%	-3.11%	-3.54%	9.28%	1.66%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	6/4/24
Current Quarter	1.74
EPS Last Quarter	2.33
Last EPS Surprise	5.91%
ABR	1.73

Earnings ESP	-13.80%
Current Year	12.81
Next Year	14.15
EPS (TTM)	12.58
P/E (F1)	25.23

% EPS Growth Estimates	CASY	IND	S&P
Current Qtr (04/2024)	16.78	-7.21	14.20
Next Qtr (07/2024)	3.76	62.77	11.23
Current Year (04/2024)	10.43	10.40	17.08
Next Year (04/2025)	10.46	10.50	8.00
Past 5 Years	20.10	20.10	8.10
Next 5 Years	9.70	9.70	NA
PE	25.23	25.20	20.46
PEG Ratio	2.59	2.60	NA

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Research for CASY

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (4/2024)	Next Qtr (7/2024)	Current Year (4/2024)	Next Year (4/2025)
Zacks Consensus Estimate	3.43B	4.01B	14.69B	15.33B
# of Estimates	5	5	5	5
High Estimate	3.50B	4.19B	14.76B	15.84B
Low Estimate	3.31B	3.88B	14.57B	14.91B
Year ago Sales	3.33B	3.87B	15.09B	14.69B
Year over Year Growth Est.	2.97%	3.54%	-2.68%	4.33%

Earnings Estimates

	Current Qtr (4/2024)	Next Qtr (7/2024)	Current Year (4/2024)	Next Year (4/2025)
Zacks Consensus Estimate	1.74	4.69	12.81	14.15
# of Estimates	5	5	6	6
Most Recent Consensus	1.78	4.56	12.87	14.02
High Estimate	1.83	5.07	12.93	14.93
Low Estimate	1.50	4.42	12.59	13.69
Year ago EPS	1.49	4.52	11.60	12.81
Year over Year Growth Est.	16.78%	3.76%	10.43%	10.48%

Agreement - Estimate Revisions

	Current Qtr (4/2024)	Next Qtr (7/2024)	Current Year (4/2024)	Next Year (4/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	1
Up Last 60 Days	1	3	3	5
Down Last 7 Days	0	0	0	0

Down Last 30 Days	1	0	2	0
Down Last 60 Days	4	1	3	1

Magnitude - Consensus Estimate Trend

	Current Qtr (4/2024)	Next Qtr (7/2024)	Current Year (4/2024)	Next Year (4/2025)
Current	1.74	4.69	12.81	14.15
7 Days Ago	1.74	4.69	12.81	14.15
30 Days Ago	1.79	4.69	12.88	14.15
60 Days Ago	1.92	4.34	12.64	13.70
90 Days Ago	1.92	4.24	12.64	13.70

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (4/2024)	Next Qtr (7/2024)	Current Year (4/2024)	Next Year (4/2025)
Most Accurate Estimate	1.50	4.69	12.65	14.22
Zacks Consensus Estimate	1.74	4.69	12.81	14.15
Earnings ESP	-13.80%	0.00%	-1.30%	0.47%

Surprise - Reported Earnings History

	Quarter Ending (1/2024)	Quarter Ending (10/2023)	Quarter Ending (7/2023)	Quarter Ending (4/2023)	Average Surprise
Reported	2.33	4.24	4.52	1.49	NA
Estimate	2.20	3.74	3.36	1.58	NA
Difference	0.13	0.50	1.16	-0.09	0.43
Surprise	5.91%	13.37%	34.52%	-5.70%	12.03%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/24/24
Current Quarter	5.62
EPS Last Quarter	5.20
Last EPS Surprise	-4.94%
ABR	1.33

Earnings ESP	-2.94%
Current Year	23.38
Next Year	25.58
EPS (TTM)	21.83
P/E (F1)	24.24

% EPS Growth Estimates	CHE	IND	S&P
Current Qtr (06/2024)	19.32	-47.49	14.20
Next Qtr (09/2024)	9.96	-37.62	11.23
Current Year (12/2024)	15.17	11.40	17.08
Next Year (12/2025)	9.41	17.10	8.00
Past 5 Years	14.10	6.50	8.10
Next 5 Years	11.30	11.70	NA
PE	24.24	19.40	20.46
PEG Ratio	2.15	1.66	NA

Learn More About Estimate Research

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Premium Research for CHE

Zacks Rank Sell 4

Zacks Industry Rank	Bottom 32% (171 out of 251)
Zacks Sector Rank	Top 31% (5 out of 16)
Style Scores	
D Value | **B** Growth | **C** Momentum | **C** VGM	
Earnings ESP	-2.94%
Research Reports for CHE	Analyst | Snapshot

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Research for CHE

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	602.91M	615.25M	2.44B	2.61B
# of Estimates	1	1	1	1
High Estimate	602.91M	615.25M	2.44B	2.61B
Low Estimate	602.91M	615.25M	2.44B	2.61B
Year ago Sales	553.82M	564.53M	2.26B	2.44B
Year over Year Growth Est.	8.86%	8.98%	7.95%	6.70%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	5.62	5.85	23.38	25.58
# of Estimates	2	1	2	2

Most Recent Consensus	NA	NA	NA	NA
High Estimate	5.78	5.85	23.56	26.19
Low Estimate	5.45	5.85	23.19	24.97
Year ago EPS	4.71	5.32	20.30	23.38
Year over Year Growth Est.	19.32%	9.96%	15.17%	9.43%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	1
Up Last 30 Days	0	0	0	1
Up Last 60 Days	0	0	0	1
Down Last 7 Days	0	0	1	0
Down Last 30 Days	0	0	1	0
Down Last 60 Days	0	0	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	5.62	5.85	23.38	25.58
7 Days Ago	5.78	5.85	23.51	25.55
30 Days Ago	5.78	5.85	23.51	25.55
60 Days Ago	5.78	5.85	23.51	25.55
90 Days Ago	5.75	5.73	22.93	24.82

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	5.45	5.85	23.19	26.19
Zacks Consensus Estimate	5.62	5.85	23.38	25.58
Earnings ESP	-2.94%	0.00%	-0.79%	2.39%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	5.20	6.60	5.32	4.71	NA
Estimate	5.47	6.25	4.92	5.09	NA
Difference	-0.27	0.35	0.40	-0.38	0.03
Surprise	-4.94%	5.60%	8.13%	-7.47%	0.33%

Annual Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/24/24
Current Quarter	2.16
EPS Last Quarter	2.04
Last EPS Surprise	1.49%
ABR	2.34

Earnings ESP	-0.54%
Current Year	8.89
Next Year	10.03
EPS (TTM)	8.68
P/E (F1)	16.92

% EPS Growth Estimates	CHKP	IND	S&P
Current Qtr (06/2024)	8.00	11.67	14.20
Next Qtr (09/2024)	8.70	25.50	11.23
Current Year (12/2024)	5.58	11.40	17.08
Next Year (12/2025)	12.82	26.80	8.00
Past 5 Years	7.10	8.30	8.10
Next 5 Years	7.90	15.60	NA
PE	16.92	-23.40	20.46
PEG Ratio	2.14	-1.50	NA

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Premium Research for CHKP

Zacks Rank Hold 3

Zacks Industry Rank	Top 16% (39 out of 251)
Zacks Sector Rank	Top 38% (6 out of 16)
Style Scores	
D Value | **A** Growth | **A** Momentum | **B** VGM	
Earnings ESP	-0.54%
Research Reports for CHKP	Analyst | Snapshot

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Research for CHKP

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	623.82M	632.32M	2.56B	2.70B
# of Estimates	12	11	12	12
High Estimate	629.50M	639.00M	2.58B	2.78B
Low Estimate	619.80M	627.30M	2.55B	2.62B
Year ago Sales	588.70M	596.30M	2.41B	2.56B
Year over Year Growth Est.	5.97%	6.04%	5.99%	5.39%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.16	2.25	8.89	10.03

# of Estimates	12	11	13	13
Most Recent Consensus	2.07	2.17	9.07	10.02
High Estimate	2.22	2.31	9.17	10.45
Low Estimate	2.06	2.17	7.08	9.57
Year ago EPS	2.00	2.07	8.42	8.89
Year over Year Growth Est.	8.00%	8.70%	5.58%	12.78%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	1	0	1
Up Last 30 Days	0	1	0	1
Up Last 60 Days	0	1	0	1
Down Last 7 Days	0	1	1	0
Down Last 30 Days	0	1	1	0
Down Last 60 Days	0	1	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	2.16	2.25	8.89	10.03
7 Days Ago	2.16	2.25	9.04	10.03
30 Days Ago	2.16	2.25	9.04	10.03
60 Days Ago	2.16	2.25	9.04	10.03
90 Days Ago	2.17	2.26	9.06	10.06

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	2.15	2.24	7.08	9.97
Zacks Consensus Estimate	2.16	2.25	8.89	10.03
Earnings ESP	-0.54%	-0.37%	-20.39%	-0.60%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	2.04	2.57	2.07	2.00	NA
Estimate	2.01	2.46	2.02	1.89	NA
Difference	0.03	0.11	0.05	0.11	0.08
Surprise	1.49%	4.47%	2.48%	5.82%	3.57%

Quarterly Estimates By Analyst

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EPS Estimates

Earnings Date	*AMC 5/1/24
Current Quarter	0.60
EPS Last Quarter	0.50
Last EPS Surprise	-37.50%
ABR	3.40

Earnings ESP	-2.09%
Current Year	3.24
Next Year	3.96
EPS (TTM)	3.22
P/E (F1)	22.11

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	CHRW	IND	S&P
Current Qtr (03/2024)	-38.78	-23.34	14.20
Next Qtr (06/2024)	-12.22	-50.51	11.23
Current Year (12/2024)	-1.82	-3.70	17.08
Next Year (12/2025)	22.22	20.50	8.00
Past 5 Years	-4.40	17.60	8.10
Next 5 Years	6.00	8.70	NA
PE	22.11	18.30	20.46
PEG Ratio	3.68	2.10	NA

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Premium Research for CHRW

Zacks Rank	Hold 3
Zacks Industry Rank	Bottom 27% (183 out of 251)
Zacks Sector Rank	Bottom 44% (9 out of 16)
Style Scores	
C Value | A Growth | D Momentum | B VGM	
Earnings ESP	-2.09%
Research Reports for CHRW	Analyst | Snapshot

(= Change in last 30 days)

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Research for CHRW

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	4.21B	4.42B	17.48B	18.17B
# of Estimates	6	6	6	6
High Estimate	4.30B	4.54B	18.25B	18.99B
Low Estimate	4.09B	4.33B	16.94B	17.16B
Year ago Sales	4.61B	4.42B	17.60B	17.48B
Year over Year Growth Est.	-8.73%	-0.03%	-0.65%	3.93%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)

Zacks Consensus Estimate	0.60	0.79	3.24	3.96
# of Estimates	8	6	9	8
Most Recent Consensus	NA	NA	NA	NA
High Estimate	0.79	0.90	3.64	4.25
Low Estimate	0.49	0.66	2.75	3.70
Year ago EPS	0.98	0.90	3.30	3.24
Year over Year Growth Est.	-38.78%	-12.22%	-1.82%	22.11%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	1
Up Last 60 Days	0	0	0	1
Down Last 7 Days	0	0	0	0
Down Last 30 Days	3	2	4	3
Down Last 60 Days	3	2	4	3

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.60	0.79	3.24	3.96
7 Days Ago	0.60	0.79	3.24	3.96
30 Days Ago	0.63	0.82	3.30	4.01
60 Days Ago	0.63	0.82	3.23	4.00
90 Days Ago	0.84	0.94	3.91	4.42

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.59	0.83	3.15	3.92
Zacks Consensus Estimate	0.60	0.79	3.24	3.96
Earnings ESP	-2.09%	4.75%	-3.03%	-1.01%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.50	0.84	0.90	0.98	NA
Estimate	0.80	0.82	0.90	1.01	NA
Difference	-0.30	0.02	0.00	-0.03	-0.08
Surprise	-37.50%	2.44%	0.00%	-2.97%	-9.51%

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EPS Estimates

Earnings Date	*BMO 5/1/24
Current Quarter	3.65
EPS Last Quarter	3.28
Last EPS Surprise	14.69%
ABR	1.53

Earnings ESP	0.00%
Current Year	13.43
Next Year	14.64
EPS (TTM)	12.56
P/E (F1)	17.87

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	COR	IND	S&P
Current Qtr (03/2024)	4.29	211.53	14.20
Next Qtr (06/2024)	11.64	797.92	11.23
Current Year (09/2024)	12.01	12.30	17.08
Next Year (09/2025)	9.01	21.40	8.00
Past 5 Years	13.00	9.50	8.10
Next 5 Years	9.80	15.20	NA
PE	17.87	6.20	20.46
PEG Ratio	1.83	0.41	NA

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Research for COR

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Zacks Consensus Estimate	70.35B	73.83B	292.23B	309.04B
# of Estimates	6	6	6	6
High Estimate	71.02B	75.01B	295.65B	314.99B
Low Estimate	69.21B	72.62B	289.06B	297.35B
Year ago Sales	63.46B	66.95B	262.17B	292.23B
Year over Year Growth Est.	10.85%	10.28%	11.47%	5.75%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Zacks Consensus Estimate	3.65	3.26	13.43	14.64
# of Estimates	8	6	8	8
Most Recent Consensus	3.56	3.30	13.51	14.88
High Estimate	3.80	3.39	13.51	14.92
Low Estimate	3.23	3.15	13.27	14.14
Year ago EPS	3.50	2.92	11.99	13.43
Year over Year Growth Est.	4.29%	11.64%	12.01%	9.03%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	1	0
Up Last 60 Days	0	0	1	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	1	0	1
Down Last 60 Days	0	1	0	1

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Current	3.65	3.26	13.43	14.64
7 Days Ago	3.65	3.26	13.43	14.64
30 Days Ago	3.65	3.26	13.43	14.65
60 Days Ago	3.65	3.26	13.43	14.65
90 Days Ago	3.64	3.19	12.88	14.17

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Most Accurate Estimate	3.65	3.30	13.51	14.88
Zacks Consensus Estimate	3.65	3.26	13.43	14.64
Earnings ESP	0.00%	1.15%	0.61%	1.63%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	3.28	2.86	2.92	3.50	NA
Estimate	2.86	2.79	2.83	3.29	NA
Difference	0.42	0.07	0.09	0.21	0.20
Surprise	14.69%	2.51%	3.18%	6.38%	6.69%

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EPS Estimates

Earnings Date	*AMC 5/1/24
Current Quarter	0.93
EPS Last Quarter	0.92
Last EPS Surprise	5.75%
ABR	1.33

Earnings ESP	-1.50%
Current Year	4.02
Next Year	4.33
EPS (TTM)	3.68
P/E (F1)	12.03

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	CSGS	IND	S&P
Current Qtr (03/2024)	-10.58	122.97	14.20
Next Qtr (06/2024)	17.50	-23.42	11.23
Current Year (12/2024)	8.94	12.60	17.08
Next Year (12/2025)	7.71	19.80	8.00
Past 5 Years	3.10	13.60	8.10
Next 5 Years	10.00	14.00	NA
PE	12.03	19.80	20.46
PEG Ratio	1.20	1.41	NA

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Research for CSGS

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	271.66M	274.90M	1.12B	1.17B
# of Estimates	5	5	5	5
High Estimate	274.00M	278.00M	1.13B	1.19B
Low Estimate	268.10M	270.10M	1.11B	1.16B
Year ago Sales	298.74M	265.15M	1.10B	1.12B
Year over Year Growth Est.	-9.07%	3.68%	1.40%	4.71%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.93	0.94	4.02	4.33
# of Estimates	5	5	6	5
Most Recent Consensus	0.96	0.95	4.08	4.25
High Estimate	0.96	0.98	4.09	4.40
Low Estimate	0.88	0.86	3.95	4.25
Year ago EPS	1.04	0.80	3.69	4.02
Year over Year Growth Est.	-10.58%	17.50%	8.94%	7.74%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	1	0	0
Up Last 30 Days	0	2	0	0
Up Last 60 Days	0	2	0	0

Down Last 7 Days	1	0	0	1
Down Last 30 Days	2	0	0	1
Down Last 60 Days	2	0	0	1

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.93	0.94	4.02	4.33
7 Days Ago	0.97	0.93	4.02	4.35
30 Days Ago	0.98	0.93	4.02	4.35
60 Days Ago	0.98	0.93	4.02	4.35
90 Days Ago	1.02	0.94	3.96	4.30

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.92	0.91	4.02	4.25
Zacks Consensus Estimate	0.93	0.94	4.02	4.33
Earnings ESP	-1.50%	-4.13%	0.00%	-1.80%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.92	0.92	0.80	1.04	NA
Estimate	0.87	0.82	0.72	0.94	NA
Difference	0.05	0.10	0.08	0.10	0.08
Surprise	5.75%	12.20%	11.11%	10.64%	9.93%

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EPS Estimates

Exp Earnings Date	5/23/24
Current Quarter	1.86
EPS Last Quarter	1.07
Last EPS Surprise	-8.55%
ABR	NA

Earnings ESP	0.00%
Current Year	6.83
Next Year	8.13
EPS (TTM)	6.71
P/E (F1)	29.52

% EPS Growth Estimates	CSWI	IND	S&P
Current Qtr (03/2024)	6.90	172.44	14.20
Next Qtr (06/2024)	7.11	-14.14	11.23
Current Year (03/2024)	10.16	15.40	5.37
Next Year (03/2025)	19.03	19.10	11.11
Past 5 Years	22.70	4.00	8.10
Next 5 Years	15.00	12.80	NA
PE	29.52	16.80	22.74
PEG Ratio	1.97	1.31	NA

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Research for CSWI

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Zacks Consensus Estimate	204.70M	214.70M	786.70M	831.50M
# of Estimates	1	1	1	1
High Estimate	204.70M	214.70M	786.70M	831.50M
Low Estimate	204.70M	214.70M	786.70M	831.50M
Year ago Sales	195.69M	203.36M	757.91M	786.70M
Year over Year Growth Est.	4.60%	5.58%	3.80%	5.69%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Zacks Consensus Estimate	1.86	2.11	6.83	8.13
# of Estimates	1	1	1	1
Most Recent Consensus	1.86	2.11	6.83	8.13
High Estimate	1.86	2.11	6.83	8.13
Low Estimate	1.86	2.11	6.83	8.13
Year ago EPS	1.74	1.97	6.20	6.83
Year over Year Growth Est.	6.90%	7.11%	10.16%	19.03%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Current	1.86	2.11	6.83	8.13
7 Days Ago	1.86	2.11	6.83	8.13
30 Days Ago	1.86	2.11	6.83	8.13
60 Days Ago	1.86	2.11	6.83	8.13
90 Days Ago	2.06	2.16	7.12	8.32

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Most Accurate Estimate	1.86	2.11	6.83	8.13
Zacks Consensus Estimate	1.86	2.11	6.83	8.13
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	1.07	1.93	1.97	1.74	NA
Estimate	1.17	1.87	NA	NA	NA
Difference	-0.10	0.06	NA	NA	-0.02
Surprise	-8.55%	3.21%	NA	NA	-2.67%

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EPS Estimates

Earnings Date	*BMO 5/1/24
Current Quarter	1.69
EPS Last Quarter	2.12
Last EPS Surprise	5.47%
ABR	1.63

Earnings ESP	3.71%
Current Year	8.31
Next Year	9.08
EPS (TTM)	8.74
P/E (F1)	8.12

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	CVS	IND	S&P
Current Qtr (03/2024)	-23.18	236.38	14.20
Next Qtr (06/2024)	0.45	83.39	11.23
Current Year (12/2024)	-4.92	-14.10	17.08
Next Year (12/2025)	9.27	20.20	8.00
Past 5 Years	5.50	-1.80	8.10
Next 5 Years	9.10	7.00	NA
PE	8.12	6.20	20.46
PEG Ratio	0.89	0.89	NA

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Research for CVS

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	89.20B	92.43B	370.48B	390.05B
# of Estimates	9	9	9	9
High Estimate	90.57B	93.08B	371.62B	401.28B
Low Estimate	87.42B	91.33B	365.86B	370.47B
Year ago Sales	85.28B	88.92B	357.78B	370.48B
Year over Year Growth Est.	4.60%	3.95%	3.55%	5.28%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.69	2.22	8.31	9.08
# of Estimates	11	9	13	11
Most Recent Consensus	1.70	2.13	8.24	9.05
High Estimate	1.83	2.34	8.50	9.26
Low Estimate	1.63	2.13	8.13	8.30
Year ago EPS	2.20	2.21	8.74	8.31
Year over Year Growth Est.	-23.18%	0.45%	-4.92%	9.23%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	1	0	0
Up Last 60 Days	0	3	0	0
Down Last 7 Days	1	0	1	1

Down Last 30 Days	1	2	4	4
Down Last 60 Days	4	1	5	4

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.69	2.22	8.31	9.08
7 Days Ago	1.69	2.22	8.31	9.08
30 Days Ago	1.69	2.23	8.33	9.22
60 Days Ago	1.74	2.18	8.35	9.20
90 Days Ago	2.02	2.20	8.53	9.40

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.76	2.16	8.29	8.89
Zacks Consensus Estimate	1.69	2.22	8.31	9.08
Earnings ESP	3.71%	-2.59%	-0.24%	-2.06%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	2.12	2.21	2.21	2.20	NA
Estimate	2.01	2.13	2.12	2.07	NA
Difference	0.11	0.08	0.09	0.13	0.10
Surprise	5.47%	3.76%	4.25%	6.28%	4.94%

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EPS Estimates

Exp Earnings Date	7/25/24
Current Quarter	0.32
EPS Last Quarter	-0.01
Last EPS Surprise	66.67%
ABR	1.38

Earnings ESP	3.71%
Current Year	0.77
Next Year	1.21
EPS (TTM)	0.83
P/E (F1)	117.57

% EPS Growth Estimates	CWST	IND	S&P
Current Qtr (06/2024)	-11.11	22.77	14.20
Next Qtr (09/2024)	2.86	-38.35	11.23
Current Year (12/2024)	-18.09	18.60	17.08
Next Year (12/2025)	57.14	30.30	8.00
Past 5 Years	5.80	12.90	8.10
Next 5 Years	19.90	12.30	NA
PE	117.57	13.90	20.46
PEG Ratio	5.91	1.13	NA

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Research for CWST

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	381.90M	394.90M	1.50B	1.59B
# of Estimates	2	2	3	3
High Estimate	385.00M	395.80M	1.51B	1.60B
Low Estimate	378.80M	394.00M	1.49B	1.57B
Year ago Sales	289.65M	352.74M	1.26B	1.50B
Year over Year Growth Est.	31.85%	11.95%	18.30%	6.26%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.32	0.36	0.77	1.21
# of Estimates	4	3	4	4
Most Recent Consensus	0.33	NA	NA	1.20
High Estimate	0.38	0.38	0.82	1.33
Low Estimate	0.27	0.34	0.70	1.07
Year ago EPS	0.36	0.35	0.94	0.77
Year over Year Growth Est.	-11.11%	2.86%	-18.09%	56.82%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	2	2	1	1
Up Last 30 Days	2	2	1	2
Up Last 60 Days	2	2	1	2
Down Last 7 Days	0	0	1	0

Down Last 30 Days	0	0	1	0
Down Last 60 Days	0	0	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.32	0.36	0.77	1.21
7 Days Ago	0.29	0.34	0.78	1.21
30 Days Ago	0.29	0.34	0.77	1.21
60 Days Ago	0.29	0.34	0.77	1.21
90 Days Ago	0.37	0.39	1.08	1.48

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.33	0.36	0.79	1.14
Zacks Consensus Estimate	0.32	0.36	0.77	1.21
Earnings ESP	3.71%	0.00%	1.62%	-6.20%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	-0.01	0.13	0.35	0.36	NA
Estimate	-0.03	0.18	0.32	0.37	NA
Difference	0.02	-0.05	0.03	-0.01	0.00
Surprise	66.67%	-27.78%	9.38%	-2.70%	11.39%

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EPS Estimates

Exp Earnings Date	7/24/24
Current Quarter	2.32
EPS Last Quarter	2.04
Last EPS Surprise	9.68%
ABR	2.47

Earnings ESP	-0.35%
Current Year	8.78
Next Year	9.43
EPS (TTM)	8.71
P/E (F1)	15.90

% EPS Growth Estimates	DGX	IND	S&P
Current Qtr (06/2024)	0.87	-47.49	14.20
Next Qtr (09/2024)	3.60	-37.62	11.23
Current Year (12/2024)	0.80	11.40	17.08
Next Year (12/2025)	7.40	17.10	8.00
Past 5 Years	7.40	6.50	8.10
Next 5 Years	5.20	11.70	NA
PE	15.90	19.40	20.46
PEG Ratio	3.03	1.66	NA

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Research for DGX

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.39B	2.36B	9.43B	9.75B
# of Estimates	8	8	9	9
High Estimate	2.40B	2.38B	9.47B	9.91B
Low Estimate	2.37B	2.35B	9.35B	9.65B
Year ago Sales	2.34B	2.30B	9.25B	9.43B
Year over Year Growth Est.	2.09%	2.97%	1.91%	3.38%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.32	2.30	8.78	9.43
# of Estimates	10	9	10	10
Most Recent Consensus	2.28	2.25	8.61	9.31
High Estimate	2.37	2.33	8.90	9.58
Low Estimate	2.23	2.18	8.37	9.21
Year ago EPS	2.30	2.22	8.71	8.78
Year over Year Growth Est.	0.87%	3.60%	0.80%	7.43%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	2	1	6	4
Up Last 30 Days	2	2	6	3
Up Last 60 Days	3	2	7	4
Down Last 7 Days	4	5	1	0

Down Last 30 Days	4	5	1	0
Down Last 60 Days	4	5	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	2.32	2.30	8.78	9.43
7 Days Ago	2.32	2.32	8.75	9.40
30 Days Ago	2.32	2.33	8.75	9.41
60 Days Ago	2.32	2.33	8.75	9.41
90 Days Ago	2.22	2.29	8.96	9.61

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	2.31	2.29	8.80	9.48
Zacks Consensus Estimate	2.32	2.30	8.78	9.43
Earnings ESP	-0.35%	-0.39%	0.23%	0.56%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	2.04	2.15	2.22	2.30	NA
Estimate	1.86	2.14	2.19	2.23	NA
Difference	0.18	0.01	0.03	0.07	0.07
Surprise	9.68%	0.47%	1.37%	3.14%	3.67%

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EPS Estimates

Exp Earnings Date	7/23/24
Current Quarter	1.58
EPS Last Quarter	1.92
Last EPS Surprise	11.63%
ABR	1.70

Earnings ESP	0.00%
Current Year	7.63
Next Year	8.71
EPS (TTM)	8.08
P/E (F1)	32.33

% EPS Growth Estimates	DHR	IND	S&P
Current Qtr (06/2024)	-22.93	260.42	14.20
Next Qtr (09/2024)	-14.36	-12.91	11.23
Current Year (12/2024)	0.66	-0.70	17.08
Next Year (12/2025)	14.15	19.20	8.00
Past 5 Years	11.80	14.30	8.10
Next 5 Years	8.50	8.30	NA
PE	32.33	1.30	20.46
PEG Ratio	3.80	0.16	NA

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Premium Research for DHR

Zacks Rank Hold 3

Zacks Industry Rank	Bottom 39% (154 out of 251)
Zacks Sector Rank	Bottom 19% (13 out of 16)
Style Scores	
F Value | **D** Growth | **B** Momentum | **F** VGM	
Earnings ESP	0.00%
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Research for DHR

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	5.61B	5.83B	23.91B	25.89B
# of Estimates	8	8	8	8
High Estimate	5.72B	5.90B	24.05B	26.05B
Low Estimate	5.57B	5.75B	23.77B	25.68B
Year ago Sales	7.16B	6.87B	27.60B	23.91B
Year over Year Growth Est.	-21.63%	-15.18%	-13.37%	8.28%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.58	1.73	7.63	8.71
# of Estimates	10	8	11	10

Most Recent Consensus	1.56	1.73	7.67	8.90
High Estimate	1.63	1.90	7.75	8.96
Low Estimate	1.55	1.63	7.54	8.45
Year ago EPS	2.05	2.02	7.58	7.63
Year over Year Growth Est.	-22.93%	-14.36%	0.66%	14.06%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	4	3
Up Last 30 Days	0	1	4	5
Up Last 60 Days	0	1	4	5
Down Last 7 Days	6	6	3	4
Down Last 30 Days	8	7	4	4
Down Last 60 Days	8	7	4	4

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.58	1.73	7.63	8.71
7 Days Ago	1.62	1.90	7.62	8.75
30 Days Ago	1.63	1.91	7.62	8.70
60 Days Ago	1.63	1.91	7.62	8.70
90 Days Ago	1.79	1.89	7.73	8.57

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.58	1.73	7.64	8.71
Zacks Consensus Estimate	1.58	1.73	7.63	8.71
Earnings ESP	0.00%	0.00%	0.12%	0.01%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	1.92	2.09	2.02	2.05	NA
Estimate	1.72	1.90	1.83	2.00	NA
Difference	0.20	0.19	0.19	0.05	0.16
Surprise	11.63%	10.00%	10.38%	2.50%	8.63%

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EPS Estimates

Exp Earnings Date	7/11/24
Current Quarter	0.53
EPS Last Quarter	0.52
Last EPS Surprise	-1.89%
ABR	3.00

Earnings ESP	0.00%
Current Year	2.12
Next Year	2.31
EPS (TTM)	2.02
P/E (F1)	32.26

% EPS Growth Estimates	FAST	IND	S&P
Current Qtr (06/2024)	1.92	26.78	14.20
Next Qtr (09/2024)	5.77	7.14	11.23
Current Year (12/2024)	4.95	-1.70	17.08
Next Year (12/2025)	8.96	12.60	8.00
Past 5 Years	10.50	21.10	8.10
Next 5 Years	9.00	10.40	NA
PE	32.26	17.90	20.46
PEG Ratio	3.58	1.72	NA

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Research for FAST

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.97B	1.97B	7.73B	8.33B
# of Estimates	6	6	6	6
High Estimate	1.99B	2.02B	7.84B	8.51B
Low Estimate	1.95B	1.93B	7.66B	8.08B
Year ago Sales	1.88B	1.85B	7.35B	7.73B
Year over Year Growth Est.	4.38%	6.85%	5.22%	7.73%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.53	0.55	2.12	2.31
# of Estimates	6	6	8	8
Most Recent Consensus	0.54	0.53	2.12	2.27
High Estimate	0.54	0.56	2.17	2.35
Low Estimate	0.51	0.53	2.07	2.25
Year ago EPS	0.52	0.52	2.02	2.12
Year over Year Growth Est.	1.92%	5.77%	4.95%	8.61%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	1
Up Last 60 Days	0	0	0	1
Down Last 7 Days	0	0	0	0

Down Last 30 Days	6	3	5	4
Down Last 60 Days	6	3	5	4

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.53	0.55	2.12	2.31
7 Days Ago	0.53	0.55	2.12	2.31
30 Days Ago	0.55	0.56	2.15	2.32
60 Days Ago	0.55	0.55	2.15	2.31
90 Days Ago	0.55	0.55	2.14	2.31

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.53	0.54	2.11	2.31
Zacks Consensus Estimate	0.53	0.55	2.12	2.31
Earnings ESP	0.00%	-0.61%	-0.40%	0.29%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	0.52	0.46	0.52	0.52	NA
Estimate	0.53	0.45	0.51	0.52	NA
Difference	-0.01	0.01	0.01	0.00	0.00
Surprise	-1.89%	2.22%	1.96%	0.00%	0.57%

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EPS Estimates

Exp Earnings Date	*BMO 4/30/24
Current Quarter	0.74
EPS Last Quarter	0.82
Last EPS Surprise	-3.53%
ABR	2.20

Earnings ESP	-1.79%
Current Year	4.32
Next Year	4.71
EPS (TTM)	4.11
P/E (F1)	23.92

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	FELE	IND	S&P
Current Qtr (03/2024)	-6.33	71.43	14.20
Next Qtr (06/2024)	4.72	2.79	11.23
Current Year (12/2024)	5.11	19.70	17.08
Next Year (12/2025)	9.03	14.40	8.00
Past 5 Years	14.40	6.30	8.10
Next 5 Years	12.00	11.50	NA
PE	23.92	17.60	20.46
PEG Ratio	1.99	1.53	NA

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Research for FELE

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	483.85M	579.00M	2.13B	2.22B
# of Estimates	2	2	2	2
High Estimate	487.70M	583.00M	2.14B	2.24B
Low Estimate	480.00M	575.00M	2.11B	2.21B
Year ago Sales	484.55M	569.18M	2.07B	2.13B
Year over Year Growth Est.	-0.14%	1.73%	2.95%	4.61%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.74	1.33	4.32	4.71
# of Estimates	3	2	3	3
Most Recent Consensus	0.75	1.32	4.32	4.69
High Estimate	0.76	1.33	4.38	4.82
Low Estimate	0.73	1.32	4.25	4.55
Year ago EPS	0.79	1.27	4.11	4.32
Year over Year Growth Est.	-6.33%	4.72%	5.11%	9.03%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	1	0	0
Up Last 60 Days	0	1	0	0

Down Last 7 Days	0	0	0	0
Down Last 30 Days	1	0	0	0
Down Last 60 Days	1	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.74	1.33	4.32	4.71
7 Days Ago	0.74	1.33	4.32	4.71
30 Days Ago	0.75	1.30	4.32	4.71
60 Days Ago	0.75	1.30	4.32	4.71
90 Days Ago	0.85	1.30	4.40	4.75

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.73	1.33	4.32	4.71
Zacks Consensus Estimate	0.74	1.33	4.32	4.71
Earnings ESP	-1.79%	0.38%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.82	1.23	1.27	0.79	NA
Estimate	0.85	1.27	1.31	0.66	NA
Difference	-0.03	-0.04	-0.04	0.13	0.01
Surprise	-3.53%	-3.15%	-3.05%	19.70%	2.49%

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EPS Estimates

Exp Earnings Date	7/23/24
Current Quarter	1.84
EPS Last Quarter	1.89
Last EPS Surprise	26.85%
ABR	1.34

Earnings ESP	0.88%
Current Year	7.46
Next Year	8.58
EPS (TTM)	6.52
P/E (F1)	22.51

% EPS Growth Estimates	GOOG	IND	S&P
Current Qtr (06/2024)	27.78	16.98	14.20
Next Qtr (09/2024)	16.77	-2.34	11.23
Current Year (12/2024)	28.62	19.60	17.08
Next Year (12/2025)	15.01	23.50	8.00
Past 5 Years	21.30	10.30	8.10
Next 5 Years	17.20	22.40	NA
PE	22.51	2.00	20.46
PEG Ratio	1.31	0.09	NA

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Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

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Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	70.48B	72.17B	290.81B	324.33B
# of Estimates	13	13	13	13
High Estimate	71.60B	73.54B	294.73B	330.00B
Low Estimate	69.10B	70.60B	283.85B	315.87B
Year ago Sales	62.07B	64.05B	256.51B	290.81B
Year over Year Growth Est.	13.55%	12.68%	13.37%	11.52%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.84	1.81	7.46	8.58
# of Estimates	16	14	17	17
Most Recent Consensus	1.85	1.81	7.27	8.16
High Estimate	1.98	1.99	8.17	9.81
Low Estimate	1.60	1.56	6.34	7.38
Year ago EPS	1.44	1.55	5.80	7.46
Year over Year Growth Est.	27.78%	16.77%	28.62%	15.06%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	11	11	13	14
Up Last 30 Days	12	11	14	15
Up Last 60 Days	12	11	14	15
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.84	1.81	7.46	8.58
7 Days Ago	1.68	1.69	6.79	7.78
30 Days Ago	1.68	1.69	6.77	7.75
60 Days Ago	1.68	1.69	6.78	7.76
90 Days Ago	1.67	1.68	6.72	7.79

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.85	1.83	7.62	8.65
Zacks Consensus Estimate	1.84	1.81	7.46	8.58
Earnings ESP	0.88%	1.38%	2.18%	0.80%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	1.89	1.64	1.55	1.44	NA
Estimate	1.49	1.60	1.45	1.32	NA
Difference	0.40	0.04	0.10	0.12	0.17
Surprise	26.85%	2.50%	6.90%	9.09%	11.34%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/29/24
Current Quarter	-0.05
EPS Last Quarter	-0.19
Last EPS Surprise	-72.73%
ABR	3.00

Earnings ESP	0.00%
Current Year	-0.05
Next Year	0.66
EPS (TTM)	-0.17
P/E (F1)	NA

% EPS Growth Estimates	HTLD	IND	S&P
Current Qtr (06/2024)	-150.00	42.94	14.20
Next Qtr (09/2024)	128.57	31.40	11.23
Current Year (12/2024)	-126.32	1.40	17.08
Next Year (12/2025)	1,420.00	25.70	8.00
Past 5 Years	-24.60	9.80	8.10
Next 5 Years	NA	14.20	NA
PE	NA	4.00	20.46
PEG Ratio	NA	0.28	NA

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Research for HTLD

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	276.31M	284.11M	1.15B	1.27B
# of Estimates	1	1	2	2
High Estimate	276.31M	284.11M	1.18B	1.30B
Low Estimate	276.31M	284.11M	1.13B	1.23B
Year ago Sales	306.17M	295.03M	1.21B	1.15B
Year over Year Growth Est.	-9.75%	-3.70%	-4.48%	10.01%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	-0.05	0.04	-0.05	0.66
# of Estimates	2	2	2	2
Most Recent Consensus	NA	NA	NA	NA
High Estimate	-0.04	0.06	-0.03	0.67
Low Estimate	-0.06	0.02	-0.06	0.64
Year ago EPS	0.10	-0.14	0.19	-0.05
Year over Year Growth Est.	-150.00%	128.57%	-126.32%	1,400.00%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	1	0	1	1
Down Last 30 Days	2	1	2	2

Down Last 60 Days	2	1	2	2

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	-0.05	0.04	-0.05	0.66
7 Days Ago	-0.05	0.04	-0.01	0.70
30 Days Ago	-0.02	0.08	0.09	0.79
60 Days Ago	-0.02	0.08	0.01	0.79
90 Days Ago	0.05	0.14	0.18	0.85

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	-0.05	0.06	-0.05	0.66
Zacks Consensus Estimate	-0.05	0.04	-0.05	0.66
Earnings ESP	0.00%	50.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	-0.19	0.06	-0.14	0.10	NA
Estimate	-0.11	-0.10	0.07	0.16	NA
Difference	-0.08	0.16	-0.21	-0.06	-0.05
Surprise	-72.73%	160.00%	-300.00%	-37.50%	-62.56%

Annual Estimates By Analyst

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Earnings Date	*AMC 5/6/24
Current Quarter	0.63
EPS Last Quarter	0.52
Last EPS Surprise	-40.23%
ABR	1.75

Earnings ESP	0.00%
Current Year	5.06
Next Year	5.72
EPS (TTM)	4.60
P/E (F1)	27.01

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	JJSF	IND	S&P
Current Qtr (03/2024)	46.51	8.56	14.20
Next Qtr (06/2024)	6.25	10.05	11.23
Current Year (09/2024)	12.44	10.80	17.08
Next Year (09/2025)	13.04	15.70	8.00
Past 5 Years	0.40	5.60	8.10
Next 5 Years	NA	10.20	NA
PE	27.01	32.90	20.46
PEG Ratio	NA	3.23	NA

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Research for JJSF

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Zacks Consensus Estimate	340.98M	441.66M	1.57B	1.62B
# of Estimates	3	3	3	3
High Estimate	344.40M	445.00M	1.59B	1.64B
Low Estimate	339.00M	439.59M	1.56B	1.61B
Year ago Sales	337.85M	425.77M	1.56B	1.57B
Year over Year Growth Est.	0.93%	3.73%	0.69%	3.49%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Zacks Consensus Estimate	0.63	2.04	5.06	5.72
# of Estimates	3	3	3	3
Most Recent Consensus	0.69	2.07	5.14	5.74
High Estimate	0.69	2.10	5.30	6.10
Low Estimate	0.51	1.96	4.73	5.33
Year ago EPS	0.43	1.92	4.50	5.06
Year over Year Growth Est.	46.51%	6.25%	12.44%	13.17%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Current	0.63	2.04	5.06	5.72
7 Days Ago	0.63	2.04	5.06	5.72
30 Days Ago	0.63	2.04	5.06	5.72
60 Days Ago	0.63	2.04	5.06	5.72
90 Days Ago	0.86	2.02	5.62	6.23

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (9/2024)	Next Year (9/2025)
Most Accurate Estimate	0.63	2.04	5.06	5.72
Zacks Consensus Estimate	0.63	2.04	5.06	5.72
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.52	1.73	1.92	0.43	NA
Estimate	0.87	1.69	1.51	0.49	NA
Difference	-0.35	0.04	0.41	-0.06	0.01
Surprise	-40.23%	2.37%	27.15%	-12.24%	-5.74%

Quarterly Estimates By Analyst

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EPS Estimates

Earnings Date	*AMC 5/7/24
Current Quarter	1.16
EPS Last Quarter	1.22
Last EPS Surprise	7.02%
ABR	2.50

Earnings ESP	0.00%
Current Year	5.11
Next Year	5.67
EPS (TTM)	5.07
P/E (F1)	32.50

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	JKHY	IND	S&P
Current Qtr (03/2024)	3.57	7.64	14.20
Next Qtr (06/2024)	-3.73	-75.09	11.23
Current Year (06/2024)	1.79	15.10	17.08
Next Year (06/2025)	10.96	19.70	8.00
Past 5 Years	8.00	8.50	8.10
Next 5 Years	8.30	8.30	NA
PE	32.50	16.80	20.46
PEG Ratio	3.89	2.02	NA

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Premium Research for JKHY

Zacks Rank	**Buy 2**
Zacks Industry Rank	Top 1% (1 out of 251)
Zacks Sector Rank	Top 38% (6 out of 16)
Style Scores	
D Value | D Growth | C Momentum | D VGM	
Earnings ESP	0.00%
Research Reports for JKHY	Analyst | Snapshot

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Research for JKHY

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (6/2024)	Next Year (6/2025)
Zacks Consensus Estimate	542.51M	562.40M	2.22B	2.37B
# of Estimates	5	5	5	5
High Estimate	544.50M	566.49M	2.23B	2.39B
Low Estimate	541.00M	559.00M	2.22B	2.37B
Year ago Sales	508.55M	534.63M	2.08B	2.22B
Year over Year Growth Est.	6.68%	5.19%	6.94%	6.88%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (6/2024)	Next Year (6/2025)

Zacks Consensus Estimate	1.16	1.29	5.11	5.67
# of Estimates	6	5	7	7
Most Recent Consensus	1.14	1.30	5.09	5.58
High Estimate	1.20	1.32	5.13	5.76
Low Estimate	1.14	1.27	5.09	5.58
Year ago EPS	1.12	1.34	5.02	5.11
Year over Year Growth Est.	3.57%	-3.73%	1.79%	10.99%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (6/2024)	Next Year (6/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	1	1
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (6/2024)	Next Year (6/2025)
Current	1.16	1.29	5.11	5.67
7 Days Ago	1.16	1.29	5.11	5.67
30 Days Ago	1.16	1.29	5.11	5.67
60 Days Ago	1.16	1.29	5.10	5.67
90 Days Ago	1.16	1.31	5.01	5.61

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (6/2024)	Next Year (6/2025)
Most Accurate Estimate	1.16	1.29	5.11	5.67
Zacks Consensus Estimate	1.16	1.29	5.11	5.67
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	1.22	1.39	1.34	1.12	NA
Estimate	1.14	1.29	1.19	1.09	NA
Difference	0.08	0.10	0.15	0.03	0.09
Surprise	7.02%	7.75%	12.61%	2.75%	7.53%

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EPS Estimates

Exp Earnings Date	7/24/24
Current Quarter	3.12
EPS Last Quarter	3.06
Last EPS Surprise	5.88%
ABR	1.63

Earnings ESP	0.64%
Current Year	12.79
Next Year	14.21
EPS (TTM)	12.57
P/E (F1)	16.98

% EPS Growth Estimates	LHX	IND	S&P
Current Qtr (06/2024)	5.05	34.79	14.20
Next Qtr (09/2024)	2.19	337.58	11.23
Current Year (12/2024)	3.48	16.20	17.08
Next Year (12/2025)	11.10	22.00	8.00
Past 5 Years	8.30	3.80	8.10
Next 5 Years	8.50	11.10	NA
PE	16.98	-20.10	20.46
PEG Ratio	2.01	-1.81	NA

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Research for LHX

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	5.30B	5.30B	21.16B	22.09B
# of Estimates	6	6	3	7
High Estimate	5.39B	5.38B	21.18B	22.26B
Low Estimate	5.18B	5.23B	21.14B	21.77B
Year ago Sales	4.69B	4.92B	19.42B	21.16B
Year over Year Growth Est.	13.02%	7.81%	8.96%	4.41%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	3.12	3.26	12.79	14.21
# of Estimates	7	7	9	8
Most Recent Consensus	3.10	3.20	12.70	14.13
High Estimate	3.20	3.34	13.14	14.58
Low Estimate	3.06	3.20	12.60	13.75
Year ago EPS	2.97	3.19	12.36	12.79
Year over Year Growth Est.	5.05%	2.19%	3.48%	11.13%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	2	2	2	2
Up Last 30 Days	2	2	2	2
Up Last 60 Days	3	2	3	3
Down Last 7 Days	0	1	0	0
Down Last 30 Days	0	1	0	0

Down Last 60 Days	1	3	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	3.12	3.26	12.79	14.21
7 Days Ago	3.10	3.25	12.73	14.16
30 Days Ago	3.10	3.25	12.73	14.16
60 Days Ago	3.12	3.27	12.78	14.16
90 Days Ago	3.16	3.29	12.91	14.28

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	3.14	3.28	13.02	14.57
Zacks Consensus Estimate	3.12	3.26	12.79	14.21
Earnings ESP	0.64%	0.66%	1.84%	2.51%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	3.06	3.35	3.19	2.97	NA
Estimate	2.89	3.31	3.06	2.94	NA
Difference	0.17	0.04	0.13	0.03	0.09
Surprise	5.88%	1.21%	4.25%	1.02%	3.09%

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EPS Estimates

Earnings Date	*AMC 5/7/24
Current Quarter	6.34
EPS Last Quarter	7.74
Last EPS Surprise	9.79%
ABR	1.41

Earnings ESP	-0.67%
Current Year	27.59
Next Year	31.06
EPS (TTM)	28.43
P/E (F1)	17.26

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	MCK	IND	S&P
Current Qtr (03/2024)	-11.82	211.53	14.20
Next Qtr (06/2024)	-1.79	797.92	11.23
Current Year (03/2024)	6.36	10.70	5.37
Next Year (03/2025)	12.58	17.20	11.11
Past 5 Years	15.40	12.80	8.10
Next 5 Years	12.10	11.50	NA
PE	17.26	125.30	22.74
PEG Ratio	1.42	10.90	NA

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Research for MCK

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Zacks Consensus Estimate	78.72B	80.48B	311.31B	339.29B
# of Estimates	6	5	6	6
High Estimate	79.67B	81.74B	312.27B	357.25B
Low Estimate	76.38B	79.50B	308.98B	332.27B
Year ago Sales	68.91B	74.48B	276.71B	311.31B
Year over Year Growth Est.	14.23%	8.05%	12.50%	8.99%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Zacks Consensus Estimate	6.34	7.14	27.59	31.06
# of Estimates	8	5	9	9
Most Recent Consensus	6.39	7.04	27.64	31.37
High Estimate	6.68	7.29	27.93	31.49
Low Estimate	6.20	6.96	27.45	30.75
Year ago EPS	7.19	7.27	25.94	27.59
Year over Year Growth Est.	-11.82%	-1.79%	6.36%	12.56%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	1	1	3
Up Last 60 Days	0	1	1	3
Down Last 7 Days	0	0	0	0

Down Last 30 Days	2	0	1	0
Down Last 60 Days	2	0	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Current	6.34	7.14	27.59	31.06
7 Days Ago	6.34	7.14	27.59	31.06
30 Days Ago	6.39	7.11	27.57	31.00
60 Days Ago	6.39	7.11	27.57	31.00
90 Days Ago	6.68	7.44	27.27	31.10

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Most Accurate Estimate	6.30	7.04	27.55	31.05
Zacks Consensus Estimate	6.34	7.14	27.59	31.06
Earnings ESP	-0.67%	-1.33%	-0.17%	-0.02%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	7.74	6.23	7.27	7.19	NA
Estimate	7.05	6.11	5.85	7.16	NA
Difference	0.69	0.12	1.42	0.03	0.57
Surprise	9.79%	1.96%	24.27%	0.42%	9.11%

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EPS Estimates

Exp Earnings Date	7/4/24
Current Quarter	0.60
EPS Last Quarter	0.63
Last EPS Surprise	8.62%
ABR	2.85

Earnings ESP	-1.08%
Current Year	2.85
Next Year	3.04
EPS (TTM)	2.73
P/E (F1)	26.75

% EPS Growth Estimates	MKC	IND	S&P
Current Qtr (05/2024)	0.00	2,874.87	14.20
Next Qtr (08/2024)	7.69	8.56	11.23
Current Year (11/2024)	5.56	10.80	17.08
Next Year (11/2025)	6.67	15.70	8.00
Past 5 Years	2.10	5.60	8.10
Next 5 Years	6.80	10.20	NA
PE	26.75	32.90	20.46
PEG Ratio	3.91	3.23	NA

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Research for MKC

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (11/2024)	Next Year (11/2025)
Zacks Consensus Estimate	1.64B	1.66B	6.68B	6.86B
# of Estimates	4	4	4	4
High Estimate	1.66B	1.69B	6.70B	6.90B
Low Estimate	1.62B	1.63B	6.67B	6.80B
Year ago Sales	1.66B	1.68B	6.66B	6.68B
Year over Year Growth Est.	-1.01%	-1.18%	0.30%	2.61%

Earnings Estimates

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (11/2024)	Next Year (11/2025)
Zacks Consensus Estimate	0.60	0.70	2.85	3.04
# of Estimates	6	4	7	6
Most Recent Consensus	NA	NA	2.85	NA
High Estimate	0.63	0.72	2.90	3.10
Low Estimate	0.55	0.69	2.83	2.98
Year ago EPS	0.60	0.65	2.70	2.85
Year over Year Growth Est.	0.00%	7.69%	5.56%	6.73%

Agreement - Estimate Revisions

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (11/2024)	Next Year (11/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	0	0	0
Up Last 60 Days	1	0	5	4
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	1	0	0
Down Last 60 Days	2	2	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (11/2024)	Next Year (11/2025)
Current	0.60	0.70	2.85	3.04
7 Days Ago	0.60	0.70	2.85	3.04
30 Days Ago	0.59	0.71	2.85	3.04
60 Days Ago	0.59	0.70	2.84	3.02
90 Days Ago	0.59	0.70	2.84	3.02

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (11/2024)	Next Year (11/2025)
Most Accurate Estimate	0.59	0.70	2.85	3.04
Zacks Consensus Estimate	0.60	0.70	2.85	3.04
Earnings ESP	-1.08%	-0.40%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (2/2024)	Quarter Ending (11/2023)	Quarter Ending (8/2023)	Quarter Ending (5/2023)	Average Surprise
Reported	0.63	0.85	0.65	0.60	NA
Estimate	0.58	0.79	0.65	0.57	NA
Difference	0.05	0.06	0.00	0.03	0.04
Surprise	8.62%	7.59%	0.00%	5.26%	5.37%

Annual Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/24/24
Current Quarter	NA
EPS Last Quarter	NA
Last EPS Surprise	NA
ABR	NA

Earnings ESP	NA
Current Year	NA
Next Year	NA
EPS (TTM)	41.57
P/E (F1)	NA

% EPS Growth Estimates	NEU	IND	S&P
Current Qtr (Not defined)	NA	NA	NA
Next Qtr (Not defined)	NA	NA	NA
Current Year (Not defined)	NA	NA	NA
Next Year (Not defined)	NA	NA	NA
Past 5 Years	NA	NA	NA
Next 5 Years	NA	NA	NA
PE	NA	NA	NA
PEG Ratio	NA	NA	NA

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Premium Research for NEU

Zacks Rank NA

Zacks Industry Rank	Top 18% (45 out of 251)
Zacks Sector Rank	Top 19% (3 out of 16)
Style Scores	
NA Value | NA Growth | NA Momentum | NA VGM	
Earnings ESP	NA
Research Report for NEU	Snapshot

(= Change in last 30 days)

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Research for NEU

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (ND)	Next Qtr (ND)	Current Year (ND)	Next Year (ND)
Zacks Consensus Estimate	NA	NA	NA	NA
# of Estimates	NA	NA	NA	NA
High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago Sales	NA	NA	2.70B	NA
Year over Year Growth Est.	NA	NA	NA	NA

Earnings Estimates

	This Quarter (ND)	Next Quarter (ND)	This Year (ND)	Next Year (ND)
Zacks Consensus Estimate	NA	NA	NA	NA

# of Estimates	NA	NA	NA	NA
Most Recent Consensus	NA	NA	NA	NA
High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago EPS	NA	NA	NA	NA
Year over Year Growth Est.	NA	NA	NA	NA

Agreement - Estimate Revisions

	Current Qtr (NA)	Next Qtr (NA)	Current Year (NA)	Next Year (NA)
Up Last 7 Days	NA	NA	NA	NA
Up Last 30 Days	NA	NA	NA	NA
Up Last 60 Days	NA	NA	NA	NA
Down Last 7 Days	NA	NA	NA	NA
Down Last 30 Days	NA	NA	NA	NA
Down Last 60 Days	NA	NA	NA	NA

Magnitude - Consensus Estimate Trend

	This Quarter (Not defined)	Next Quarter (Not defined)	This Year (Not defined)	Next Year (Not defined)
Current	NA	NA	NA	NA
7 Days Ago	NA	NA	NA	NA
30 Days Ago	NA	NA	NA	NA
60 Days Ago	NA	NA	NA	NA
90 Days Ago	NA	NA	NA	NA

Upside - Most Accurate Estimate Versus Zacks Consensus

	This Quarter (Not defined)	Next Quarter (Not defined)	This Year (Not defined)	Next Year (Not defined)
Most Accurate Estimate	NA	NA	NA	NA
Zacks Consensus Estimate	NA	NA	NA	NA
Earnings ESP	NA	NA	NA	NA

Surprise - Reported Earnings History

	Quarter Ending (Not defined)	Quarter Ending (Not defined)	Quarter Ending (Not defined)	Quarter Ending (Not defined)	Average Surprise
Reported	NA	NA	NA	NA	NA
Estimate	NA	NA	NA	NA	NA
Difference	NA	NA	NA	NA	NA
Surprise	NA	NA	NA	NA	NA

Annual Estimates By Analyst

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EPS Estimates

Exp Earnings Date	7/25/24
Current Quarter	6.03
EPS Last Quarter	6.32
Last EPS Surprise	8.40%
ABR	2.53

Earnings ESP	0.07%
Current Year	24.70
Next Year	27.81
EPS (TTM)	24.11
P/E (F1)	19.69

% EPS Growth Estimates	NOC	IND	S&P
Current Qtr (06/2024)	12.92	34.79	14.20
Next Qtr (09/2024)	0.00	337.58	11.23
Current Year (12/2024)	6.05	16.20	17.08
Next Year (12/2025)	12.59	22.00	8.00
Past 5 Years	4.60	3.80	8.10
Next 5 Years	9.90	11.10	NA
PE	19.69	-20.10	20.46
PEG Ratio	2.00	-1.81	NA

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Research for NOC

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	10.07B	10.26B	41.10B	43.28B
# of Estimates	6	6	6	6
High Estimate	10.17B	10.35B	41.30B	43.73B
Low Estimate	9.97B	10.16B	40.98B	42.96B
Year ago Sales	9.58B	9.78B	39.29B	41.10B
Year over Year Growth Est.	5.21%	4.92%	4.61%	5.29%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	6.03	6.18	24.70	27.81
# of Estimates	7	6	8	8
Most Recent Consensus	NA	6.19	24.70	27.57
High Estimate	6.16	6.22	24.85	28.80
Low Estimate	5.88	6.12	24.52	27.35
Year ago EPS	5.34	6.18	23.29	24.70
Year over Year Growth Est.	12.92%	0.00%	6.05%	12.58%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	2	1	2	1
Up Last 30 Days	2	1	2	1
Up Last 60 Days	3	1	4	1
Down Last 7 Days	0	1	0	1

Down Last 30 Days	0	1	0	2
Down Last 60 Days	0	3	1	2

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	6.03	6.18	24.70	27.81
7 Days Ago	6.02	6.16	24.67	27.81
30 Days Ago	6.02	6.16	24.67	27.82
60 Days Ago	6.02	6.18	24.68	27.84
90 Days Ago	6.01	6.17	24.52	27.83

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	6.04	6.17	24.80	27.64
Zacks Consensus Estimate	6.03	6.18	24.70	27.81
Earnings ESP	0.07%	-0.06%	0.41%	-0.60%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	6.32	6.27	6.18	5.34	NA
Estimate	5.83	5.75	5.81	5.31	NA
Difference	0.49	0.52	0.37	0.03	0.35
Surprise	8.40%	9.04%	6.37%	0.56%	6.09%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	6/10/24
Current Quarter	1.64
EPS Last Quarter	1.41
Last EPS Surprise	2.92%
ABR	1.80

Earnings ESP	-0.15%
Current Year	5.58
Next Year	6.15
EPS (TTM)	5.61
P/E (F1)	20.87

% EPS Growth Estimates	ORCL	IND	S&P
Current Qtr (05/2024)	-1.80	1.41	14.20
Next Qtr (08/2024)	10.92	-3.31	11.23
Current Year (05/2024)	8.98	15.10	17.08
Next Year (05/2025)	10.22	17.90	8.00
Past 5 Years	7.40	10.60	8.10
Next 5 Years	11.20	12.50	NA
PE	20.87	32.50	20.46
PEG Ratio	1.86	2.60	NA

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Research for ORCL

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (5/2024)	Next Year (5/2025)
Zacks Consensus Estimate	14.56B	13.39B	53.22B	57.50B
# of Estimates	9	9	10	10
High Estimate	14.67B	13.57B	53.34B	58.26B
Low Estimate	14.51B	13.32B	53.14B	56.87B
Year ago Sales	13.84B	12.45B	49.96B	53.22B
Year over Year Growth Est.	5.21%	7.53%	6.54%	8.04%

Earnings Estimates

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (5/2024)	Next Year (5/2025)
Zacks Consensus Estimate	1.64	1.32	5.58	6.15
# of Estimates	12	9	13	13
Most Recent Consensus	1.64	1.32	5.58	5.99
High Estimate	1.66	1.38	5.60	6.43
Low Estimate	1.63	1.27	5.57	5.89
Year ago EPS	1.67	1.19	5.12	5.58
Year over Year Growth Est.	-1.80%	10.92%	8.98%	10.11%

Agreement - Estimate Revisions

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (5/2024)	Next Year (5/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	0	1	1
Up Last 60 Days	4	2	11	6
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	1	0	0
Down Last 60 Days	3	4	0	4

Magnitude - Consensus Estimate Trend

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (5/2024)	Next Year (5/2025)
Current	1.64	1.32	5.58	6.15
7 Days Ago	1.64	1.32	5.58	6.15
30 Days Ago	1.64	1.32	5.58	6.14
60 Days Ago	1.64	1.33	5.53	6.13
90 Days Ago	1.64	1.33	5.53	6.13

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (5/2024)	Next Year (5/2025)
Most Accurate Estimate	1.64	1.33	5.58	6.07
Zacks Consensus Estimate	1.64	1.32	5.58	6.15
Earnings ESP	-0.15%	0.38%	-0.03%	-1.23%

Surprise - Reported Earnings History

	Quarter Ending (2/2024)	Quarter Ending (11/2023)	Quarter Ending (8/2023)	Quarter Ending (5/2023)	Average Surprise
Reported	1.41	1.34	1.19	1.67	NA
Estimate	1.37	1.32	1.14	1.58	NA
Difference	0.04	0.02	0.05	0.09	0.05
Surprise	2.92%	1.52%	4.39%	5.70%	3.63%

Quarterly Estimates By Analyst

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EPS Estimates

Exp Earnings Date	8/22/24
Current Quarter	2.77
EPS Last Quarter	2.16
Last EPS Surprise	2.37%
ABR	1.00

Earnings ESP	0.24%
Current Year	8.09
Next Year	8.66
EPS (TTM)	7.94
P/E (F1)	16.83

% EPS Growth Estimates	OSIS	IND	S&P
Current Qtr (06/2024)	4.14	89.32	14.20
Next Qtr (09/2024)	5.49	-1.97	11.23
Current Year (06/2024)	30.27	5.80	17.08
Next Year (06/2025)	7.05	18.50	8.00
Past 5 Years	11.20	6.20	8.10
Next 5 Years	11.00	15.20	NA
PE	16.83	24.50	20.46
PEG Ratio	1.53	1.61	NA

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Premium Research for OSIS

Zacks Rank Buy 2

Zacks Industry Rank	Top 35% (89 out of 251)
Zacks Sector Rank	Top 38% (6 out of 16)
Style Scores	
C Value | **F** Growth | **A** Momentum | **D** VGM	
Earnings ESP	0.24%
Research Report for OSIS	Snapshot

(= Change in last 30 days)

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Research for OSIS

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Zacks Consensus Estimate	465.82M	NA	1.52B	1.60B
# of Estimates	3	NA	3	3
High Estimate	471.45M	NA	1.53B	1.60B
Low Estimate	463.00M	NA	1.52B	1.60B
Year ago Sales	411.87M	279.21M	1.28B	1.52B
Year over Year Growth Est.	13.10%	NA	19.19%	5.00%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Zacks Consensus Estimate	2.77	0.96	8.09	8.66
# of Estimates	3	1	3	3

Most Recent Consensus	2.78	NA	8.08	8.60
High Estimate	2.79	0.96	8.10	8.80
Low Estimate	2.75	0.96	8.08	8.50
Year ago EPS	2.66	0.91	6.21	8.09
Year over Year Growth Est.	4.14%	5.49%	30.27%	7.13%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Up Last 7 Days	0	0	3	2
Up Last 30 Days	0	0	3	2
Up Last 60 Days	0	0	3	2
Down Last 7 Days	1	0	0	0
Down Last 30 Days	1	0	0	0
Down Last 60 Days	1	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Current	2.77	0.96	8.09	8.66
7 Days Ago	2.79	NA	8.03	8.51
30 Days Ago	2.79	NA	8.03	8.51
60 Days Ago	2.79	NA	8.03	8.51
90 Days Ago	2.79	NA	8.03	8.51

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (6/2024)	Next Year (6/2025)
Most Accurate Estimate	2.78	0.96	8.09	8.66
Zacks Consensus Estimate	2.77	0.96	8.09	8.66
Earnings ESP	0.24%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	2.16	2.21	0.91	2.66	NA
Estimate	2.11	1.74	0.85	2.54	NA
Difference	0.05	0.47	0.06	0.12	0.18
Surprise	2.37%	27.01%	7.06%	4.72%	10.29%

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EPS Estimates

Earnings Date	*AMC 5/14/24
Current Quarter	1.14
EPS Last Quarter	1.06
Last EPS Surprise	1.92%
ABR	1.50

Earnings ESP	0.00%
Current Year	4.33
Next Year	4.61
EPS (TTM)	4.26
P/E (F1)	15.56

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	PBH	IND	S&P
Current Qtr (03/2024)	6.54	-47.81	14.20
Next Qtr (06/2024)	3.77	-14.11	11.23
Current Year (03/2024)	2.85	18.10	5.37
Next Year (03/2025)	6.47	24.60	11.11
Past 5 Years	10.20	4.00	8.10
Next 5 Years	8.00	10.90	NA
PE	15.56	NA	22.74
PEG Ratio	1.95	NA	NA

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Research for PBH

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Zacks Consensus Estimate	286.91M	284.42M	1.14B	1.16B
# of Estimates	3	2	3	3
High Estimate	287.13M	285.73M	1.14B	1.16B
Low Estimate	286.60M	283.10M	1.14B	1.16B
Year ago Sales	285.87M	279.31M	1.13B	1.14B
Year over Year Growth Est.	0.36%	1.83%	0.67%	2.14%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Zacks Consensus Estimate	1.14	1.10	4.33	4.61
# of Estimates	4	2	4	4
Most Recent Consensus	1.14	NA	4.33	4.59
High Estimate	1.14	1.10	4.33	4.65
Low Estimate	1.14	1.10	4.33	4.59
Year ago EPS	1.07	1.06	4.21	4.33
Year over Year Growth Est.	6.54%	3.77%	2.85%	6.47%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	0	1	0
Up Last 60 Days	1	0	1	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Current	1.14	1.10	4.33	4.61
7 Days Ago	1.14	1.10	4.33	4.61
30 Days Ago	1.14	1.10	4.33	4.61
60 Days Ago	1.14	1.10	4.33	4.61
90 Days Ago	1.14	1.10	4.31	4.61

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (3/2024)	Next Year (3/2025)
Most Accurate Estimate	1.14	1.10	4.33	4.61
Zacks Consensus Estimate	1.14	1.10	4.33	4.61
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	1.06	1.07	1.06	1.07	NA
Estimate	1.04	1.07	1.01	1.04	NA
Difference	0.02	0.00	0.05	0.03	0.03
Surprise	1.92%	0.00%	4.95%	2.88%	2.44%

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EPS Estimates

Earnings Date	*BMO 5/1/24
Current Quarter	0.56
EPS Last Quarter	0.10
Last EPS Surprise	152.63%
ABR	2.14

Earnings ESP	-6.76%
Current Year	2.23
Next Year	2.77
EPS (TTM)	1.83
P/E (F1)	11.48

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	PFE	IND	S&P
Current Qtr (03/2024)	-54.47	230.35	14.20
Next Qtr (06/2024)	-31.34	266.22	11.23
Current Year (12/2024)	21.20	4.10	17.08
Next Year (12/2025)	24.22	16.00	8.00
Past 5 Years	-8.50	3.00	8.10
Next 5 Years	9.90	12.00	NA
PE	11.48	19.40	20.46
PEG Ratio	1.16	1.62	NA

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Research for PFE

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	13.86B	13.23B	60.26B	62.07B
# of Estimates	6	6	6	6
High Estimate	14.18B	13.64B	60.85B	62.85B
Low Estimate	13.33B	12.97B	59.33B	61.46B
Year ago Sales	18.28B	12.73B	58.50B	60.26B
Year over Year Growth Est.	-24.21%	3.88%	3.01%	3.01%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.56	0.46	2.23	2.77
# of Estimates	8	6	9	8
Most Recent Consensus	0.56	0.41	2.25	2.63
High Estimate	0.82	0.55	2.36	3.21
Low Estimate	0.40	0.40	2.05	2.55
Year ago EPS	1.23	0.67	1.84	2.23
Year over Year Growth Est.	-54.47%	-31.34%	21.20%	24.18%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	2	1	4	4
Up Last 60 Days	2	1	4	4
Down Last 7 Days	0	0	0	0

Down Last 30 Days	2	2	0	2
Down Last 60 Days	2	1	1	3

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.56	0.46	2.23	2.77
7 Days Ago	0.56	0.46	2.23	2.77
30 Days Ago	0.57	0.47	2.21	2.76
60 Days Ago	0.53	0.46	2.22	2.78
90 Days Ago	0.56	0.47	2.23	2.75

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.52	0.50	2.28	2.79
Zacks Consensus Estimate	0.56	0.46	2.23	2.77
Earnings ESP	-6.76%	7.97%	2.20%	0.69%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.10	-0.17	0.67	1.23	NA
Estimate	-0.19	-0.32	0.56	1.00	NA
Difference	0.29	0.15	0.11	0.23	0.20
Surprise	152.63%	46.88%	19.64%	23.00%	60.54%

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EPS Estimates

Exp Earnings Date	7/11/24
Current Quarter	2.37
EPS Last Quarter	3.73
Last EPS Surprise	16.56%
ABR	1.90

Earnings ESP	0.00%
Current Year	11.34
Next Year	11.80
EPS (TTM)	9.28
P/E (F1)	18.23

% EPS Growth Estimates	PGR	IND	S&P
Current Qtr (06/2024)	374.00	-79.47	14.20
Next Qtr (09/2024)	6.70	-83.49	11.23
Current Year (12/2024)	85.60	16.50	17.08
Next Year (12/2025)	4.06	17.20	8.00
Past 5 Years	5.90	9.60	8.10
Next 5 Years	22.50	10.60	NA
PE	18.23	15.70	20.46
PEG Ratio	0.81	1.48	NA

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Research for PGR

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

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Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	17.96B	18.62B	72.76B	81.54B
# of Estimates	7	7	6	7
High Estimate	18.67B	19.37B	73.66B	83.69B
Low Estimate	16.88B	17.30B	71.80B	77.69B
Year ago Sales	15.23B	15.71B	61.76B	72.76B
Year over Year Growth Est.	17.95%	18.54%	17.82%	12.06%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.37	2.23	11.34	11.80
# of Estimates	11	9	11	12
Most Recent Consensus	2.31	2.24	10.98	11.75
High Estimate	3.07	2.74	12.90	14.65
Low Estimate	1.75	1.73	8.75	9.00
Year ago EPS	0.50	2.09	6.11	11.34
Year over Year Growth Est.	374.00%	6.70%	85.60%	4.10%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	1	0
Up Last 30 Days	9	9	10	11
Up Last 60 Days	9	8	10	10
Down Last 7 Days	0	0	0	1

Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	1	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	2.37	2.23	11.34	11.80
7 Days Ago	2.37	2.23	11.22	11.86
30 Days Ago	2.09	2.05	10.09	11.15
60 Days Ago	1.95	1.92	9.24	10.48
90 Days Ago	1.82	1.81	8.73	10.22

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	2.37	2.23	11.60	12.06
Zacks Consensus Estimate	2.37	2.23	11.34	11.80
Earnings ESP	0.00%	0.00%	2.28%	2.16%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	3.73	2.96	2.09	0.50	NA
Estimate	3.20	2.38	1.71	0.88	NA
Difference	0.53	0.58	0.38	-0.38	0.28
Surprise	16.56%	24.37%	22.22%	-43.18%	4.99%

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EPS Estimates

Exp Earnings Date	7/22/24
Current Quarter	1.36
EPS Last Quarter	1.89
Last EPS Surprise	15.95%
ABR	2.29

Earnings ESP	0.00%
Current Year	5.74
Next Year	5.92
EPS (TTM)	5.20
P/E (F1)	24.76

% EPS Growth Estimates	RLI	IND	S&P
Current Qtr (06/2024)	17.24	-79.47	14.20
Next Qtr (09/2024)	73.77	-83.49	11.23
Current Year (12/2024)	16.19	16.50	17.08
Next Year (12/2025)	3.14	17.20	8.00
Past 5 Years	18.70	9.60	8.10
Next 5 Years	NA	10.60	NA
PE	24.76	15.70	20.46
PEG Ratio	NA	1.48	NA

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Research for RLI

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	397.45M	406.37M	1.63B	1.75B
# of Estimates	4	4	4	4
High Estimate	404.67M	418.17M	1.69B	1.79B
Low Estimate	387.00M	394.00M	1.59B	1.72B
Year ago Sales	351.07M	350.37M	1.41B	1.63B
Year over Year Growth Est.	13.21%	15.98%	15.12%	7.57%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.36	1.06	5.74	5.92
# of Estimates	4	4	4	4
Most Recent Consensus	1.36	1.26	5.70	5.75
High Estimate	1.36	1.26	5.95	6.30
Low Estimate	1.34	0.95	5.34	5.63
Year ago EPS	1.16	0.61	4.94	5.74
Year over Year Growth Est.	17.24%	73.77%	16.19%	3.22%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	2	2	2	2
Up Last 30 Days	3	2	3	3
Up Last 60 Days	3	2	3	3
Down Last 7 Days	1	0	0	0

Down Last 30 Days	1	0	0	0
Down Last 60 Days	1	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.36	1.06	5.74	5.92
7 Days Ago	1.41	1.03	5.56	5.83
30 Days Ago	1.41	1.03	5.54	5.82
60 Days Ago	1.41	1.03	5.54	5.82
90 Days Ago	1.40	1.04	5.51	5.76

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.36	1.14	5.66	5.79
Zacks Consensus Estimate	1.36	1.06	5.74	5.92
Earnings ESP	0.00%	7.80%	-1.25%	-2.14%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	1.89	1.54	0.61	1.16	NA
Estimate	1.63	1.44	0.10	1.20	NA
Difference	0.26	0.10	0.51	-0.04	0.21
Surprise	15.95%	6.94%	510.00%	-3.33%	132.39%

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EPS Estimates

Exp Earnings Date	*BMO 4/30/24
Current Quarter	0.35
EPS Last Quarter	0.33
Last EPS Surprise	-10.81%
ABR	2.00

Earnings ESP	7.80%
Current Year	2.52
Next Year	4.53
EPS (TTM)	2.21
P/E (F1)	33.51

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	SCL	IND	S&P
Current Qtr (03/2024)	-50.70	8,513.28	14.20
Next Qtr (06/2024)	28.30	25.41	11.23
Current Year (12/2024)	14.03	6.60	17.08
Next Year (12/2025)	79.76	21.50	8.00
Past 5 Years	-14.80	-2.90	8.10
Next 5 Years	NA	17.40	NA
PE	33.51	24.50	20.46
PEG Ratio	NA	1.41	NA

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Research for SCL

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	575.83M	586.78M	2.37B	2.58B
# of Estimates	4	4	4	4
High Estimate	585.10M	602.80M	2.44B	2.65B
Low Estimate	561.00M	551.30M	2.31B	2.54B
Year ago Sales	651.44M	579.98M	2.33B	2.37B
Year over Year Growth Est.	-11.61%	1.17%	2.03%	8.91%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.35	0.68	2.52	4.53
# of Estimates	4	4	4	4
Most Recent Consensus	0.39	0.79	2.55	4.80
High Estimate	0.39	0.81	2.72	4.90
Low Estimate	0.32	0.50	2.25	4.17
Year ago EPS	0.71	0.53	2.21	2.52
Year over Year Growth Est.	-50.70%	28.30%	14.03%	79.66%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	2	0	1	0
Up Last 60 Days	2	0	1	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	2	1	2
Down Last 60 Days	1	3	2	3

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.35	0.68	2.52	4.53
7 Days Ago	0.35	0.68	2.52	4.53
30 Days Ago	0.34	0.69	2.53	4.62
60 Days Ago	0.43	0.82	2.94	4.77
90 Days Ago	0.71	1.04	3.70	5.05

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.38	0.65	2.56	4.49
Zacks Consensus Estimate	0.35	0.68	2.52	4.53
Earnings ESP	7.80%	-5.15%	1.49%	-0.99%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.33	0.64	0.53	0.71	NA
Estimate	0.37	0.76	1.17	0.94	NA
Difference	-0.04	-0.12	-0.64	-0.23	-0.26
Surprise	-10.81%	-15.79%	-54.70%	-24.47%	-26.44%

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EPS Estimates

Earnings Date	*AMC 5/1/24
Current Quarter	1.88
EPS Last Quarter	1.94
Last EPS Surprise	1.04%
ABR	2.88

Earnings ESP	-0.99%
Current Year	7.67
Next Year	8.43
EPS (TTM)	5.88
P/E (F1)	13.22

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	SIGI	IND	S&P
Current Qtr (03/2024)	30.56	-79.47	14.20
Next Qtr (06/2024)	79.80	-83.49	11.23
Current Year (12/2024)	30.22	16.50	17.08
Next Year (12/2025)	9.91	17.20	8.00
Past 5 Years	9.50	9.60	8.10
Next 5 Years	17.70	10.60	NA
PE	13.22	15.70	20.46
PEG Ratio	0.75	1.48	NA

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Research for SIGI

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.17B	1.20B	4.86B	5.32B
# of Estimates	4	4	4	4
High Estimate	1.19B	1.22B	4.98B	5.55B
Low Estimate	1.16B	1.19B	4.79B	5.20B
Year ago Sales	996.40M	1.05B	4.24B	4.86B
Year over Year Growth Est.	17.20%	14.70%	14.78%	9.37%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.88	1.78	7.67	8.43
# of Estimates	5	4	5	5
Most Recent Consensus	1.78	1.72	7.51	8.40
High Estimate	2.04	1.94	7.95	8.85
Low Estimate	1.78	1.69	7.43	8.00
Year ago EPS	1.44	0.99	5.89	7.67
Year over Year Growth Est.	30.56%	79.80%	30.22%	9.91%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	2	0	1	1
Up Last 60 Days	2	0	1	1

Down Last 7 Days	0	0	0	0
Down Last 30 Days	1	1	2	2
Down Last 60 Days	1	1	2	2

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	1.88	1.78	7.67	8.43
7 Days Ago	1.88	1.78	7.67	8.43
30 Days Ago	1.88	1.78	7.68	8.46
60 Days Ago	1.88	1.78	7.68	8.46
90 Days Ago	1.79	1.71	7.67	8.38

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	1.86	1.69	7.63	8.58
Zacks Consensus Estimate	1.88	1.78	7.67	8.43
Earnings ESP	-0.99%	-4.92%	-0.50%	1.80%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	1.94	1.51	0.99	1.44	NA
Estimate	1.92	1.66	0.99	1.57	NA
Difference	0.02	-0.15	0.00	-0.13	-0.07
Surprise	1.04%	-9.04%	0.00%	-8.28%	-4.07%

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EPS Estimates

Exp Earnings Date	6/26/24
Current Quarter	1.88
EPS Last Quarter	1.22
Last EPS Surprise	-13.48%
ABR	3.33

Earnings ESP	0.00%
Current Year	7.48
Next Year	8.14
EPS (TTM)	6.64
P/E (F1)	21.80

% EPS Growth Estimates	UNF	IND	S&P
Current Qtr (05/2024)	45.74	-2.65	14.20
Next Qtr (08/2024)	14.29	-2.23	11.23
Current Year (08/2024)	6.55	10.80	17.08
Next Year (08/2025)	8.82	9.20	8.00
Past 5 Years	-0.20	8.10	8.10
Next 5 Years	NA	11.40	NA
PE	21.80	33.20	20.46
PEG Ratio	NA	2.91	NA

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Research for UNF

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (8/2024)	Next Year (8/2025)
Zacks Consensus Estimate	600.97M	635.16M	2.42B	2.49B
# of Estimates	2	2	2	2
High Estimate	601.93M	635.31M	2.42B	2.50B
Low Estimate	600.00M	635.00M	2.42B	2.49B
Year ago Sales	576.67M	571.89M	2.23B	2.42B
Year over Year Growth Est.	4.21%	11.06%	8.38%	3.08%

Earnings Estimates

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (8/2024)	Next Year (8/2025)
Zacks Consensus Estimate	1.88	2.00	7.48	8.14
# of Estimates	2	2	2	2
Most Recent Consensus	1.87	1.96	7.44	8.45
High Estimate	1.88	2.04	7.51	8.45
Low Estimate	1.87	1.96	7.44	7.82
Year ago EPS	1.29	1.75	7.02	7.48
Year over Year Growth Est.	45.74%	14.29%	6.55%	8.82%

Agreement - Estimate Revisions

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (8/2024)	Next Year (8/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	1	1	0	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	0	0	0	0
Down Last 60 Days	1	1	2	2

Magnitude - Consensus Estimate Trend

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (8/2024)	Next Year (8/2025)
Current	1.88	2.00	7.48	8.14
7 Days Ago	1.88	2.00	7.48	8.14
30 Days Ago	1.88	2.00	7.48	8.14
60 Days Ago	1.86	1.96	7.60	8.22
90 Days Ago	1.86	1.96	7.60	8.22

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (5/2024)	Next Qtr (8/2024)	Current Year (8/2024)	Next Year (8/2025)
Most Accurate Estimate	1.88	2.00	7.48	8.14
Zacks Consensus Estimate	1.88	2.00	7.48	8.14
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (2/2024)	Quarter Ending (11/2023)	Quarter Ending (8/2023)	Quarter Ending (5/2023)	Average Surprise
Reported	1.22	2.38	1.75	1.29	NA
Estimate	1.41	2.33	1.72	1.82	NA
Difference	-0.19	0.05	0.03	-0.53	-0.16
Surprise	-13.48%	2.15%	1.74%	-29.12%	-9.68%

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EPS Estimates

Exp Earnings Date	8/13/24
Current Quarter	2.01
EPS Last Quarter	1.43
Last EPS Surprise	7.52%
ABR	1.93

Earnings ESP	-0.24%
Current Year	8.25
Next Year	9.60
EPS (TTM)	8.01
P/E (F1)	18.01

% EPS Growth Estimates	UPS	IND	S&P
Current Qtr (06/2024)	-20.87	10.61	14.20
Next Qtr (09/2024)	30.57	273.04	11.23
Current Year (12/2024)	-6.04	-7.60	17.08
Next Year (12/2025)	16.36	24.30	8.00
Past 5 Years	4.80	4.00	8.10
Next 5 Years	10.60	10.40	NA
PE	18.01	19.60	20.46
PEG Ratio	1.70	1.88	NA

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Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	22.35B	22.63B	93.16B	98.41B
# of Estimates	8	8	8	8
High Estimate	22.80B	23.20B	93.71B	102.29B
Low Estimate	22.03B	22.13B	92.05B	95.30B
Year ago Sales	22.06B	21.06B	90.96B	93.16B
Year over Year Growth Est.	1.32%	7.47%	2.42%	5.65%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.01	2.05	8.25	9.60
# of Estimates	10	8	10	10
Most Recent Consensus	NA	2.15	8.30	10.00
High Estimate	2.08	2.23	8.75	10.20
Low Estimate	1.95	1.82	7.79	8.04
Year ago EPS	2.54	1.57	8.78	8.25
Year over Year Growth Est.	-20.87%	30.57%	-6.04%	16.32%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	2	1	4	4
Up Last 30 Days	2	0	3	3
Up Last 60 Days	5	3	1	3
Down Last 7 Days	4	6	3	3

Down Last 30 Days	4	7	4	3
Down Last 60 Days	2	4	6	5

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	2.01	2.05	8.25	9.60
7 Days Ago	2.03	2.08	8.22	9.57
30 Days Ago	2.03	2.09	8.29	9.60
60 Days Ago	1.95	2.06	8.32	9.74
90 Days Ago	2.03	2.13	8.82	9.83

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	2.00	2.08	8.18	9.46
Zacks Consensus Estimate	2.01	2.05	8.25	9.60
Earnings ESP	-0.24%	1.61%	-0.82%	-1.40%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	1.43	2.47	1.57	2.54	NA
Estimate	1.33	2.44	1.53	2.51	NA
Difference	0.10	0.03	0.04	0.03	0.05
Surprise	7.52%	1.23%	2.61%	1.20%	3.14%

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EPS Estimates

Exp Earnings Date	5/22/24
Current Quarter	NA
EPS Last Quarter	NA
Last EPS Surprise	NA
ABR	NA

Earnings ESP	NA
Current Year	NA
Next Year	NA
EPS (TTM)	4.26
P/E (F1)	NA

% EPS Growth Estimates	UVV	IND	S&P
Current Qtr (Not defined)	NA	NA	NA
Next Qtr (Not defined)	NA	NA	NA
Current Year (Not defined)	NA	NA	NA
Next Year (Not defined)	NA	NA	NA
Past 5 Years	NA	NA	NA
Next 5 Years	NA	NA	NA
PE	NA	NA	NA
PEG Ratio	NA	NA	NA

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Premium Research for UVV

Zacks Rank	NA

Zacks Industry Rank	Top 38% (95 out of 251)
Zacks Sector Rank	Bottom 0% (16 out of 16)
Style Scores	
NA Value | NA Growth | NA Momentum | NA VGM	
Earnings ESP	NA
Research Report for UVV	Snapshot

(= Change in last 30 days)

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Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (ND)	Next Qtr (ND)	Current Year (ND)	Next Year (ND)
Zacks Consensus Estimate	NA	NA	NA	NA
# of Estimates	NA	NA	NA	NA
High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago Sales	NA	NA	2.57B	NA
Year over Year Growth Est.	NA	NA	NA	NA

Earnings Estimates

	This Quarter (ND)	Next Quarter (ND)	This Year (ND)	Next Year (ND)
Zacks Consensus Estimate	NA	NA	NA	NA
# of Estimates	NA	NA	NA	NA
Most Recent Consensus	NA	NA	NA	NA

High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago EPS	NA	NA	NA	NA
Year over Year Growth Est.	NA	NA	NA	NA

Agreement - Estimate Revisions

	Current Qtr (NA)	Next Qtr (NA)	Current Year (NA)	Next Year (NA)
Up Last 7 Days	NA	NA	NA	NA
Up Last 30 Days	NA	NA	NA	NA
Up Last 60 Days	NA	NA	NA	NA
Down Last 7 Days	NA	NA	NA	NA
Down Last 30 Days	NA	NA	NA	NA
Down Last 60 Days	NA	NA	NA	NA

Magnitude - Consensus Estimate Trend

	This Quarter (Not defined)	Next Quarter (Not defined)	This Year (Not defined)	Next Year (Not defined)
Current	NA	NA	NA	NA
7 Days Ago	NA	NA	NA	NA
30 Days Ago	NA	NA	NA	NA
60 Days Ago	NA	NA	NA	NA
90 Days Ago	NA	NA	NA	NA

Upside - Most Accurate Estimate Versus Zacks Consensus

	This Quarter (Not defined)	Next Quarter (Not defined)	This Year (Not defined)	Next Year (Not defined)
Most Accurate Estimate	NA	NA	NA	NA
Zacks Consensus Estimate	NA	NA	NA	NA
Earnings ESP	NA	NA	NA	NA

Surprise - Reported Earnings History

	Quarter Ending (Not defined)	Quarter Ending (Not defined)	Quarter Ending (Not defined)	Quarter Ending (Not defined)	Average Surprise
Reported	NA	NA	NA	NA	NA
Estimate	NA	NA	NA	NA	NA
Difference	NA	NA	NA	NA	NA
Surprise	NA	NA	NA	NA	NA

Annual Estimates By Analyst

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EPS Estimates

Exp Earnings Date	*AMC 4/30/24
Current Quarter	0.28
EPS Last Quarter	0.39
Last EPS Surprise	-11.36%
ABR	2.57

Earnings ESP	4.19%
Current Year	1.91
Next Year	2.91
EPS (TTM)	1.93
P/E (F1)	18.14

*BMO = Before Market Open *AMC = After Market Close

% EPS Growth Estimates	WERN	IND	S&P
Current Qtr (03/2024)	-53.33	42.94	14.20
Next Qtr (06/2024)	-19.23	31.40	11.23
Current Year (12/2024)	-1.04	1.40	17.08
Next Year (12/2025)	52.36	25.70	8.00
Past 5 Years	-0.80	9.80	8.10
Next 5 Years	17.10	14.20	NA
PE	18.14	4.00	20.46
PEG Ratio	1.06	0.28	NA

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Research for WERN

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	795.06M	805.12M	3.30B	3.52B
# of Estimates	4	4	4	4
High Estimate	801.00M	819.72M	3.38B	3.69B
Low Estimate	787.84M	791.51M	3.23B	3.36B
Year ago Sales	832.71M	811.10M	3.28B	3.30B
Year over Year Growth Est.	-4.52%	-0.74%	0.60%	6.56%

Earnings Estimates

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.28	0.42	1.91	2.91
# of Estimates	6	4	6	6
Most Recent Consensus	NA	NA	NA	NA
High Estimate	0.30	0.43	2.18	3.63
Low Estimate	0.24	0.41	1.77	2.55
Year ago EPS	0.60	0.52	1.93	1.91
Year over Year Growth Est.	-53.33%	-19.23%	-1.04%	51.92%

Agreement - Estimate Revisions

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Up Last 60 Days	0	0	0	0
Down Last 7 Days	0	0	0	0

Down Last 30 Days	3	2	5	3
Down Last 60 Days	4	3	6	3

Magnitude - Consensus Estimate Trend

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.28	0.42	1.91	2.91
7 Days Ago	0.28	0.42	1.91	2.91
30 Days Ago	0.31	0.47	2.09	2.96
60 Days Ago	0.34	0.49	2.16	2.94
90 Days Ago	0.45	0.55	2.46	3.22

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (3/2024)	Next Qtr (6/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.29	0.43	1.94	3.01
Zacks Consensus Estimate	0.28	0.42	1.91	2.91
Earnings ESP	4.19%	0.48%	1.54%	3.69%

Surprise - Reported Earnings History

	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Quarter Ending (3/2023)	Average Surprise
Reported	0.39	0.42	0.52	0.60	NA
Estimate	0.44	0.48	0.57	0.71	NA
Difference	-0.05	-0.06	-0.05	-0.11	-0.07
Surprise	-11.36%	-12.50%	-8.77%	-15.49%	-12.03%

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EPS Estimates

Exp Earnings Date	8/6/24
Current Quarter	4.93
EPS Last Quarter	2.17
Last EPS Surprise	-3.98%
ABR	2.33

Earnings ESP	1.62%
Current Year	14.25
Next Year	16.27
EPS (TTM)	13.00
P/E (F1)	31.43

% EPS Growth Estimates	WSO	IND	S&P
Current Qtr (06/2024)	11.54	51.50	14.20
Next Qtr (09/2024)	14.02	-5.09	11.23
Current Year (12/2024)	4.24	19.60	17.08
Next Year (12/2025)	14.18	14.80	8.00
Past 5 Years	17.10	21.50	8.10
Next 5 Years	NA	20.40	NA
PE	31.43	33.50	20.46
PEG Ratio	NA	1.64	NA

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Research for WSO

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	2.14B	2.25B	7.65B	8.10B
# of Estimates	4	4	4	4
High Estimate	2.25B	2.31B	7.84B	8.47B
Low Estimate	2.09B	2.20B	7.55B	7.78B
Year ago Sales	2.00B	2.13B	7.28B	7.65B
Year over Year Growth Est.	6.69%	5.56%	5.05%	5.91%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	4.93	4.96	14.25	16.27
# of Estimates	4	4	5	5
Most Recent Consensus	5.43	5.32	15.44	18.74
High Estimate	5.43	5.32	15.44	18.74
Low Estimate	4.69	4.58	13.48	14.50
Year ago EPS	4.42	4.35	13.67	14.25
Year over Year Growth Est.	11.54%	14.02%	4.24%	14.20%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	0	1	2	1
Up Last 30 Days	1	2	2	1
Up Last 60 Days	1	2	1	0
Down Last 7 Days	2	0	0	1

Down Last 30 Days	2	0	1	2
Down Last 60 Days	2	0	3	3

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	4.93	4.96	14.25	16.27
7 Days Ago	5.01	4.90	14.19	16.28
30 Days Ago	4.92	4.94	14.26	16.29
60 Days Ago	4.90	4.95	14.65	16.54
90 Days Ago	4.84	5.04	15.30	16.89

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	5.01	5.06	14.67	17.01
Zacks Consensus Estimate	4.93	4.96	14.25	16.27
Earnings ESP	1.62%	1.97%	2.97%	4.50%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	2.17	2.06	4.35	4.42	NA
Estimate	2.26	2.50	4.31	4.87	NA
Difference	-0.09	-0.44	0.04	-0.45	-0.24
Surprise	-3.98%	-17.60%	0.93%	-9.24%	-7.47%

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EPS Estimates

Exp Earnings Date	7/24/24
Current Quarter	0.44
EPS Last Quarter	0.45
Last EPS Surprise	12.50%
ABR	3.41

Earnings ESP	0.43%
Current Year	1.74
Next Year	1.85
EPS (TTM)	1.76
P/E (F1)	7.78

% EPS Growth Estimates	WU	IND	S&P
Current Qtr (06/2024)	-13.73	86.98	14.20
Next Qtr (09/2024)	2.33	62.79	11.23
Current Year (12/2024)	0.00	14.90	17.08
Next Year (12/2025)	6.32	23.20	8.00
Past 5 Years	-0.90	4.30	8.10
Next 5 Years	1.60	17.30	NA
PE	7.78	4.90	20.46
PEG Ratio	4.80	0.28	NA

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Research for WU

Price and EPS Surprise Chart

1 Month 3 Months 6 Months YTD 1 Year

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	1.06B	1.04B	4.17B	4.19B
# of Estimates	6	6	6	5
High Estimate	1.08B	1.04B	4.21B	4.24B
Low Estimate	1.04B	1.03B	4.12B	4.17B
Year ago Sales	1.17B	1.10B	4.36B	4.17B
Year over Year Growth Est.	-9.35%	-5.61%	-4.32%	0.56%

Earnings Estimates

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Zacks Consensus Estimate	0.44	0.44	1.74	1.85
# of Estimates	7	6	7	6
Most Recent Consensus	0.44	0.44	1.75	1.83
High Estimate	0.45	0.46	1.80	1.90
Low Estimate	0.43	0.42	1.66	1.76
Year ago EPS	0.51	0.43	1.74	1.74
Year over Year Growth Est.	-13.73%	2.33%	0.00%	6.20%

Agreement - Estimate Revisions

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Up Last 7 Days	3	5	5	5
Up Last 30 Days	3	5	5	5
Up Last 60 Days	3	5	5	5
Down Last 7 Days	1	0	0	0

Down Last 30 Days	1	0	0	0
Down Last 60 Days	1	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Current	0.44	0.44	1.74	1.85
7 Days Ago	0.43	0.42	1.68	1.78
30 Days Ago	0.43	0.42	1.68	1.78
60 Days Ago	0.44	0.43	1.68	1.77
90 Days Ago	0.44	0.43	1.69	1.76

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (6/2024)	Next Qtr (9/2024)	Current Year (12/2024)	Next Year (12/2025)
Most Accurate Estimate	0.44	0.44	1.76	1.86
Zacks Consensus Estimate	0.44	0.44	1.74	1.85
Earnings ESP	0.43%	0.86%	1.55%	0.92%

Surprise - Reported Earnings History

	Quarter Ending (3/2024)	Quarter Ending (12/2023)	Quarter Ending (9/2023)	Quarter Ending (6/2023)	Average Surprise
Reported	0.45	0.37	0.43	0.51	NA
Estimate	0.40	0.36	0.38	0.38	NA
Difference	0.05	0.01	0.05	0.13	0.06
Surprise	12.50%	2.78%	13.16%	34.21%	15.66%

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70.12 -0.13 (-0.19%)

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Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	3	4	3
Avg. Estimate	0.62	0.8	3.02	3.28
Low Estimate	0.59	0.65	2.99	3.25
High Estimate	0.65	0.9	3.05	3.31
Year Ago EPS	0.57	0.86	3.36	3.02

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	1	1	2	2
Avg. Estimate	119M	138M	555.5M	590.5M
Low Estimate	119M	138M	544M	588M
High Estimate	119M	138M	567M	593M
Year Ago Sales	161.42M	157.4M	595.7M	555.5M
Sales Growth (year/est)	-26.30%	-12.30%	-6.70%	6.30%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.52	0.78	0.83	0.54
EPS Actual	0.57	0.86	0.85	0.55
Difference	0.05	0.08	0.02	0.01
Surprise %	9.60%	10.30%	2.40%	1.90%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.62	0.8	3.02	3.28
7 Days Ago	0.6	0.8	3.02	3.27
30 Days Ago	0.6	0.8	3.02	3.27
60 Days Ago	0.6	0.8	3.02	3.27
90 Days Ago	0.58	0.84	2.98	3.29

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	--	--	--
Up Last 30 Days	1	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

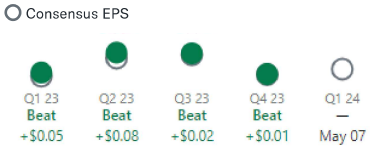
CURRENCY IN USD	AWR	Industry	Sector	S&P 500
Current Qtr.	8.80%	--	--	5.70%
Next Qtr.	-7.00%	--	--	10.80%
Current Year	-10.10%	--	--	4.50%
Next Year	8.60%	--	--	13.10%
Next 5 Years (per annum)	4.40%	--	--	10.92%
Past 5 Years (per annum)	6.13%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Wells Fargo: Underweight to Underweight	2/23/2024
Upgrade	UBS: Sell to Neutral	6/28/2023
Downgrade	Wells Fargo: Equal-Weight to Underweight	6/28/2023
Upgrade	Wells Fargo: Underweight to Equal-Weight	5/12/2023
Downgrade	Seaport Global: Buy to Neutral	1/5/2023
Initiated	UBS: Sell	11/30/2022

More Upgrades & Downgrades

Related Tickers

CWT	MSEX	AWK	SJW	YORW	WTRG	ARTNA	CWCO
California Water Servic...	Middlesex Water Comp...	American Water Works...	SJW Group	The York Water Compa...	Essential Utilities, Inc.	Artesian Resources Co...	Consolidated
48.10 -0.66%	49.82 -1.23%	121.71 -0.47%	53.43 -0.67%	35.33 -0.55%	36.54 +0.19%	34.75 -1.00%	25.20 -0.6

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NYSE - Nasdaq Real Time Price • USD

American Water Works Company, Inc. (AWK)

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121.71 -0.57 (-0.47%)

As of 9:56 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	9	5	12	13
Avg. Estimate	0.98	1.51	5.25	5.68
Low Estimate	0.94	1.49	5.2	5.55
High Estimate	1.03	1.56	5.27	5.75
Year Ago EPS	0.91	1.44	4.9	5.25

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	4	9	9
Avg. Estimate	981.75M	1.12B	4.45B	4.74B
Low Estimate	906M	1.05B	4.12B	4.42B
High Estimate	1.04B	1.15B	4.58B	4.98B
Year Ago Sales	938M	--	4.23B	4.45B
Sales Growth (year/est)	4.70%	--	5.00%	6.60%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.92	1.31	1.65	0.83
EPS Actual	0.91	1.44	1.66	0.88
Difference	-0.01	0.13	0.01	0.05
Surprise %	-1.10%	9.90%	0.60%	6.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.98	1.51	5.25	5.68
7 Days Ago	0.99	1.5	5.25	5.67
30 Days Ago	0.99	1.5	5.24	5.67
60 Days Ago	0.99	1.51	5.22	5.65
90 Days Ago	0.98	1.46	5.15	5.6

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	1	1	1
Up Last 30 Days	1	1	2	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	--	--	--

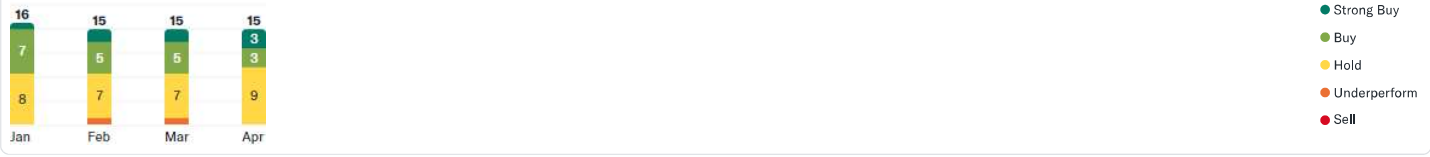
Growth Estimates

CURRENCY IN USD	AWK	Industry	Sector	S&P 500
Current Qtr.	7.70%	--	--	5.70%
Next Qtr.	4.90%	--	--	10.80%
Current Year	7.10%	--	--	4.50%
Next Year	8.20%	--	--	13.10%
Next 5 Years (per annum)	7.50%	--	--	10.92%
Past 5 Years (per annum)	6.97%	--	--	--

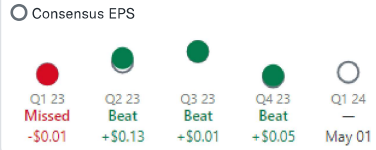
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Downgrade	Evercore ISI Group: Outperform to In-Line	2/16/2024
Maintains	Mizuho: Buy to Buy	11/7/2023
Initiated	Mizuho: Buy	10/3/2023
Reiterates	RBC Capital: Outperform to Outperform	9/14/2023
Maintains	RBC Capital: Outperform to Outperform	9/6/2023
Maintains	Argus Research: Buy	5/9/2023

More Upgrades & Downgrades

Related Tickers

WTRG Essential Utilities, Inc. 36.46 -0.04%	AWR American States Water... 70.12 -0.19%	CWT California Water Servic... 48.10 -0.66%	YORW The York Water Compa... 35.12 -1.13%	CWCO Consolidated Water Co... 25.14 -0.91%	MSEX Middlesex Water Comp... 49.91 -1.05%	SJW SJW Group 53.43 -0.67%	GWRS Global Water 12.69 -0.0

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NasdaqGS - Nasdaq Real Time Price • USD

Artesian Resources Corporation (ARTNA)

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34.75 -0.35 (-1.00%)

As of 9:46 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	1	1	1	1
Avg. Estimate	0.42	0.55	1.99	2.1
Low Estimate	0.42	0.55	1.99	2.1
High Estimate	0.42	0.55	1.99	2.1
Year Ago EPS	0.39	0.44	1.67	1.99

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	1	1	1	1
Avg. Estimate	24M	27M	105M	109M
Low Estimate	24M	27M	105M	109M
High Estimate	24M	27M	105M	109M
Year Ago Sales	22.5M	25.25M	98.86M	105M
Sales Growth (year/est)	6.70%	6.90%	6.20%	3.80%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.5	0.37	0.48	0.31
EPS Actual	0.39	0.44	0.49	0.34
Difference	-0.11	0.07	0.01	0.03
Surprise %	-22.00%	18.90%	2.10%	9.70%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.42	0.55	1.99	2.1
7 Days Ago	0.42	0.55	1.99	2.1
30 Days Ago	0.42	0.55	1.99	2.1
60 Days Ago	0.43	0.54	2	2.1
90 Days Ago	0.43	0.54	2	2.1

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	ARTNA	Industry	Sector	S&P 500
Current Qtr.	7.70%	--	--	5.70%
Next Qtr.	25.00%	--	--	10.80%
Current Year	19.20%	--	--	4.50%
Next Year	5.50%	--	--	13.10%
Next 5 Years (per annum)	4.00%	--	--	10.92%
Past 5 Years (per annum)	-4.13%	--	--	--

Research Analysis

Analyst Recommendations

Earnings

Consensus EPS

View More →

Upgrades & Downgrades

Initiated	Janney Montgomery Scott: Buy	10/25/202
Downgrade	Hilliard Lyons: Long-Term Buy to Neutral	5/4/2017
Downgrade	Baird: Outperform to Neutral	3/2/2016
Downgrade	Hilliard Lyons: Neutral to Underperform	10/21/2015
Upgrade	Baird: Neutral to Outperform	3/25/2015
Upgrade	Hilliard Lyons: Neutral to Long-Term Buy	4/7/2014

More Upgrades & Downgrades

Related Tickers

MSEX	SJW	CWT	SBS	YORW	PCYO	CWCO	WTRG
Middlesex Water Comp...	SJW Group	California Water Servic...	Companhia de Saneam...	The York Water Compa...	Pure Cycle Corporation	Consolidated Water Co...	Essential Ut
49.91 -1.05%	53.43 -0.67%	48.10 -0.66%	15.83 -1.46%	35.12 -1.13%	9.49 0.00%	25.14 -0.91%	36.46 -0.(

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NYSE - Nasdaq Real Time Price • USD

California Water Service Group (CWT)

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48.10 -0.32 (-0.66%)

As of 9:53 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	4	5	5
Avg. Estimate	0.43	1.17	2.77	2.37
Low Estimate	0.38	1.09	2.09	2.26
High Estimate	0.45	1.27	3.26	2.48
Year Ago EPS	0.17	0.6	0.91	2.77

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	4	4
Avg. Estimate	216.25M	289.3M	997.37M	977.99M
Low Estimate	205M	272M	982M	941M
High Estimate	227.5M	306.6M	1.03B	1.03B
Year Ago Sales	194.04M	254.98M	794.63M	997.37M
Sales Growth (year/est)	11.40%	13.50%	25.50%	-1.90%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.55	0.73	1.24	0.5
EPS Actual	0.17	0.6	0.52	1.21
Difference	-0.38	-0.13	-0.72	0.71
Surprise %	-69.10%	-17.80%	-58.10%	142.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.43	1.17	2.77	2.37
7 Days Ago	0.45	1.2	2.43	2.38
30 Days Ago	0.45	1.2	2.43	2.37
60 Days Ago	0.46	1.16	2.38	2.37
90 Days Ago	0.46	1.16	2.38	2.37

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	1	1
Up Last 30 Days	--	--	3	1
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	1	--	--

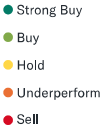
Growth Estimates

CURRENCY IN USD	CWT	Industry	Sector	S&P 500
Current Qtr.	152.90%	--	--	5.70%
Next Qtr.	95.00%	--	--	10.80%
Current Year	204.40%	--	--	4.50%
Next Year	-14.40%	--	--	13.10%
Next 5 Years (per annum)	10.80%	--	--	10.92%
Past 5 Years (per annum)	-7.06%	--	--	--

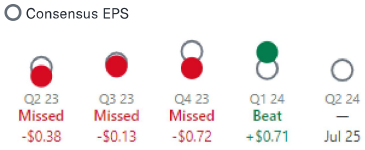
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	Baird: Outperform to Outperform	4/26/2024
Upgrade	UBS: Sell to Neutral	4/4/2024
Maintains	Baird: Outperform to Outperform	3/1/2024
Upgrade	Janney Montgomery Scott: Neutral to Buy	7/28/2023
Upgrade	Wells Fargo: Underweight to Equal-Weight	6/28/2023
Downgrade	UBS: Neutral to Sell	6/14/2023

More Upgrades & Downgrades

Related Tickers

SJW SJW Group 53.47 -0.59%	MSEX Middlesex Water Comp... 49.86 -1.15%	YORW The York Water Compa... 35.25 -0.76%	ARTNA Artesian Resources Co... 34.75 -1.00%	AWR American States Water... 70.14 -0.16%	WTRG Essential Utilities, Inc. 36.59 +0.33%	SBS Companhia de Saneam... 15.85 -1.31%	AWK American Wa 121.85 -0.3

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NYSE - Nasdaq Real Time Price • USD

Essential Utilities, Inc. (WTRG)

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36.57 +0.10 (+0.27%)

As of 11:14 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	7	5	10	10
Avg. Estimate	0.77	0.37	1.98	2.12
Low Estimate	0.67	0.34	1.97	2.08
High Estimate	0.86	0.43	2	2.18
Year Ago EPS	0.72	0.34	1.86	1.98

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	3	3	7	7
Avg. Estimate	750.08M	458.23M	2.33B	2.48B
Low Estimate	745M	450M	2.14B	2.27B
High Estimate	757M	462.9M	2.52B	2.7B
Year Ago Sales	726.45M	436.7M	2.05B	2.33B
Sales Growth (year/est)	3.30%	4.90%	13.30%	6.70%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.71	0.34	0.29	0.5
EPS Actual	0.72	0.34	0.3	0.49
Difference	0.01	0	0.01	-0.01
Surprise %	1.40%	0.00%	3.40%	-2.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.77	0.37	1.98	2.12
7 Days Ago	0.75	0.37	1.98	2.13
30 Days Ago	0.74	0.36	1.98	2.12
60 Days Ago	0.74	0.36	1.98	2.12
90 Days Ago	0.73	0.37	1.99	2.13

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	1	1	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	--	1	--

Growth Estimates

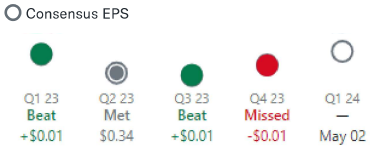
CURRENCY IN USD	WTRG	Industry	Sector	S&P 500
Current Qtr.	6.90%	--	--	5.70%
Next Qtr.	8.80%	--	--	10.80%
Current Year	6.50%	--	--	4.50%
Next Year	7.10%	--	--	13.10%
Next 5 Years (per annum)	5.20%	--	--	10.92%
Past 5 Years (per annum)	3.84%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Evercore ISI Group: Outperform to Outperform	3/4/2024
Upgrade	Edward Jones: Hold to Buy	11/3/2023
Maintains	UBS: Buy to Buy	10/4/2023
Upgrade	Northcoast Research: Neutral to Buy	9/28/2023
Downgrade	Northcoast Research: Buy to Neutral	5/18/2023
Maintains	Wells Fargo: Overweight	5/10/2023

More Upgrades & Downgrades

Related Tickers

AWK American Water Works... 121.84 -0.36%	CWT California Water Servic... 48.70 +0.58%	YORW The York Water Compa... 35.48 -0.12%	AWR American States Water... 70.57 +0.46%	MSEX Middlesex Water Comp... 50.23 -0.42%	SJW SJW Group 53.83 +0.07%	CWCO Consolidated Water Co... 25.15 -0.85%	ARTNA Artesian I 34.95 -

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NasdaqGM - Nasdaq Real Time Price • USD

Global Water Resources, Inc. (GWRS)

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12.59 -0.11 (-0.87%)

As of 10:00 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	0.03	0.08	0.3	0.34
Low Estimate	0.03	0.08	0.27	0.29
High Estimate	0.04	0.09	0.33	0.39
Year Ago EPS	0.03	0.07	0.26	0.3

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	11.7M	13.7M	53.05M	56.8M
Low Estimate	11.4M	13.4M	52.1M	53.6M
High Estimate	12M	14M	54M	60M
Year Ago Sales	13.13M	--	53.03M	53.05M
Sales Growth (year/est)	-10.90%	--	0.00%	7.10%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.02	0.07	0.08	0.04
EPS Actual	0.03	0.07	0.11	0.07
Difference	0.01	0	0.03	0.03
Surprise %	50.00%	0.00%	37.50%	75.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.03	0.08	0.3	0.34
7 Days Ago	0.03	0.08	0.3	0.34
30 Days Ago	0.03	0.08	0.3	0.34
60 Days Ago	0.05	0.11	0.25	0
90 Days Ago	0.05	0.11	0.25	0

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

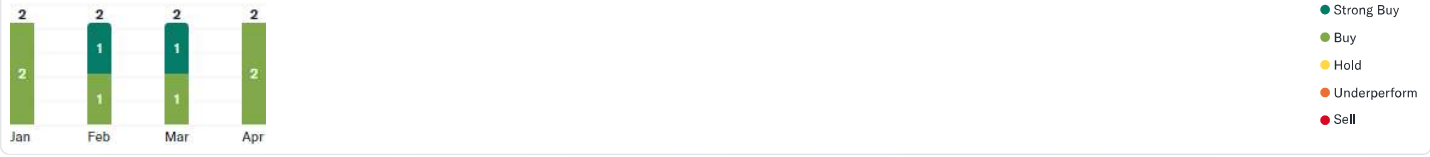
Growth Estimates

CURRENCY IN USD	GWRS	Industry	Sector	S&P 500
Current Qtr.	0.00%	--	--	5.70%
Next Qtr.	14.30%	--	--	10.80%
Current Year	15.40%	--	--	4.50%
Next Year	13.30%	--	--	13.10%
Next 5 Years (per annum)	15.00%	--	--	10.92%
Past 5 Years (per annum)	16.74%	--	--	--

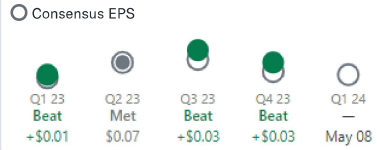
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Initiated	Janney Montgomery Scott: Buy	9/19/2022
Maintains	Roth Capital: Buy	9/23/2021

Related Tickers

YORW	CWCO	CWT	ARTNA	WTRG	MSEX	SJW	AWK
The York Water Compa...	Consolidated Water Co...	California Water Servic...	Artesian Resources Co...	Essential Utilities, Inc.	Middlesex Water Comp...	SJW Group	American Wa
35.30 -0.63%	25.32 -0.20%	48.30 -0.25%	34.75 -1.00%	36.71 +0.66%	50.29 -0.30%	53.66 -0.24%	122.00 -0.

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Summary News Chart Community Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

NasdaqGS - Nasdaq Real Time Price • USD

Middlesex Water Company (MSEX)

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50.29 -0.15 (-0.30%)

As of 10:05 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	0.46	0.62	2.22	2.35
Low Estimate	0.45	0.59	2.16	2.3
High Estimate	0.48	0.66	2.28	2.4
Year Ago EPS	0.33	0.55	1.76	2.22

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	44.55M	49M	190.1M	198.8M
Low Estimate	42M	47M	182M	191M
High Estimate	47.1M	51M	198.2M	206.6M
Year Ago Sales	38.16M	42.8M	166.27M	190.1M
Sales Growth (year/est)	16.80%	14.50%	14.30%	4.60%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.47	0.6	0.87	0.52
EPS Actual	0.33	0.55	0.56	0.32
Difference	-0.14	-0.05	-0.31	-0.2
Surprise %	-29.80%	-8.30%	-35.60%	-38.50%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.46	0.62	2.22	2.35
7 Days Ago	0.46	0.62	2.22	2.35
30 Days Ago	0.46	0.62	2.26	2.41
60 Days Ago	0.47	0.62	2.35	2.48
90 Days Ago	0.47	0.62	2.35	2.48

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

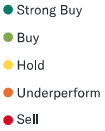
Growth Estimates

CURRENCY IN USD	MSEX	Industry	Sector	S&P 500
Current Qtr.	39.40%	--	--	5.70%
Next Qtr.	12.70%	--	--	10.80%
Current Year	26.10%	--	--	4.50%
Next Year	5.90%	--	--	13.10%
Next 5 Years (per annum)	2.70%	--	--	10.92%
Past 5 Years (per annum)	-0.93%	--	--	--

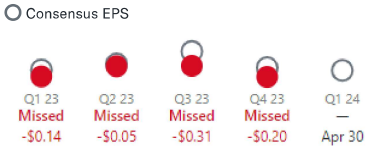
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	Baird: Outperform to Outperform	3/1/2024
Maintains	Baird: Outperform	5/2/2023
Maintains	Baird: Outperform	3/1/2023
Upgrade	Janney Montgomery Scott: Neutral to Buy	6/24/2022
Downgrade	Janney Montgomery Scott: Buy to Neutral	4/14/2021
Upgrade	Janney Montgomery Scott: Neutral to Buy	3/2/2021

More Upgrades & Downgrades

Related Tickers

ARTNA	SJW	CWT	YORW	AWR	SBS	WTRG	CWCO
Artesian Resources Co...	SJW Group	California Water Servic...	The York Water Compa...	American States Water...	Companhia de Saneam...	Essential Utilities, Inc.	Consolidatec
34.75 -1.00%	53.66 -0.24%	48.30 -0.25%	35.30 -0.63%	70.43 +0.26%	15.80 -1.62%	36.71 +0.66%	25.32 -0.2

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NYSE - Nasdaq Real Time Price • USD

SJW Group (SJW)

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53.76 -0.03 (-0.06%)

As of 11:13 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	4	6	6
Avg. Estimate	0.57	1.19	2.75	2.99
Low Estimate	0.53	1.14	2.74	2.93
High Estimate	0.6	1.27	2.78	3.08
Year Ago EPS	0.58	1.13	2.68	2.75

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	5	5
Avg. Estimate	165M	213M	707.28M	735.63M
Low Estimate	164M	213M	695M	717M
High Estimate	166M	213M	731.6M	749.03M
Year Ago Sales	156.89M	204.84M	670.36M	707.28M
Sales Growth (year/est)	5.20%	4.00%	5.50%	4.00%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.56	0.97	0.6	0.38
EPS Actual	0.58	1.13	0.59	0.36
Difference	0.02	0.16	-0.01	-0.02
Surprise %	3.60%	16.50%	-1.70%	-5.30%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.57	1.19	2.75	2.99
7 Days Ago	0.58	1.19	2.76	3
30 Days Ago	0.58	1.19	2.76	3
60 Days Ago	0.6	1.17	2.75	2.98
90 Days Ago	0.62	1.19	2.79	2.95

EPS Revisions

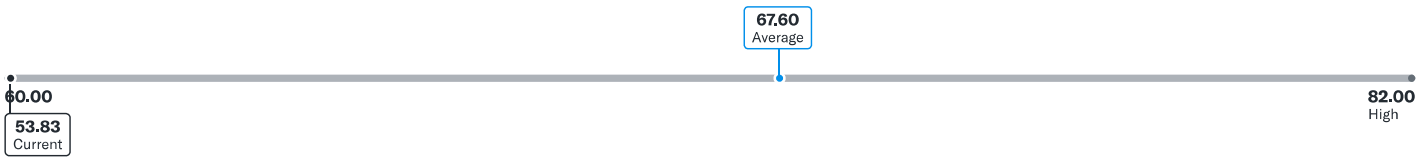
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	1	--	--
Up Last 30 Days	--	1	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	--	1	1

Growth Estimates

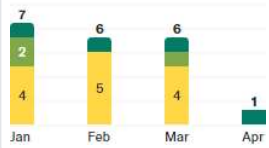
CURRENCY IN USD	SJW	Industry	Sector	S&P 500
Current Qtr.	-1.70%	--	--	5.70%
Next Qtr.	5.30%	--	--	10.80%
Current Year	2.60%	--	--	4.50%
Next Year	8.70%	--	--	13.10%
Next 5 Years (per annum)	7.50%	--	--	10.92%
Past 5 Years (per annum)	19.96%	--	--	--

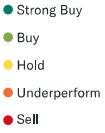
Research Analysis

Analyst Price Targets

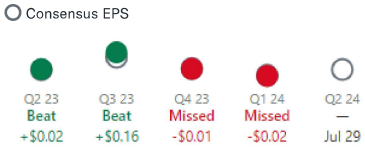


Analyst Recommendations





Earnings



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Upgrades & Downgrades

Upgrade	Seaport Global: Neutral to Buy	2/26/2024
Maintains	Wells Fargo: Equal-Weight to Equal-Weight	2/23/2024
Upgrade	Wells Fargo: Underweight to Equal-Weight	10/25/2023
Maintains	UBS: Neutral to Neutral	10/4/2023
Maintains	Wells Fargo: Underweight to Underweight	9/20/2023
Maintains	RBC Capital: Sector Perform to Sector Perform	9/6/2023

More Upgrades & Downgrades

Related Tickers

MSEX	CWT	ARTNA	YORW	AWR	SBS	WTRG	CW
Middlesex Water Comp...	California Water Servic...	Artesian Resources Co...	The York Water Compa...	American States Water...	Companhia de Saneam...	Essential Utilities, Inc.	Con
50.23 -0.42%	48.70 +0.58%	34.95 -0.43%	35.48 -0.12%	70.57 +0.46%	15.67 -2.43%	36.52 +0.13%	25.1

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NasdaqGS - Nasdaq Real Time Price • USD

The York Water Company (YORW)

☆ Follow

35.34 -0.18 (-0.51%)

As of 11:05 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	1	1	1	1
Avg. Estimate	0.29	0.45	1.61	1.69
Low Estimate	0.29	0.45	1.61	1.69
High Estimate	0.29	0.45	1.61	1.69
Year Ago EPS	0.26	0.45	1.66	1.61

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	1	1	1	1
Avg. Estimate	17M	19M	74M	78M
Low Estimate	17M	19M	74M	78M
High Estimate	17M	19M	74M	78M
Year Ago Sales	15.4M	18.77M	71.03M	74M
Sales Growth (year/est)	10.40%	1.20%	4.20%	5.40%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.26	0.44	0.46	0.36
EPS Actual	0.26	0.45	0.53	0.42
Difference	0	0.01	0.07	0.06
Surprise %	0.00%	2.30%	15.20%	16.70%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.29	0.45	1.61	1.69
7 Days Ago	0.29	0.45	1.61	1.69
30 Days Ago	0.29	0.45	1.61	1.69
60 Days Ago	0.3	0.48	1.61	1.68
90 Days Ago	0.3	0.48	1.61	1.68

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

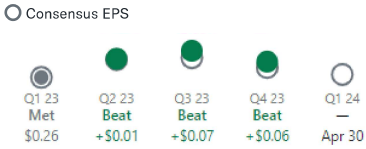
CURRENCY IN USD	YORW	Industry	Sector	S&P 500
Current Qtr.	11.50%	--	--	5.70%
Next Qtr.	0.00%	--	--	10.80%
Current Year	-3.00%	--	--	4.50%
Next Year	5.00%	--	--	13.10%
Next 5 Years (per annum)	4.90%	--	--	10.92%
Past 5 Years (per annum)	8.45%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Downgrade	Janney Montgomery Scott: Buy to Neutral	3/13/2019
Initiated	Janney Montgomery Scott: Buy	1/18/2019
Downgrade	Hilliard Lyons: Neutral to Underperform	4/22/2016
Maintains	Baird: Neutral	3/9/2016
Maintains	Baird: Neutral	3/18/2015
Upgrade	Hilliard Lyons: Underperform to Neutral	3/12/2015

More Upgrades & Downgrades

Related Tickers

MSEX	CWT	SJW	ARTNA	WTRG	AWR	GWRS	SBS
Middlesex Water Comp...	California Water Servic...	SJW Group	Artesian Resources Co...	Essential Utilities, Inc.	American States Water...	Global Water Resource...	Companhia
50.23 -0.42%	48.70 +0.58%	53.83 +0.07%	34.95 -0.43%	36.53 +0.16%	70.57 +0.46%	12.60 -0.83%	15.67 -2.4

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NYSE - Nasdaq Real Time Price • USD

A. O. Smith Corporation (AOS)

83.90 -0.41 (-0.49%)

As of 11:49 AM EDT. Market Open.

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	13	13	14	14
Avg. Estimate	1.06	0.98	4.08	4.36
Low Estimate	1.02	0.96	4	3.95
High Estimate	1.14	1.02	4.15	4.5
Year Ago EPS	1.01	0.9	3.81	4.08

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	13	13	14	14
Avg. Estimate	998.74M	979.99M	3.99B	4.16B
Low Estimate	974.46M	968.56M	3.96B	4B
High Estimate	1.02B	990.07M	4.04B	4.28B
Year Ago Sales	--	910.06M	3.85B	3.99B
Sales Growth (year/est)	--	7.70%	3.60%	4.20%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.91	0.8	0.96	0.98
EPS Actual	1.01	0.9	0.97	1
Difference	0.1	0.1	0.01	0.02
Surprise %	11.00%	12.50%	1.00%	2.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.06	0.98	4.08	4.36
7 Days Ago	1.06	0.99	4.08	4.34
30 Days Ago	1.05	0.98	4.06	4.33
60 Days Ago	1.05	0.98	4.06	4.33
90 Days Ago	1.05	0.95	4.05	4.29

EPS Revisions

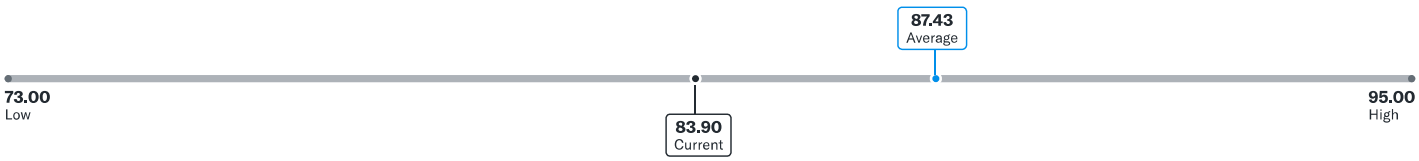
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	3	2	5	5
Up Last 30 Days	6	4	9	7
Down Last 7 Days	--	--	--	--
Down Last 30 Days	3	2	1	2

Growth Estimates

CURRENCY IN USD	AOS	Industry	Sector	S&P 500
Current Qtr.	5.00%	--	--	5.70%
Next Qtr.	8.90%	--	--	10.80%
Current Year	7.10%	--	--	4.50%
Next Year	6.90%	--	--	13.10%
Next 5 Years (per annum)	10.00%	--	--	10.92%
Past 5 Years (per annum)	14.10%	--	--	--

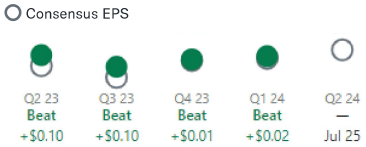
Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Stifel: Hold to Hold	4/26/2024
Maintains	Baird: Neutral to Neutral	4/26/2024
Maintains	Oppenheimer: Perform to Perform	4/18/2024
Maintains	Stifel: Hold to Hold	4/17/2024
Maintains	Jefferies: Hold to Hold	4/12/2024
Maintains	Citigroup: Neutral to Neutral	4/8/2024

More Upgrades & Downgrades

Related Tickers

PNR	GGG	DOV	ITW	IEX	IR	CR	OTIS	PH
Pentair plc	Graco Inc.	Dover Corporation	Illinois Tool Works Inc.	IDEX Corporation	Ingersoll Rand Inc.	Crane Company	Otis Worldwide Corpor...	Parker-Hannifin Cor
80.01 -0.68%	80.91 -1.33%	179.61 -0.24%	246.73 -1.01%	222.96 -0.41%	92.55 -0.90%	142.59 -1.17%	92.26 -1.19%	547.97 -1.17%

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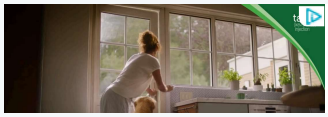
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Abbott Laboratories (ABT)

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106.42 -0.85 (-0.80%)

As of 11:33 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	19	19	22	22
Avg. Estimate	1.1	1.2	4.63	5.14
Low Estimate	1.09	1.17	4.57	5.03
High Estimate	1.12	1.23	4.7	5.44
Year Ago EPS	1.08	1.14	4.44	4.63

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	17	17	21	21
Avg. Estimate	10.37B	10.56B	41.74B	44.77B
Low Estimate	10.24B	10.48B	41.44B	44.28B
High Estimate	10.54B	10.66B	42.39B	45.37B
Year Ago Sales	9.7B	--	40.11B	41.74B
Sales Growth (year/est)	6.90%	--	4.10%	7.30%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	1.05	1.1	1.19	0.95
EPS Actual	1.08	1.14	1.19	0.98
Difference	0.03	0.04	0	0.03
Surprise %	2.90%	3.60%	0.00%	3.20%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.1	1.2	4.63	5.14
7 Days Ago	1.04	1.13	4.31	4.79
30 Days Ago	1.03	1.12	4.25	4.72
60 Days Ago	1.12	1.21	4.59	5.11
90 Days Ago	1.11	1.2	4.62	5.1

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	1	3	3
Up Last 30 Days	4	5	13	9
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	1	2	4

Growth Estimates

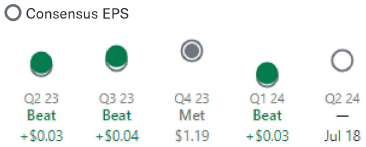
CURRENCY IN USD	ABT	Industry	Sector	S&P 500
Current Qtr.	1.90%	--	--	5.70%
Next Qtr.	5.30%	--	--	10.80%
Current Year	4.30%	--	--	4.50%
Next Year	11.00%	--	--	13.10%
Next 5 Years (per annum)	8.10%	--	--	10.92%
Past 5 Years (per annum)	9.85%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Barclays: Overweight to Overweight	4/22/2024
Maintains	RBC Capital: Outperform to Outperform	4/18/2024
Maintains	Evercore ISI Group: Outperform to Outperform	4/4/2024
Maintains	Citigroup: Buy to Buy	4/3/2024
Reiterates	RBC Capital: Outperform to Outperform	2/14/2024
Maintains	Barclays: Overweight to Overweight	1/26/2024

More Upgrades & Downgrades

Related Tickers

MDT Medtronic plc 80.54 -0.40%	BSX Boston Scientific Corp... 71.97 -0.73%	DXCM DexCom, Inc. 128.03 +1.76%	SYK Stryker Corporation 337.80 -0.32%	EW Edwards Lifesciences ... 85.39 -0.65%	ALGN Align Technology, Inc. 289.36 -5.07%	PHG Koninklijke Philips N.V. 26.95 +0.90%	PODD Insulet Corporation 172.48 +1.30%

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NYSE - Nasdaq Real Time Price • USD

AbbVie Inc. (ABBV)

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162.22 +0.70 (+0.43%)

As of 11:33 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	17	16	21	24
Avg. Estimate	3.02	2.9	11.22	12.08
Low Estimate	2.62	2.81	10.86	11.46
High Estimate	3.11	2.94	11.4	13.22
Year Ago EPS	2.91	2.95	11.11	11.22

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	16	15	25	25
Avg. Estimate	14B	14.16B	54.98B	58.05B
Low Estimate	13.81B	13.98B	53.86B	55.72B
High Estimate	14.2B	14.37B	55.84B	60.81B
Year Ago Sales	13.87B	13.71B	54.32B	54.98B
Sales Growth (year/est)	1.00%	3.30%	1.20%	5.60%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	2.81	2.86	2.77	2.23
EPS Actual	2.91	2.95	2.79	2.31
Difference	0.1	0.09	0.02	0.08
Surprise %	3.60%	3.10%	0.70%	3.60%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	3.02	2.9	11.22	12.08
7 Days Ago	2.81	2.93	11.1	12.15
30 Days Ago	2.8	2.92	11.19	12.21
60 Days Ago	2.8	2.93	11.19	12.21
90 Days Ago	2.84	2.88	11.24	12.21

EPS Revisions

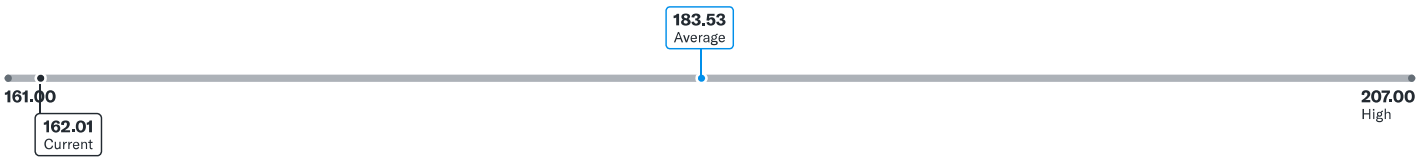
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	14	3	16	7
Up Last 30 Days	14	3	18	10
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	11	2	9

Growth Estimates

CURRENCY IN USD	ABBV	Industry	Sector	S&P 500
Current Qtr.	3.80%	--	--	5.70%
Next Qtr.	-1.70%	--	--	10.80%
Current Year	1.00%	--	--	4.50%
Next Year	7.70%	--	--	13.10%
Next 5 Years (per annum)	6.14%	--	--	10.92%
Past 5 Years (per annum)	8.87%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Strong Buy
Buy
Hold
Underperform
Sell

Earnings

Consensus EPS

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Upgrades & Downgrades

Maintains	Barclays: Overweight to Overweight	4/29/2024
Maintains	BMO Capital: Outperform to Outperform	4/29/2024
Maintains	Barclays: Overweight to Overweight	3/27/2024
Maintains	Guggenheim: Buy to Buy	3/22/2024
Maintains	Truist Securities: Buy to Buy	2/6/2024
Maintains	Raymond James: Outperform	2/6/2024

More Upgrades & Downgrades

Related Tickers

BMY Bristol-Myers Squibb ... 44.46 -0.40%	**MRK** Merck & Co., Inc. 130.03 -0.07%	**PFE** Pfizer Inc. 25.62 -0.10%	**JNJ** Johnson & Johnson 145.53 -0.88%	**LLY** Eli Lilly and Company 773.81 +4.97%	**GILD** Gilead Sciences, Inc. 65.26 -1.04%	**BIIB** Biogen Inc. 216.88 +0.64%	**AMGN** Amgen Inc. 273.10 -1.19%	**AZN** AstraZeneca PL 75.49 +0.01%

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NasdaqGS - Nasdaq Real Time Price • USD

Akamai Technologies, Inc. (AKAM)

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101.15 -0.63 (-0.62%)

As of 11:50 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	18	18	20	20
Avg. Estimate	1.61	1.63	6.73	7.33
Low Estimate	1.57	1.57	6.38	6.71
High Estimate	1.67	1.7	6.91	8
Year Ago EPS	1.4	1.49	6.2	6.73

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	17	17	20	20
Avg. Estimate	989.26M	1B	4.08B	4.39B
Low Estimate	981.8M	985.8M	4.04B	4.29B
High Estimate	996.7M	1.01B	4.12B	4.5B
Year Ago Sales	910.52M	935.72M	3.81B	4.08B
Sales Growth (year/est)	8.60%	6.90%	7.10%	7.60%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	1.32	1.41	1.5	1.6
EPS Actual	1.4	1.49	1.63	1.69
Difference	0.08	0.08	0.13	0.09
Surprise %	6.10%	5.70%	8.70%	5.60%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.61	1.63	6.73	7.33
7 Days Ago	1.61	1.63	6.73	7.33
30 Days Ago	1.61	1.63	6.73	7.33
60 Days Ago	1.61	1.63	6.73	7.33
90 Days Ago	1.59	1.63	6.72	7.63

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	--	--	--
Up Last 30 Days	1	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	1	--

Growth Estimates

CURRENCY IN USD	AKAM	Industry	Sector	S&P 500
Current Qtr.	15.00%	--	--	5.70%
Next Qtr.	9.40%	--	--	10.80%
Current Year	8.50%	--	--	4.50%
Next Year	8.90%	--	--	13.10%
Next 5 Years (per annum)	6.60%	--	--	10.92%
Past 5 Years (per annum)	7.38%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

View More →

Upgrades & Downgrades

Maintains	Citigroup: Neutral to Neutral	4/25/2024
Maintains	Tigress Financial: Strong Buy to Strong Buy	3/8/2024
Upgrade	Baird: Neutral to Outperform	3/7/2024
Downgrade	HSBC: Hold to Reduce	2/15/2024
Maintains	Baird: Neutral to Neutral	2/14/2024
Maintains	JP Morgan: Underweight to Underweight	2/14/2024

More Upgrades & Downgrades

Related Tickers

DOX Amdocs Limited 84.47 -0.47%	**VRSN** VeriSign, Inc. 172.34 -1.58%	**FFIV** F5, Inc. 167.64 -7.96%	**GEN** Gen Digital Inc. 20.49 -1.29%	**CHKP** Check Point Software ... 150.09 -0.25%	**CYBR** CyberArk Software Ltd. 240.21 -1.38%	**WEX** WEX Inc. 215.17 -1.62%	**GDDY** GoDaddy Inc. 123.77 -0.99%	**OKTA** Okta, Inc. 93.50 +0.36%	

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NasdaqGS - Nasdaq Real Time Price • USD

Alphabet Inc. (GOOG)

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166.90 -1.00 (-0.60%)

As of 12:17 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	34	33	42	43
Avg. Estimate	1.7	1.71	6.94	7.89
Low Estimate	1.45	1.52	6.22	7
High Estimate	1.88	1.95	7.63	9.16
Year Ago EPS	1.44	1.41	5.8	6.94

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	31	29	39	39
Avg. Estimate	78.31B	80.15B	322.85B	357.97B
Low Estimate	73.82B	78.67B	315.69B	341.84B
High Estimate	79.83B	81.68B	327.81B	372.44B
Year Ago Sales	74.6B	69.95B	307.39B	322.85B
Sales Growth (year/est)	5.00%	14.60%	5.00%	10.90%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	1.34	1.32	1.59	1.41
EPS Actual	1.44	1.41	1.64	1.77
Difference	0.1	0.09	0.05	0.36
Surprise %	7.50%	6.80%	3.10%	25.50%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.7	1.71	6.94	7.89
7 Days Ago	1.57	1.59	6.39	7.37
30 Days Ago	1.55	1.58	6.29	7.24
60 Days Ago	1.67	1.7	6.78	7.81
90 Days Ago	1.66	1.68	6.66	7.67

EPS Revisions

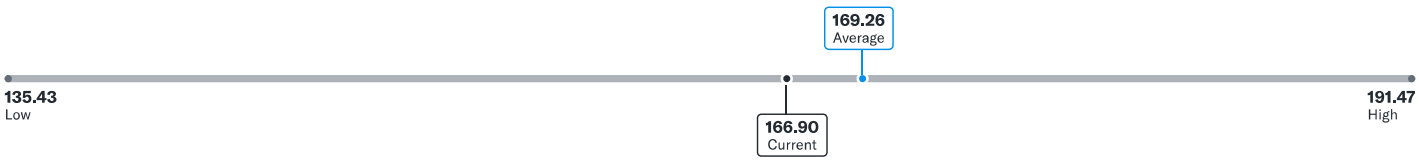
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	21	22	24	25
Up Last 30 Days	30	31	33	33
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	--	--	--

Growth Estimates

CURRENCY IN USD	GOOG	Industry	Sector	S&P 500
Current Qtr.	18.10%	--	--	5.70%
Next Qtr.	21.30%	--	--	10.80%
Current Year	19.70%	--	--	4.50%
Next Year	13.70%	--	--	13.10%
Next 5 Years (per annum)	18.40%	--	--	10.92%
Past 5 Years (per annum)	23.24%	--	--	--

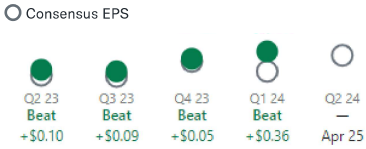
Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Stifel: Buy to Buy	4/16/2024
Maintains	Morgan Stanley: Overweight to Overweight	4/11/2024
Maintains	Oppenheimer: Outperform to Outperform	4/8/2024
Maintains	Wedbush: Outperform to Outperform	3/22/2024
Maintains	Susquehanna: Positive to Positive	1/31/2024
Maintains	Raymond James: Outperform to Outperform	1/24/2024

More Upgrades & Downgrades

Related Tickers

META	SNAP	SPOT	DJT	BIDU	RDDT	PINS	TCEHY	DJTWW
Meta Platforms, Inc.	Snap Inc.	Spotify Technology S.A.	Trump Media & Techno...	Baidu, Inc.	Reddit, Inc.	Pinterest, Inc.	Tencent Holdings Limit...	Trump Medi
434.04 +0.33%	15.11 +4.24%	285.23 -0.35%	50.07 +7.23%	103.67 -2.35%	45.17 -2.40%	33.77 -0.04%	43.95 -1.04%	19.86 +0.

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NYSE - Nasdaq Real Time Price • USD

Assurant, Inc. (AIZ)

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174.50 -0.82 (-0.47%)

As of 11:32 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	7	6	7	7
Avg. Estimate	3.87	4.03	15.57	16.93
Low Estimate	3.6	3.91	15	16.5
High Estimate	4.12	4.1	16	17.59
Year Ago EPS	2.75	3.89	15.49	15.57

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	5	5	5	5
Avg. Estimate	2.84B	2.9B	11.7B	12.1B
Low Estimate	2.8B	2.84B	11.38B	11.56B
High Estimate	2.92B	2.97B	11.9B	12.43B
Year Ago Sales	2.58B	2.73B	11.13B	11.7B
Sales Growth (year/est)	10.10%	6.10%	5.10%	3.40%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	2.32	2.57	2.58	3.72
EPS Actual	2.75	3.89	4.29	4.58
Difference	0.43	1.32	1.71	0.86
Surprise %	18.50%	51.40%	66.30%	23.10%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	3.87	4.03	15.57	16.93
7 Days Ago	3.87	4.03	15.57	16.93
30 Days Ago	3.87	4.01	15.54	16.95
60 Days Ago	3.91	4.01	15.54	16.95
90 Days Ago	3.71	3.85	14.37	16.67

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	2	2	2	1
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

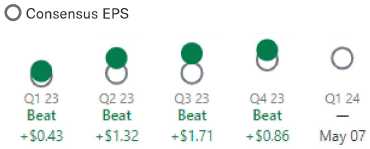
CURRENCY IN USD	AIZ	Industry	Sector	S&P 500
Current Qtr.	40.70%	--	--	5.70%
Next Qtr.	3.60%	--	--	10.80%
Current Year	0.50%	--	--	4.50%
Next Year	8.70%	--	--	13.10%
Next 5 Years (per annum)	5.00%	--	--	10.92%
Past 5 Years (per annum)	17.90%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Piper Sandler: Overweight to Overweight	4/5/2024
Maintains	UBS: Buy to Buy	2/12/2024
Downgrade	Keefe, Bruyette & Woods: Outperform to Market Perform	2/12/2024
Maintains	Piper Sandler: Overweight to Overweight	1/17/2024
Maintains	UBS: Buy to Buy	11/9/2023
Maintains	Truist Securities: Buy to Buy	11/3/2023

More Upgrades & Downgrades

Related Tickers

AXS	ESNT	RYAN	ACT	AMSF	FAF	AGO	MTG
AXIS Capital Holdings ...	Essent Group Ltd.	Ryan Specialty Holding...	Enact Holdings, Inc.	AMERISAFE, Inc.	First American Financi...	Assured Guaranty Ltd.	MGIC Investment Corp...
61.24 -1.24%	53.37 -0.58%	48.98 -0.18%	29.82 -0.37%	44.68 -0.67%	53.63 -1.02%	77.30 -1.47%	20.46 -0.49%

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Balchem Corporation (BCPC)

☆ Follow

140.10 +0.87 (+0.62%)

As of 11:49 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	0.98	1.03	4.25	4.77
Low Estimate	0.98	1	4.1	4.59
High Estimate	0.98	1.07	4.4	4.95
Year Ago EPS	0.94	1.06	4	4.25

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	232.46M	239.68M	965.1M	1.02B
Low Estimate	230.8M	239.17M	958.4M	1B
High Estimate	234.12M	240.2M	971.81M	1.03B
Year Ago Sales	232.54M	231.25M	922.44M	965.1M
Sales Growth (year/est)	-0.00%	3.60%	4.60%	5.50%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.7	0.84	0.97	0.93
EPS Actual	0.94	1.06	1.04	0.95
Difference	0.24	0.22	0.07	0.02
Surprise %	34.30%	26.20%	7.20%	2.20%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.98	1.03	4.25	4.77
7 Days Ago	0.99	1.04	4.27	4.79
30 Days Ago	0.99	1.04	4.27	4.79
60 Days Ago	0.99	1.04	4.27	4.79
90 Days Ago	0.95	1	4.04	3.95

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	1	1	1

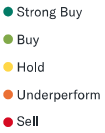
Growth Estimates

CURRENCY IN USD	BCPC	Industry	Sector	S&P 500
Current Qtr.	4.30%	--	--	5.70%
Next Qtr.	-2.80%	--	--	10.80%
Current Year	6.20%	--	--	4.50%
Next Year	12.20%	--	--	13.10%
Next 5 Years (per annum)	24.00%	--	--	10.92%
Past 5 Years (per annum)	6.59%	--	--	--

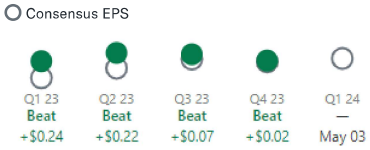
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	HC Wainwright & Co.: Buy to Buy	10/30/2023
Maintains	HC Wainwright & Co.: Buy to Buy	7/31/2023
Maintains	HC Wainwright & Co.: Buy to Buy	6/5/2023
Maintains	HC Wainwright & Co.: Buy	2/27/2023
Maintains	HC Wainwright & Co.: Buy	11/7/2022
Maintains	HC Wainwright & Co.: Buy	8/22/2022

More Upgrades & Downgrades

Related Tickers

KWR Quaker Chemical Corp... 186.96 -1.81%	IOSP Innospec Inc. 120.53 -0.54%	ALB-PA Albemarle Corporation 55.00 -3.24%	SXT Sensient Technologies ... 72.79 +0.15%	SCL Stepan Company 85.50 +1.15%	AVNT Avient Corporation 42.80 -1.15%	AXTA Axalta Coating System... 31.48 -0.62%	KOP Koppers Holdings Inc. 52.43 -1.95%

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Baxter International Inc. (BAX)

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40.51 -0.13 (-0.33%)

As of 11:53 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	13	12	16	16
Avg. Estimate	0.61	0.67	2.9	3.23
Low Estimate	0.59	0.63	2.85	3.11
High Estimate	0.62	0.73	2.96	3.47
Year Ago EPS	0.49	0.55	2.6	2.9

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	11	10	15	15
Avg. Estimate	3.55B	3.77B	15.11B	15.67B
Low Estimate	3.53B	3.72B	15.04B	15.47B
High Estimate	3.59B	3.79B	15.17B	15.98B
Year Ago Sales	3.6B	3.71B	14.81B	15.11B
Sales Growth (year/est)	-1.30%	1.70%	2.00%	3.70%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.49	0.61	0.67	0.86
EPS Actual	0.49	0.55	0.68	0.88
Difference	0	-0.06	0.01	0.02
Surprise %	0.00%	-9.80%	1.50%	2.30%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.61	0.67	2.9	3.23
7 Days Ago	0.61	0.67	2.9	3.23
30 Days Ago	0.61	0.67	2.89	3.23
60 Days Ago	0.61	0.67	2.89	3.22
90 Days Ago	0.63	0.71	2.95	3.33

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

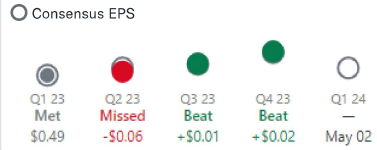
CURRENCY IN USD	BAX	Industry	Sector	S&P 500
Current Qtr.	24.50%	--	--	5.70%
Next Qtr.	21.80%	--	--	10.80%
Current Year	11.50%	--	--	4.50%
Next Year	11.40%	--	--	13.10%
Next 5 Years (per annum)	4.07%	--	--	10.92%
Past 5 Years (per annum)	-1.76%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Citigroup: Neutral to Neutral	4/3/2024
Maintains	B of A Securities: Neutral to Neutral	3/5/2024
Maintains	Barclays: Overweight to Overweight	2/12/2024
Maintains	JP Morgan: Neutral to Neutral	2/9/2024
Maintains	Morgan Stanley: Equal-Weight to Equal-Weight	12/4/2023
Maintains	JP Morgan: Neutral to Neutral	10/31/2023

More Upgrades & Downgrades

Related Tickers

BDX Becton, Dickinson and ... 233.90 +0.19%	WST West Pharmaceutical S... 361.36 +1.96%	TFX Teleflex Incorporated 208.50 +0.01%	ALC Alcon Inc. 77.74 -1.24%	HOLX Hologic, Inc. 75.95 -0.89%	NVST Envista Holdings Corp... 20.03 -2.86%	EMBC Embecta Corp. 10.23 -2.01%	XRAY DENTSPLY SIRONA Inc. 30.21 -1.56%

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Becton, Dickinson and Company (BDX)

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233.97 +0.53 (+0.23%)

As of 11:51 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	13	12	15	15
Avg. Estimate	2.97	3.43	12.95	14.35
Low Estimate	2.92	3.37	12.9	14.06
High Estimate	3.02	3.62	13.05	14.59
Year Ago EPS	2.86	2.96	12.21	12.95

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	12	11	14	15
Avg. Estimate	5.04B	5.14B	20.3B	21.49B
Low Estimate	5.01B	5.11B	20.2B	21.36B
High Estimate	5.07B	5.17B	20.35B	21.64B
Year Ago Sales	--	--	19.37B	20.3B
Sales Growth (year/est)	--	--	4.80%	5.90%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	2.74	2.91	3.43	2.4
EPS Actual	2.86	2.96	3.42	2.68
Difference	0.12	0.05	-0.01	0.28
Surprise %	4.40%	1.70%	-0.30%	11.70%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	2.97	3.43	12.95	14.35
7 Days Ago	2.97	3.43	12.95	14.35
30 Days Ago	2.96	3.43	12.94	14.34
60 Days Ago	2.96	3.43	12.94	14.34
90 Days Ago	2.99	3.47	12.84	14.26

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	1	--	2	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	1	1

Growth Estimates

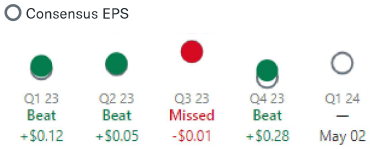
CURRENCY IN USD	BDX	Industry	Sector	S&P 500
Current Qtr.	3.80%	--	--	5.70%
Next Qtr.	15.90%	--	--	10.80%
Current Year	6.10%	--	--	4.50%
Next Year	10.80%	--	--	13.10%
Next 5 Years (per annum)	8.65%	--	--	10.92%
Past 5 Years (per annum)	1.39%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Barclays: Overweight to Overweight	2/5/2024
Maintains	Raymond James: Outperform to Outperform	1/3/2024
Maintains	Morgan Stanley: Overweight to Overweight	12/4/2023
Maintains	Piper Sandler: Overweight to Overweight	11/10/2023
Maintains	Raymond James: Outperform to Outperform	11/10/2023
Maintains	Citigroup: Neutral to Neutral	8/21/2023

More Upgrades & Downgrades

Related Tickers

EMBC Embecta Corp. 10.23 -2.01%	BAX Baxter International Inc. 40.52 -0.31%	WST West Pharmaceutical S... 361.36 +1.96%	TFX Teleflex Incorporated 208.50 +0.01%	HOLX Hologic, Inc. 75.95 -0.89%	ALC Alcon Inc. 77.74 -1.24%	RMD ResMed Inc. 212.38 -2.22%	COO The Cooper Companie... 89.04 -0.95%	ISRG Intuitive Su 370.88 -

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Booz Allen Hamilton Holding Corporation (BAH)

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146.83 -0.75 (-0.51%)

As of 11:51 AM EDT. Market Open.

Estimate Trends | Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	12	6	12	12
Avg. Estimate	1.23	1.49	5.4	5.9
Low Estimate	1.16	1.32	5.33	5.45
High Estimate	1.48	1.59	5.65	6.25
Year Ago EPS	1.01	1.47	4.56	5.4

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	10	5	12	12
Avg. Estimate	2.71B	2.86B	10.61B	11.48B
Low Estimate	2.65B	2.82B	10.54B	11.08B
High Estimate	2.76B	2.91B	10.65B	11.85B
Year Ago Sales	2.43B	2.51B	9.26B	10.61B
Sales Growth (year/est)	11.50%	13.90%	14.50%	8.20%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.95	1.25	1.33	1.14
EPS Actual	1.01	1.47	1.29	1.41
Difference	0.06	0.22	-0.04	0.27
Surprise %	6.30%	17.60%	-3.00%	23.70%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.23	1.49	5.4	5.9
7 Days Ago	1.23	1.47	5.4	5.86
30 Days Ago	1.24	1.47	5.4	5.86
60 Days Ago	1.24	1.47	5.4	5.86
90 Days Ago	1.2	1.47	5.31	5.78

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	1	--	1
Up Last 30 Days	1	1	1	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

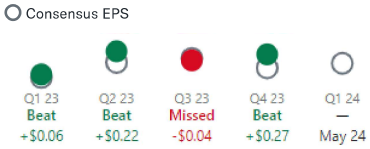
CURRENCY IN USD	BAH	Industry	Sector	S&P 500
Current Qtr.	21.80%	--	--	5.70%
Next Qtr.	1.40%	--	--	10.80%
Current Year	18.40%	--	--	4.50%
Next Year	9.30%	--	--	13.10%
Next 5 Years (per annum)	12.60%	--	--	10.92%
Past 5 Years (per annum)	13.56%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Jefferies: Buy to Buy	4/10/2024
Maintains	JP Morgan: Neutral to Neutral	2/6/2024
Maintains	Wells Fargo: Equal-Weight to Equal-Weight	1/30/2024
Maintains	Goldman Sachs: Buy to Buy	1/29/2024
Maintains	Truist Securities: Hold to Hold	1/29/2024
Downgrade	Barclays: Equal-Weight to Underweight	1/5/2024

More Upgrades & Downgrades

Related Tickers

FCN FTI Consulting, Inc. 215.71 +1.04%	**VRSK** Verisk Analytics, Inc. 219.83 -0.91%	**EFX** Equifax Inc. 224.01 -0.67%	**TRU** TransUnion 74.84 -1.41%	**BVI.PA** Bureau Veritas SA 27.42 -0.22%	**SGSN.SW** SGS SA 81.06 -1.41%	**EXPN.L** Experian plc 3,244.00 -0.40%	**ICFI** ICF International, Inc. 142.87 -1.04%	**HURN** Huron Consulting Grc 93.71 +0.03%

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BWX Technologies, Inc. (BWXT)

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95.95 -1.04 (-1.07%)

As of 12:47 PM EDT. Market Open.

Estimate Trends | Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	8	8	8	8
Avg. Estimate	0.68	0.73	3.14	3.42
Low Estimate	0.62	0.69	3.1	3.17
High Estimate	0.73	0.77	3.2	3.59
Year Ago EPS	0.7	0.65	3.02	3.14

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	7	7	8	8
Avg. Estimate	597.8M	637.61M	2.61B	2.75B
Low Estimate	578.9M	627.4M	2.58B	2.67B
High Estimate	621.5M	648.8M	2.64B	2.81B
Year Ago Sales	558.21M	612.4M	2.5B	2.61B
Sales Growth (year/est)	7.10%	4.10%	4.70%	5.10%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.61	0.59	0.63	0.93
EPS Actual	0.7	0.65	0.67	1.01
Difference	0.09	0.06	0.04	0.08
Surprise %	14.80%	10.20%	6.30%	8.60%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.68	0.73	3.14	3.42
7 Days Ago	0.68	0.73	3.14	3.42
30 Days Ago	0.68	0.73	3.14	3.42
60 Days Ago	0.67	0.73	3.12	3.49
90 Days Ago	0.68	0.74	3.09	3.46

EPS Revisions

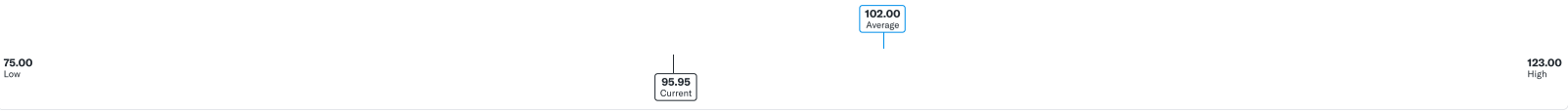
CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	1	--	--
Up Last 30 Days	--	1	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	BWXT	Industry	Sector	S&P 500
Current Qtr.	-2.90%	--	--	5.70%
Next Qtr.	12.30%	--	--	10.80%
Current Year	4.00%	--	--	4.50%
Next Year	8.90%	--	--	13.10%
Next 5 Years (per annum)	2.49%	--	--	10.92%
Past 5 Years (per annum)	3.57%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings

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Upgrades & Downgrades

Maintains	B of A Securities: Buy to Buy	3/28/2024
Maintains	Truist Securities: Hold to Hold	3/26/2024
Downgrade	Truist Securities: Buy to Hold	3/25/2024
Maintains	Truist Securities: Buy to Buy	2/29/2024
Maintains	Truist Securities: Buy to Buy	2/28/2024
Maintains	Truist Securities: Buy to Buy	1/10/2024

More Upgrades & Downgrades

Related Tickers

CW	HII	WWD	MOG-A	HWM	KTOS	AVAV	DRS	ESLT	HEI
Curtiss-Wright Corpora...	Huntington Ingalls Ind...	Woodward, Inc.	Moog Inc.	Howmet Aerospace Inc.	Kratos Defense & Secu...	AeroVironment, Inc.	Leonardo DRS, Inc.	Elbit Systems Ltd.	HEICO Corporation
256.00 -0.39%	276.32 -0.80%	163.13 +7.98%	161.21 -0.81%	67.17 +0.09%	18.24 -2.25%	161.00 +1.11%	21.58 -1.60%	203.72 +0.29%	206.20 -0.66%

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C.H. Robinson Worldwide, Inc. (CHRW)

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70.41 -1.29 (-1.80%)

As of 11:57 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	19	19	21	21
Avg. Estimate	0.62	0.77	3.15	3.9
Low Estimate	0.49	0.62	2.75	3.53
High Estimate	0.79	0.9	3.64	4.25
Year Ago EPS	0.98	0.9	3.3	3.15

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	15	13	20	20
Avg. Estimate	4.27B	4.41B	17.61B	18.41B
Low Estimate	4.03B	4.19B	16.93B	17.07B
High Estimate	4.65B	4.64B	18.55B	20.1B
Year Ago Sales	4.61B	4.66B	17.6B	17.61B
Sales Growth (year/est)	-7.40%	-5.20%	0.10%	4.60%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.99	0.91	0.82	0.81
EPS Actual	0.98	0.9	0.84	0.5
Difference	-0.01	-0.01	0.02	-0.31
Surprise %	-1.00%	-1.10%	2.40%	-38.30%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.62	0.77	3.15	3.9
7 Days Ago	0.62	0.77	3.15	3.9
30 Days Ago	0.66	0.8	3.25	4
60 Days Ago	0.66	0.81	3.24	4.02
90 Days Ago	0.83	0.94	3.82	4.46

EPS Revisions

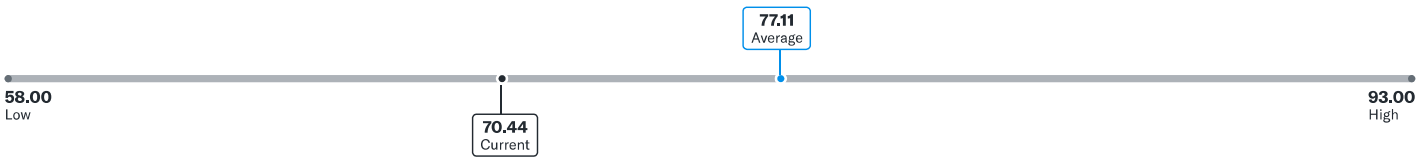
CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	1	1	1
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	CHRW	Industry	Sector	S&P 500
Current Qtr.	-36.70%	--	--	5.70%
Next Qtr.	-14.40%	--	--	10.80%
Current Year	-4.50%	--	--	4.50%
Next Year	23.80%	--	--	13.10%
Next 5 Years (per annum)	-1.33%	--	--	10.92%
Past 5 Years (per annum)	-0.46%	--	--	--

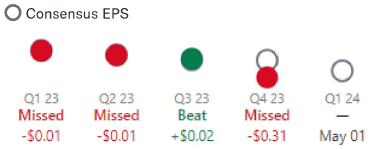
Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	B of A Securities: Underperform to Underperform	4/15/2024
Upgrade	Wolfe Research: Underperform to Peer Perform	4/11/2024
Maintains	JP Morgan: Underweight to Underweight	4/9/2024
Downgrade	Barclays: Equal-Weight to Underweight	4/1/2024
Maintains	Susquehanna: Neutral to Neutral	3/26/2024
Maintains	Susquehanna: Neutral to Neutral	3/25/2024

More Upgrades & Downgrades

Related Tickers

EXPD	JBHT	LSTR	FWRD	HUBG	ZTO	KNIN.SW	GXO
Expeditors Internation...	J.B. Hunt Transport Ser...	Landstar System, Inc.	Forward Air Corporation	Hub Group, Inc.	ZTO Express (Cayman) ...	Kuehne + Nagel Intern...	GXO Logistics
112.03 -1.55%	163.02 +0.53%	176.04 -0.67%	21.97 -2.44%	40.29 -0.52%	21.13 -0.98%	243.70 -0.33%	49.87 -2.15%

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CACI International Inc (CACI)

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401.99 -3.02 (-0.74%)

As of 11:52 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	12	8	12	13
Avg. Estimate	5.96	5.26	20.37	23.06
Low Estimate	5.7	4.77	20.15	21.92
High Estimate	6.12	5.7	20.55	24.37
Year Ago EPS	5.3	4.36	18.83	20.37

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	12	7	13	13
Avg. Estimate	1.9B	1.89B	7.5B	7.76B
Low Estimate	1.86B	1.85B	7.33B	7.51B
High Estimate	1.94B	1.95B	7.56B	8.02B
Year Ago Sales	1.7B	--	6.7B	7.5B
Sales Growth (year/est)	11.80%	--	11.90%	3.50%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	4.9	4.55	4.44	5.63
EPS Actual	5.3	4.36	4.36	5.74
Difference	0.4	-0.19	-0.08	0.11
Surprise %	8.20%	-4.20%	-1.80%	2.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	5.96	5.26	20.37	23.06
7 Days Ago	6	5.45	20.31	22.76
30 Days Ago	5.98	5.44	20.31	22.74
60 Days Ago	5.98	5.44	20.31	22.74
90 Days Ago	5.98	5.44	20.3	22.71

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	4	2	4	5
Up Last 30 Days	7	3	8	10
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	--	1	--

Growth Estimates

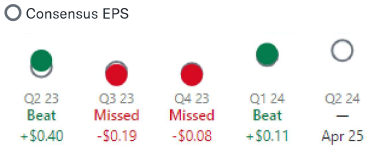
CURRENCY IN USD	CACI	Industry	Sector	S&P 500
Current Qtr.	12.50%	--	--	5.70%
Next Qtr.	20.60%	--	--	10.80%
Current Year	8.20%	--	--	4.50%
Next Year	13.20%	--	--	13.10%
Next 5 Years (per annum)	6.70%	--	--	10.92%
Past 5 Years (per annum)	14.77%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Wells Fargo: Overweight to Overweight	4/30/2024
Maintains	Barclays: Overweight to Overweight	4/30/2024
Maintains	Stifel: Buy to Buy	4/23/2024
Maintains	Goldman Sachs: Neutral to Neutral	4/16/2024
Maintains	Truist Securities: Buy to Buy	4/9/2024
Maintains	Baird: Outperform to Outperform	4/8/2024

More Upgrades & Downgrades

Related Tickers

LDOS	SAIC	ASGN	GIB	IT	FI	GIB-A.TO	CDW	WNS
Leidos Holdings, Inc.	Science Applications I...	ASGN Incorporated	CGI Inc.	Gartner, Inc.	Fiserv, Inc.	CGI Inc.	CDW Corporation	WNS (Holdings) Li
136.57 +3.76%	129.55 -0.44%	96.95 -1.75%	101.47 -0.66%	424.62 -5.36%	152.58 -1.13%	139.49 -0.06%	245.49 -0.18%	43.31 +0.67%

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NasdaqGS - Nasdaq Real Time Price • USD

Casella Waste Systems, Inc. (CWST)

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90.53 -0.29 (-0.32%)

As of 12:41 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	7	7	6	7
Avg. Estimate	0.31	0.37	0.81	1.23
Low Estimate	0.27	0.33	0.74	1
High Estimate	0.38	0.48	0.9	1.55
Year Ago EPS	0.36	0.35	0.94	0.81

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	7	7	7	7
Avg. Estimate	375.59M	397.27M	1.5B	1.59B
Low Estimate	341.86M	389.26M	1.48B	1.55B
High Estimate	389.68M	419.2M	1.51B	1.64B
Year Ago Sales	289.64M	360.66M	1.26B	1.5B
Sales Growth (year/est)	29.70%	10.20%	18.30%	6.50%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.37	0.39	0.16	-0.02
EPS Actual	0.36	0.35	0.13	-0.01
Difference	-0.01	-0.04	-0.03	0.01
Surprise %	-2.70%	-10.30%	-18.80%	50.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.31	0.37	0.81	1.23
7 Days Ago	0.31	0.36	0.81	1.23
30 Days Ago	0.3	0.36	0.79	1.17
60 Days Ago	0.33	0.38	0.91	1.25
90 Days Ago	0.38	0.41	1.17	1.56

EPS Revisions

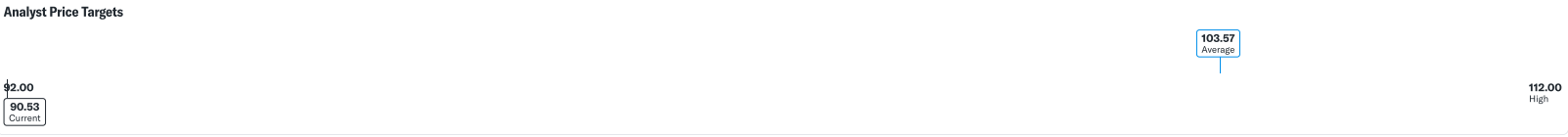
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	3	2	2	1
Up Last 30 Days	3	2	2	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	2	1	1

Growth Estimates

CURRENCY IN USD	CWST	Industry	Sector	S&P 500
Current Qtr.	-13.90%	--	--	5.70%
Next Qtr.	5.70%	--	--	10.80%
Current Year	-13.80%	--	--	4.50%
Next Year	51.90%	--	--	13.10%
Next 5 Years (per annum)	14.90%	--	--	10.92%
Past 5 Years (per annum)	6.68%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings

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Upgrades & Downgrades

Maintains	Wells Fargo: Overweight to Overweight	2/20/2024
Initiated	Wells Fargo: Overweight	11/27/2023
Initiated	Wolfe Research: Outperform	10/17/2023
Initiated	Goldman Sachs: Buy	9/15/2023
Maintains	Raymond James: Strong Buy to Strong Buy	7/31/2023
Maintains	UBS: Buy to Buy	6/15/2023

More Upgrades & Downgrades

Related Tickers

WCN	SRCL	CLH	GFL	RSG	NVRI	QRHC	MEG	JAN	PESI
Waste Connections, Inc.	Stericycle, Inc.	Clean Harbors, Inc.	GFL Environmental Inc.	Republic Services, Inc.	Enviri Corporation	Quest Resource Holdin...	Montrose Environment...	JanOne Inc.	Perma-Fix Environmen...
162.81 -1.12%	45.34 -0.19%	191.54 -0.82%	32.00 -1.87%	192.30 -0.57%	7.88 -4.60%	10.14 -0.78%	43.10 -0.37%	3.7000 -0.80%	11.43 -2.43%

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NasdaqGS - Nasdaq Real Time Price • USD

Casey's General Stores, Inc. (CASY)

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318.76 -4.08 (-1.26%)

As of 11:55 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Apr 2024)	Next Qtr. (Jul 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	13	11	13	13
Avg. Estimate	1.76	4.68	12.85	13.95
Low Estimate	1.5	4.26	12.59	13.21
High Estimate	1.91	5.07	13.02	14.93
Year Ago EPS	1.49	4.52	11.6	12.85

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Apr 2024)	Next Qtr. (Jul 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	12	9	14	14
Avg. Estimate	3.43B	4.02B	14.73B	15.54B
Low Estimate	3.27B	3.88B	14.53B	14.8B
High Estimate	3.61B	4.19B	15B	17.42B
Year Ago Sales	3.33B	--	15.09B	14.73B
Sales Growth (year/est)	3.10%	--	-2.40%	5.50%

Earnings History

CURRENCY IN USD	4/30/2023	7/31/2023	10/31/2023	1/31/2024
EPS Est.	1.65	3.37	3.8	2.14
EPS Actual	1.49	4.52	4.24	2.33
Difference	-0.16	1.15	0.44	0.19
Surprise %	-9.70%	34.10%	11.60%	8.90%

EPS Trend

CURRENCY IN USD	Current Qtr. (Apr 2024)	Next Qtr. (Jul 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.76	4.68	12.85	13.95
7 Days Ago	1.76	4.68	12.85	13.95
30 Days Ago	1.8	4.66	12.9	13.93
60 Days Ago	1.99	4.42	12.8	13.75
90 Days Ago	1.99	4.42	12.79	13.75

EPS Revisions

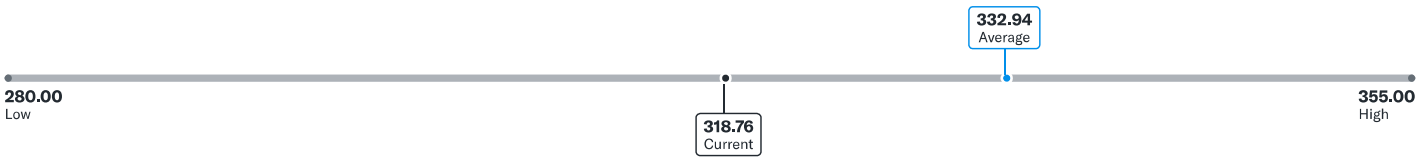
CURRENCY IN USD	Current Qtr. (Apr 2024)	Next Qtr. (Jul 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	1	--	1
Up Last 30 Days	--	1	--	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	--	1	--

Growth Estimates

CURRENCY IN USD	CASY	Industry	Sector	S&P 500
Current Qtr.	18.10%	--	--	5.70%
Next Qtr.	3.50%	--	--	10.80%
Current Year	10.80%	--	--	4.50%
Next Year	8.60%	--	--	13.10%
Next 5 Years (per annum)	10.31%	--	--	10.92%
Past 5 Years (per annum)	18.86%	--	--	--

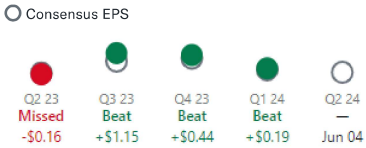
Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Evercore ISI Group: Outperform to Outperform	4/16/2024
Maintains	Evercore ISI Group: Outperform to Outperform	4/2/2024
Maintains	Evercore ISI Group: Outperform to Outperform	3/26/2024
Maintains	BMO Capital: Market Perform to Market Perform	3/13/2024
Maintains	Evercore ISI Group: Outperform to Outperform	3/13/2024
Maintains	RBC Capital: Sector Perform to Sector Perform	3/12/2024

More Upgrades & Downgrades

Related Tickers

MUSA	TSCO	DKS	ORLY	AZO	WSM	FIVE	BBY	UL
Murphy USA Inc.	Tractor Supply Company	DICK'S Sporting Good...	O'Reilly Automotive, Inc.	AutoZone, Inc.	Williams-Sonoma, Inc.	Five Below, Inc.	Best Buy Co., Inc.	Ult
413.41 -2.39%	274.87 -1.09%	201.15 -2.17%	1,019.47 -1.69%	2,965.83 -1.10%	288.41 +0.70%	146.80 -0.29%	74.68 -0.43%	40

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Cencora, Inc. (COR)

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239.16 -0.77 (-0.32%)

As of 11:57 AM EDT. Market Open.

Estimate Trends | Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	15	15	18	17
Avg. Estimate	3.69	3.25	13.45	14.65
Low Estimate	3.23	3.14	13.33	14.14
High Estimate	3.8	3.39	13.51	15.01
Year Ago EPS	3.5	2.92	11.99	13.45

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	12	12	15	15
Avg. Estimate	70.65B	73.67B	292.18B	310.82B
Low Estimate	69.6B	72.76B	289.65B	304.13B
High Estimate	71.23B	74.33B	295.65B	317.31B
Year Ago Sales	--	--	262.17B	292.18B
Sales Growth (year/est)	--	--	11.40%	6.40%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	3.29	2.82	2.8	2.89
EPS Actual	3.5	2.92	2.86	3.28
Difference	0.21	0.1	0.06	0.39
Surprise %	6.40%	3.50%	2.10%	13.50%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	3.69	3.25	13.45	14.65
7 Days Ago	3.7	3.24	13.45	14.6
30 Days Ago	3.7	3.24	13.45	14.59
60 Days Ago	3.7	3.24	13.45	14.59
90 Days Ago	3.69	3.17	12.91	14.05

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	2	--	1
Up Last 30 Days	2	3	2	3
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	--	1	--

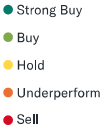
Growth Estimates

CURRENCY IN USD	COR	Industry	Sector	S&P 500
Current Qtr.	5.40%	--	--	5.70%
Next Qtr.	11.30%	--	--	10.80%
Current Year	12.20%	--	--	4.50%
Next Year	8.90%	--	--	13.10%
Next 5 Years (per annum)	9.11%	--	--	10.92%
Past 5 Years (per annum)	14.26%	--	--	--

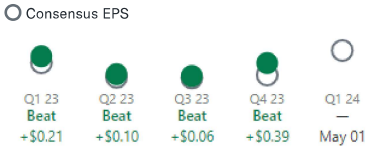
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	Citigroup: Buy to Buy	4/30/2024
Initiated	Leerink Partners: Outperform	2/26/2024
Maintains	Mizuho: Neutral to Neutral	2/5/2024
Initiated	Barclays: Overweight	1/3/2024
Initiated	Wells Fargo: Equal-Weight	12/14/2023

Related Tickers

MCK	CAH	OMI	HSIC	ZYXI	PDCO	MCK.F	UPR.IR	EDAP
McKesson Corporation	Cardinal Health, Inc.	Owens & Minor, Inc.	Henry Schein, Inc.	Zynex, Inc.	Patterson Companies, ...	McKesson Corporation	Uniphar plc	EDAP T
536.16 +0.01%	102.78 -0.13%	25.23 -0.75%	69.93 -4.24%	11.33 -1.09%	25.59 -1.60%	500.00 -1.96%	2.5650 +0.39%	7.21 -

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Check Point Software Technologies Ltd. (CHKP)

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149.94 -0.52 (-0.35%)

As of 11:57 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	31	31	34	34
Avg. Estimate	2.16	2.25	9.08	10.02
Low Estimate	2.1	2.18	8.93	9.36
High Estimate	2.2	2.3	9.3	11
Year Ago EPS	2	2.07	8.42	9.08

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	30	30	34	34
Avg. Estimate	623.46M	633.65M	2.56B	2.7B
Low Estimate	619.8M	627.3M	2.55B	2.62B
High Estimate	629.5M	645.82M	2.59B	2.83B
Year Ago Sales	588.7M	591.46M	2.41B	2.56B
Sales Growth (year/est)	5.90%	7.10%	6.00%	5.50%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	1.89	2.02	2.48	2
EPS Actual	2	2.07	2.57	2.04
Difference	0.11	0.05	0.09	0.04
Surprise %	5.80%	2.50%	3.60%	2.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	2.16	2.25	9.08	10.02
7 Days Ago	2.16	2.25	9.07	10.02
30 Days Ago	2.16	2.25	9.07	10.02
60 Days Ago	2.16	2.25	9.07	10.02
90 Days Ago	2.16	2.23	9.05	10

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	3	4	4	5
Up Last 30 Days	8	10	12	17
Down Last 7 Days	--	--	--	--
Down Last 30 Days	3	2	2	--

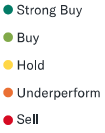
Growth Estimates

CURRENCY IN USD	CHKP	Industry	Sector	S&P 500
Current Qtr.	8.00%	--	--	5.70%
Next Qtr.	8.70%	--	--	10.80%
Current Year	7.80%	--	--	4.50%
Next Year	10.40%	--	--	13.10%
Next 5 Years (per annum)	7.30%	--	--	10.92%
Past 5 Years (per annum)	8.38%	--	--	--

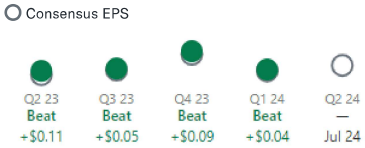
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	Stifel: Hold to Hold	4/26/2024
Reiterates	Wedbush: Outperform to Outperform	4/26/2024
Maintains	Barclays: Equal-Weight to Equal-Weight	4/26/2024
Reiterates	Needham: Hold	4/26/2024
Reiterates	Wedbush: Outperform to Outperform	4/10/2024
Maintains	Mizuho: Neutral to Neutral	3/27/2024

More Upgrades & Downgrades

Related Tickers

FFIV F5, Inc. 168.28 -7.60%	**CYBR** CyberArk Software Ltd. 240.81 -1.14%	**VRSN** VeriSign, Inc. 172.17 -1.68%	**FTNT** Fortinet, Inc. 64.35 +0.08%	**ZS** Zscaler, Inc. 174.97 -2.28%	**S** SentinelOne, Inc. 21.50 -0.94%	**WIX** Wix.com Ltd. 120.05 -0.97%	**OKTA** Okta, Inc. 93.81 +0.70%	**HCP** HashiCorp, Inc. 32.50 -0.29%	**PAN** Palo A 293.

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Chemed Corporation (CHE)

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567.94 +1.43 (+0.25%)

As of 11:57 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	3	3	3	3
Avg. Estimate	5.59	5.88	23.31	25.39
Low Estimate	5.45	5.83	23.19	24.84
High Estimate	5.69	5.92	23.53	26.19
Year Ago EPS	4.71	5.32	20.3	23.31

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	3	3	3	3
Avg. Estimate	601.13M	610.53M	2.44B	2.6B
Low Estimate	599.77M	603.82M	2.42B	2.56B
High Estimate	602.9M	615.25M	2.44B	2.64B
Year Ago Sales	553.82M	--	2.26B	2.44B
Sales Growth (year/est)	8.50%	--	7.60%	6.80%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	5.09	4.9	6.25	5.48
EPS Actual	4.71	5.32	6.6	5.2
Difference	-0.38	0.42	0.35	-0.28
Surprise %	-7.50%	8.60%	5.60%	-5.10%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	5.59	5.88	23.31	25.39
7 Days Ago	5.7	5.88	23.52	25.41
30 Days Ago	5.7	5.88	23.52	25.41
60 Days Ago	5.67	5.83	23.4	25.33
90 Days Ago	5.61	5.64	23.01	24.86

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	1	--	1
Up Last 30 Days	--	1	--	1
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	1	2	1

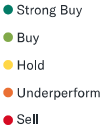
Growth Estimates

CURRENCY IN USD	CHE	Industry	Sector	S&P 500
Current Qtr.	18.70%	--	--	5.70%
Next Qtr.	10.50%	--	--	10.80%
Current Year	14.80%	--	--	4.50%
Next Year	8.90%	--	--	13.10%
Next 5 Years (per annum)	11.25%	--	--	10.92%
Past 5 Years (per annum)	10.20%	--	--	--

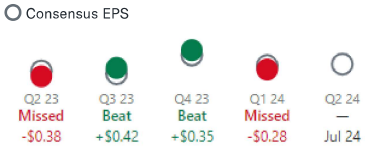
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	RBC Capital: Outperform to Outperform	3/4/2024
Maintains	Oppenheimer: Outperform to Outperform	2/29/2024
Maintains	Oppenheimer: Outperform to Outperform	1/17/2024
Maintains	RBC Capital: Outperform to Outperform	10/30/2023
Maintains	RBC Capital: Outperform to Outperform	7/31/2023
Maintains	Oppenheimer: Outperform to Outperform	7/27/2023

More Upgrades & Downgrades

Related Tickers

UHS Universal Health Servi... 170.05 +0.55%	**EHC** Encompass Health Cor... 83.26 -0.46%	**ENSG** The Ensign Group, Inc. 117.34 -1.14%	**OPCH** Option Care Health, Inc. 30.05 -0.66%	**ACHC** Acadia Healthcare Co... 74.12 -0.66%	**HCSG** Healthcare Services Gr... 10.92 +0.55%	**ADUS** Addus HomeCare Corp... 93.65 -0.57%	**AM** Ame... 91.7

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NasdaqGS - Nasdaq Real Time Price • USD

CSG Systems International, Inc. (CSGS)

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47.94 -0.40 (-0.84%)

As of 11:51 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	10	10	10	10
Avg. Estimate	0.93	0.95	4	4.33
Low Estimate	0.88	0.86	3.91	4.16
High Estimate	0.96	1.02	4.09	4.61
Year Ago EPS	1.04	0.8	3.69	4

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	10	10	10	10
Avg. Estimate	284.17M	288.23M	1.18B	1.23B
Low Estimate	268.1M	270.1M	1.11B	1.16B
High Estimate	297M	300.8M	1.22B	1.28B
Year Ago Sales	271.14M	--	1.17B	1.18B
Sales Growth (year/est)	4.80%	--	0.50%	5.00%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.94	0.72	0.8	0.86
EPS Actual	1.04	0.8	0.92	0.92
Difference	0.1	0.08	0.12	0.06
Surprise %	10.60%	11.10%	15.00%	7.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.93	0.95	4	4.33
7 Days Ago	0.95	0.94	4	4.34
30 Days Ago	0.95	0.94	3.99	4.35
60 Days Ago	0.95	0.95	4	4.38
90 Days Ago	0.97	0.95	3.94	4.29

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	3	--	--
Up Last 30 Days	1	3	1	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	3	--	--	1

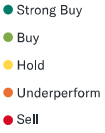
Growth Estimates

CURRENCY IN USD	CSGS	Industry	Sector	S&P 500
Current Qtr.	-10.60%	--	--	5.70%
Next Qtr.	18.70%	--	--	10.80%
Current Year	8.40%	--	--	4.50%
Next Year	8.30%	--	--	13.10%
Next 5 Years (per annum)	10.00%	--	--	10.92%
Past 5 Years (per annum)	1.65%	--	--	--

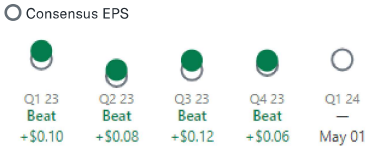
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Initiated	RBC Capital: Outperform	3/27/2024
Reiterates	Cantor Fitzgerald: Overweight to Overweight	2/8/2024
Maintains	Wells Fargo: Equal-Weight to Equal-Weight	2/8/2024
Initiated	Jefferies: Buy	12/1/2023
Initiated	Wells Fargo: Equal-Weight	11/9/2023
Maintains	Cantor Fitzgerald: Overweight to Overweight	11/2/2023

More Upgrades & Downgrades

Related Tickers

EVTC EVERTEC, Inc. 37.93 -1.10%	EEFT Euronet Worldwide, Inc. 103.69 -0.92%	GLBX.TA Glassbox Ltd 3,720.00 +3.28%	DOX Amdocs Limited 84.52 -0.42%	ALLT Allot Ltd. 2.1400 +0.47%	ASAI.ST Artificial Solutions Inte... 0.6000 -1.64%	ACIW ACI Worldwide, Inc. 34.35 +3.78%	FLYW Flywire Corporation 20.39 -1.31%	BNAI Brand Engag 2.1300 -1

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NasdaqGS - Nasdaq Real Time Price • USD

CSW Industrials, Inc. (CSWI)

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240.60 +0.62 (+0.26%)

As of 11:40 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	1.84	2.11	6.58	7.89
Low Estimate	1.82	2.11	6.35	7.65
High Estimate	1.86	2.11	6.81	8.13
Year Ago EPS	1.74	1.97	6.2	6.58

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	2	2	2
Avg. Estimate	203.9M	214.65M	785.85M	833.25M
Low Estimate	203.1M	214.6M	785M	831.5M
High Estimate	204.7M	214.7M	786.7M	835M
Year Ago Sales	195.69M	203.36M	757.9M	785.85M
Sales Growth (year/est)	4.20%	5.60%	3.70%	6.00%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	1.44	1.92	1.97	1.17
EPS Actual	1.74	1.97	1.93	0.59
Difference	0.3	0.05	-0.04	-0.58
Surprise %	20.80%	2.60%	-2.00%	-49.60%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.84	2.11	6.58	7.89
7 Days Ago	1.84	2.11	6.58	7.89
30 Days Ago	1.84	2.11	6.58	7.89
60 Days Ago	1.84	2.11	6.58	7.89
90 Days Ago	2.06	2.16	6.96	7.91

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

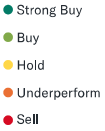
Growth Estimates

CURRENCY IN USD	CSWI	Industry	Sector	S&P 500
Current Qtr.	5.70%	--	--	5.70%
Next Qtr.	7.10%	--	--	10.80%
Current Year	6.10%	--	--	4.50%
Next Year	19.90%	--	--	13.10%
Next 5 Years (per annum)	12.00%	--	--	10.92%
Past 5 Years (per annum)	20.08%	--	--	--

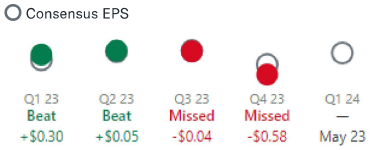
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	Barrington Research: Outperform	8/22/2022
Initiated	Barrington Research: Outperform	1/19/2021
Maintains	Sidoti & Co.: Neutral	5/14/2020
Maintains	Sidoti & Co.: Neutral	1/28/2020
Maintains	B. Riley Securities: Buy to Buy	8/2/2018
Initiated	Wunderlich Securities: Buy	6/16/2016

Related Tickers

WTS	**EPAC**	**FELE**	**RRX**	**CXT**	**ITT**	**SXI**	**HURC**
Watts Water Technolog...	Enerpac Tool Group Co...	Franklin Electric Co., Inc.	Regal Rexnord Corpora...	Crane NXT, Co.	ITT Inc.	Standex International ...	Hurco Companies, Ir
198.61 -1.58%	36.13 -0.58%	98.84 -4.26%	161.99 -2.57%	61.90 -1.10%	130.71 -1.41%	174.50 -1.00%	18.13 -1.73%

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NYSE - Nasdaq Real Time Price • USD

CVS Health Corporation (CVS)

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67.65 +0.21 (+0.30%)

As of 11:58 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	22	22	27	25
Avg. Estimate	1.69	2.19	8.28	9.14
Low Estimate	1.62	1.94	8	8.75
High Estimate	1.99	2.34	8.4	9.53
Year Ago EPS	2.2	2.21	8.74	8.28

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	19	18	24	23
Avg. Estimate	89.21B	92.1B	370.93B	392.68B
Low Estimate	87.42B	90.01B	363.6B	384.03B
High Estimate	91.18B	93.49B	377.36B	401.28B
Year Ago Sales	80.81B	88.92B	357.78B	370.93B
Sales Growth (year/est)	10.40%	3.60%	3.70%	5.90%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	2.09	2.11	2.13	1.99
EPS Actual	2.2	2.21	2.21	2.12
Difference	0.11	0.1	0.08	0.13
Surprise %	5.30%	4.70%	3.80%	6.50%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.69	2.19	8.28	9.14
7 Days Ago	1.61	2.07	7.78	8.6
30 Days Ago	1.71	2.22	8.31	9.22
60 Days Ago	1.73	2.19	8.32	9.22
90 Days Ago	2.03	2.21	8.52	9.37

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	1	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	3	3	3	2

Growth Estimates

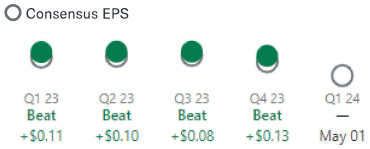
CURRENCY IN USD	CVS	Industry	Sector	S&P 500
Current Qtr.	-23.20%	--	--	5.70%
Next Qtr.	-0.90%	--	--	10.80%
Current Year	-5.30%	--	--	4.50%
Next Year	10.40%	--	--	13.10%
Next 5 Years (per annum)	3.69%	--	--	10.92%
Past 5 Years (per annum)	4.31%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Reiterates	Cantor Fitzgerald: Overweight to Overweight	4/10/2024
Maintains	Wells Fargo: Equal-Weight to Equal-Weight	4/8/2024
Reiterates	Cantor Fitzgerald: Overweight to Overweight	4/4/2024
Maintains	Piper Sandler: Overweight to Overweight	3/15/2024
Initiated	Barclays: Equal-Weight	3/6/2024
Initiated	Leerink Partners: Outperform	2/26/2024

More Upgrades & Downgrades

Related Tickers

UNH UnitedHealth Group In... 484.21 -0.99%	HUM Humana Inc. 304.93 +0.59%	CI The Cigna Group 356.36 -0.02%	CNC Centene Corporation 73.28 -0.74%	ELV Elevance Health, Inc. 528.61 -1.01%	MOH Molina Healthcare, Inc. 340.42 -1.01%	OSCR Oscar Health, Inc. 17.50 +0.57%	CLOV Clover Health Investme... 0.6494 -3.66%

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Danaher Corporation (DHR)

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246.01 -0.81 (-0.33%)

As of 11:58 AM EDT. Market Open.

Estimate Trends | Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	19	19	21	21
Avg. Estimate	1.47	1.58	7.11	8.1
Low Estimate	1.45	1.52	6.96	7.71
High Estimate	1.52	1.73	7.46	8.75
Year Ago EPS	2.05	1.84	7.58	7.11

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	18	18	22	22
Avg. Estimate	5.22B	5.37B	22.31B	24.17B
Low Estimate	5.17B	5.23B	21.94B	23.54B
High Estimate	5.29B	5.47B	22.87B	25.04B
Year Ago Sales	7.11B	--	23.89B	22.31B
Sales Growth (year/est)	-26.60%	--	-6.60%	8.30%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	2.01	1.7	1.91	1.6
EPS Actual	2.05	1.84	2.09	1.79
Difference	0.04	0.14	0.18	0.19
Surprise %	2.00%	8.20%	9.40%	11.90%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.47	1.58	7.11	8.1
7 Days Ago	1.57	1.78	7.15	8.15
30 Days Ago	1.68	1.91	7.62	8.66
60 Days Ago	1.68	1.91	7.62	8.66
90 Days Ago	1.8	1.9	7.74	8.74

EPS Revisions

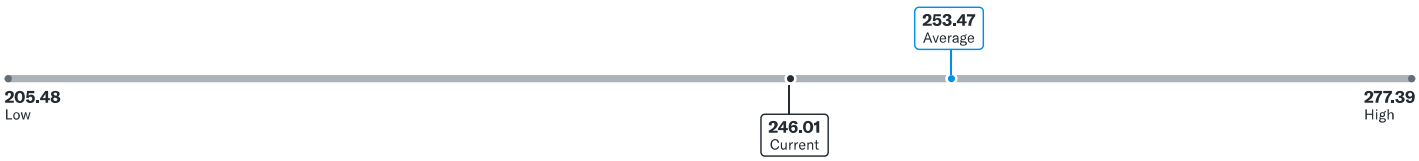
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	2	1
Up Last 30 Days	--	--	9	9
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	2	1	1

Growth Estimates

CURRENCY IN USD	DHR	Industry	Sector	S&P 500
Current Qtr.	-28.30%	--	--	5.70%
Next Qtr.	-14.10%	--	--	10.80%
Current Year	-6.20%	--	--	4.50%
Next Year	13.90%	--	--	13.10%
Next 5 Years (per annum)	7.03%	--	--	10.92%
Past 5 Years (per annum)	16.66%	--	--	--

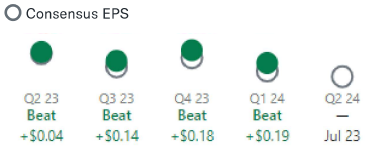
Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Citigroup: Buy to Buy	4/24/2024
Maintains	TD Cowen: Buy to Buy	4/24/2024
Maintains	B of A Securities: Neutral to Neutral	4/24/2024
Maintains	Barclays: Equal-Weight to Equal-Weight	4/24/2024
Maintains	Baird: Outperform to Outperform	4/24/2024
Upgrade	HSBC: Hold to Buy	4/17/2024

More Upgrades & Downgrades

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TMO	DGX	MEDP	LH	ILMN	IDXX	A	EXAS
Thermo Fisher Scienti...	Quest Diagnostics Inco...	Medpace Holdings, Inc.	Laboratory Corporatio...	Illumina, Inc.	IDEXX Laboratories, Inc.	Agilent Technologies, I...	Exact Scien
572.30 -0.80%	139.08 -0.30%	393.82 -1.60%	203.99 -0.09%	124.10 -0.50%	499.07 -1.24%	138.34 -0.90%	59.52 +1.

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Fastenal Company (FAST)

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68.29 -0.19 (-0.28%)

As of 12:16 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	11	11	14	14
Avg. Estimate	0.53	0.55	2.11	2.31
Low Estimate	0.51	0.53	2.07	2.21
High Estimate	0.55	0.56	2.15	2.45
Year Ago EPS	0.52	0.52	2.02	2.11

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	11	11	13	13
Avg. Estimate	1.97B	1.99B	7.75B	8.39B
Low Estimate	1.94B	1.93B	7.66B	8.08B
High Estimate	2B	2.05B	7.9B	8.87B
Year Ago Sales	1.89B	1.85B	7.35B	7.75B
Sales Growth (year/est)	4.00%	7.40%	5.50%	8.10%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.53	0.5	0.45	0.53
EPS Actual	0.52	0.52	0.46	0.52
Difference	-0.01	0.02	0.01	-0.01
Surprise %	-1.90%	4.00%	2.20%	-1.90%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.53	0.55	2.11	2.31
7 Days Ago	0.53	0.55	2.11	2.31
30 Days Ago	0.56	0.56	2.16	2.35
60 Days Ago	0.55	0.56	2.15	2.34
90 Days Ago	0.56	0.56	2.15	2.34

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	1	1	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

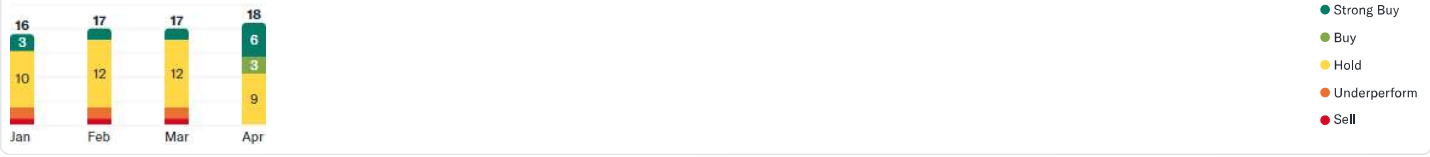
Growth Estimates

CURRENCY IN USD	FAST	Industry	Sector	S&P 500
Current Qtr.	1.90%	--	--	5.70%
Next Qtr.	5.80%	--	--	10.80%
Current Year	4.50%	--	--	4.50%
Next Year	9.50%	--	--	13.10%
Next 5 Years (per annum)	6.33%	--	--	10.92%
Past 5 Years (per annum)	9.79%	--	--	--

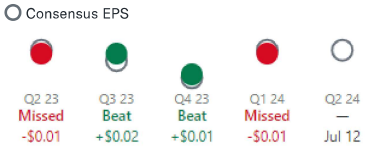
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	Loop Capital: Hold to Hold	4/15/2024
Maintains	HSBC: Hold to Hold	4/15/2024
Maintains	Baird: Neutral to Neutral	4/12/2024
Maintains	Stifel: Buy to Buy	3/18/2024
Maintains	Baird: Neutral to Neutral	3/7/2024
Maintains	Baird: Neutral to Neutral	1/19/2024

More Upgrades & Downgrades

Related Tickers

GWW	WSO	POOL	FERG	AIT	MSM	WCC	BECN
W.W. Grainger, Inc.	Watsco, Inc.	Pool Corporation	Ferguson plc	Applied Industrial Tech...	MSC Industrial Direct ...	WESCO International, I...	Beacon Roofing Supply...
928.57 -0.64%	447.56 -0.06%	365.98 -0.98%	212.52 -1.23%	182.79 -1.05%	91.88 -1.23%	155.76 -1.51%	99.30 +0.30%

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NasdaqGS - Nasdaq Real Time Price • USD

Franklin Electric Co., Inc. (FELE)

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98.90 -4.34 (-4.20%)

As of 12:09 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	5	5	5	5
Avg. Estimate	0.73	1.34	4.33	4.72
Low Estimate	0.71	1.27	4.25	4.55
High Estimate	0.76	1.39	4.38	4.82
Year Ago EPS	0.79	1.27	4.12	4.33

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	5	5	5	5
Avg. Estimate	477.68M	579.82M	2.12B	2.21B
Low Estimate	466.04M	569.16M	2.09B	2.17B
High Estimate	487.7M	586M	2.14B	2.24B
Year Ago Sales	476.08M	--	2.07B	2.12B
Sales Growth (year/est)	0.30%	--	2.70%	4.40%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.63	1.33	1.29	0.84
EPS Actual	0.79	1.27	1.24	0.83
Difference	0.16	-0.06	-0.05	-0.01
Surprise %	25.40%	-4.50%	-3.90%	-1.20%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.73	1.34	4.33	4.72
7 Days Ago	0.73	1.34	4.33	4.72
30 Days Ago	0.74	1.33	4.33	4.72
60 Days Ago	0.74	1.33	4.33	4.72
90 Days Ago	0.84	1.29	4.37	4.68

EPS Revisions

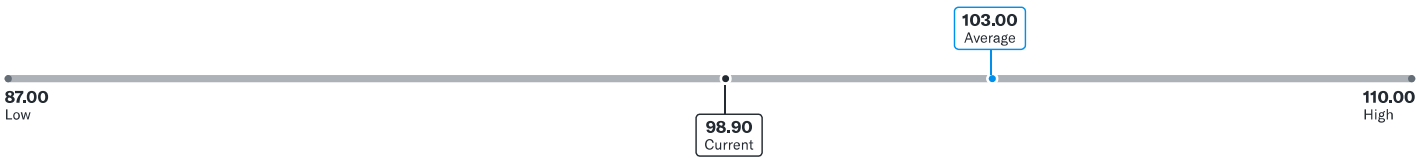
CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	1	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	FELE	Industry	Sector	S&P 500
Current Qtr.	-7.60%	--	--	5.70%
Next Qtr.	5.50%	--	--	10.80%
Current Year	5.10%	--	--	4.50%
Next Year	9.00%	--	--	13.10%
Next 5 Years (per annum)	13.40%	--	--	10.92%
Past 5 Years (per annum)	24.53%	--	--	--

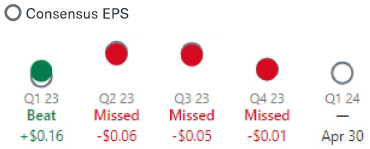
Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings



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Upgrades & Downgrades

Upgrade	Northcoast Research: Neutral to Buy	2/23/2024
Maintains	Baird: Neutral to Neutral	2/14/2024
Maintains	DA Davidson: Neutral	5/3/2023
Initiated	Oppenheimer: Perform	4/19/2023
Maintains	DA Davidson: Neutral	2/15/2023
Maintains	Baird: Neutral	2/15/2023

More Upgrades & Downgrades

Related Tickers

WTS	CSWI	GRC	CXT	NDSN	MIDD	TNC	SXI
Watts Water Technolog...	CSW Industrials, Inc.	The Gorman-Rupp Co...	Crane NXT, Co.	Nordson Corporation	The Middleby Corporat...	Tennant Company	Standex International ...
199.14 -1.32%	240.61 +0.26%	33.27 +0.54%	61.93 -1.06%	260.41 -0.79%	139.50 -1.87%	116.54 +0.09%	174.33 -1.09%

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NasdaqGS - Nasdaq Real Time Price • USD

Heartland Express, Inc. (HTLD)

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9.94 -0.02 (-0.20%)

As of 12:23 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	5	5	5	5
Avg. Estimate	-0.08	-0.01	-0.22	0.53
Low Estimate	-0.11	-0.08	-0.41	0.3
High Estimate	-0.04	0.06	-0.03	0.67
Year Ago EPS	0.1	-0.14	0.19	-0.22

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	2	1	5	5
Avg. Estimate	275.45M	284M	1.12B	1.19B
Low Estimate	274.9M	284M	1.08B	1.09B
High Estimate	276M	284M	1.18B	1.3B
Year Ago Sales	322.65M	295.03M	1.21B	1.12B
Sales Growth (year/est)	-14.60%	-3.70%	-7.60%	6.60%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.16	0.08	-0.08	-0.12
EPS Actual	0.1	-0.14	0.06	-0.19
Difference	-0.06	-0.22	0.14	-0.07
Surprise %	-37.50%	-275.00%	175.00%	-58.30%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	-0.08	-0.01	-0.22	0.53
7 Days Ago	-0.05	0.02	-0.04	0.6
30 Days Ago	-0.02	0.07	0.08	0.69
60 Days Ago	-0.02	0.07	0.08	0.69
90 Days Ago	0	0.09	0.19	0.76

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	1	1	1

Growth Estimates

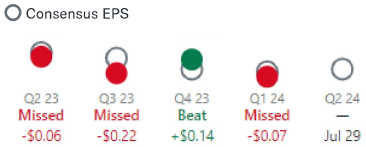
CURRENCY IN USD	HTLD	Industry	Sector	S&P 500
Current Qtr.	-180.00%	--	--	5.70%
Next Qtr.	92.90%	--	--	10.80%
Current Year	-215.80%	--	--	4.50%
Next Year	340.90%	--	--	13.10%
Next 5 Years (per annum)	68.70%	--	--	10.92%
Past 5 Years (per annum)	-10.28%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Barclays: Underweight to Underweight	4/30/2024
Maintains	JP Morgan: Neutral to Neutral	4/24/2024
Maintains	JP Morgan: Neutral to Neutral	4/9/2024
Maintains	Barclays: Underweight to Underweight	4/1/2024
Maintains	Morgan Stanley: Equal-Weight to Equal-Weight	2/12/2024
Maintains	JP Morgan: Neutral to Neutral	12/21/2023

More Upgrades & Downgrades

Related Tickers

WERN	**KNX**	**MRTN**	**SNDR**	**CVLG**	**PTSI**	**ULH**	**RXO**
Werner Enterprises, Inc.	Knight-Swift Transport...	Marten Transport, Ltd.	Schneider National, Inc.	Covenant Logistics Gro...	P.A.M. Transportation ...	Universal Logistics Hol...	RXO, I
34.25 -1.37%	46.61 -0.53%	17.01 +1.13%	20.83 -1.84%	45.37 -0.15%	17.21 -0.12%	45.21 -0.32%	18.94

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J&J Snack Foods Corp. (JJSF)

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137.94 +1.35 (+0.99%)

As of 12:32 PM EDT. Market Open.

Estimate Trends | Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	5	5	5	5
Avg. Estimate	0.61	2.07	5.11	5.89
Low Estimate	0.51	1.96	4.73	5.33
High Estimate	0.69	2.12	5.3	6.53
Year Ago EPS	0.43	1.92	4.5	5.11

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	5	5	5	5
Avg. Estimate	341.08M	442M	1.57B	1.62B
Low Estimate	339M	439.59M	1.56B	1.61B
High Estimate	344.43M	445.6M	1.59B	1.64B
Year Ago Sales	--	--	1.56B	1.57B
Sales Growth (year/est)	--	--	0.70%	3.40%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.46	1.52	1.72	0.78
EPS Actual	0.43	1.92	1.73	0.52
Difference	-0.03	0.4	0.01	-0.26
Surprise %	-6.50%	26.30%	0.60%	-33.30%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.61	2.07	5.11	5.89
7 Days Ago	0.61	2.07	5.11	5.89
30 Days Ago	0.62	2.06	5.09	5.92
60 Days Ago	0.62	2.06	5.09	5.92
90 Days Ago	0.83	2.06	5.61	6.35

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	1	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

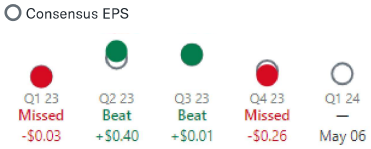
CURRENCY IN USD	JJSF	Industry	Sector	S&P 500
Current Qtr.	41.90%	--	--	5.70%
Next Qtr.	7.80%	--	--	10.80%
Current Year	13.60%	--	--	4.50%
Next Year	15.30%	--	--	13.10%
Next 5 Years (per annum)	73.10%	--	--	10.92%
Past 5 Years (per annum)	-2.44%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Benchmark: Buy to Buy	11/17/2023
Maintains	Benchmark: Buy to Buy	8/2/2023
Reiterates	Benchmark: Buy to Buy	8/1/2023
Maintains	Benchmark: Buy	5/5/2023
Reiterates	Benchmark: Buy	1/31/2023
Initiated	Benchmark: Buy	12/8/2021

More Upgrades & Downgrades

Related Tickers

LANC Lancaster Colony Corp... 189.06 -0.68%	THS TreeHouse Foods, Inc. 37.51 +0.78%	JBSS John B. Sanfilippo & So... 99.94 -0.12%	CENT Central Garden & Pet ... 40.83 -0.99%	MKC-V McCormick & Compan... 75.55 -0.79%	HAIN The Hain Celestial Gro... 6.10 -2.79%	CENTA Central Garden & Pet ... 35.33 -0.53%	NO Nom 18.1

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Jack Henry & Associates, Inc. (JKHY)

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162.87 -3.25 (-1.96%)

As of 12:33 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	15	15	14	15
Avg. Estimate	1.17	1.29	5.12	5.7
Low Estimate	1.15	1.24	5.11	5.52
High Estimate	1.2	1.33	5.14	6.06
Year Ago EPS	1.12	1.34	5.02	5.12

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	14	14	15	15
Avg. Estimate	542.16M	563.55M	2.22B	2.38B
Low Estimate	538.58M	559M	2.22B	2.35B
High Estimate	544.5M	567.9M	2.23B	2.39B
Year Ago Sales	--	534.63M	2.08B	2.22B
Sales Growth (year/est)	--	5.40%	7.00%	7.00%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	1.1	1.18	1.32	1.14
EPS Actual	1.12	1.34	1.39	1.26
Difference	0.02	0.16	0.07	0.12
Surprise %	1.80%	13.60%	5.30%	10.50%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.17	1.29	5.12	5.7
7 Days Ago	1.17	1.29	5.12	5.7
30 Days Ago	1.17	1.29	5.12	5.71
60 Days Ago	1.17	1.29	5.12	5.71
90 Days Ago	1.17	1.31	5.02	5.62

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	1	--	--
Up Last 30 Days	1	1	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	--	--	--

Growth Estimates

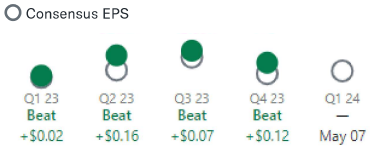
CURRENCY IN USD	JKHY	Industry	Sector	S&P 500
Current Qtr.	4.50%	--	--	5.70%
Next Qtr.	-3.70%	--	--	10.80%
Current Year	2.00%	--	--	4.50%
Next Year	11.30%	--	--	13.10%
Next 5 Years (per annum)	7.70%	--	--	10.92%
Past 5 Years (per annum)	8.53%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings



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Upgrades & Downgrades

Maintains	Baird: Neutral to Neutral	4/17/2024
Maintains	Evercore ISI Group: In-Line to In-Line	3/26/2024
Initiated	Wolfe Research: Peer Perform	3/7/2024
Maintains	RBC Capital: Sector Perform to Sector Perform	2/8/2024
Reiterates	Baird: Neutral to Neutral	1/30/2024
Initiated	Citigroup: Neutral	1/18/2024

More Upgrades & Downgrades

Related Tickers

IT Gartner, Inc. 426.25 -4.99%	BR Broadridge Financial S... 194.53 -0.90%	CDW CDW Corporation 245.55 -0.16%	FIS Fidelity National Infor... 68.41 -1.48%	EXLS ExlService Holdings, Inc. 29.28 -0.68%	GIB CGI Inc. 101.45 -0.68%	CTSH Cognizant Technology ... 65.99 -0.81%	DXC DXC Technology Comp... 19.83 -2.22%

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L3Harris Technologies, Inc. (LHX)

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215.24 -1.82 (-0.84%)

As of 12:32 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	22	22	24	23
Avg. Estimate	3.14	3.23	12.85	14.17
Low Estimate	3.06	3.12	12.48	13.6
High Estimate	3.26	3.34	13.14	14.65
Year Ago EPS	2.97	3.19	12.36	12.85

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	20	20	23	22
Avg. Estimate	5.3B	5.25B	21.19B	22.1B
Low Estimate	5.12B	5.09B	20.91B	21.77B
High Estimate	5.4B	5.42B	21.57B	22.61B
Year Ago Sales	4.37B	--	19.42B	21.19B
Sales Growth (year/est)	21.10%	--	9.10%	4.30%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	2.94	3.03	3.31	2.9
EPS Actual	2.97	3.19	3.35	3.06
Difference	0.03	0.16	0.04	0.16
Surprise %	1.00%	5.30%	1.20%	5.50%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	3.14	3.23	12.85	14.17
7 Days Ago	3.11	3.22	12.71	14.08
30 Days Ago	3.11	3.22	12.72	14.09
60 Days Ago	3.11	3.22	12.72	14.09
90 Days Ago	3.13	3.23	12.78	14.09

EPS Revisions

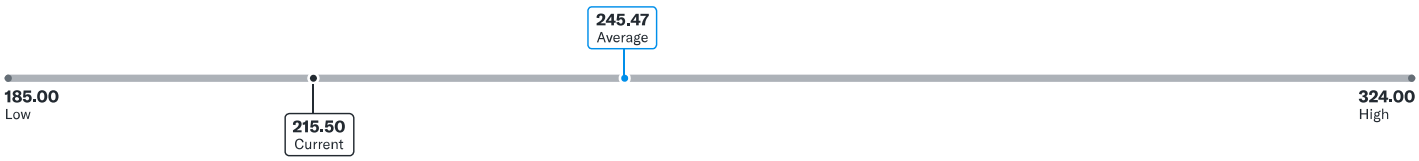
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	13	8	15	12
Up Last 30 Days	13	9	15	13
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	7	--	1

Growth Estimates

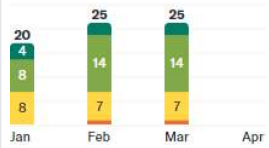
CURRENCY IN USD	LHX	Industry	Sector	S&P 500
Current Qtr.	5.70%	--	--	5.70%
Next Qtr.	1.30%	--	--	10.80%
Current Year	4.00%	--	--	4.50%
Next Year	10.30%	--	--	13.10%
Next 5 Years (per annum)	8.77%	--	--	10.92%
Past 5 Years (per annum)	7.51%	--	--	--

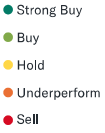
Research Analysis

Analyst Price Targets

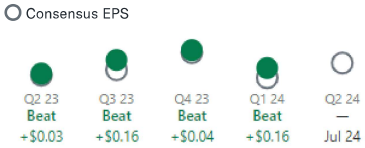


Analyst Recommendations





Earnings



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Upgrades & Downgrades

Maintains	Barclays: Overweight to Overweight	4/30/2024
Maintains	RBC Capital: Outperform to Outperform	4/29/2024
Upgrade	Alembic Global: Neutral to Overweight	4/22/2024
Maintains	Citigroup: Buy to Buy	2/13/2024
Maintains	Wells Fargo: Overweight to Overweight	1/30/2024
Maintains	RBC Capital: Outperform to Outperform	1/29/2024

More Upgrades & Downgrades

Related Tickers

NOC	**GD**	**RTX**	**LMT**	**TXT**	**HII**	**AVAV**	**TDG**
Northrop Grumman Co...	General Dynamics Cor...	RTX Corporation	Lockheed Martin Corp...	Textron Inc.	Huntington Ingalls Ind...	AeroVironment, Inc.	TransDigm Group Incor...
485.20 -0.21%	287.45 -0.12%	101.79 -0.63%	465.82 -0.37%	85.39 -1.17%	277.08 -0.53%	161.46 +1.39%	1,251.63 -0.56%

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NYSE - Nasdaq Real Time Price • USD

McCormick & Company, Incorporated (MKC)

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76.23 -0.06 (-0.08%)

As of 12:32 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	12	11	14	14
Avg. Estimate	0.6	0.71	2.87	3.08
Low Estimate	0.55	0.69	2.83	2.98
High Estimate	0.63	0.74	3.02	3.26
Year Ago EPS	0.6	0.65	2.7	2.87

Revenue Estimate

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	11	11	14	14
Avg. Estimate	1.64B	1.68B	6.68B	6.87B
Low Estimate	1.62B	1.63B	6.65B	6.79B
High Estimate	1.66B	1.7B	6.73B	6.99B
Year Ago Sales	--	--	6.66B	6.68B
Sales Growth (year/est)	--	--	0.30%	2.80%

Earnings History

CURRENCY IN USD	5/31/2023	8/31/2023	11/30/2023	2/29/2024
EPS Est.	0.57	0.65	0.79	0.58
EPS Actual	0.6	0.65	0.85	0.63
Difference	0.03	0	0.06	0.05
Surprise %	5.30%	0.00%	7.60%	8.60%

EPS Trend

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.6	0.71	2.87	3.08
7 Days Ago	0.6	0.71	2.87	3.08
30 Days Ago	0.6	0.71	2.86	3.07
60 Days Ago	0.61	0.71	2.83	3.05
90 Days Ago	0.61	0.71	2.85	3.07

EPS Revisions

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	1	--	1	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

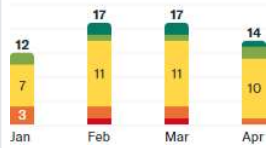
Growth Estimates

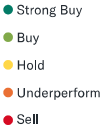
CURRENCY IN USD	MKC	Industry	Sector	S&P 500
Current Qtr.	0.00%	--	--	5.70%
Next Qtr.	9.20%	--	--	10.80%
Current Year	6.30%	--	--	4.50%
Next Year	7.30%	--	--	13.10%
Next 5 Years (per annum)	7.15%	--	--	10.92%
Past 5 Years (per annum)	-0.91%	--	--	--

Research Analysis

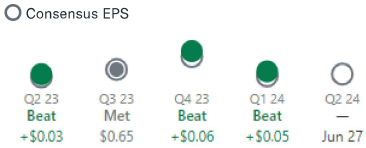
Analyst Price Targets

Analyst Recommendations





Earnings



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Upgrades & Downgrades

Upgrade	Argus Research: Hold to Buy	4/2/2024
Maintains	Barclays: Equal-Weight to Equal-Weight	3/28/2024
Maintains	Stifel: Hold to Hold	3/27/2024
Maintains	Citigroup: Sell to Sell	3/27/2024
Initiated	Citigroup: Sell	2/1/2024
Maintains	JP Morgan: Underweight to Underweight	1/26/2024

More Upgrades & Downgrades

Related Tickers

HRL	CPB	GIS	SJM	CAG	K	KHC	LW
Hormel Foods Corpora...	Campbell Soup Compa...	General Mills, Inc.	The J. M. Smucker Co...	Conagra Brands, Inc.	Kellanova	The Kraft Heinz Comp...	Lamb Weston Holding
35.53 +0.31%	45.59 +1.46%	70.14 -0.13%	114.37 -0.24%	30.79 -0.50%	57.72 -0.84%	38.47 -0.48%	84.01 -0.78%

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McKesson Corporation (MCK)

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537.47 +1.38 (+0.26%)

As of 12:33 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	15	9	18	18
Avg. Estimate	6.35	7.16	27.6	31.01
Low Estimate	6.2	6.86	27.31	30.07
High Estimate	6.68	7.34	27.93	31.6
Year Ago EPS	7.19	7.27	25.94	27.6

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	13	7	16	16
Avg. Estimate	79.32B	80.84B	311.92B	340.48B
Low Estimate	77.7B	78.17B	310.3B	332.67B
High Estimate	81.12B	82.67B	313.71B	360.82B
Year Ago Sales	68.91B	--	276.71B	311.92B
Sales Growth (year/est)	15.10%	--	12.70%	9.20%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	7.17	5.87	6.15	7.05
EPS Actual	7.19	7.27	6.23	7.74
Difference	0.02	1.4	0.08	0.69
Surprise %	0.30%	23.90%	1.30%	9.80%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	6.35	7.16	27.6	31.01
7 Days Ago	6.34	7.15	27.6	31.02
30 Days Ago	6.35	7.13	27.61	31.01
60 Days Ago	6.35	7.13	27.6	30.99
90 Days Ago	6.77	7.25	27.32	30.82

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	1	1	1
Up Last 30 Days	2	2	4	5
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

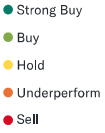
Growth Estimates

CURRENCY IN USD	MCK	Industry	Sector	S&P 500
Current Qtr.	-11.70%	--	--	5.70%
Next Qtr.	-1.50%	--	--	10.80%
Current Year	6.40%	--	--	4.50%
Next Year	12.40%	--	--	13.10%
Next 5 Years (per annum)	9.84%	--	--	10.92%
Past 5 Years (per annum)	18.33%	--	--	--

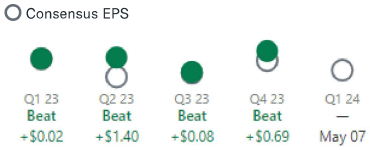
Research Analysis

Analyst Price Targets

Analyst Recommendations



Earnings



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Upgrades & Downgrades

Maintains	Citigroup: Buy to Buy	4/30/2024
Maintains	Morgan Stanley: Overweight to Overweight	4/15/2024
Maintains	Argus Research: Buy to Buy	4/10/2024
Maintains	UBS: Buy to Buy	3/6/2024
Initiated	Leerink Partners: Outperform	2/26/2024
Maintains	Mizuho: Neutral to Neutral	2/9/2024

More Upgrades & Downgrades

Related Tickers

CAH	COR	HSIC	OMI	ZYXI	PDCO	ABG.BE	ABC.VI	SHTDY
Cardinal Health, Inc.	Cencora, Inc.	Henry Schein, Inc.	Owens & Minor, Inc.	Zynex, Inc.	Patterson Companies, ...	AmerisourceBergen Corp	Cencora, Inc.	Sinopharm
102.76 -0.15%	239.45 -0.20%	70.22 -3.85%	25.27 -0.61%	11.32 -1.14%	25.58 -1.62%	222.40 -0.38%	223.85 +0.40%	12.59 -2

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NewMarket Corporation (NEU)

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528.68 -6.41 (-1.20%)

As of 12:26 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Dec 2019)	Next Qtr. (Mar 2020)	Current Year (2019)	Next Year (2020)
No. of Analysts	--	--	--	--
Avg. Estimate	0	0	0	0
Low Estimate	0	0	0	0
High Estimate	0	0	0	0
Year Ago EPS	4.53	5.57	--	--

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Dec 2019)	Next Qtr. (Mar 2020)	Current Year (2019)	Next Year (2020)
No. of Analysts	1	1	1	1
Avg. Estimate	--	552M	--	--
Low Estimate	540M	552M	2.2B	2.25B
High Estimate	540M	552M	2.2B	2.25B
Year Ago Sales	538.31M	536.62M	2.29B	--
Sales Growth (year/est)	--	2.90%	--	--

Earnings History

CURRENCY IN USD	6/30/2018	3/31/2019	6/30/2019	9/30/2019
EPS Est.	5.68	5.81	5.16	5.93
EPS Actual	4.53	5.57	6.63	6.06
Difference	-1.15	-0.24	1.47	0.13
Surprise %	-20.20%	-4.10%	28.50%	2.20%

EPS Trend

CURRENCY IN USD	Current Qtr. (Dec 2019)	Next Qtr. (Mar 2020)	Current Year (2019)	Next Year (2020)
Current Estimate	0	0	0	0
7 Days Ago	5.16	6.11	23.42	25.82
30 Days Ago	5.16	6.11	23.42	25.82
60 Days Ago	5.16	6.11	23.42	25.82
90 Days Ago	5.16	6.11	23.42	25.82

EPS Revisions

CURRENCY IN USD	Current Qtr. (Dec 2019)	Next Qtr. (Mar 2020)	Current Year (2019)	Next Year (2020)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	NEU	Industry	Sector	S&P 500
Current Qtr.	--	--	--	5.70%
Next Qtr.	--	--	--	10.80%
Current Year	--	--	--	4.50%
Next Year	--	--	--	13.10%
Next 5 Years (per annum)	7.70%	--	--	10.92%
Past 5 Years (per annum)	3.33%	--	--	--

Research Analysis

Analyst Recommendations

Earnings

View More →

Upgrades & Downgrades

Initiated	Buckingham Research: Underperform	4/1/2019
Downgrade	BMO Capital: Outperform to Market Perform	9/30/2016
Downgrade	Longbow Research: Buy to Neutral	7/29/2016
Upgrade	Longbow Research: Neutral to Buy	3/10/2016

Related Tickers

KWR	SCL	SXT	MTX	FUL	KOP	IOSP	WDFC	OEC	AXTA
Quaker Chemical Corp...	Stepan Company	Sensient Technologies ...	Minerals Technologies ...	H.B. Fuller Company	Koppers Holdings Inc.	Innospec Inc.	WD-40 Company	Orion S.A.	Axalta Coating System...
187.71 -1.42%	84.26 -0.32%	72.98 +0.41%	73.55 -2.00%	75.03 -0.43%	52.41 -1.99%	120.49 -0.58%	224.94 +0.32%	23.82 -0.77%	31.44 -0.73%

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Northrop Grumman Corporation (NOC)

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485.57 -0.65 (-0.13%)

As of 12:29 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	19	20	22	22
Avg. Estimate	5.95	6.05	24.79	27.54
Low Estimate	5.75	5.87	24.55	26.4
High Estimate	6.16	6.32	25.24	28.8
Year Ago EPS	5.34	6.18	23.29	24.79

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	18	18	21	22
Avg. Estimate	10.03B	10.15B	41.12B	43.14B
Low Estimate	9.82B	10.04B	40.93B	42.58B
High Estimate	10.16B	10.32B	41.67B	44.42B
Year Ago Sales	9.58B	9.78B	39.29B	41.12B
Sales Growth (year/est)	4.70%	3.90%	4.70%	4.90%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	5.33	5.81	5.8	5.79
EPS Actual	5.34	6.18	6.27	6.32
Difference	0.01	0.37	0.47	0.53
Surprise %	0.20%	6.40%	8.10%	9.20%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	5.95	6.05	24.79	27.54
7 Days Ago	5.96	6.16	24.65	27.6
30 Days Ago	5.97	6.17	24.68	27.65
60 Days Ago	5.96	6.16	24.65	27.59
90 Days Ago	5.96	6.18	24.56	27.51

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	4	1	10	5
Up Last 30 Days	8	3	15	10
Down Last 7 Days	--	--	--	--
Down Last 30 Days	5	9	--	4

Growth Estimates

CURRENCY IN USD	NOC	Industry	Sector	S&P 500
Current Qtr.	11.40%	--	--	5.70%
Next Qtr.	-2.10%	--	--	10.80%
Current Year	6.40%	--	--	4.50%
Next Year	11.10%	--	--	13.10%
Next 5 Years (per annum)	29.69%	--	--	10.92%
Past 5 Years (per annum)	3.66%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

View More →

Upgrades & Downgrades

Maintains	Wells Fargo: Equal-Weight to Equal-Weight	4/30/2024
Maintains	RBC Capital: Sector Perform to Sector Perform	4/26/2024
Maintains	Susquehanna: Positive to Positive	4/26/2024
Maintains	Baird: Neutral to Neutral	4/26/2024
Upgrade	Alembic Global: Neutral to Overweight	4/22/2024
Maintains	Susquehanna: Positive to Positive	1/26/2024

More Upgrades & Downgrades

Related Tickers

GD	LMT	LHX	RTX	HII	TXT	TDG	AVAV	KTOS	HWM
General Dynamics Cor...	Lockheed Martin Corp...	L3Harris Technologies,...	RTX Corporation	Huntington Ingalls Ind...	Textron Inc.	TransDigm Group Incor...	AeroVironment, Inc.	Kratos Defense & Secu...	Howmet Aerospace Inc.
287.83 +0.01%	465.94 -0.35%	215.62 -0.66%	101.94 -0.49%	276.88 -0.60%	85.40 -1.16%	1,252.11 -0.53%	161.53 +1.44%	18.29 -2.01%	67.33 +0.33%

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Oracle Corporation (ORCL)

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114.62 -1.87 (-1.61%)

As of 12:26 PM EDT. Market Open.

Estimate Trends | Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	24	21	28	28
Avg. Estimate	1.54	1.23	5.22	5.81
Low Estimate	1.52	1.19	5.2	5.5
High Estimate	1.6	1.29	5.28	6.34
Year Ago EPS	1.67	1.19	5.12	5.22

Revenue Estimate

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	22	18	28	28
Avg. Estimate	13.62B	12.51B	49.74B	53.9B
Low Estimate	13.53B	12.43B	49.63B	53.16B
High Estimate	14.13B	12.71B	49.99B	54.57B
Year Ago Sales	13.84B	--	49.95B	49.74B
Sales Growth (year/est)	-1.50%	--	-0.40%	8.40%

Earnings History

CURRENCY IN USD	5/31/2023	8/31/2023	11/30/2023	2/29/2024
EPS Est.	1.58	1.15	1.22	1.28
EPS Actual	1.67	1.19	1.23	1.32
Difference	0.09	0.04	0.01	0.04
Surprise %	5.70%	3.50%	0.80%	3.10%

EPS Trend

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.54	1.23	5.22	5.81
7 Days Ago	1.55	1.23	5.24	5.84
30 Days Ago	1.53	1.22	5.17	5.77
60 Days Ago	1.64	1.33	5.55	6.22
90 Days Ago	1.64	1.33	5.55	6.21

EPS Revisions

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	ORCL	Industry	Sector	S&P 500
Current Qtr.	-7.80%	--	--	5.70%
Next Qtr.	3.40%	--	--	10.80%
Current Year	2.00%	--	--	4.50%
Next Year	11.30%	--	--	13.10%
Next 5 Years (per annum)	10.00%	--	--	10.92%
Past 5 Years (per annum)	9.45%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

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Upgrades & Downgrades

Initiated	Oppenheimer: Perform	4/18/2024
Initiated	Keybanc: Overweight	3/21/2024
Upgrade	Argus Research: Hold to Buy	3/14/2024
Maintains	Goldman Sachs: Neutral to Neutral	3/13/2024
Maintains	HSBC: Buy to Buy	3/13/2024
Maintains	Evercore ISI Group: Outperform to Outperform	3/12/2024

More Upgrades & Downgrades

Related Tickers

ADBE Adobe Inc. 469.95 -0.66%	PANW Palo Alto Networks, Inc. 295.50 +0.71%	CRWD CrowdStrike Holdings, ... 298.53 -1.81%	PLTR Palantir Technologies I... 22.34 -2.17%	RBRK Rubrik, Inc. 33.44 -4.47%	SQ Block, Inc. 73.24 -2.75%	MSFT Microsoft Corporation 397.34 -1.22%	NET Cloudflare, Inc. 89.76 +0.12%	PATH UiPath Inc. 19.39 -1.90%	HCP HashiCorp, Inc. 32.50 -0.28%

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OSI Systems, Inc. (OSIS)

☆ Follow

132.54 -3.59 (-2.64%)

As of 12:17 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	1	4	4
Avg. Estimate	2.79	0.96	8.08	8.68
Low Estimate	2.78	0.96	8.08	8.5
High Estimate	2.8	0.96	8.1	8.8
Year Ago EPS	2.66	0.91	6.21	8.08

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	3	1	4	4
Avg. Estimate	466.48M	303M	1.52B	1.61B
Low Estimate	463M	303M	1.51B	1.6B
High Estimate	471.45M	303M	1.53B	1.63B
Year Ago Sales	411.87M	--	1.28B	1.52B
Sales Growth (year/est)	13.30%	--	19.00%	5.90%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	2.53	0.86	1.74	2.1
EPS Actual	2.66	0.91	2.21	2.16
Difference	0.13	0.05	0.47	0.06
Surprise %	5.10%	5.80%	27.00%	2.90%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	2.79	0.96	8.08	8.68
7 Days Ago	2.79	0	8.02	8.59
30 Days Ago	2.79	0	8.02	8.59
60 Days Ago	2.79	0	8.02	8.59
90 Days Ago	2.79	0	8.02	8.59

EPS Revisions

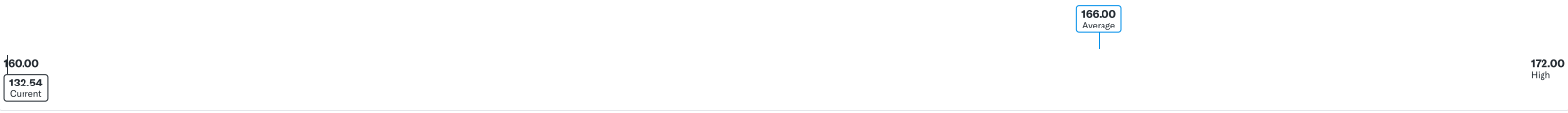
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	--	4	2
Up Last 30 Days	1	--	4	2
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	--	--	--

Growth Estimates

CURRENCY IN USD	OSIS	Industry	Sector	S&P 500
Current Qtr.	4.90%	--	--	5.70%
Next Qtr.	5.50%	--	--	10.80%
Current Year	30.10%	--	--	4.50%
Next Year	7.40%	--	--	13.10%
Next 5 Years (per annum)	8.00%	--	--	10.92%
Past 5 Years (per annum)	7.88%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings

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Upgrades & Downgrades

Maintains	Oppenheimer: Outperform to Outperform	4/29/2024
Maintains	Roth MKM: Buy to Buy	4/26/2024
Maintains	Roth MKM: Buy to Buy	1/26/2024
Maintains	Roth MKM: Buy to Buy	8/25/2023
Maintains	B. Riley Securities: Buy to Buy	8/25/2023
Maintains	Oppenheimer: Outperform to Outperform	8/25/2023

More Upgrades & Downgrades

Related Tickers

TTDKY	SANM	CTS	LYTS	PLXS	BHE	TEL	APH	OLED	VICR
TDK Corporation	Sanmina Corporation	CTS Corporation	LSI Industries Inc.	Plexus Corp.	Benchmark Electronics...	TE Connectivity Ltd.	Amphenol Corporation	Universal Display Corp...	Vicor Corporation
45.51 +1.35%	61.09 -4.56%	46.40 -1.28%	14.66 -2.33%	101.10 -1.12%	31.05 -1.40%	143.00 +0.13%	122.09 -0.03%	160.95 -0.66%	33.15 -3.35%

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Pfizer Inc. (PFE)

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25.70 +0.07 (+0.25%)

As of 12:23 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	16	16	23	22
Avg. Estimate	0.49	0.41	2.06	2.55
Low Estimate	0.35	0.33	1.91	2.11
High Estimate	0.77	0.52	2.2	3
Year Ago EPS	1.23	0.67	1.84	2.06

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	14	13	23	22
Avg. Estimate	13.08B	12.28B	56.06B	58.57B
Low Estimate	11.91B	11.82B	54.64B	54.42B
High Estimate	15.37B	13.07B	56.87B	61.18B
Year Ago Sales	16.59B	12.73B	58.5B	56.06B
Sales Growth (year/est)	-21.20%	-3.60%	-4.20%	4.50%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.98	0.57	-0.34	-0.22
EPS Actual	1.23	0.67	-0.17	0.1
Difference	0.25	0.1	0.17	0.32
Surprise %	25.50%	17.50%	50.00%	145.50%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.49	0.41	2.06	2.55
7 Days Ago	0.49	0.42	2.07	2.56
30 Days Ago	0.5	0.42	2.04	2.55
60 Days Ago	0.52	0.45	2.2	2.74
90 Days Ago	0.57	0.48	2.26	2.71

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	2
Up Last 30 Days	5	1	8	7
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	1	--	--

Growth Estimates

CURRENCY IN USD	PFE	Industry	Sector	S&P 500
Current Qtr.	-60.20%	--	--	5.70%
Next Qtr.	-38.80%	--	--	10.80%
Current Year	12.00%	--	--	4.50%
Next Year	23.80%	--	--	13.10%
Next 5 Years (per annum)	-1.24%	--	--	10.92%
Past 5 Years (per annum)	0.52%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

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Upgrades & Downgrades

Reiterates	Cantor Fitzgerald: Overweight to Overweight	4/18/2024
Reiterates	Cantor Fitzgerald: Overweight to Overweight	4/15/2024
Reiterates	Cantor Fitzgerald: Overweight to Overweight	4/5/2024
Reiterates	Cantor Fitzgerald: Overweight to Overweight	4/1/2024
Downgrade	Argus Research: Buy to Hold	3/22/2024
Reiterates	Cantor Fitzgerald: Overweight to Overweight	3/4/2024

More Upgrades & Downgrades

Related Tickers

BMY	ABBV	JNJ	MRK	LLY	GILD	AZN	BIIB	AMGN	GSK
Bristol-Myers Squibb ...	AbbVie Inc.	Johnson & Johnson	Merck & Co., Inc.	Eli Lilly and Company	Gilead Sciences, Inc.	AstraZeneca PLC	Biogen Inc.	Amgen Inc.	GSK plc
44.56 -0.19%	162.93 +0.87%	145.66 -0.79%	130.39 +0.21%	775.17 +5.15%	65.36 -0.88%	75.99 +0.67%	217.24 +0.81%	274.07 -0.84%	41.77 +0.37%

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Prestige Consumer Healthcare Inc. (PBH)

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71.05 -0.69 (-0.96%)

As of 12:18 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	6	6	7	7
Avg. Estimate	1.14	1.11	4.33	4.63
Low Estimate	1.14	1.1	4.33	4.52
High Estimate	1.14	1.14	4.34	4.69
Year Ago EPS	-4.83	1.06	-1.65	4.33

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	6	6	7	7
Avg. Estimate	287.47M	285.36M	1.14B	1.16B
Low Estimate	286.65M	283.19M	1.14B	1.16B
High Estimate	289M	286.29M	1.14B	1.17B
Year Ago Sales	285.87M	--	1.13B	1.14B
Sales Growth (year/est)	0.60%	--	0.70%	2.30%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	1.04	1.01	1.07	1.04
EPS Actual	-4.83	1.06	1.07	1.06
Difference	-5.87	0.05	0	0.02
Surprise %	-564.40%	5.00%	0.00%	1.90%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.14	1.11	4.33	4.63
7 Days Ago	1.14	1.11	4.33	4.63
30 Days Ago	1.14	1.11	4.33	4.63
60 Days Ago	1.14	1.11	4.33	4.63
90 Days Ago	1.14	1.11	4.32	4.6

EPS Revisions

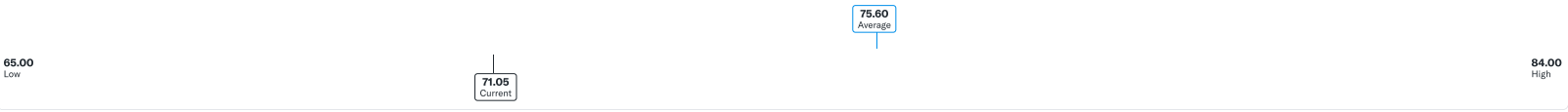
CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	PBH	Industry	Sector	S&P 500
Current Qtr.	123.60%	--	--	5.70%
Next Qtr.	4.70%	--	--	10.80%
Current Year	362.40%	--	--	4.50%
Next Year	6.90%	--	--	13.10%
Next 5 Years (per annum)	8.00%	--	--	10.92%
Past 5 Years (per annum)	10.66%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings

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Upgrades & Downgrades

Reiterates	DA Davidson: Neutral to Neutral	6/26/2023
Reiterates	DA Davidson: Neutral	5/8/2023
Maintains	RBC Capital: Sector Perform	3/17/2023
Maintains	Oppenheimer: Outperform	2/17/2023
Maintains	Oppenheimer: Outperform	1/13/2023
Initiated	Canaccord Genuity: Buy	11/17/2022

More Upgrades & Downgrades

Related Tickers

TARO Taro Pharmaceutical In... 42.32 -0.39%	KMDA Kamada Ltd. 5.34 +1.14%	LFCR Lifecore Biomedical, Inc. 6.40 -0.94%	APH.L Alliance Pharma plc 34.00 0.00%	COLL Collegium Pharmaceuti... 37.71 +2.72%	RDY Dr. Reddy's Laboratorie... 73.76 -0.89%	INDV Indivior PLC 17.91 -0.11%	HCM HUTCHMED (China) Li... 18.44 -2.49%	ALKS Alkermes plc 24.59 -1.17%	AMPH Amphastar Pharmaceu... 41.76 -0.63%

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Quest Diagnostics Incorporated (DGX)

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139.06 -0.44 (-0.32%)

As of 12:15 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	16	16	18	18
Avg. Estimate	2.34	2.31	8.83	9.47
Low Estimate	2.23	2.18	8.37	9.23
High Estimate	2.49	2.39	8.96	9.76
Year Ago EPS	2.3	2.22	8.71	8.83

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	14	14	17	17
Avg. Estimate	2.4B	2.36B	9.45B	9.76B
Low Estimate	2.38B	2.34B	9.4B	9.55B
High Estimate	2.45B	2.39B	9.48B	9.91B
Year Ago Sales	2.25B	--	9.25B	9.45B
Sales Growth (year/est)	6.30%	--	2.10%	3.30%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	2.27	2.19	2.11	1.85
EPS Actual	2.3	2.22	2.15	2.04
Difference	0.03	0.03	0.04	0.19
Surprise %	1.30%	1.40%	1.90%	10.30%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	2.34	2.31	8.83	9.47
7 Days Ago	2.35	2.34	8.75	9.41
30 Days Ago	2.36	2.35	8.75	9.41
60 Days Ago	2.36	2.35	8.74	9.41
90 Days Ago	2.29	2.28	8.99	9.7

EPS Revisions

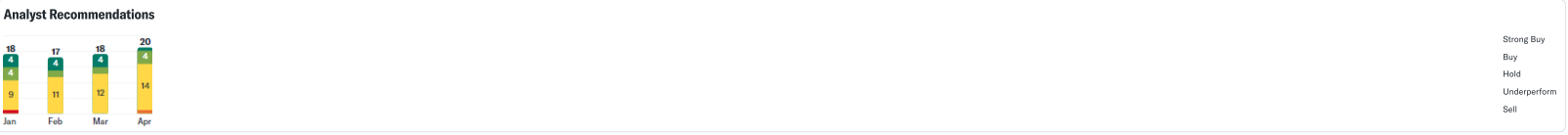
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	1	1
Up Last 30 Days	4	2	14	11
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	1	--	--

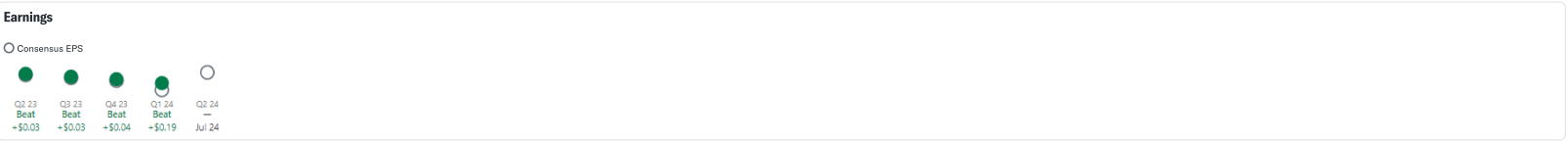
Growth Estimates

CURRENCY IN USD	DGX	Industry	Sector	S&P 500
Current Qtr.	1.70%	--	--	5.70%
Next Qtr.	4.10%	--	--	10.80%
Current Year	1.40%	--	--	4.50%
Next Year	7.20%	--	--	13.10%
Next 5 Years (per annum)	4.96%	--	--	10.92%
Past 5 Years (per annum)	6.18%	--	--	--

Research Analysis

Analyst Price Targets





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Upgrades & Downgrades

Maintains	Barclays: Equal-Weight to Equal-Weight	4/25/2024
Maintains	Citigroup: Neutral to Neutral	4/24/2024
Maintains	UBS: Neutral to Neutral	4/24/2024
Maintains	Truist Securities: Hold to Hold	4/24/2024
Maintains	Mizuho: Buy to Buy	4/24/2024
Reiterates	Truist Securities: Hold to Hold	3/20/2024

More Upgrades & Downgrades

Related Tickers

LH	DHR	TMO	RVTY	MEDP	CRL	ICLR	ILMN	IDXX	EXAS
Laboratory Corporatio...	Danaher Corporation	Thermo Fisher Scienti...	Revvity, Inc.	Medpace Holdings, Inc.	Charles River Laborato...	ICON Public Limited C...	Illumina, Inc.	IDEXX Laboratories, Inc.	Exact Sciences Corpor...
204.09 -0.04%	245.22 -0.65%	572.24 -0.81%	103.63 -1.32%	391.50 -2.18%	228.58 -1.52%	300.47 -1.21%	124.05 -0.55%	496.37 -1.78%	59.60 +1.40%

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RLI Corp. (RLI)

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141.41 -0.62 (-0.44%)

As of 12:13 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	8	7	8	8
Avg. Estimate	1.35	1.01	5.72	5.84
Low Estimate	1.18	0.74	5.25	5.4
High Estimate	1.52	1.3	6	6.29
Year Ago EPS	1.16	0.61	4.94	5.72

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	4	4	4
Avg. Estimate	442.53M	389.08M	1.58B	1.68B
Low Estimate	434.31M	380.91M	1.55B	1.64B
High Estimate	446.36M	395.86M	1.6B	1.71B
Year Ago Sales	372.65M	--	1.43B	1.58B
Sales Growth (year/est)	18.80%	--	10.80%	6.30%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	1.19	0.08	1.49	1.6
EPS Actual	1.16	0.61	1.54	1.89
Difference	-0.03	0.53	0.05	0.29
Surprise %	-2.50%	662.50%	3.40%	18.10%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.35	1.01	5.72	5.84
7 Days Ago	1.36	0.98	5.48	5.72
30 Days Ago	1.37	0.97	5.45	5.74
60 Days Ago	1.37	0.97	5.45	5.74
90 Days Ago	1.37	0.97	5.45	5.74

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	3	4	5	5
Up Last 30 Days	3	4	5	5
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	1	--	1

Growth Estimates

CURRENCY IN USD	RLI	Industry	Sector	S&P 500
Current Qtr.	16.40%	--	--	5.70%
Next Qtr.	65.60%	--	--	10.80%
Current Year	15.80%	--	--	4.50%
Next Year	2.10%	--	--	13.10%
Next 5 Years (per annum)	9.80%	--	--	10.92%
Past 5 Years (per annum)	19.93%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

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Upgrades & Downgrades

Maintains	Compass Point: Buy to Buy	4/24/2024
Maintains	RBC Capital: Sector Perform to Sector Perform	4/24/2024
Reiterates	JMP Securities: Market Perform	4/23/2024
Maintains	Keefe, Bruyette & Woods: Outperform to Outperform	4/10/2024
Reiterates	RBC Capital: Sector Perform to Sector Perform	1/26/2024
Maintains	RBC Capital: Sector Perform to Sector Perform	10/25/2023

More Upgrades & Downgrades

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SKWD	WRB	STC	PLMR	SIGI	HMN	AFG	MKL	HIG	KMPR
Skyward Specialty Ins...	W. R. Berkley Corporati...	Stewart Information Se...	Palomar Holdings, Inc.	Selective Insurance Gr...	Horace Mann Educator...	American Financial Gr...	Markel Group Inc.	The Hartford Financial ...	Kemper Corporation
34.76 +0.64%	77.11 -0.35%	62.50 -0.98%	79.77 -0.60%	100.62 -0.77%	36.79 -0.18%	126.69 -0.79%	1,456.59 +0.50%	96.66 -0.43%	57.49 -1.98%

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Selective Insurance Group, Inc. (SIGI)

☆ Follow

100.61 -0.79 (-0.78%)

As of 12:10 PM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	9	7	9	9
Avg. Estimate	1.86	1.72	7.73	8.64
Low Estimate	1.71	1.41	7.43	8
High Estimate	2.04	1.94	8.05	9.2
Year Ago EPS	1.44	0.99	5.89	7.73

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	5	5	5	5
Avg. Estimate	1.12B	1.21B	4.59B	4.96B
Low Estimate	1.09B	1.18B	4.51B	4.84B
High Estimate	1.13B	1.23B	4.69B	5.18B
Year Ago Sales	974.95M	1.08B	4.13B	4.59B
Sales Growth (year/est)	15.00%	11.70%	11.10%	8.10%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	1.59	0.99	1.58	1.94
EPS Actual	1.44	0.99	1.51	1.94
Difference	-0.15	0	-0.07	0
Surprise %	-9.40%	0.00%	-4.40%	0.00%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.86	1.72	7.73	8.64
7 Days Ago	1.86	1.72	7.73	8.64
30 Days Ago	1.82	1.72	7.7	8.67
60 Days Ago	1.83	1.72	7.7	8.67
90 Days Ago	1.87	1.74	7.75	8.54

EPS Revisions

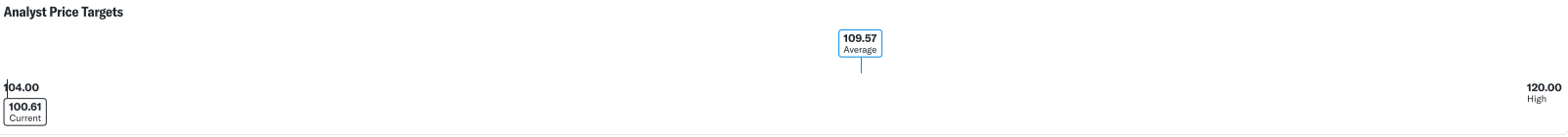
CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	4	2	3	1
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	SIGI	Industry	Sector	S&P 500
Current Qtr.	29.20%	--	--	5.70%
Next Qtr.	73.70%	--	--	10.80%
Current Year	31.20%	--	--	4.50%
Next Year	11.80%	--	--	13.10%
Next 5 Years (per annum)	17.70%	--	--	10.92%
Past 5 Years (per annum)	9.02%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings

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Upgrades & Downgrades

Reiterates	JMP Securities: Market Perform	4/15/2024
Maintains	Oppenheimer: Outperform to Outperform	4/5/2024
Maintains	Piper Sandler: Neutral to Neutral	4/1/2024
Maintains	Keefe, Bruyette & Woods: Market Perform to Market Perform	2/6/2024
Maintains	RBC Capital: Sector Perform to Sector Perform	2/2/2024
Initiated	Oppenheimer: Outperform	11/16/2023

More Upgrades & Downgrades

Related Tickers

HMN	THG	UFCS	WRB-PE	SKWD	PLMR	RLI	KMPR	ALL-PH	CNA
Horace Mann Educator...	The Hanover Insurance...	United Fire Group, Inc.	W. R. Berkley Corporati...	Skyward Specialty Ins...	Palomar Holdings, Inc.	RLI Corp.	Kemper Corporation	The Allstate Corporation	CNA Financial Corpora...
36.79 -0.18%	128.95 -0.98%	22.04 -0.36%	23.36 -0.36%	34.76 +0.64%	79.58 -0.83%	141.45 -0.41%	57.45 -2.05%	21.79 -0.79%	43.91 +0.38%

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Stepan Company (SCL)

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85.12 +0.59 (+0.70%)

As of 11:54 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	4	4	4
Avg. Estimate	0.35	0.68	2.52	4.53
Low Estimate	0.32	0.5	2.25	4.17
High Estimate	0.39	0.81	2.72	4.9
Year Ago EPS	0.71	0.53	2.21	2.52

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	4	4	4
Avg. Estimate	575.82M	586.72M	2.37B	2.58B
Low Estimate	561M	551.3M	2.31B	2.54B
High Estimate	585.1M	602.6M	2.44B	2.65B
Year Ago Sales	649.73M	579.98M	2.33B	2.37B
Sales Growth (year/est)	-11.40%	1.20%	2.00%	8.90%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.94	1.17	0.75	0.37
EPS Actual	0.71	0.53	0.64	0.33
Difference	-0.23	-0.64	-0.11	-0.04
Surprise %	-24.50%	-54.70%	-14.70%	-10.80%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.35	0.68	2.52	4.53
7 Days Ago	0.35	0.68	2.52	4.53
30 Days Ago	0.33	0.69	2.53	4.62
60 Days Ago	0.34	0.72	2.62	4.75
90 Days Ago	0.71	1.04	3.7	5.05

EPS Revisions

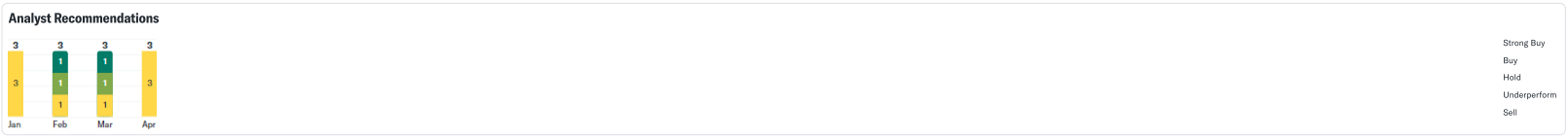
CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	--	1	--
Up Last 30 Days	2	--	1	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	1	--	1

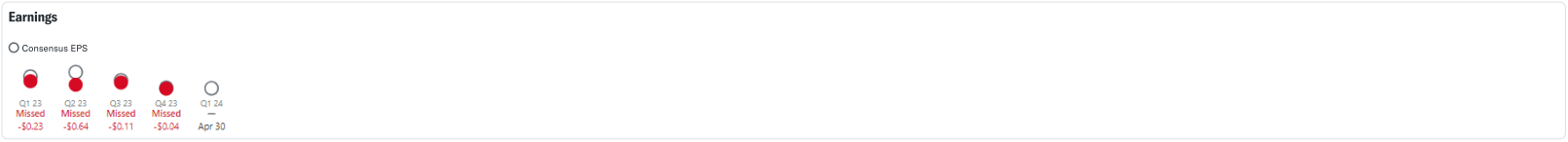
Growth Estimates

CURRENCY IN USD	SCL	Industry	Sector	S&P 500
Current Qtr.	-50.70%	--	--	5.70%
Next Qtr.	28.30%	--	--	10.80%
Current Year	14.00%	--	--	4.50%
Next Year	79.80%	--	--	13.10%
Next 5 Years (per annum)	4.40%	--	--	10.92%
Past 5 Years (per annum)	-14.16%	--	--	--

Research Analysis

Analyst Price Targets





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Upgrades & Downgrades

Upgrade	CL King: Neutral to Buy	10/19/2023
Downgrade	Seaport Global: Buy to Neutral	1/11/2021
Maintains	Stifel: Buy	6/18/2020
Maintains	Stifel: Buy	3/24/2020
Initiated	Stifel: Buy	12/11/2018
Maintains	Seaport Global: Neutral	8/24/2016

More Upgrades & Downgrades

Related Tickers

FUL H.B. Fuller Company 74.95 -0.53%	**SXT** Sensient Technologies ... 72.63 -0.07%	**KWR** Quaker Chemical Corp... 187.40 -1.58%	**BCPC** Balchem Corporation 139.77 +0.39%	**WTTR** Select Water Solutions... 9.30 -2.21%	**OEC** Orion S.A. 23.78 -0.92%	**ASH** Ashland Inc. 96.30 -0.74%	**NEU** NewMarket Corporation 526.84 -1.54%	**MTX** Minerals Technologies ... 73.65 -1.86%	**ALB-PA** Albemarle Corporation 55.00 -3.24%

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The Progressive Corporation (PGR)

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207.95 +1.28 (+0.62%)

As of 11:59 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	17	16	17	18
Avg. Estimate	2.56	2.34	11.27	11.81
Low Estimate	1.97	1.74	8.97	9.86
High Estimate	3.18	2.95	12.9	14.65
Year Ago EPS	0.4	2.09	6.1	11.27

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	7	6	9	10
Avg. Estimate	17.34B	18.44B	72.89B	82.19B
Low Estimate	16.86B	17.92B	71.12B	73.19B
High Estimate	18.24B	19.45B	74.83B	87.67B
Year Ago Sales	14.98B	15.59B	61.55B	72.89B
Sales Growth (year/est)	15.70%	18.20%	18.40%	12.80%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.86	1.72	2.43	3.21
EPS Actual	0.4	2.09	2.97	3.75
Difference	-0.46	0.37	0.54	0.54
Surprise %	-53.50%	21.50%	22.20%	16.80%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	2.56	2.34	11.27	11.81
7 Days Ago	2.56	2.34	11.27	11.81
30 Days Ago	2.21	2.09	9.96	11.17
60 Days Ago	2.01	1.93	9.11	10.62
90 Days Ago	1.89	1.87	8.5	10.38

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	1	1	1	--
Up Last 30 Days	15	16	19	17
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	1

Growth Estimates

CURRENCY IN USD	PGR	Industry	Sector	S&P 500
Current Qtr.	540.00%	--	--	5.70%
Next Qtr.	12.00%	--	--	10.80%
Current Year	84.80%	--	--	4.50%
Next Year	4.80%	--	--	13.10%
Next 5 Years (per annum)	26.00%	--	--	10.92%
Past 5 Years (per annum)	-1.06%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

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Upgrades & Downgrades

Maintains	UBS: Neutral to Neutral	4/17/2024
Maintains	B of A Securities: Buy to Buy	4/17/2024
Maintains	Citigroup: Neutral to Neutral	4/15/2024
Maintains	Morgan Stanley: Overweight to Overweight	4/15/2024
Maintains	Jefferies: Buy to Buy	4/15/2024
Maintains	Wells Fargo: Overweight to Overweight	4/11/2024

More Upgrades & Downgrades

Related Tickers

ALL The Allstate Corporation 169.76 +0.11%	CB Chubb Limited 248.70 -0.21%	TRV The Travelers Compani... 212.16 -0.35%	HIG The Hartford Financial ... 96.58 -0.51%	WRB W. R. Berkley Corporati... 77.09 -0.37%	KNSL Kinsale Capital Group, ... 367.62 +2.69%	CINF Cincinnati Financial C... 115.38 +1.61%	MCY Mercury General Corp... 51.76 -2.52%	MKL Markel Group Inc. 1,454.56 +0.36%	ROOT Root, Inc. 68.46 +2.47%

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The Western Union Company (WU)

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13.48 -0.03 (-0.22%)

As of 11:58 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	19	19	20	19
Avg. Estimate	0.45	0.44	1.76	1.83
Low Estimate	0.42	0.42	1.65	1.75
High Estimate	0.51	0.46	1.84	1.91
Year Ago EPS	0.51	0.43	1.74	1.76

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	16	16	19	18
Avg. Estimate	1.06B	1.04B	4.18B	4.2B
Low Estimate	1.03B	1.02B	4.1B	4.05B
High Estimate	1.09B	1.07B	4.29B	4.28B
Year Ago Sales	1.05B	1.1B	4.36B	4.18B
Sales Growth (year/est)	1.40%	-5.50%	-4.00%	0.50%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	0.39	0.39	0.37	0.41
EPS Actual	0.51	0.43	0.37	0.45
Difference	0.12	0.04	0	0.04
Surprise %	30.80%	10.30%	0.00%	9.80%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.45	0.44	1.76	1.83
7 Days Ago	0.44	0.43	1.7	1.78
30 Days Ago	0.44	0.43	1.7	1.78
60 Days Ago	0.44	0.43	1.7	1.78
90 Days Ago	0.44	0.43	1.68	1.76

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	2	3	4	3
Up Last 30 Days	10	13	17	15
Down Last 7 Days	--	--	--	--
Down Last 30 Days	1	--	--	--

Growth Estimates

CURRENCY IN USD	WU	Industry	Sector	S&P 500
Current Qtr.	-11.80%	--	--	5.70%
Next Qtr.	2.30%	--	--	10.80%
Current Year	1.10%	--	--	4.50%
Next Year	4.00%	--	--	13.10%
Next 5 Years (per annum)	1.62%	--	--	10.92%
Past 5 Years (per annum)	-0.98%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

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Upgrades & Downgrades

Maintains	JP Morgan: Underweight to Underweight	4/25/2024
Maintains	Evercore ISI Group: In-Line to In-Line	4/25/2024
Maintains	Evercore ISI Group: In-Line to In-Line	3/26/2024
Initiated	Monness, Crespi, Hardt: Neutral	3/20/2024
Maintains	Barclays: Underweight to Underweight	2/12/2024
Maintains	BMO Capital: Market Perform to Market Perform	2/7/2024

More Upgrades & Downgrades

Related Tickers

OMF	COF	SYF	ALLY	AXP	DFS	FCFS	SLM	MA	NAVI
OneMain Holdings, Inc.	Capital One Financial ...	Synchrony Financial	Ally Financial Inc.	American Express Com...	Discover Financial Ser...	FirstCash Holdings, Inc.	SLM Corporation	Mastercard Incorporated	Navient Corporation
51.95 +2.16%	143.71 -1.23%	44.06 -1.43%	38.41 -1.17%	236.74 -0.91%	127.02 -0.77%	113.69 -1.44%	21.40 -1.06%	454.09 -0.66%	15.40 -1.00%

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UniFirst Corporation (UNF)

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161.28 -1.66 (-1.02%)

As of 11:47 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	6	6	5	6
Avg. Estimate	1.86	2.01	7.45	8.07
Low Estimate	1.73	1.95	7.34	7.7
High Estimate	1.97	2.09	7.56	8.55
Year Ago EPS	1.66	1.75	7.02	7.45

Revenue Estimate

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	4	4	5	5
Avg. Estimate	601.29M	637.1M	2.42B	2.5B
Low Estimate	599.84M	635M	2.41B	2.49B
High Estimate	603.3M	640.35M	2.43B	2.54B
Year Ago Sales	--	571.89M	2.23B	2.42B
Sales Growth (year/est)	--	11.40%	8.40%	3.40%

Earnings History

CURRENCY IN USD	5/31/2023	8/31/2023	11/30/2023	2/29/2024
EPS Est.	1.79	1.63	2.18	1.42
EPS Actual	1.66	1.75	2.38	1.22
Difference	-0.13	0.12	0.2	-0.2
Surprise %	-7.30%	7.40%	9.20%	-14.10%

EPS Trend

CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	1.86	2.01	7.45	8.07
7 Days Ago	1.86	2.01	7.45	8.07
30 Days Ago	1.86	2.01	7.45	8.07
60 Days Ago	1.8	1.92	7.54	8.1
90 Days Ago	1.8	1.92	7.54	8.1

EPS Revisions

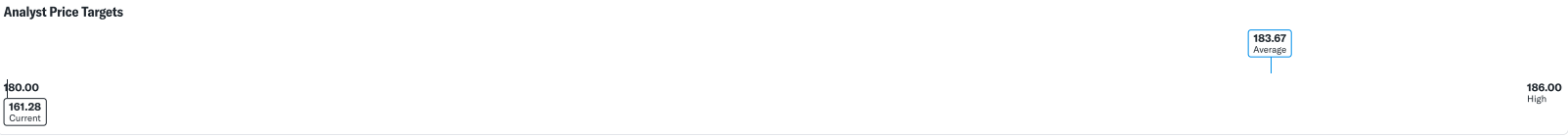
CURRENCY IN USD	Current Qtr. (May 2024)	Next Qtr. (Aug 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	UNF	Industry	Sector	S&P 500
Current Qtr.	12.00%	--	--	5.70%
Next Qtr.	14.90%	--	--	10.80%
Current Year	6.10%	--	--	4.50%
Next Year	8.30%	--	--	13.10%
Next 5 Years (per annum)	7.80%	--	--	10.92%
Past 5 Years (per annum)	-3.81%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings

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Upgrades & Downgrades

Maintains	UBS: Neutral to Neutral	3/28/2024
Maintains	Barclays: Equal-Weight to Equal-Weight	2/29/2024
Downgrade	Baird: Outperform to Neutral	1/4/2024
Maintains	JP Morgan: Underweight to Underweight	10/19/2023
Initiated	Barclays: Equal-Weight	10/6/2023
Maintains	JP Morgan: Underweight to Underweight	6/29/2023

More Upgrades & Downgrades

Related Tickers

ARMK Aramark 31.85 -1.82%	TDCX TDCX Inc. 7.16 +0.07%	MMS Maximus, Inc. 80.49 -0.61%	RLXXF RELX PLC 43.09 +3.28%	BLIS Treasure & Shipwreck ... 0.0295 +1.72%	SP SP Plus Corporation 51.15 0.00%	RBA RB Global, Inc. 72.62 -1.48%	TISI Team, Inc. 6.90 +4.73%	ABM ABM Industries Incorp... 44.09 -0.41%	CVEO Civeo Corporation 24.11 +4.51%

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United Parcel Service, Inc. (UPS)

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147.85 -0.70 (-0.47%)

As of 11:54 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	22	22	26	26
Avg. Estimate	2.01	2.07	8.23	9.82
Low Estimate	1.86	1.86	7.79	8.04
High Estimate	2.13	2.24	8.68	10.4
Year Ago EPS	2.54	1.57	8.78	8.23

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	18	17	24	24
Avg. Estimate	22.27B	22.49B	92.97B	98.56B
Low Estimate	21.96B	21.74B	91.44B	95.17B
High Estimate	22.8B	23.2B	94.09B	102.3B
Year Ago Sales	--	21.06B	90.96B	92.97B
Sales Growth (year/est)	--	6.80%	2.20%	6.00%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	2.5	1.52	2.46	1.29
EPS Actual	2.54	1.57	2.47	1.43
Difference	0.04	0.05	0.01	0.14
Surprise %	1.60%	3.30%	0.40%	10.90%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	2.01	2.07	8.23	9.82
7 Days Ago	2.04	2.09	8.11	9.58
30 Days Ago	2.04	2.1	8.21	9.6
60 Days Ago	1.98	2.06	8.28	9.74
90 Days Ago	2.15	2.16	8.97	10.31

EPS Revisions

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	7	5	17	16
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	UPS	Industry	Sector	S&P 500
Current Qtr.	-20.90%	--	--	5.70%
Next Qtr.	31.80%	--	--	10.80%
Current Year	-6.30%	--	--	4.50%
Next Year	19.30%	--	--	13.10%
Next 5 Years (per annum)	10.22%	--	--	10.92%
Past 5 Years (per annum)	5.37%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

View More →

Upgrades & Downgrades

Upgrade	HSBC: Hold to Buy	4/25/2024
Maintains	B of A Securities: Neutral to Neutral	4/24/2024
Maintains	BMO Capital: Market Perform to Market Perform	4/24/2024
Maintains	Susquehanna: Neutral to Neutral	4/24/2024
Maintains	Oppenheimer: Outperform to Outperform	4/24/2024
Maintains	JP Morgan: Neutral to Neutral	4/9/2024

More Upgrades & Downgrades

Related Tickers

FDX	JBHT	CHRW	GXO	CJT.TO	LSTR	EXPD	DHL.DE	FWRD	ZTO
FedEx Corporation	J.B. Hunt Transport Ser...	C.H. Robinson Worldwi...	GXO Logistics, Inc.	Cargojet Inc.	Landstar System, Inc.	Expeditors Internation...	Deutsche Post AG	Forward Air Corporation	ZTO Express (Cayman) ...
263.22 -0.99%	163.19 +0.64%	70.44 -1.76%	49.89 -2.10%	124.61 +4.05%	176.00 -0.69%	112.02 -1.56%	39.26 +0.93%	21.97 -2.45%	21.13 -0.98%

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NYSE - Nasdaq Real Time Price • USD

Universal Corporation (UVV) ☆ Follow

51.19 -0.39 (-0.76%)

As of 11:47 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Dec 1969)	Next Qtr. (Dec 1969)	Current Year (1969)	Next Year (1969)
No. of Analysts	--	--	--	--
Avg. Estimate	0	0	0	0
Low Estimate	0	0	0	0
High Estimate	0	0	0	0
Year Ago EPS	--	--	--	--

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Dec 1969)	Next Qtr. (Dec 1969)	Current Year (1969)	Next Year (1969)
No. of Analysts	--	--	--	--
Avg. Estimate	--	--	--	--
Low Estimate	--	--	--	--
High Estimate	--	--	--	--
Year Ago Sales	--	--	--	--
Sales Growth (year/est)	--	--	--	--

Earnings History

CURRENCY IN USD				
EPS Est.	--	--	--	--
EPS Actual	--	--	--	--
Difference	--	--	--	--
Surprise %	--	--	--	--

EPS Trend

CURRENCY IN USD	Current Qtr. (Dec 1969)	Next Qtr. (Dec 1969)	Current Year (1969)	Next Year (1969)
Current Estimate	0	0	0	0
7 Days Ago	0	0	0	0
30 Days Ago	0	0	0	0
60 Days Ago	0	0	0	0
90 Days Ago	0	0	0	0

EPS Revisions

CURRENCY IN USD	Current Qtr. (Dec 1969)	Next Qtr. (Dec 1969)	Current Year (1969)	Next Year (1969)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	UVV	Industry	Sector	S&P 500
Current Qtr.	--	--	--	5.70%
Next Qtr.	--	--	--	10.80%
Current Year	--	--	--	4.50%
Next Year	--	--	--	13.10%
Next 5 Years (per annum)	--	--	--	10.92%
Past 5 Years (per annum)	-5.63%	--	--	--

Upgrades & Downgrades

Upgrade	Davenport: Neutral to Buy	9/12/2013
Downgrade	Davenport: Buy to Neutral	3/18/2013

Related Tickers

VGR Vector Group Ltd. 10.35 -0.77%	**TPB** Turning Point Brands, I... 28.67 +0.92%	**BTI** British American Tobac... 29.53 0.00%	**IMBBY** Imperial Brands PLC 23.20 -0.09%	**PM** Philip Morris Internatio... 94.78 -0.86%	**MO** Altria Group, Inc. 43.84 +0.04%	**PYYX** Pyxus International, Inc. 3.9500 0.00%	**ISPR** Ispire Technology Inc. 5.26 +2.56%	**BMT.DE** British American Tobac... 27.75 +0.33%	**BTAFF** British American Tobac... 29.25 +1.36%

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NYSE - Nasdaq Real Time Price • USD

Watsco, Inc. (WSO)

☆ Follow

445.62 -2.23 (-0.50%)

As of 11:32 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	10	10	13	11
Avg. Estimate	4.72	4.84	14.13	15.99
Low Estimate	4.43	4.54	13.3	14.55
High Estimate	5.43	5.32	15.44	18.74
Year Ago EPS	4.42	4.35	13.67	14.13

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	10	10	14	13
Avg. Estimate	2.19B	2.25B	7.7B	8.25B
Low Estimate	2.09B	2.2B	7.55B	7.79B
High Estimate	2.27B	2.31B	7.84B	8.57B
Year Ago Sales	2.19B	2.05B	7.28B	7.7B
Sales Growth (year/est)	-0.10%	10.00%	5.70%	7.10%

Earnings History

CURRENCY IN USD	6/30/2023	9/30/2023	12/31/2023	3/31/2024
EPS Est.	4.93	4.29	2.41	2.28
EPS Actual	4.42	4.35	2.06	2.17
Difference	-0.51	0.06	-0.35	-0.11
Surprise %	-10.30%	1.40%	-14.50%	-4.80%

EPS Trend

CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	4.72	4.84	14.13	15.99
7 Days Ago	4.77	4.8	14.27	15.96
30 Days Ago	4.79	4.8	14.4	16.2
60 Days Ago	4.79	4.8	14.4	16.2
90 Days Ago	4.75	4.79	14.98	16.75

EPS Revisions

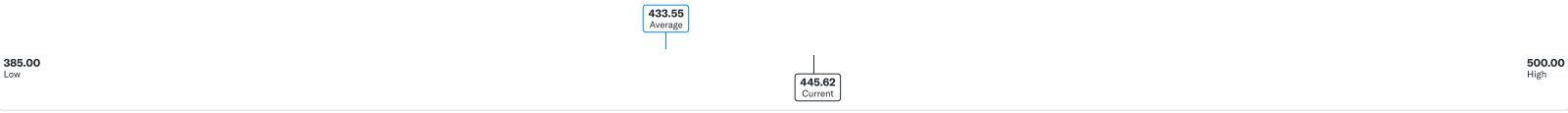
CURRENCY IN USD	Current Qtr. (Jun 2024)	Next Qtr. (Sep 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	2	1	1
Up Last 30 Days	4	8	5	5
Down Last 7 Days	--	--	--	--
Down Last 30 Days	2	--	2	2

Growth Estimates

CURRENCY IN USD	WSO	Industry	Sector	S&P 500
Current Qtr.	6.80%	--	--	5.70%
Next Qtr.	11.30%	--	--	10.80%
Current Year	3.40%	--	--	4.50%
Next Year	13.20%	--	--	13.10%
Next 5 Years (per annum)	4.42%	--	--	10.92%
Past 5 Years (per annum)	23.95%	--	--	--

Research Analysis

Analyst Price Targets



Analyst Recommendations

Earnings

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Upgrades & Downgrades

Reiterates	Stephens & Co.: Overweight to Overweight	4/25/2024
Maintains	Baird: Outperform to Outperform	4/25/2024
Maintains	Baird: Outperform to Outperform	2/14/2024
Maintains	Stephens & Co.: Overweight to Overweight	12/11/2023
Maintains	UBS: Neutral to Neutral	10/10/2023
Maintains	Morgan Stanley: Underweight to Underweight	9/22/2023

More Upgrades & Downgrades

Related Tickers

POOL	GWW	FAST	FERG	AIT	TEQ.ST	WCC	CNM	MSM	BECN
Pool Corporation	W.W. Grainger, Inc.	Fastenal Company	Ferguson plc	Applied Industrial Tech...	Teqnion AB (publ)	WESCO International, I...	Core & Main, Inc.	MSC Industrial Direct ...	Beacon Roofing Supply...
363.54 -1.64%	928.97 -0.59%	68.23 -0.37%	212.92 -1.04%	182.20 -1.37%	201.50 +0.25%	156.20 -1.23%	56.99 -0.71%	91.98 -1.12%	99.37 +0.37%

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Werner Enterprises, Inc. (WERN)

☆ Follow

34.19 -0.53 (-1.54%)

As of 11:33 AM EDT. Market Open.

Estimate Trends Fair Value

Earnings Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	13	12	14	14
Avg. Estimate	0.27	0.4	1.81	2.8
Low Estimate	0.2	0.3	1.35	2.2
High Estimate	0.31	0.47	2.18	3.63
Year Ago EPS	0.6	0.52	1.93	1.81

Revenue Estimate

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
No. of Analysts	11	9	14	14
Avg. Estimate	788.32M	800.88M	3.28B	3.5B
Low Estimate	773.6M	788.39M	3.23B	3.36B
High Estimate	809.08M	816.3M	3.38B	3.69B
Year Ago Sales	832.71M	--	3.28B	3.28B
Sales Growth (year/est)	-5.30%	--	-0.10%	6.70%

Earnings History

CURRENCY IN USD	3/31/2023	6/30/2023	9/30/2023	12/31/2023
EPS Est.	0.71	0.59	0.49	0.43
EPS Actual	0.6	0.52	0.42	0.39
Difference	-0.11	-0.07	-0.07	-0.04
Surprise %	-15.50%	-11.90%	-14.30%	-9.30%

EPS Trend

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Current Estimate	0.27	0.4	1.81	2.8
7 Days Ago	0.27	0.4	1.81	2.8
30 Days Ago	0.31	0.43	1.99	2.92
60 Days Ago	0.32	0.44	1.99	2.93
90 Days Ago	0.41	0.52	2.31	3.15

EPS Revisions

CURRENCY IN USD	Current Qtr. (Mar 2024)	Next Qtr. (Jun 2024)	Current Year (2024)	Next Year (2025)
Up Last 7 Days	--	--	--	--
Up Last 30 Days	--	--	--	--
Down Last 7 Days	--	--	--	--
Down Last 30 Days	--	--	--	--

Growth Estimates

CURRENCY IN USD	WERN	Industry	Sector	S&P 500
Current Qtr.	-55.00%	--	--	5.70%
Next Qtr.	-23.10%	--	--	10.80%
Current Year	-6.20%	--	--	4.50%
Next Year	54.70%	--	--	13.10%
Next 5 Years (per annum)	9.85%	--	--	10.92%
Past 5 Years (per annum)	0.15%	--	--	--

Research Analysis

Analyst Price Targets

Analyst Recommendations

Earnings

View More →

Upgrades & Downgrades

Maintains	Stifel: Hold to Hold	4/18/2024
Maintains	B of A Securities: Underperform to Underperform	4/15/2024
Downgrade	Barclays: Overweight to Equal-Weight	4/1/2024
Maintains	Susquehanna: Neutral to Neutral	3/26/2024
Maintains	Susquehanna: Neutral to Neutral	3/25/2024
Downgrade	Stifel: Buy to Hold	2/8/2024

More Upgrades & Downgrades

Related Tickers

MRTN	HTLD	CVLG	KNX	SNDR	ARCB	PTSI	ULH	RXO	TFII
Marten Transport, Ltd.	Heartland Express, Inc.	Covenant Logistics Gro...	Knight-Swift Transport...	Schneider National, Inc.	ArcBest Corporation	P.A.M. Transportation ...	Universal Logistics Hol...	RXO, Inc.	TFI International Inc.
16.90 +0.48%	9.77 -1.92%	45.06 -0.84%	46.52 -0.73%	20.78 -2.07%	110.23 -14.85%	17.14 -0.52%	45.78 +0.95%	18.81 -2.99%	131.69 -3.01%

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ABBVIE INC. NYSE-ABBV

RECENT PRICE 178.49 | P/E RATIO 16.4 (Trailing: 16.1 Median: NMF) | RELATIVE P/E RATIO 0.91 | DIV'D YLD 3.5% | VALUE LINE

TIMELINESS 3 Raised 1/19/24
SAFETY 2 Raised 12/30/22
TECHNICAL 3 Raised 2/9/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

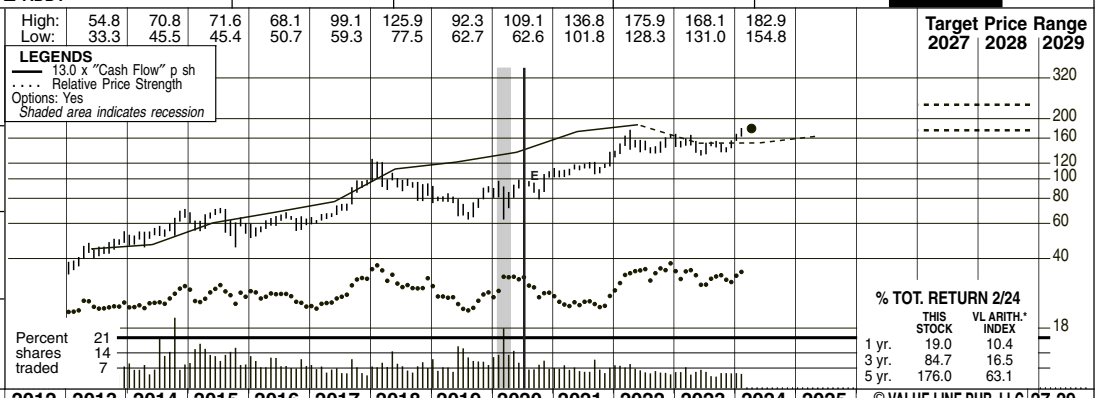
Low-High	Midpoint (% to Mid)
$134-$203	$169 (-5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	235	(+30%)	*10%*
Low	175	(Nil)	*3%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	1222	1400	1442
to Sell	1579	1337	1471
Hld's(000)	1209581	1208858	1247481



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
--	--	--	--	--	11.84	12.54	14.20	16.10	17.72	22.15	22.49	25.95	31.78	32.81	30.76	*31.15*	*32.90*	Sales per sh	*36.95*
--	--	--	--	--	3.44	3.62	4.64	5.23	5.93	8.62	9.32	10.45	13.28	14.34	11.62	*11.65*	*12.65*	"Cash Flow" per sh	*16.20*
--	--	--	--	--	3.14	3.32	4.29	4.82	5.60	7.91	8.94	10.56	12.70	13.77	11.11	*11.20*	*12.20*	Earnings per sh A	*15.70*
--	--	--	--	--	1.60	1.66	2.02	2.28	2.56	3.59	4.28	4.72	5.20	5.64	5.92	*6.20*	*6.48*	Div'ds Decl'd per sh B■	*7.32*
--	--	--	--	--	.56	.78	.33	.30	.33	.43	.37	.45	.45	.39	.44	*.45*	*.45*	Cap'l Spending per sh	*.55*
--	--	--	--	--	2.83	1.09	2.45	2.91	3.20	d5.71	d5.53	7.41	8.71	9.75	5.87	*7.65*	*9.65*	Book Value per sh C	*14.75*
--	--	--	--	--	1587.4	1591.4	1609.9	1592.5	1592.1	1478.8	1478.9	1765.1	1768.3	1769.2	1765.9	*1765.0*	*1764.0*	Common Shs Outst'g D	*1760.0*
--	--	--	--	--	13.9	16.7	14.4	12.6	13.4	12.3	8.7	8.6	8.9	10.8	13.4	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*13.0*
--	--	--	--	--	.78	.88	.73	.66	.67	.66	.46	.44	.48	.62	.75			Relative P/E Ratio	*.70*
--	--	--	--	--	3.7%	3.0%	3.3%	3.8%	3.4%	3.7%	5.5%	5.2%	4.6%	3.8%	4.0%			Avg Ann'l Div'd Yield	*3.6%*
						19960	22859	25638	28216	32753	33266	45804	56197	58054	54318	*55000*	*58000*	Sales ($mill)	*65000*
						38.4%	45.5%	44.2%	44.1%	46.1%	48.7%	49.5%	51.8%	53.0%	46.5%	*45.0%*	*46.0%*	Operating Margin	*52.0%*
						383.0	417.0	425.0	425.0	471.0	464.0	666.0	803.0	778.0	752.0	*780*	*810*	Depreciation ($mill)	*920*
						5375.0	7060.0	7904.0	9011.0	12282	13324	17781	22689	24597	19769	*19770*	*21520*	Net Profit ($mill)	*27630*
						22.4%	21.9%	20.2%	18.9%	8.7%	8.6%	11.2%	12.5%	13.0%	15.7%	*16.0%*	*16.0%*	Income Tax Rate	*16.0%*
						26.9%	30.9%	30.8%	31.9%	37.5%	40.1%	38.8%	40.4%	42.4%	36.4%	*35.9%*	*37.1%*	Net Profit Margin	*42.5%*
						4688.0	5420.0	6406.0	4582.0	d294.0	33934	d4488	d7266	d1075	d4839	*d1000*	*1000*	Working Cap'l ($mill)	*5000*
						10565	29240	36440	30953	35002	62975	77554	64189	59135	52194	*52000*	*51000*	Long-Term Debt ($mill)	*48000*
						1742.0	3945.0	4636.0	5097.0	d8446	d8172	13076	15408	17254	10360	*13500*	*17000*	Shr. Equity ($mill)	*26000*
						45.3%	22.2%	20.4%	26.4%	48.4%	25.7%	20.9%	30.0%	33.5%	*33.5%*	*32.0%*	*33.5%*	Return on Total Cap'l	*38.0%*
						NMF	NMF	NMF	NMF	--	--	NMF	NMF	NMF	NMF	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
						NMF	95.5%	90.3%	96.2%	--	--	77.0%	87.1%	84.4%	89.9%	*65.5%*	*59.5%*	Retained to Com Eq	*56.5%*
						50%	47%	47%	46%	45%	48%	43%	41%	41%	53%	*55%*	*53%*	All Div'ds to Net Prof	*47%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $59.4 bill. **Due in 5 Yrs** $25.9 bill.
LT Debt $52.2 bill. **LT Interest** $2.2 bill.
(83% of Capital)

Leases, Uncapitalized Annual rentals $194 mill.

Pension Assets-12/23 $9.8 bill. **Oblig.** $9.5 bill.

Common Stock 1,766,473,359 shares
as of 1/31/24

MARKET CAP: $315 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	9830	9229	12816
Receivables	9977	11254	11155
Inventory	3128	3579	4099
Other	4993	4401	4932
Current Assets	27928	28463	33002
Accts Payable	22699	25402	30650
Debt Due	12495	4136	7191
Other	--	--	--
Current Liab.	35194	29538	37841

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	10.5%	11.5%	*2.5%*
"Cash Flow"	15.0%	16.0%	*3.5%*
Earnings	15.5%	16.5%	*4.0%*
Dividends	13.0%	14.0%	*4.5%*
Book Value	12.5%	133.0%	*10.0%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	13010	13959	14342	14886	56197
2022	13538	14583	14812	15121	58054
2023	12225	13865	13927	14301	54318
2024	*12300*	*13800*	*14200*	*14700*	*55000*
2025	*13100*	*14600*	*14900*	*15400*	*58000*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	2.95	3.11	3.33	3.31	12.70
2022	3.16	3.37	3.66	3.60	13.77
2023	2.46	2.91	2.95	2.79	11.11
2024	*2.34*	*2.81*	*2.92*	*3.13*	*11.20*
2025	*2.75*	*3.00*	*3.20*	*3.25*	*12.20*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.18	1.18	1.18	1.18	4.72
2021	1.30	1.30	1.30	1.30	5.20
2022	1.41	1.41	1.41	1.41	5.64
2023	1.48	1.48	1.48	1.48	5.92
2024	1.55				

BUSINESS: AbbVie Inc. is a research-based biopharmaceutical company. It is engaged in the development, manufacture, commercialization and sale of innovative medicines and therapies worldwide. Its portfolio is focused in therapeutic areas of immunology, hematologic oncology, aesthetics, neuroscience and eye care. Top-grossing products include *Humira* (27% of 2023 sales), *Skyrizi* (14%), *Botox* (11%), and *Rinvoq* (7%). Created through spin off from Abbott Labs (1/13). Completed acquisition of Allergan (5/20). Has 50,000 employees. Off/dirs. own less than 1% of comm. stock; Vanguard, 9.1%; BlackRock, 8.1% (3/24 proxy). Chairman/CEO: Richard A. Gonzalez. Inc: DE. Addr.: 1 North Waukegan Rd, North Chicago, IL 60064. Tel.: 847-932-7900. Internet: www.abbvie.com.

AbbVie closed out 2023 on a mixed note. Fourth-quarter sales surpassed our estimate by about $300 million, fueled by strength in the *Rinvoq* and *Botox* franchises. The drugmaker's flagship *Humira* product also performed better than expected, despite facing increased competitive pressures in U.S. markets. However, earnings missed our target by $0.09 a share, as higher acquisition-related costs more than offset the top-line outperformance.

***Humira* will likely continue to weigh on comparisons in the near term.** The immunology drug has generated hundreds of billions in sales over the last two decades, helping to establish AbbVie as a powerhouse in the large pharma space. We started to see some softness a few years ago due to exclusivity losses overseas, but with competition entering the U.S. in force during 2023, demand has weakened considerably in recent quarters. In total, *Humira* sales plummeted 32% last year, to $14.4 billion. Leadership expects this figure to drop to $9.6 billion in 2024, taking into account U.S. erosion of roughly 36%.

We anticipate a modest rebound in 2024. In addition to *Humira*, *Botox* could be facing a challenging landscape in 2024, as speculation mounts that surging interest in weight loss drugs may create headwinds. Full-year earnings are also expected to be hit by a $0.32-a-share dilutive impact related to the recent acquisitions of ImmunoGen and Cerevel. All told, we are targeting adjusted earnings of $11.20 a share in 2024, which is at the higher end of leadership's $11.05-$11.25 forecast.

Our model calls for earnings growth acceleration in 2025. Further development of newer drugs like *Skyrizi* and *Rinvoq* should provide a more substantial offset to competitive pressures next year and beyond. Contributions from recent dealmaking activity should also be increasingly supportive to bottom-line performance.

A new CEO is coming on in July. Richard Gonzalez is retiring after more than a decade at the helm. He is being replaced by AbbVie's current president and chief operating officer, Robert Michael.

The stock does not stand out for Timeliness (3). Recent price momentum also discounts much of the potential upside we envision out to 2027-2029.

Michael Ratty *March 29, 2024*

(A) Diluted earnings (adjusted). Quarters may not sum due to rounding. Excl. nonrec. items: '13, (58¢); '14, ($2.22); '15, ($1.16); '16, ($1.19); '17, ($2.30); '18, ($4.25); '19, ($3.66); '20, ($7.84); '21, ($6.25); '22, ($7.14); '23, ($8.39). Next egs. report due late April. **(B)** Dividends historically paid in February, May, August, and November. ■ Dividend reinvestment plan available. **(C)** Includes intangibles. In '23: $87.9 billion, $49.78 a share. **(D)** In millions. **(E)** Completed Allergan merger (5/20).

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	85
Earnings Predictability	95

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ABBOTT LABS. NYSE-ABT

RECENT PRICE 113.45 | P/E RATIO 24.9 (Trailing: 25.6 Median: 21.0) | RELATIVE P/E RATIO 1.46 | DIV'D YLD 1.9% | VALUE LINE

TIMELINESS 3 Raised 10/27/23
SAFETY 1 New 4/12/13
TECHNICAL 4 Raised 2/9/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

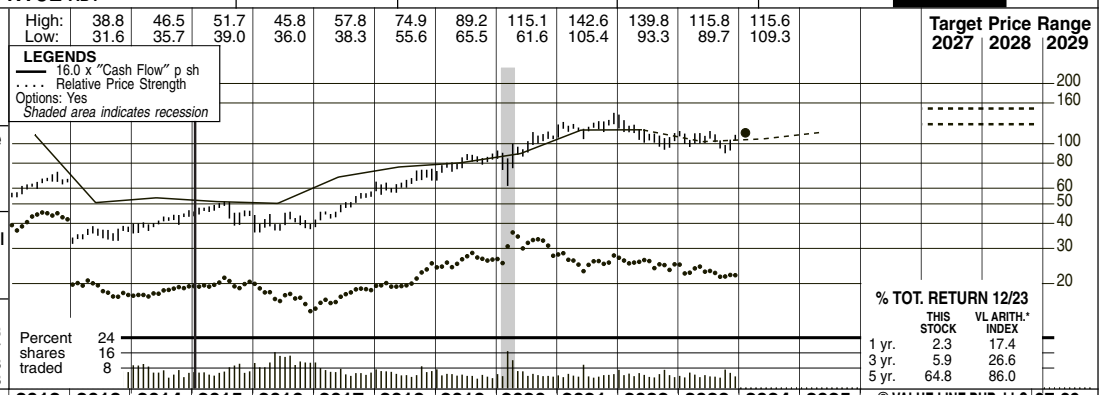
Low-High	Midpoint (% to Mid)
$84-$129	$107 (-5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	150	(+30%)	9%
Low	125	(+10%)	5%

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	1150	1169	1087
to Sell	1185	1187	1278
Hld's(000)	1286989	1289712	1268358



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
19.40	19.82	22.73	24.74	25.29	14.11	14.80	13.86	14.16	15.71	17.42	18.10	19.54	24.42	25.12	*23.10*	*24.20*	*25.95*	Sales per sh	*29.45*
4.32	5.09	5.90	6.61	6.91	3.17	3.35	3.21	3.15	4.26	4.79	5.01	5.58	7.32	7.33	*6.40*	*6.60*	*7.15*	"Cash Flow" per sh	*8.55*
3.03	3.72	4.17	4.66	4.99	2.01	2.28	2.15	2.20	2.50	2.88	3.24	3.65	5.21	5.34	4.44	*4.65*	*5.15*	Earnings per sh A	*6.30*
1.44	1.60	1.76	1.88	2.01	.56	.88	.96	1.04	1.06	1.12	1.28	1.44	1.80	1.88	2.04	*2.20*	*2.28*	Div'ds Decl'd per sh B■	*2.52*
.85	.70	.66	.95	1.14	.74	.71	.75	.76	.65	.79	.93	1.23	1.07	1.02	*1.10*	*1.10*	*1.15*	Cap'l Spending per sh	*1.20*
11.48	14.73	14.47	15.56	16.95	16.26	14.27	14.40	13.94	17.72	17.39	17.64	18.51	20.30	21.11	*21.60*	*22.20*	*23.05*	Book Value per sh C	*26.00*
1522.4	1551.9	1547.0	1570.4	1576.7	1548.1	1508.0	1472.7	1472.9	1743.6	1755.6	1762.5	1771.2	1764.1	1737.8	*1736.0*	*1735.0*	*1734.0*	Common Shs Outst'g D	*1731.0*
18.3	13.0	12.2	11.0	12.6	17.8	18.0	21.5	18.4	19.4	22.3	24.9	26.3	23.3	21.0	23.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*22.0*
1.10	.87	.78	.69	.80	1.00	.95	1.08	.97	.98	1.20	1.33	1.35	1.26	1.21	1.36			Relative P/E Ratio	*1.20*
2.6%	3.3%	3.5%	3.7%	3.2%	1.6%	2.1%	2.1%	2.6%	2.2%	1.7%	1.6%	1.5%	1.5%	1.7%	2.0%			Avg Ann'l Div'd Yield	*1.8%*
22324	20405	20853	27390	30578	31904	34608	43075	43653	40109	*42000*	*45000*	Sales ($mill)	*51000*						
26.4%	17.0%	17.9%	13.5%	19.1%	20.3%	21.6%	24.3%	23.8%	*23.0%*	*23.0%*	*23.5%*	Operating Margin	*25.0%*						
1548.0	1472.0	1353.0	3021.0	3278.0	3014.0	3327.0	3538.0	3267.0	*3300*	*3400*	*3500*	Depreciation ($mill)	*3900*						
3503.0	3258.0	3281.0	4400.0	5131.0	5810.0	6552.0	9367.0	9466.0	7802.0	*8070*	*8930*	Net Profit ($mill)	*10900*						
17.9%	15.0%	9.6%	29.9%	14.1%	14.0%	15.0%	15.5%	15.7%	14.0%	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*						
15.7%	16.0%	15.7%	16.1%	16.8%	18.2%	18.9%	21.7%	21.7%	19.5%	*19.2%*	*19.8%*	Net Profit Margin	*21.4%*						
4729.0	4969.0	20116	11235	5620.0	4804.0	8534.0	11134	9735.0	*10000*	*10200*	*10400*	Working Cap'l ($mill)	*11000*						
3408.0	5871.0	20681	27210	19359	16661	18527	17296	14522	*14500*	*14500*	*14500*	Long-Term Debt ($mill)	*14500*						
21526	21211	20538	30897	30524	31088	32784	35802	36686	*37500*	*38500*	*40000*	Shr. Equity ($mill)	*45000*						
14.2%	12.1%	8.4%	8.2%	11.0%	12.8%	13.3%	18.1%	19.0%	*15.5%*	*16.0%*	*17.0%*	Return on Total Cap'l	*19.0%*						
16.3%	15.4%	16.0%	14.2%	16.8%	18.7%	20.0%	26.2%	25.8%	*21.0%*	*21.0%*	*22.5%*	Return on Shr. Equity	*24.0%*						
10.0%	8.6%	8.5%	8.3%	10.3%	11.4%	12.2%	17.2%	16.8%	*11.5%*	*11.0%*	*12.5%*	Retained to Com Eq	*14.5%*						
38%	44%	47%	42%	38%	39%	39%	34%	35%	*45%*	*47%*	*44%*	All Div'ds to Net Prof	*40%*						

CAPITAL STRUCTURE as of 9/30/23
Total Debt $15.6 bill. **Due in 5 Yrs** $8.4 bill.
LT Debt $14.5 bill. **LT Interest** $.6 bill.
(28% of Capital)

Leases, Uncapitalized Annual rentals $258 mill.

Pension Assets-12/22 $11.4 bill. **Oblig.** $9.2 bill.

Preferred Stock None

Common Stock 1,736,058,536 shares

MARKET CAP: $197 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	9799	9882	6709
Receivables	6487	6218	6499
Inventory (FIFO)	5157	6173	6650
Other	2796	2951	2806
Current Assets	24239	25224	22664
Accts Payable	4408	4607	3961
Debt Due	754	2251	1051
Other	7943	8631	8030
Current Liab.	13105	15489	13042

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Sales	1.5%	9.5%	*3.5%*
"Cash Flow"	3.0%	12.5%	*3.0%*
Earnings	3.0%	16.0%	*4.0%*
Dividends	2.0%	11.5%	*5.5%*
Book Value	2.5%	5.0%	*4.0%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	10456	10223	10928	11468	43075
2022	11895	11257	10410	10091	43653
2023	9747	9978	10143	10241	40109
2024	*9900*	*10500*	*10700*	*10900*	*42000*
2025	*10800*	*11200*	*11400*	*11600*	*45000*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.32	1.17	1.40	1.32	5.21
2022	1.73	1.43	1.15	1.03	5.34
2023	1.03	1.08	1.14	1.19	4.44
2024	*.99*	*1.15*	*1.23*	*1.28*	*4.65*
2025	*1.21*	*1.27*	*1.31*	*1.36*	*5.15*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.36	.36	.36	.36	1.44
2021	.45	.45	.45	.45	1.80
2022	.47	.47	.47	.47	1.88
2023	.51	.51	.51	.51	2.04
2024	.55				

BUSINESS: Abbott Laboratories discovers, develops, manufactures, and sells health care products worldwide. The company has four reportable segments: Diagnostic Products (38% of 2022 sales); Medical Devices (34%); Nutritional Products (17%); and Established Pharmaceutical Products (11%). Completed separation of branded pharmaceuticals business AbbVie (1/13). Completed sale of Abbott Medical Optics (2/17). Acquired St. Jude (1/17) and Alere (10/17). Has about 115,000 employees. Officers and directors own less than 1% of common stock; Vanguard Group, 8.9%; BlackRock, 8.0% (3/23 proxy). Chairman, President & Chief Executive Officer: Robert B. Ford. Inc.: IL. Addr.: 100 Abbott Park Road, Abbott Park, IL 60064. Tel.: 847-937-6100. Internet: www.abbott.com.

Abbott Laboratories closed out 2023 on a positive note. The healthcare giant reported adjusted earnings of $1.19 a share on total sales of $10.24 billion in the fourth quarter, marking decent improvement versus $1.03 a share and $10.09 billion in the comparable year-ago period. The performance was highlighted by double-digit momentum in the company's core Medical Devices (sales +17.5%) and Nutrition (+12.2%) segments. This helped to mitigate lingering weakness in the Diagnostics business (-22.7%), where comparisons remained challenging due to declines in COVID-19 test demand. All in all, the December-period earnings tally was relatively in line with expectations, while sales surpassed our estimate by about $100 million.

We believe the company is well positioned for a recovery in 2024 and beyond. Abbott posted significant pullbacks in both earnings and sales last year, largely attributable to the above-mentioned headwinds in Diagnostics. However, with the brunt of this impact now in the rearview mirror, comparisons are likely to be less difficult in the coming quarters. Continued momentum in Medical Devices, fueled by strong underlying trends for the company's popular glucose monitoring system *FreeStyle Libre* (Q4 sales +26% year over year), represents a key catalyst in our 2024 growth assumptions. Nutrition ought to be another area of strength, as it continues to benefit from market share recovery in the infant formula business. We are currently targeting 2024 adjusted earnings of $4.65 a share, implying annual improvement of 5%. Our presentation calls for an acceleration to $5.15 a share in 2025.

The stock holds an Average (3) rank for Timeliness. ABT has risen 22% in value since our November report, fueled by broader market strength and easing concerns tied to the potential impact of weight loss drugs on the medical device industry. With the equity currently hovering right around its 52-week high and also trading at a somewhat expensive 25x forward earnings, this entry point doesn't seem overly compelling. Our projections suggest below-average upside potential over both the 18-month and 2027-2029 time frames.

Michael Ratty *February 9, 2024*

(A) Diluted earnings. Excludes nonrecurring gain/ (losses): '08, 19¢; '10, ($1.21); '11, ($1.65); '12, ($1.27); '13, (39¢); '14, (79¢); '15, 77¢; '16, ($1.26); '17, ($2.23); '18, ($1.55); '19, ($1.18); '20, ($1.15); '21, ($1.27); '22, ($1.43); '23, ($1.18). Next egs. report due late April. **(B)** Dividends historically paid in February, May, August, and November. ■ Dividend reinvestment plan available. **(C)** Includes intangibles. In '22: $33.3 billion, $19.14 a share. **(D)** In millions. **(E)** Data post-2012 reflect the spinoff of the pharmaceuticals operation (AbbVie).

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	75

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ASSURANT, INC. NYSE-AIZ

RECENT PRICE 174.60 | P/E RATIO 14.1 (Trailing: 14.6 Median: 16.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 1.7% | VALUE LINE

TIMELINESS 2 Lowered 3/22/24
SAFETY 2 Raised 5/16/14
TECHNICAL 3 Lowered 5/3/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$152-$289	$221 (25%)

2027-29 PROJECTIONS

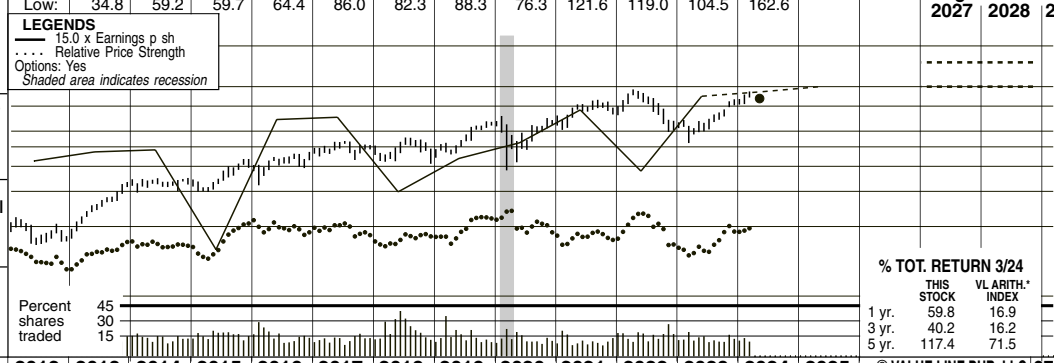
	Price	Gain	Ann'l Total Return
High	265	(+50%)	*12%*
Low	200	(+15%)	*5%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	182	184	272
to Sell	209	204	188
Hld's(000)	49647	48934	48373

	66.7	69.9	87.2	94.4	107.0	111.4	134.3	142.6	172.2	194.1	173.0	189.5
High:	34.8	59.2	59.7	64.4	86.0	82.3	88.3	76.3	121.6	119.0	104.5	162.6

LEGENDS
15.0 x Earnings p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
67.53	64.73	72.58	80.49	92.00	108.03	124.56	126.82	89.51	84.02	99.45	133.79	143.92	153.75	165.92	180.69	*198.05*	*220.40*	Premium Inc per sh	*277.80*
6.60	5.99	6.89	7.79	9.07	9.05	9.47	9.51	9.22	9.42	9.67	11.26	9.92	5.64	6.89	9.41	*10.30*	*11.75*	Investment Inc per sh	*15.55*
3.77	4.09	2.50	5.58	5.67	6.30	6.44	2.05	9.13	9.39	3.98	5.84	6.99	10.20	5.05	11.95	*12.60*	*13.40*	Earnings per sh [A]	*15.50*
.54	.59	.63	.70	.81	.96	1.06	1.37	2.03	2.15	2.28	2.43	2.55	2.66	2.74	2.82	*2.88*	*2.96*	Div'ds Decl'd per sh [B]	*3.20*
31.61	41.61	46.87	56.79	65.92	67.29	74.77	68.70	73.26	81.47	82.53	94.25	102.62	98.46	80.04	92.57	*101.00*	*110.20*	Book Value per sh [C]	*142.20*
117.37	116.65	102.00	88.52	78.66	71.83	69.30	65.85	55.94	52.42	61.91	59.95	57.97	55.75	52.83	51.96	*51.00*	*49.00*	Common Shs Outst'g [D]	*45.00*
172%	64%	76%	66%	57%	76%	88%	104%	114%	121%	118%	118%	115%	155%	201%	148%			Price to Book Value	*165%*
14.4	6.5	14.3	6.7	6.6	8.2	10.3	34.8	9.2	10.5	24.4	19.0	16.9	15.0	31.8	11.4	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.0*
.87	.43	.91	.42	.42	.46	.54	1.75	.48	.53	1.32	1.01	.87	.81	1.84	.64			Relative P/E Ratio	*.85*
1.0%	2.2%	1.8%	1.9%	2.2%	1.9%	1.6%	1.9%	2.4%	2.2%	2.3%	2.2%	2.2%	1.7%	1.7%	2.1%			Avg Ann'l Div'd Yield	*1.4%*
8632.1	8351.0	5007.4	4404.1	6156.9	8020.0	8342.7	8572.1	8765.3	9388.0	*10100*	*10800*	Premium Inc ($mill)	*12500*
656.4	626.2	515.7	493.8	598.4	675.0	574.9	314.4	364.1	489.1	*525*	*575*	Investment Inc ($mill)	*700*
1032.3	1318.6	1846.2	31.0	- -	- -	- -	- -	1239.5	1323.2	*1400*	*1475*	Other Income ($mill)	*1650*
10321	10296	7369.3	4928.9	6755.3	8695.0	8917.6	8886.5	10369	11200	*12025*	*12850*	Total Income ($mill)	*14850*
4405.3	4742.5	1808.5	1870.6	2342.6	2654.7	2549.3	2195.7	2359.8	2521.8	*2600*	*2700*	Benefits & Reserves ($m)	*3100*
36.7%	29.6%	33.4%	NMF	24.3%	30.2%	14.1%	21.6%	20.9%	20.4%	*21.0%*	*23.0%*	Income Tax Rate	*23.0%*
470.9	141.6	565.4	519.6	251.0	382.6	441.8	613.5	276.6	642.5	*645*	*655*	Net Profit ($mill)	*700*
69.7	- -	4.3	3.6	5.3	- -	- -	- -	5.3	5.3	*10.0*	*15.0*	Insur in Force ($bill)	*25.0*
31562	30043	29709	31843	41089	44291	44650	33912	33124	33635	*34500*	*38000*	Total Assets ($mill)	*52000*
5181.3	4524.0	4098.1	4270.6	5112.0	5652.8	5951.4	5489.7	4228.7	4809.5	*5150*	*5400*	Shr. Equity ($mill) [C]	*6400*
9.1%	3.1%	13.8%	12.2%	4.9%	6.8%	7.4%	11.2%	6.5%	13.4%	*12.5%*	*12.0%*	Return on Shr. Equity	*11.0%*
7.6%	1.0%	10.7%	9.4%	2.0%	3.8%	4.5%	8.2%	3.0%	10.2%	*9.5%*	*9.5%*	Retained to Com Eq	*8.5%*
16%	67%	22%	23%	59%	44%	39%	26%	54%	24%	*23%*	*22%*	All Div'ds to Net Prof	*21%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $2081 mill. **Due in 5 Yrs** $475.0 mill.
LT Debt $2081 mill. **LT Interest** $108 mill.
(LT Interest Earned: 8.5x)
(30% of Cap'l)
Leases, Uncapitalized: Annual rentals: $15.8 mill.

Pension Assets-12/23 $636.7 mill.
Oblig. $599.8 mill.
Pfd Stock None
Common Stock 51,977,634 shs
as of 2/9/24

MARKET CAP: $9.1 billion (Mid Cap)

FINANCIAL POSITION ($MILL.)	2021	2022	12/31/23
Investments	8672	7525	8221
Cash & equiv.	2289	1692	1627
Premiums Due	1943	2406	2266
Other	21008	21501	21521
Total Assets	33912	33124	33635
Notes Payable	- -	- -	- -
Debt	2203	2130	2081
Other	26219	26765	26745
Total Liab.	28422	28895	28826

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Premium Inc	- -	8.0%	*NMF*
Earnings	- -	1.0%	*9.5%*
Dividends	- -	16.5%	*2.5%*
Book Value	- -	11.0%	*8.0%*

Calendar	QUARTERLY PREMIUM INC. ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	2106	2151	2140	2178	8572.1
2022	2136	2169	2197	2263	8765.3
2023	2266	2343	2357	2422	9388
2024	*2300*	*2450*	*2450*	*2900*	*10100*
2025	*2500*	*2600*	*2600*	*3100*	*10800*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	2.41	3.01	2.58	2.20	10.20
2022	2.59	.95	.14	1.27	5.05
2023	2.12	2.90	3.54	3.42	11.95
2024	*3.20*	*3.15*	*2.60*	*3.65*	*12.60*
2025	*3.40*	*3.35*	*2.80*	*3.85*	*13.40*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.63	.63	.63	.66	2.55
2021	.66	.66	.66	.68	2.66
2022	.68	.68	.68	.70	2.74
2023	.70	.70	.70	.72	2.82
2024	.72				

BUSINESS: Assurant, Inc. provides specialized insurance products and related services primarily in North America, South America, and Europe. The company operates in three segments: Global Housing (homeowners insurance); Global Lifestlye (offers domestic and international extended service contracts); Corp. & Other. Exited the health insurance market (2016), sold its Employee Benefits segment (3/16) and Global Preneed business (8/21). Acq'd The Warranty Group (5/18). 13,600 emplys. 12/31/23. President and CEO: Keith W. Demmings. Offs./dirs. own less than 1% of com. stk.; The Vanguard Group, 13.1%; BlackRock, 10.4%; T.Rowe Price, 9.8% (4/24 proxy). Inc.: DE. Addrs.: 260 Interstate North Circle SE, Atlanta, GA 30339. Tel.: 770-763-1000. Web:www.assurant.com.

Assurant finished a good year on a fairly strong note. The company posted favorable comparisons in recent quarters, and the December period was no exception. For full-year 2023, the bottom line more than doubled the depressed tally from the prior year and was up 17% compared with the more robust figure achieved in 2021. These impressive results were primarily due to greater earnings at the Global Housing segment, thanks to lower reportable catastrophes, as well as a decline in net unrealized losses from changes in the fair value of equity securities. Results at the Global Lifestyle segment were mixed during 2023, as stronger mobile device protection earnings in North America and higher investment income were more than offset by elevated automotive claims costs as well as lower mobile earnings in the Asia Pacific region.

Profitable growth is expected to persist in the current year. Premium income ought to increase at a solid pace, and we anticipate that earnings per share will rise a more-moderate 5% in the current year. Solid growth in premiums and earnings may well continue from 2025 onward. The company is a leading global business services operation that supports, protects, and connects major consumer purchases. It is looking to capitalize on the convergences of the connected world, diversify its distribution channels, strengthen partnerships with major clients, and provide integrated offerings through a superior, digital-first customer experience.

This stock remains well ranked for Timeliness. We anticipate solid growth in premium income and earnings per share for the company over the pull to late decade. From the recent quotation, this equity offers respectable long-term total return potential on a risk-adjusted basis. Capital gains prospects for the coming 18 months are also fairly solid. Assurant earns good marks for Safety, Financial Strength, Price Stability, and Growth Persistence. But it is worth mentioning that earnings have proven erratic from time to time. Specifically, the bottom line fell dramatically in 2015, 2018, and 2022, and such declines may well recur. This issue's score for Earnings Predictability is nothing to write home about.

Michael Napoli, CFA *May 3, 2024*

(A) Diluted earnings. Next earnings report due early August. Earnings may not sum due to changes in shares outstanding.
(B) Dividends historically paid in mid-March, June, September, and December.
(C) Includes intangibles. In 2023, $3175.9 million, $61.13 per share.
(D) In millions.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	80
Earnings Predictability	50

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AKAMAI TECH., INC. NDQ-AKAM

RECENT PRICE 108.56 | P/E RATIO 26.6 (Trailing: 30.8 Median: 31.0) | RELATIVE P/E RATIO 1.45 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 2 Lowered 3/29/24
SAFETY 2 Raised 4/5/24
TECHNICAL 1 Raised 3/29/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$66-$131	$99 (-10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	195	(+80%)	*16%*
Low	145	(+35%)	*8%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	297	277	361
to Sell	318	353	320
Hld's(000)	139193	140302	144027

High:	53.6	65.4	78.4	71.0	71.6	83.1	93.1	120.0	124.9	123.3	120.6	129.2
Low:	32.6	45.6	50.6	39.4	44.7	58.3	57.2	75.2	92.6	76.3	70.7	106.6

LEGENDS
20.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029

% TOT. RETURN 2/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	52.8	10.4
3 yr.	17.4	16.5
5 yr.	59.2	63.1

Akamai Technologies, Inc. was founded in April 1999, and on October 29, 1999, sold nine million shares to the public at $26.00. The underwriting syndicate was led by Morgan Stanley Dean Witter. In 10/05, the company sold twelve million shares to the public at $17.00. Deutsche Bank Securities Inc. was the prime underwriter.

CAPITAL STRUCTURE as of 12/31/23

Total Debt $3538.2 mill. **Due in 5 Yrs** Nil
LT Debt $3538.2 mill. **LT Interest** $55.4 mill. (43% of Cap'l)

Leases,Uncapitalized: Annual rentals $224.2 mill.

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 151,233,000 shs.

MARKET CAP: $16.4 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	1078.2	1105.3	864.4
Receivables	675.9	679.2	724.3
Other	166.3	185.1	216.2
Current Assets	1920.4	1969.6	1804.9
Accts Payable	109.9	145.4	146.9
Debt Due	- -	- -	- -
Deferred Revenue	86.5	105.1	- -
Other	593.9	568.4	689.1
Current Liab.	790.3	818.9	836.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	11.5%	9.0%	*4.5%*
"Cash Flow"	12.0%	13.5%	*4.5%*
Earnings	11.0%	17.5%	*5.5%*
Dividends	- -	- -	*Nil*
Book Value	8.0%	8.5%	*3.5%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	842.7	852.8	860.3	905.4	3461.2
2022	904.0	903.3	881.9	927.5	3616.7
2023	915.7	935.7	965.5	995.0	3811.9
2024	*955*	*975*	*1000*	*1025*	*3955*
2025	*995*	*1020*	*1045*	*1065*	*4125*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	.94	.94	1.08	.97	3.93
2022	.82	.85	.78	.82	3.26
2023	.62	.84	1.04	1.03	3.52
2024	*.90*	*1.00*	*1.15*	*1.20*	*4.25*
2025	*.95*	*1.05*	*1.20*	*1.25*	*4.45*

Calendar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020					
2021	NO CASH DIVIDENDS BEING PAID				
2022					
2023					
2024					

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
Sales per sh	11.01	12.40	13.51	14.73	16.66	17.86	19.66	21.56	23.11	25.21	*26.35*	*27.50*		*30.00*
"Cash Flow" per sh	3.26	3.50	3.75	3.48	4.50	5.67	6.36	7.49	7.13	7.40	*8.25*	*8.75*		*9.45*
Earnings per sh A	1.84	1.78	1.79	1.26	1.76	2.90	3.37	3.93	3.26	3.52	*4.25*	*4.45*		*4.95*
Div'ds Decl'd per sh	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*		*Nil*
Cap'l Spending per sh	1.16	1.76	1.04	1.50	1.34	2.22	3.16	2.05	1.54	3.03	*2.85*	*2.80*		*2.75*
Book Value per sh B	16.52	17.61	18.61	19.49	19.59	22.58	26.13	28.22	27.86	30.40	*32.50*	*33.65*		*35.90*
Common Shs Outst'g C	178.30	177.21	173.26	169.89	162.91	162.00	162.71	160.51	156.50	151.23	*150.00*	*150.00*		*150.00*
Avg Ann'l P/E Ratio	31.4	38.4	30.8	44.2	40.4	27.6	30.4	28.0	30.3	26.9	*Bold figures are Value Line estimates*			*34.0*
Relative P/E Ratio	1.65	1.93	1.62	2.22	2.18	1.47	1.56	1.51	1.75	1.50				*1.90*
Avg Ann'l Div'd Yield	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -				*Nil*
Sales ($mill)	1963.9	2197.4	2340.0	2503.0	2714.5	2893.6	3198.1	3461.2	3616.7	3811.9	*3955*	*4125*		*4500*
Operating Margin	37.5%	34.8%	35.5%	30.9%	31.6%	36.1%	38.0%	40.2%	35.5%	33.2%	*36.0%*	*36.0%*		*36.0%*
Depreciation ($mill)	247.4	299.6	334.3	372.3	434.5	440.7	478.4	550.6	592.8	570.8	*600*	*645*		*675*
Net Profit ($mill)	333.9	321.4	316.1	218.3	298.4	478.0	557.1	651.6	523.7	547.6	*640*	*665*		*740*
Income Tax Rate	30.4%	29.6%	31.2%	30.9%	13.0%	10.0%	7.5%	8.6%	19.3%	16.3%	*21.0%*	*21.0%*		*21.0%*
Net Profit Margin	17.0%	14.6%	13.5%	8.7%	11.0%	16.5%	17.4%	18.8%	14.5%	14.4%	*16.1%*	*16.2%*		*16.6%*
Working Cap'l ($mill)	928.6	920.8	935.3	845.0	1324.7	1538.3	1171.3	1130.1	1150.7	968.9	*1265*	*1300*		*1375*
Long-Term Debt ($mill)	604.9	624.3	640.1	662.9	874.1	1839.8	1906.7	1976.2	2285.3	3538.2	*3250*	*3000*		*1850*
Shr. Equity ($mill) B	2945.3	3120.9	3224.4	3310.7	3191.9	3658.0	4251.3	4530.0	4360.2	4597.2	*4875*	*5050*		*5385*
Return on Total Cap'l	9.6%	8.8%	8.4%	5.7%	7.9%	9.1%	9.6%	10.6%	7.9%	6.8%	*8.0%*	*8.5%*		*10.5%*
Return on Shr. Equity	11.3%	10.3%	9.8%	6.6%	9.3%	13.1%	13.1%	14.4%	12.0%	11.9%	*13.0%*	*13.0%*		*14.0%*
Retained to Com Eq	11.3%	10.3%	9.8%	6.6%	9.3%	13.1%	13.1%	14.4%	12.0%	11.9%	*13.0%*	*13.0%*		*14.0%*
All Div'ds to Net Prof	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*		*Nil*

BUSINESS: Akamai Technologies, Inc. provides services for the delivery of content (video streaming) and business processes over the Internet. The company operates the world's largest and most widely used on-demand distributed computing platform, with more than 350,000 servers and approximately 1,200 networks around the world (as of 12/23). Acquired Cotendo, Inc., 3/12. Foreign customers accounted for about 48% of '23 revenues. Has approximately 9,800 employees. Officers and directors own 1.8% of the common stock (4/23 proxy). Chief Executive Officer: Tom Leighton. Chairman of the Board: Frederic V. Salerno. Incorporated: Delaware. Address: 145 Broadway, Cambridge, Massachusetts 02142. Telephone: 617-444-3000. Internet: www.akamai.com.

Akamai stock has taken a breather of late. Subsequent to etching a fresh all-time high price in early February, shares of the content delivery and cloud security provider pulled back considerably, and are down roughly 10% in value over the past three months. Recent selling pressure likely stemmed from the combination of a relatively modest fourth-quarter showing and some profit taking at recently elevated levels.

We look for decent top- and bottom-line growth this year and next. Akamai's Security and Cloud Computing segments now represent more than 60% of total revenues, and are apt to remain primary growth avenues going forward. Meanwhile, the company's domestic and international operations are both expanding at a fairly even clip. Lastly, healthier operating margins and further stock repurchases in 2024 ought to support the bottom line.

The company is moving full steam ahead in developing its artificial intelligence (AI) portfolio. First, Akamai recently partnered with Neural Magic in an effort to implement and deploy deep AI learning capabilities into Akamai's computing infrastructure. Second, the company has also joined forces with Scaleflex to enhance and increase the use of AI-driven resources and cloud computing amongst enterprises.

Akamai is well positioned to benefit long term from a steady and aggressive rise in global cyber attacks. In fact, cyber criminals' most lucrative targets are larger enterprises and organizations, including financial services providers, educational institutions, and healthcare companies. Moreover, the ease and frequency in which these digital threats can be carried out suggests that the rate of attacks are likely to rise from here, which ought to underpin customer spending on digital platform protection.

Akamai stock holds some investment appeal. The shares are ranked 2 (Above Average) for relative year-ahead price performance. What's more, at the recent quotation, the equity offers worthwhile capital appreciation potential three to five years hence. In sum, we think a variety of investors can find something to like here.

Nicholas Patrikis *April 5, 2024*

(A) Diluted earnings. Quarterly earnings may not sum due to rounding or changes in share count. Next earnings report due early May.

(B) Includes intangibles: In 2023, $3386.6 mill., $22.39/sh.

(C) In millions.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	65
Earnings Predictability	60

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SMITH (A.O.) NYSE-AOS

RECENT PRICE **88.04** | P/E RATIO **22.2** (Trailing: 23.0 Median: 22.0) | RELATIVE P/E RATIO **1.21** | DIV'D YLD **1.5%** | **VALUE LINE**

TIMELINESS 2 Lowered 2/9/24
SAFETY 2 Raised 1/8/21
TECHNICAL 3 Lowered 3/15/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$68-$123	$96 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	130	(+50%)	*11%*
Low	95	(+10%)	*3%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	250	272	305
to Sell	266	264	279
Hld's(000)	112701	117012	113660

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	27.6	28.6	40.6	51.5	63.7	68.4	56.7	58.7	86.7	86.1	82.8	90.0						
Low:	15.5	22.1	25.0	30.2	46.4	40.3	40.4	33.8	52.1	46.6	57.4	76.9						

LEGENDS
16.0 x "Cash Flow" p sh
Relative Price Strength
2-for-1 split 5/13
2-for-1 split 10/16
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029: 128, 96, 80, 64, 48, 40, 32, 24, 16, 12

% TOT. RETURN 2/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.5	10.4
3 yr.	47.1	16.5
5 yr.	73.9	63.1

Percent shares traded: 30, 20, 10

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	11.80	10.24	8.14	9.27	10.49	11.80	13.18	14.42	15.49	17.46	18.96	18.43	17.90	22.45	24.83	26.12	*27.80*	*29.60*	Sales per sh	*37.10*
	.79	.77	.65	.86	1.08	1.38	1.57	1.97	2.26	2.61	3.10	2.76	2.63	3.58	3.74	4.43	*4.65*	*5.05*	"Cash Flow" per sh	*6.45*
	.49	.57	.43	.60	.78	1.03	1.22	1.58	1.85	2.17	2.61	2.22	2.12	3.02	3.14	3.81	*4.00*	*4.30*	Earnings per sh [A]	*5.55*
	.12	.13	.14	.15	.18	.23	.30	.38	.48	.56	.76	.90	.98	1.06	1.14	1.22	*1.30*	*1.38*	Div'ds Decl'd per sh [B■]	*1.66*
	.34	.29	.29	.29	.38	.54	.48	.41	.47	.55	.51	.40	.35	.48	.47	.49	*.75*	*.55*	Cap'l Spending per sh	*.60*
	3.28	4.06	4.82	5.89	6.46	7.28	7.73	8.20	8.74	9.60	10.21	10.27	11.43	11.62	11.56	12.50	*13.50*	*14.75*	Book Value per sh [C]	*19.55*
	195.30	194.44	182.97	184.48	184.88	182.48	178.80	175.90	173.44	171.66	168.16	162.37	161.77	157.65	151.18	147.53	*144.00*	*140.65*	Common Shs Outst'g [D]	*130.95*
	11.9	10.1	20.3	16.6	16.4	20.2	20.3	21.6	23.0	25.4	22.2	21.8	22.6	22.8	19.7	18.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.0*
	.72	.67	1.29	1.04	1.04	1.13	1.07	1.09	1.21	1.28	1.20	1.16	1.16	1.23	1.14	1.02			Relative P/E Ratio	*1.10*
	2.1%	2.2%	1.6%	1.5%	1.4%	1.1%	1.2%	1.1%	1.1%	1.0%	1.3%	1.9%	2.0%	1.5%	1.8%	1.8%			Avg Ann'l Div'd Yield	*1.7%*
							2356.0	2536.5	2685.9	2996.7	3187.9	2992.7	2895.3	3538.9	3753.9	3852.8	*4000*	*4160*	Sales ($mill)	*4860*
							15.6%	18.2%	19.6%	19.7%	19.6%	18.2%	18.0%	19.4%	19.6%	21.7%	*21.5%*	*21.5%*	Operating Margin	*22.0%*
							59.8	63.0	65.1	70.1	71.9	78.3	80.0	77.9	76.9	78.3	*80.0*	*82.0*	Depreciation ($mill)	*87.0*
							221.0	282.9	326.5	378.3	449.2	370.0	344.9	487.1	488.7	574.8	*590*	*625*	Net Profit ($mill)	*755*
							28.3%	29.7%	29.4%	27.4%	20.4%	21.6%	22.3%	22.1%	24.3%	23.5%	*24.0%*	*24.0%*	Income Tax Rate	*24.0%*
							9.4%	11.2%	12.2%	12.6%	14.1%	12.4%	11.9%	13.8%	13.0%	14.9%	*14.8%*	*15.0%*	Net Profit Margin	*15.5%*
							713.8	802.1	796.4	978.3	853.2	733.9	731.7	633.8	699.5	555.0	*575*	*580*	Working Cap'l ($mill)	*660*
							210.1	236.1	316.4	402.9	221.4	277.2	106.4	189.9	334.5	117.3	*105*	*95.0*	Long-Term Debt ($mill)	*Nil*
							1381.3	1442.3	1515.3	1648.8	1717.0	1666.8	1848.3	1832.2	1747.7	1844.4	*1945*	*2075*	Shr. Equity ($mill) [C]	*2560*
							14.0%	17.1%	18.0%	18.7%	23.4%	19.3%	17.8%	24.2%	23.7%	29.6%	*29.0%*	*29.0%*	Return on Total Cap'l	*29.5%*
							16.0%	19.6%	21.5%	22.9%	26.2%	22.2%	18.7%	26.6%	28.0%	31.2%	*30.5%*	*30.0%*	Return on Shr. Equity	*29.5%*
							12.1%	14.9%	16.0%	17.1%	18.6%	13.2%	10.1%	17.3%	17.8%	21.2%	*20.5%*	*20.5%*	Retained to Com Eq	*20.5%*
							25%	24%	26%	26%	29%	40%	46%	35%	36%	32%	*33%*	*32%*	All Div'ds to Net Prof	*30%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $127.3 mill. **Due in 5 Yrs** $90.2 mill.
LT Debt $117.3 mill. **LT Interest** $6.0 mill. (6% of Cap'l)
Leases, Uncapitalized Annual rentals $13.0 mill.
Pension Assets-12/23 $20.3 mill. **Oblig.** $26.7 mill.
Common Stock 147,195,095 shares.
Includes 25,887,352 Class A shares.
Class A shares have (10 times) super voting power for matters beyond director elections.
as of 1/31/24

MARKET CAP: $13.0 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	631.4	481.8	363.4
Receivables	634.4	581.2	596.0
Inventory (LIFO)	447.7	516.4	497.4
Other	39.1	54.3	43.5
Current Assets	1752.6	1633.7	1500.3
Accts Payable	745.9	625.8	600.4
Debt Due	6.8	10.0	10.0
Other	366.1	298.4	334.9
Current Liab.	1118.8	934.2	945.3

ANNUAL RATES (of change (per sh))	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	9.0%	7.0%	*7.0%*
"Cash Flow"	13.5%	8.0%	*8.5%*
Earnings	15.5%	8.5%	*9.0%*
Dividends	20.0%	13.5%	*6.5%*
Book Value	6.0%	4.5%	*8.5%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	769.0	859.8	914.6	995.5	3538.9
2022	977.7	965.9	874.2	936.1	3753.9
2023	966.4	960.8	937.5	988.1	3852.8
2024	*995*	*1010*	*975*	*1020*	*4000*
2025	*1035*	*1050*	*1015*	*1060*	*4160*

Calendar	EARNINGS PER SHARE[A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.60	.73	.82	.87	3.02
2022	.77	.82	.69	.86	3.14
2023	.94	1.01	.90	.97	3.81
2024	*.98*	*1.06*	*.95*	*1.01*	*4.00*
2025	*1.05*	*1.14*	*1.02*	*1.09*	*4.30*

Calendar	QUARTERLY DIVIDENDS PAID [B■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.24	.24	.24	.26	.98
2021	.26	.26	.26	.28	1.06
2022	.28	.28	.28	.30	1.14
2023	.30	.30	.30	.32	1.22
2024	.32				

BUSINESS: A.O. Smith Corp. is a leading manufacturer of residential and commercial water heaters, boilers. and water treatment products. Has two reportable segments: North America (75% of '23 sales); and Rest of World (25%), which primarily serves China, Europe, and India. Brands include A.O. Smith, GSW, Lochinvar, Reliance, and Takagi. As of 12/23, had approximately 12,000 employees and 27 wholly-owned and leased manufacturing facilities. Smith Family Voting Trust owns 96.9% of Class A shares; Offs. & dirs., 1.8% of regular common; Vanguard Group, 11.6% (2/24 proxy). Chairman & CEO: Kevin J. Wheeler. Incorporated: Delaware. Address: 11270 West Park Place, Milwaukee, WI 53224. Telephone: 414-359-4130. Internet: www.aosmith.com.

A.O. Smith may enjoy a slight uptick in sales this year. Indeed, if management has it right, top-line growth will clock in between 3% and 4% in 2024, up modestly from 2023's 2.6% advance. Leadership expected the marginal acceleration even as it warned that, within the company's core North American market, industry sales of residential water heaters may increase little, if any, due to less pro-active (non-emergency) replacement demand and a sluggish pace of new home construction. That said, A.O.'s water-treatment business in the U.S. and Canada was largely expected to pick up the slack, with segment sales pegged to increase as much as 12%, partly due to recent bolt-on acquisitions, including Arizona-based Water Tec.

While sales are expected to rise faster in 2024, overall bottom-line growth is likely to be well below the 21% jump that the company enjoyed last year. That's partly because A.O. Smith's new manufacturing facility in Mexico isn't expected to be fully up and running for several quarters, leaving the company to temporarily rely on its plants in China to produce a new line up of tankless water heaters for the U.S. market. Importing these goods from China means that A.O. Smith will be subject to costly tariffs. Associated freight costs are also likely to weigh on profit margins.

We are penciling in earnings of $5.55 a share by 2027–2029, up 6%–10% a year from 2023's $3.81 total. Underpinning our positive stance is in no small measure an expectation that America's large housing deficit declines, as construction activity improves with lower interest rates and a consequent increase in home affordability. Too, amid growing concern about water-supply contamination in the U.S. and elsewhere (from among other things, lead pipes and so-called forever chemicals), sales of water-treatment products should remain strong.

Shares of A.O. Smith are ranked 2 (Above Average) for relative year-ahead price performance. Still, with the stock now trading near the low end of our 3- to 5-year Target Price Range ($95-$130), we think that buy-and-hold investors will do better elsewhere.

Nils C. Van Liew *April 5, 2024*

(A) Excludes nonrecurring gain/(losses): '08, ($0.21); '10, ($0.47); '12, $0.38; '14, ($0.15); '18, ($0.03); '22, (1.60). Also excludes disc. operations: '10, $1.18; '11, $4.18; '12, ($0.08). Next earnings report due late April.
(B) Dividends historically paid in mid-February, May, August & November. ■ Dividend reinvestment plan available.
(C) Includes intangible assets: In 2023: $970.1 mill., $6.58/sh. **(D)** In millions, adjusted for stock splits.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	70
Earnings Predictability	80

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BOOZ ALLEN NYSE-BAH

RECENT PRICE 141.87 | P/E RATIO 24.9 (Trailing: 27.3 Median: 19.0) | RELATIVE P/E RATIO 1.48 | DIV'D YLD 1.5% | VALUE LINE 372

TIMELINESS 1 Raised 2/9/24
SAFETY 2 Raised 11/18/22
TECHNICAL 4 Lowered 2/16/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

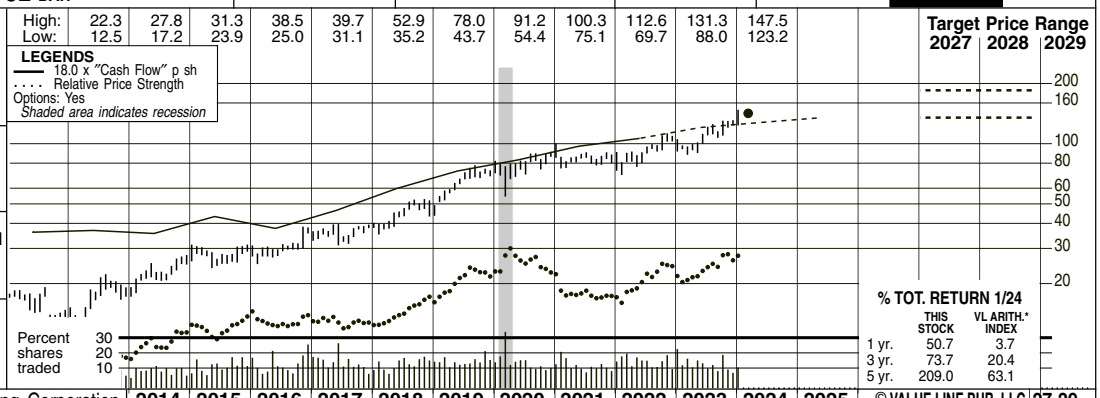
Low-High	Midpoint (% to Mid)
$101-$165	$133 (-5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	185	(+30%)	*8%*
Low	135	(-5%)	*1%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	296	281	266
to Sell	292	312	316
Hld's(000)	122310	123230	119063



Booz Allen Hamilton Holding Corporation completed its initial public offering on November 16, 2010. At that time, 16.1 million shares were sold to the public at an average price of $17.00 per share. The underwriting syndicate was led by Bank of America Merrill Lynch, Barclays, and Credit Suisse.

CAPITAL STRUCTURE as of 12/31/23
Total Debt $3421.1 mill. **Debt Due 5 Yrs** $2.8 bill.
LT Debt $3369.5 mill. **LT Interest** $175.0 mill.

(Total interest coverage: 6.3x) (76% of Cap'l)

Leases, Uncapitalized: Annual Rentals $61.5 mill.

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 129,745,860 shs.
as of 1/23/24
MARKET CAP: $18.4 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	695.9	404.9	601.8
Receivables	1623.0	1774.8	1968.1
Inventory	- -	- -	- -
Other	126.8	108.4	107.0
Current Assets	2445.7	2288.1	2676.9
Accts Payable	539.5	597.8	993.5
Debt Due	68.4	41.3	51.6
Other	926.1	1258.0	552.3
Current Liab.	1534.0	1897.1	1597.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	4.0%	10.0%	*7.5%*
"Cash Flow"	11.0%	17.5%	*7.5%*
Earnings	13.0%	17.5%	*8.0%*
Dividends	26.0%	20.0%	*6.5%*
Book Value	3.0%	17.5%	*17.5%*

Fiscal Year Begins	QUARTERLY REVENUES ($ mill.) A Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2021	1989.1	2106.2	2030.5	2237.9	8363.6
2022	2249.6	2299.0	2277.1	2433.2	9258.9
2023	2654.5	2666.3	2569.8	*2709.4*	*10600*
2024	*2825*	*2825*	*2775*	*2900*	*11325*
2025	*2950*	*2975*	*2900*	*3050*	*11875*

Fiscal Year Begins	EARNINGS PER SHARE AB Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2021	1.07	1.26	1.02	.86	4.21
2022	1.13	1.34	1.07	1.02	4.56
2023	1.47	1.29	1.41	*1.18*	*5.35*
2024	*1.52*	*1.58*	*1.45*	*1.25*	*5.80*
2025	*1.60*	*1.70*	*1.55*	*1.35*	*6.20*

Cal-endar	QUARTERLY DIVIDENDS PAID D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.31	.31	.31	.31	1.24
2021	.37	.37	.37	.37	1.48
2022	.43	.43	.43	.43	1.72
2023	.47	.47	.47	.47	1.88
2024	.51				

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	35.38	36.53	38.98	43.03	47.88	53.81	57.68	63.08	70.34	*81.85*	*87.80*	*92.75*	Revenues per sh A	*106.00*
	1.98	2.40	2.10	2.58	3.33	4.06	4.61	5.40	5.91	*6.70*	*7.10*	*7.50*	"Cash Flow" per sh	*8.85*
	1.52	1.94	1.67	2.05	2.76	3.41	3.90	4.21	4.56	*5.35*	*5.80*	*6.20*	Earnings per sh AB	*7.30*
	.46	.54	.62	.70	.80	1.04	1.30	1.54	1.76	*1.92*	*1.95*	*2.08*	Div'ds Decl'd per sh D	*2.42*
	.24	.45	.36	.55	.68	.92	.64	.60	.58	*.65*	*.80*	*.80*	Cap'l Spending per sh	*.95*
	1.25	2.76	3.85	3.87	4.82	6.17	7.86	7.89	7.54	*8.90*	*11.55*	*14.45*	Book Value per sh C	*24.35*
	149.09	147.99	148.89	143.45	140.03	138.72	136.25	132.58	131.64	*129.50*	*129.00*	*128.00*	Common Shs Outst'g E	*125.00*
	16.4	14.3	19.2	17.9	17.3	20.3	20.9	20.0	20.8	*Bold figures are Value Line estimates*			Avg Ann'l P/E Ratio	*22.0*
	.86	.72	1.01	.90	.93	1.08	1.07	1.08	1.20				Relative P/E Ratio	*1.20*
	1.8%	1.9%	1.9%	1.9%	1.7%	1.5%	1.6%	1.8%	1.9%				Avg Ann'l Div'd Yield	*1.5%*
	5274.8	5405.7	5804.3	6171.9	6704.0	7463.8	7858.9	8363.7	9258.9	*10600*	*11325*	*11875*	Revenues ($mill)	*13250*
	9.9%	9.4%	9.4%	9.5%	10.0%	10.1%	10.7%	11.2%	9.9%	*11.0%*	*11.0%*	*11.0%*	Operating Margin	*11.5%*
	62.7	61.5	59.5	64.8	68.6	81.1	84.3	145.7	169.8	*165*	*170*	*175*	Depreciation ($mill)	*200*
	232.6	294.1	252.5	305.1	397.1	482.6	543.8	570.6	607.8	*700*	*745*	*785*	Net Profit ($mill)	*905*
	39.7%	22.5%	38.7%	30.3%	23.0%	16.7%	17.9%	19.4%	9.3%	*22.0%*	*23.5%*	*23.5%*	Income Tax Rate	*24.0%*
	4.4%	5.4%	4.4%	4.9%	5.9%	6.5%	6.9%	6.8%	6.6%	*6.6%*	*6.6%*	*6.6%*	Net Profit Margin	*6.8%*
	314.2	249.9	193.1	452.5	520.1	1000.5	1345.1	911.7	391.0	*1075*	*1150*	*1200*	Working Cap'l ($mill)	*1650*
	1569.3	1484.4	1470.2	1755.5	1701.8	2008.0	2278.7	2731.7	2770.9	*3400*	*3350*	*3300*	Long-Term Debt ($mill)	*3675*
	186.5	408.5	573.6	554.6	675.4	856.4	1071.2	1046.1	992.0	*1155*	*1490*	*1845*	Shr. Equity ($mill)	*3045*
	15.2%	17.3%	13.6%	14.8%	18.3%	18.3%	17.4%	16.3%	17.7%	*17.0%*	*17.0%*	*17.0%*	Return on Total Cap'l	*14.5%*
	124.7%	72.0%	44.0%	55.0%	58.8%	56.4%	50.8%	54.5%	61.3%	*60.5%*	*50.0%*	*42.5%*	Return on Shr. Equity	*30.0%*
	88.2%	52.4%	27.4%	36.2%	41.9%	39.2%	33.9%	34.6%	37.5%	*39.0%*	*33.0%*	*28.0%*	Retained to Com Eq	*20.0%*
	29%	27%	38%	34%	29%	30%	33%	37%	39%	*36%*	*34%*	*34%*	All Div'ds to Net Prof	*33%*

BUSINESS: Booz Allen Hamilton Corp. provides management and technology consulting services to the U.S. government (both defense and civil), major corporations, institutions, and not-for-profit organizations. In fiscal 2022, 97% of revenues were derived from contracts where the end client was an agency or department of the U.S. government, with the Navy Marine Corps accounting for 13% of the top line. Has had contracts with the U.S. Army and Navy for more than 70 years. At 6/30/23, total backlog was $31.3 billion. Has about 31,900 employees. CEO & Pres.: Horacio Rozanski. Off./dir. own 1.8% of common stock; The Vanguard Group 10.3%; (5/23 Proxy). Inc.: DE. Addr.: 8283 Greensboro Dr., McLean, Virginia 22102. Telephone: (703) 902-5000. Internet: www.boozallen.com.

Booz Allen Hamilton delivered outstanding fiscal third-quarter (ended December 31st) results. Indeed, the company posted adjusted earnings per share of $1.41, which handily beat the prior-year figure of $1.07 and our $1.19 estimate. The primary catalyst was a nearly 13% top-line advance, to $2.6 billion. This was fueled by double-digit organic revenue growth in the federal defense and civil markets. The investment community reacted favorably to the December-period showing and bid BAH shares up to an all-time high in the trading session immediately following the earnings release. Overall, Booz Allen shares are up more than 60% over the last 12 months.

The strong performance is apt to persist. Booz Allen continues to expand its business, with the main focus these days on internal growth. In past years, the company has used bolt-on acquisitions to supplement its operations, and we expect those deals to continue, especially in the burgeoning artificial intelligence and cyber-security arenas. Still, the most encouraging development from the December-quarter performance was the 9.2% increase in the company's client staff headcount (the overall workforce rose 8.6%). The expectation is that the larger client staff will help Booz Allen win some more projects in the key federal defense and civil markets. This also shows management's confidence in the business and the overall health of the technology and defense fields. Not surprisingly, the company's backlog of projects climbed an impressive 14.2%, year over year, to $34.3 billion, in the December interim. This augurs well for revenue and earnings visibility. Thus, we are raising our fiscal 2023 and 2024 share-net estimates by $0.25 and $0.15, to $5.35 and $5.80, respectively. We also are introducing a fiscal 2025 earnings call of $6.20 a share.

Top-ranked Booz Allen stock has been a standout performer over the last 52 weeks. The gains have been fueled by the strong operating results and optimism about the company's prospects over both the near and long term. However, from an investment perspective, the sharp run-up in price discounts a good deal of the profit gains we envision to 2027-2029.

William G. Ferguson *February 16, 2024*

(A) Fiscal years end March 31st of the following calendar year. **(B)** Diluted egs. Excludes nonrecurring gain/(loss): '18, 15¢; '20 47¢; '21, (77¢); '22, ($2.53); '23 Q1-Q3, (55¢). Next egs. report due late May. **(C)** Incl. Intang. In fiscal 2022: $3024.0 mill., $22.97/sh. **(D)** Payments in February, June, August, and November. Paid special dividend of $1.50 per share on 6/29/12, $6.50 per share on 8/31/12, $1.00 per share on 11/29/13, $1.00 per share on 2/28/14, and $1.00 per share on 8/29/14. **(E)** In millions.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	90
Earnings Predictability	95

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RECENT PRICE **39.08** | P/E RATIO **12.9** (Trailing: 13.2 Median: 23.0) | RELATIVE P/E RATIO **0.75** | DIV'D YLD **3.0%** | **VALUE LINE**

TIMELINESS 3 Raised 11/17/23
SAFETY 2 Lowered 2/3/23
TECHNICAL 4 Raised 2/2/24
BETA .70 (1.00 = Market)

18-Month Target Price Range

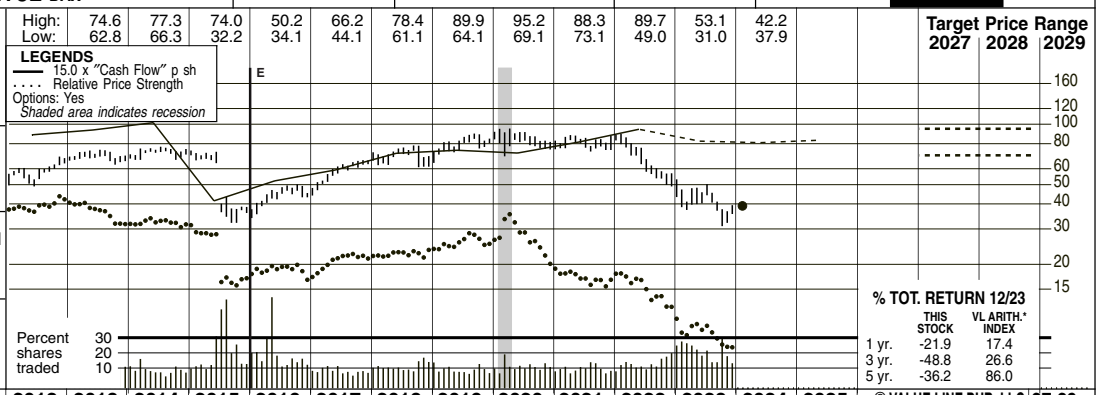
Low-High	Midpoint (% to Mid)
$31-$59	$45 (15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	95	(+145%)	*27%*
Low	70	(+80%)	*18%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	418	407	354
to Sell	464	449	501
Hld's(000)	432400	434136	441824



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
20.05	20.90	22.48	24.42	25.98	28.10	30.74	18.20	18.83	19.50	21.69	22.45	23.12	25.49	29.96	*29.60*	*30.20*	*31.15*	Sales per sh	*34.50*
4.52	4.94	5.25	5.54	5.91	6.24	6.80	2.76	3.48	3.95	4.78	4.95	4.79	5.43	6.29	*5.50*	*5.40*	*5.55*	"Cash Flow" per sh	*6.45*
3.38	3.80	3.98	4.31	4.53	4.67	4.90	1.38	1.96	2.48	3.05	3.31	3.09	3.61	3.50	*2.95*	*3.05*	*3.40*	Earnings per sh A	*4.50*
.91	1.07	1.18	1.27	1.46	1.88	2.02	1.68	.49	.58	.70	.82	.93	1.05	1.14	1.16	*1.18*	*1.24*	Div'ds Decl'd per sh B ■	*1.42*
1.55	1.69	1.66	1.69	2.13	2.81	3.50	1.66	1.33	1.17	1.33	1.38	1.40	1.48	1.35	*1.25*	*1.30*	*1.30*	Cap'l Spending per sh	*1.45*
10.11	11.97	11.31	11.57	12.70	15.58	14.97	16.15	15.36	16.85	15.19	15.57	17.21	18.10	11.56	*12.25*	*13.00*	*14.00*	Book Value per sh C	*17.95*
615.99	600.97	580.73	569.00	546.21	543.04	542.38	547.66	539.60	541.48	513.00	506.16	504.92	501.62	504.43	*507.00*	*507.00*	*507.00*	Common Shs Outst'g D	*507.00*
18.2	14.2	12.6	12.6	12.8	14.9	14.7	40.5	22.4	23.3	22.9	24.1	27.3	22.4	19.3	*14.0*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
1.10	.95	.80	.79	.81	.84	.77	2.04	1.18	1.17	1.24	1.28	1.40	1.21	1.12	*.80*			Relative P/E Ratio	*1.00*
1.5%	2.0%	2.4%	2.3%	2.5%	2.7%	2.8%	3.0%	1.1%	1.0%	1.0%	1.0%	1.1%	1.3%	1.7%	2.8%			Avg Ann'l Div'd Yield	*1.8%*
						16671	9968.0	10163	10561	11127	11362	11673	12784	15113	*15000*	*15300*	*15800*	Sales ($mill)	*17500*
						27.0%	12.1%	15.0%	19.1%	20.6%	25.6%	25.0%	26.1%	26.4%	*25.0%*	*25.0%*	*25.5%*	Operating Margin	*27.0%*
						1005.0	759.0	800.0	761.0	785.0	789.0	823.0	890.0	1403.0	*1300*	*1200*	*1100*	Depreciation ($mill)	*1000*
						2683.0	755.0	1078.0	1376.0	1666.0	1717.0	1597.0	1836.0	1772.0	*1500*	*1550*	*1720*	Net Profit ($mill)	*2280*
						21.7%	18.6%	21.9%	18.0%	16.9%	16.7%	16.7%	16.8%	19.9%	*21.0%*	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
						16.1%	7.6%	10.6%	13.0%	15.0%	15.1%	13.7%	14.4%	11.7%	*10.0%*	*10.1%*	*10.9%*	Net Profit Margin	*13.0%*
						4309.0	6046.0	3830.0	4442.0	3083.0	4273.0	5078.0	4636.0	3266.0	*4000*	*4300*	*4600*	Working Cap'l ($mill)	*5500*
						7606.0	3935.0	2779.0	3509.0	3473.0	4809.0	5786.0	17149	15232	*14000*	*13000*	*12000*	Long-Term Debt ($mill)	*12000*
						8120.0	8846.0	8290.0	9124.0	7794.0	7882.0	8689.0	9077.0	5833.0	*6200*	*6600*	*7100*	Shr. Equity ($mill)	*9100*
						17.5%	6.4%	10.0%	11.1%	15.0%	13.8%	11.5%	7.4%	9.3%	*8.5%*	*9.0%*	*10.0%*	Return on Total Cap'l	*11.5%*
						33.0%	8.5%	13.0%	15.1%	21.4%	21.8%	18.4%	20.2%	30.4%	*24.0%*	*23.5%*	*24.0%*	Return on Shr. Equity	*25.0%*
						19.6%	NMF	9.8%	11.6%	16.6%	16.4%	12.9%	14.4%	20.6%	*14.5%*	*14.5%*	*15.5%*	Retained to Com Eq	*17.0%*
						41%	121%	25%	23%	23%	25%	30%	29%	32%	*39%*	*39%*	*37%*	All Div'ds to Net Prof	*32%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $16493 mill. **Due in 5 Yrs** $9788 mill.
LT Debt $14067 mill. **LT Interest** $395 mill. (63% of Cap'l)

Leases, Uncapitalized Annual rentals $127 mill.

Pension Assets-12/22 $2.5 billion
Obligation $3.1 billion

Common Stock 507,323,509 shares
as of 10/26/23

MARKET CAP: $19.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	2951	1718	5788
Receivables	2629	2659	2512
Inventory	2453	2718	2873
Other	839	916	861
Current Assets	8872	8011	12034
Accts Payable	1246	1139	1246
Debt Due	511	1404	2426
Other	2479	2202	2537
Current Liab.	4236	4745	6209

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Sales	.5%	6.5%	*4.0%*
"Cash Flow"	- -	7.5%	*2.5%*
Earnings	-2.5%	7.5%	*4.0%*
Dividends	-3.5%	13.0%	*4.5%*
Book Value	1.0%	-1.5%	*2.0%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	2946	3098	3226	3514	12784
2022	3707	3746	3773	3887	15113
2023	3649	3852	3708	*3791*	*15000*
2024	*3600*	*3800*	*3900*	*4000*	*15300*
2025	*3850*	*3900*	*3950*	*4100*	*15800*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.76	.80	1.02	1.04	3.61
2022	.93	.87	.82	.88	3.50
2023	.59	.66	.82	***.88***	***2.95***
2024	***.65***	***.72***	***.79***	***.89***	***3.05***
2025	***.75***	***.80***	***.90***	***.95***	***3.40***

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.22	.22	.245	.245	.93
2021	.245	.245	.28	.28	1.05
2022	.28	.28	.29	.29	1.14
2023	.29	.29	.29	.29	1.16
2024	.29				

BUSINESS: Baxter International, through its subsidiaries, provides a broad portfolio of healthcare products, including acute and chronic dialysis therapies; sterile IV solutions; infusion systems and devices; parenteral nutrition therapies; inhaled anesthetics; generic injectable pharmaceuticals; surgical hemostat and sealant products; smart bed systems; patient monitoring and diagnostic technologies; and respiratory health devices. Completed Baxalta spinoff (7/15). Acq. Claris (7/17); Hillrom (12/21). Has 60,000 employees. Off./dirs. own less than 1% of common stock; BlackRock, 10.0%; Vanguard, 9.9%; Wellington, 7.2%; Morgan Stanley, 5.5% (3/23 proxy). Chairman and CEO: Jose E. Almeida. Inc.: DE. Addr.: 1 Baxter Pkwy., Deerfield, IL. 60015. Tel.: 224-948-2000. Internet: www.baxter.com.

Baxter was scheduled to report fourth-quarter results just as this Issue was going to press. Recent comparisons have been challenged by macroeconomic-related headwinds, higher borrowing costs, and the divestiture of the company's BioPharma Solution business during the third quarter. On a positive note, we saw signs of increased market stabilization as the year progressed and believe the company is well positioned to deliver improved top- and bottom-line results in 2024. Internal forecasts were calling for adjusted earnings in a range of $0.85-$0.88 a share in the final stanza of 2023, implying decent sequential growth.

The company enters 2024 with a new operating model. The move comes as part of a wider range of transformative initiatives and is designed to drive heightened innovation and improved agility in response to market dynamics. Going forward, Baxter will report performance in four segments, including Medical Products & Therapies, Healthcare Systems & Technologies, Pharmaceuticals, and Kidney Care. The new model is intended to promote a more resilient supply chain and greater alignment with the company's manufacturing footprint.

That said, we could see another adjustment later this year. Baxter is preparing to spin off its Kidney Care business into an independent publicly traded company. Leadership expects this transaction to close by July, or potentially earlier. Investors recall that the company sold its BioPharma Solutions unit last year for around $4 billion. Proceeds from this deal are being used primarily to pay down debt.

The stock is ranked to track the broader market averages in the year ahead (Timeliness: 3). BAX shares have rebounded 22% in value since our November report, fueled in part by easing industry concerns tied to the potential impact of weigh weight-loss drugs. That said, the equity is still trading well off the $50-a-share highs we saw in mid-2023. At less than 13x forward earnings, the current entry point seems attractive, particularly for investors able to implement a buy-and-hold strategy. Our projections suggest above-average recovery potential over both the 18-month and 2027-2029 time frames.

Michael Ratty *February 9, 2024*

(A) Diluted egs. Excl. nonrecur. gains/(losses): '08, ($0.22); '09, ($0.21); '10, ($1.59); '11, ($0.43); '12, ($0.35); '13, ($1.01); '14, ($0.34); '15, $0.38; '16, $7.05; '17, ($1.19); '18, ($0.08); '19, ($1.38); '20, ($0.96); '21, ($1.08); '22, ($8.33). May not sum due to rounding. Next egs. report due late April. **(B)** Div'd historically paid in Jan., Apr., July, and Oct.■ Div'd reinvestment plan available. **(C)** Incl. intang. In 2022: $13.6 billion, $27.03/sh. **(D)** In millions. **(E)** Data post 2014 reflect completed spinoff of biopharmaceutical operation.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	40
Earnings Predictability	85

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BALCHEM CORP. NDQ-BCPC

RECENT PRICE 145.33 | P/E RATIO 39.6 (Trailing: 45.6 Median: 37.0) | RELATIVE P/E RATIO 2.29 | DIV'D YLD 0.6% | VALUE LINE

TIMELINESS 4 Lowered 10/27/23
SAFETY 2 Raised 2/25/22
TECHNICAL 2 Raised 1/19/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$104-$192	$148 (0%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	220	(+50%)	*11%*
Low	160	(+10%)	*3%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	135	120	134
to Sell	122	124	124
Hld's(000)	28817	28700	28380

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	60.0	69.9	70.9	88.8	89.5	117.8	106.6	115.7	174.3	169.0	150.8	148.0								
Low:	35.7	48.9	50.8	53.1	71.9	70.2	76.2	78.3	106.3	110.1	110.7	135.8								
	8.48	7.81	8.87	10.01	10.54	11.16	17.55	17.52	17.42	18.58	19.95	19.99	21.74	24.75	29.31	*28.85*	*31.00*	*33.60*	Sales per sh	*39.05*
	.98	1.24	1.46	1.65	1.69	1.83	2.70	3.16	3.22	4.20	3.82	3.90	4.20	4.49	4.89	*5.10*	*5.55*	*6.10*	"Cash Flow" per sh	*7.20*
	.67	.93	1.12	1.28	1.32	1.45	1.69	1.89	1.75	2.79	2.42	2.45	2.60	2.94	3.25	*3.40*	*3.70*	*4.20*	Earnings per sh [A]	*5.00*
	.07	.11	.15	.18	.22	.26	.30	.34	.38	.42	.47	.52	.58	.64	.71	.79	*.84*	*.90*	Div'ds Decl'd per sh [B]	*1.12*
	.20	.12	.26	.23	.47	.27	.43	1.31	.73	.86	.59	.88	1.05	1.16	1.56	*1.60*	*1.65*	*1.75*	Cap'l Spending per sh	*1.90*
	4.18	5.24	6.52	7.95	9.27	10.96	12.71	14.71	16.41	19.27	21.44	23.09	25.58	27.16	29.18	*32.55*	*35.20*	*39.05*	Book Value per sh [C]	*46.90*
	27.37	28.10	28.75	29.17	29.45	30.23	30.85	31.53	31.76	32.02	32.26	32.20	32.37	32.29	32.15	*32.25*	*32.25*	*32.00*	Common Shs Outst'g [D]	*32.00*
	24.0	18.4	23.4	30.3	25.6	32.9	33.7	31.4	37.9	29.0	37.8	38.8	38.6	46.5	40.9	*38.3*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*38.0*
	1.44	1.23	1.49	1.90	1.63	1.85	1.77	1.58	1.99	1.46	2.04	2.07	1.98	2.51	2.36	*2.14*			Relative P/E Ratio	*2.10*
	.5%	.6%	.6%	.5%	.7%	.5%	.5%	.6%	.6%	.5%	.5%	.5%	.6%	.5%	.5%	.6%			Avg Ann'l Div'd Yield	*.6%*
							541.4	552.5	553.2	594.8	643.7	643.7	703.6	799.0	942.4	*930*	*1000*	*1075*	Sales ($mill)	*1250*
							20.8%	24.2%	24.8%	23.8%	23.7%	23.1%	23.1%	22.1%	20.9%	*23.4%*	*23.5%*	*23.5%*	Operating Margin	*23.5%*
							30.5	40.0	46.2	44.4	44.7	45.9	51.3	48.9	51.8	*55.0*	*60.0*	*60.0*	Depreciation ($mill)	*70.0*
							52.8	59.7	56.0	90.1	78.6	79.7	84.6	96.1	105.4	*110*	*120*	*135*	Net Profit ($mill)	*160*
							31.4%	31.4%	32.5%	--	20.7%	17.4%	20.5%	23.3%	21.2%	*21.0%*	*21.0%*	*21.0%*	Income Tax Rate	*21.5%*
							9.8%	10.8%	10.1%	15.1%	12.2%	12.4%	12.0%	12.0%	11.2%	*11.8%*	*11.9%*	*12.5%*	Net Profit Margin	*12.8%*
							85.8	117.7	87.4	90.9	144.2	162.7	172.5	178.4	195.8	*240*	*250*	*265*	Working Cap'l ($mill)	*275*
							297.5	262.5	245.5	184.0	156.0	248.6	163.6	110.9	442.8	*380*	*350*	*325*	Long-Term Debt ($mill)	*300*
							391.9	463.7	521.0	616.9	691.6	743.7	828.2	877.0	938.3	*1050*	*1135*	*1250*	Shr. Equity ($mill)	*1500*
							8.0%	8.7%	7.8%	11.7%	9.7%	8.3%	8.8%	9.8%	8.0%	*8.5%*	*9.0%*	*9.5%*	Return on Total Cap'l	*9.5%*
							13.5%	12.9%	10.7%	14.6%	11.4%	10.7%	10.2%	11.0%	11.2%	*10.5%*	*10.5%*	*11.0%*	Return on Shr. Equity	*10.5%*
							11.5%	10.9%	8.7%	12.6%	9.4%	8.7%	8.2%	8.8%	9.0%	*8.0%*	*8.0%*	*8.5%*	Retained to Com Eq	*8.5%*
							15%	15%	19%	13%	17%	19%	20%	19%	20%	*23%*	*23%*	*21%*	All Div'ds to Net Prof	*22%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $380.6 mill. **Due in 5 Yrs** $25.0 mill.
LT Debt $380.6 mill. **LT Interest** $22.0 mill.
(LT Int. Earned: 7.0x)
(27% of Cap'l)

Leases, Uncapitalized Annual rentals $5.0 million
No Defined Benefit Pension Plan

Common Stock 32,241,056 shs.
as of 10/19/23

MARKET CAP: $4.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	103.2	66.6	77.0
Receivables	117.4	131.6	129.0
Inventory (FIFO)	91.1	119.7	116.3
Other	10.5	18.0	18.9
Current Assets	322.2	335.8	341.2
Accts Payable	56.2	57.3	49.7
Debt Due	.2	--	--
Other	87.4	82.7	58.3
Current Liab.	143.8	140.0	108.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Sales	10.0%	7.5%	*7.0%*
"Cash Flow"	10.5%	4.5%	*7.0%*
Earnings	8.5%	6.0%	*8.5%*
Dividends	12.0%	10.0%	*8.5%*
Book Value	11.5%	8.0%	*8.0%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	185.7	202.4	197.9	213.1	799.0
2022	228.9	236.7	244.3	232.5	942.4
2023	232.5	231.3	229.9	*236.3*	*930*
2024	*245*	*250*	*250*	*255*	*1000*
2025	*260*	*265*	*270*	*280*	*1075*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.72	.70	.77	.76	2.94
2022	.89	.92	.78	.66	3.25
2023	.70	.93	.90	*.87*	*3.40*
2024	*.90*	*1.00*	*.90*	*.90*	*3.70*
2025	*.95*	*1.05*	*1.10*	*1.10*	*4.20*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.52	--	--	--	.52
2021	.58	--	--	--	.58
2022	.64	--	--	--	.64
2023	.71	--	--	--	.71
2024	.79				

BUSINESS: Balchem Corp. develops, manufactures, markets, and distributes specialty performance ingredients and products for the nutritional, food, pharmaceutical, animal health, medical device sterilization, plant nutrition, and industrial markets. Its operating segments are: Human Nutrition & Heath (56% of 2022 sales), Animal Nutrition & Health (28%), and Specialty Products (14%), Other (2%). International sales comprised 28% of 2022 sales. Has 1,340 employees. Off./dir. own 1.8% of stock; BlackRock, 15.4%; Vanguard, 11.9%; APG Asset Management, 8.4%; Wasatch Advisors, 5.1% (4/23 proxy). Inc.: MD. Chairman/President/CEO: Theodore L. Harris. Addr.: 52 Sunrise Park Road, New Hampton, NY 10958. Tel.: 845-326-5600. Internet: www.balchem.com.

Balchem Corp. likely posted decent fourth-quarter results to close out 2023. On one hand, we suspect pricing power for the company's core Human Nutrition products has remained quite strong. However, the European market for monogastric nutrients (primarily for pigs and poultry) has been weak, due to high input costs and complex livestock regulations, which have weighed on profits and created investment uncertainty. Meanwhile, competition in the form of low-cost Chinese products likely gained market share in the current environment, with soft demand within China resulting in a move of capacity offshore. Still, earnings should see a large year over year gain, supported by an improved mix towards high-margin Human Nutrition items.

Business prospects in 2024 are encouraging, as well. We expect customer inventories have been worked through after peaking in the early part of 2023. In the U.S., dairy farm margins should improve as a result of lower feed costs and higher milk prices, which should in turn boost demand for the company's ruminant nutrient products. We anticipate demand in Europe for monogastric products will eventually normalize, likely later in the year and in 2025. Meanwhile, well-performing human supplements should support strong gross margins through 2024, and ultimately provide a boost to the bottom line. We're calling for per-share earnings of $3.70 and $4.20 in 2024 and 2025, respectively.

New acquisitions and product development should drive solid earnings growth over the long pull. Management has frequently sought to cross-sell and combine multiple products to drive incremental volume and price increases. A continuation of this strategy should be accretive to both volume and margins. The company recently introduced a new marketing campaign for choline products, done in partnership with the American Nutrition Association.

This equity may interest some conservative accounts. The stock boasts strong scores for Price Stability, Price Growth Persistence, and Earnings Predictability. However, capital appreciation potential out to 2027-2029 looks below average.

Lucas Vanarthos *February 23, 2024*

(A) Based on diluted shares. Next earnings report due early May. Quarterly EPS may not sum due to rounding.
(B) Annual dividend, historically paid early Jan.
(C) Includes intangibles. On 9/30/23: $958.7 mill., $29.74/sh.
(D) In mill., adjusted for split.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	100
Earnings Predictability	85

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BECTON, D'SON. NYSE-BDX

RECENT PRICE 237.85 | P/E RATIO 18.5 (Trailing: 19.5 Median: 20.0) | RELATIVE P/E RATIO 1.08 | DIV'D YLD 1.6% | VALUE LINE

TIMELINESS 3 Raised 6/9/23
SAFETY 1 Raised 3/4/05
TECHNICAL 5 Lowered 2/2/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$203-$323	$263 (10%)

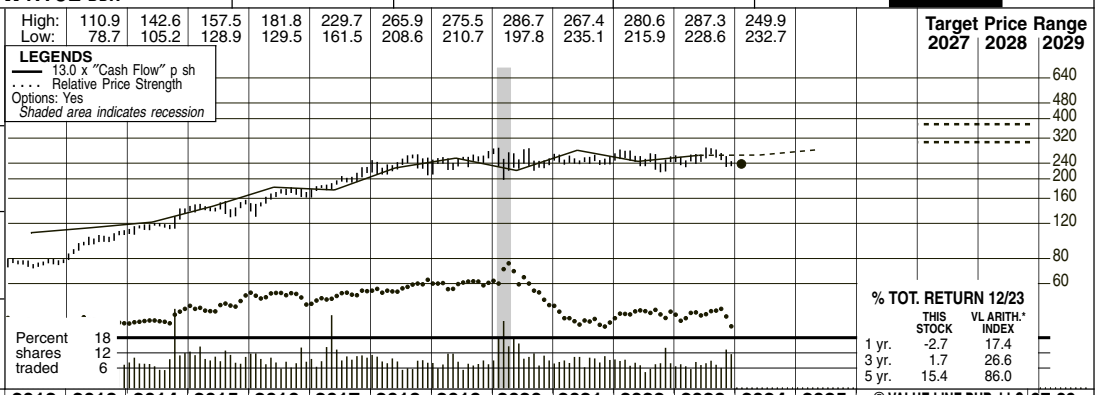
2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	375	(+60%)	*13%*
Low	305	(+30%)	*8%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	618	705	631
to Sell	670	622	683
Hld's(000)	244220	252445	254158

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	110.9	142.6	157.5	181.8	229.7	265.9	275.5	286.7	267.4	280.6	287.3	249.9						
Low:	78.7	105.2	128.9	129.5	161.5	208.6	210.7	197.8	235.1	215.9	228.6	232.7						
Sales per sh A	29.44	30.20	32.08	36.44	39.15	41.52	43.99	48.80	58.53	53.05	59.59	63.94	59.02	71.18	66.59	66.71	*69.65*	*73.80*
"Cash Flow" per sh	6.60	7.13	7.34	8.27	8.30	8.78	9.37	11.25	13.99	13.56	17.48	19.58	16.97	21.42	18.85	20.20	*20.85*	*22.25*
Earnings per sh AB	4.46	4.95	4.94	5.62	5.36	5.81	6.25	7.16	8.59	9.48	11.01	11.68	10.20	13.08	11.35	12.21	*12.85*	*14.00*
Div'ds Decl'd per sh C■	1.14	1.32	1.48	1.64	1.80	1.98	2.18	2.40	2.64	2.92	3.00	3.08	3.16	3.32	3.48	3.64	*3.80*	*4.00*
Cap'l Spending per sh	2.68	2.96	2.75	2.82	2.81	3.03	3.40	2.83	3.25	3.19	3.34	3.54	2.79	4.33	3.43	3.01	*3.30*	*3.30*
Book Value per sh D	20.30	21.69	23.65	22.48	21.00	26.00	26.32	34.00	35.79	56.80	78.26	77.95	81.94	83.22	89.22	88.83	*96.55*	*105.15*
Common Shs Outst'g E	243.08	237.08	229.82	214.82	196.91	194.00	191.98	210.70	213.29	227.94	268.22	270.43	290.02	284.48	283.36	290.39	*290.00*	*290.00*
Avg Ann'l P/E Ratio	19.0	13.7	14.9	14.5	14.1	15.6	18.1	19.5	18.4	19.4	20.8	20.8	24.7	18.9	22.3	20.6	*Bold figures are Value Line estimates*	
Relative P/E Ratio	1.14	.91	.95	.91	.90	.88	.95	.98	.97	.98	1.12	1.11	1.27	1.02	1.29	1.19		
Avg Ann'l Div'd Yield	1.3%	1.9%	2.0%	2.0%	2.4%	2.2%	1.9%	1.7%	1.7%	1.6%	1.3%	1.3%	1.3%	1.3%	1.4%	1.4%		
Sales ($mill) A							8446.0	10282	12483	12093	15983	17290	17117	20248	18870	19372	*20200*	*21400*
Operating Margin							26.6%	32.8%	30.5%	32.9%	37.0%	39.2%	35.3%	35.3%	33.5%	35.4%	*35.5%*	*36.0%*
Depreciation ($mill)							562.0	891.0	1114.0	1088.0	1978.0	2253.0	2154.0	2273.0	2229.0	2288.0	*2325*	*2400*
Net Profit ($mill)							1236.0	1480.0	1869.1	2072.0	2862.8	3195.0	2875.6	3911.0	3203.0	3577.0	*3725*	*4060*
Income Tax Rate							22.8%	31.2%	20.0%	15.2%	17.3%	18.8%	15.3%	11.4%	13.8%	12.9%	*15.0%*	*15.0%*
Net Profit Margin							14.6%	14.4%	15.0%	17.1%	17.9%	18.5%	16.8%	19.3%	17.0%	18.5%	*18.4%*	*19.0%*
Working Cap'l ($mill)							3896.0	1659.0	1967.0	15291	195.0	1009.0	3133.0	2212.0	330.0	2035.0	*1455*	*2275*
Long-Term Debt ($mill)							3768.0	11370	10550	18667	18894	18081	17224	17110	13886	14738	*14000*	*12000*
Shr. Equity ($mill) D							5053.0	7164.0	7633.0	12948	20994	21081	23765	23677	25282	25796	*28000*	*30500*
Return on Total Cap'l							14.8%	9.0%	11.3%	7.4%	7.8%	8.9%	7.6%	10.1%	8.6%	9.3%	*9.5%*	*10.0%*
Return on Shr. Equity							24.5%	20.7%	24.5%	16.0%	13.6%	15.2%	12.1%	16.5%	12.7%	13.9%	*13.5%*	*13.5%*
Retained to Com Eq							16.1%	13.9%	17.1%	10.8%	9.2%	10.5%	7.8%	11.7%	8.4%	9.5%	*9.5%*	*9.5%*
All Div'ds to Net Prof							34%	33%	30%	33%	32%	31%	36%	29%	34%	31%	*30%*	*29%*



Target Price Range 2027 2028 2029
640
480
400
320
240
200
160
120
80
60

% TOT. RETURN 12/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-2.7	17.4
3 yr.	1.7	26.6
5 yr.	15.4	86.0

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CAPITAL STRUCTURE as of 9/30/23
Total Debt $15879 mill. **Due in 5 Yrs** $9474 mill.
LT Debt $14738 mill. **LT Interest** $420 mill.
(Total interest coverage: 4.7x) (36% of Capital)

Leases, Uncapitalized Annual rentals $132 mill.
Pension Assets-9/23 $2129 mill.
Oblig. $2617 mill.

Pfd Stock None
Common Stock 290,405,122 shares
as of 10/31/23
MARKET CAP: $69.1 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	2295	1014	1424
Receivables	2497	2191	2534
Inventory (FIFO)	2866	3224	3273
Other	1180	1712	1445
Current Assets	8838	8141	8676
Accts Payable	1793	1699	1641
Debt Due	500	2179	1141
Other	4333	3933	3859
Current Liab.	6626	7811	6641

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	5.5%	3.5%	*3.5%*
"Cash Flow"	9.0%	6.0%	*4.5%*
Earnings	8.0%	4.5%	*5.5%*
Dividends	7.0%	4.0%	*5.0%*
Book Value	14.0%	9.0%	*5.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2021	5316	4907	4890	5135	20248
2022	4707	4761	4641	4761	18870
2023	4586	4821	4878	5087	19372
2024	*4750*	*5000*	*5150*	*5300*	*20200*
2025	*5000*	*5300*	*5500*	*5600*	*21400*

Fiscal Year Ends	EARNINGS PER SHARE AB Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2021	4.55	3.19	2.74	2.60	13.08
2022	3.17	2.78	2.66	2.75	11.35
2023	2.98	2.86	2.96	3.42	12.21
2024	*2.45*	*3.10*	*3.55*	*3.75*	*12.85*
2025	*3.10*	*3.40*	*3.60*	*3.90*	*14.00*

Calendar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.79	.79	.79	.83	3.20
2021	.83	.83	.83	.87	3.36
2022	.87	.87	.87	.91	3.52
2023	.91	.91	.91	.95	3.68
2024					

BUSINESS: Becton, Dickinson & Co. operates in three segments: Medical (49% of FY'23 sales) manufactures medical devices which include Medication Delivery and Pharmaceutical Systems; Life Sciences (26%) includes Integrated Diagnostic Solutions and Biosciences; Interventional (25%) includes Surgery, Peripheral Intervention and Urology and Critical Care. '23 R&D: $1237 mill, 6.6% of sales. Acquired C.R Bard 12/17. Divested Diabetes Care business 3/22. Employs about 73,000. Officers & directors own less than 1.0% of comm. stock; The Vanguard Group, 9.0%; BlackRock, 8.0%. (12/23 proxy). CEO and President: Thomas E. Pohlen. Inc.: New Jersey. Address: One Becton Drive, Franklin Lakes, NJ 07417. Telephone: 201-847-6800. Internet: www.bd.com.

Shares of Becton, Dickinson (BD) have been struggling of late. Indeed, after reaching an all-time high price of over $287 per share last summer, the stock has decreased 17% in value. Although the company posted solid results for the 2023 fiscal fourth quarter (ended September 30th), Wall Street was not enamored with BD's profit outlook for this fiscal year.

We have lowered our fiscal 2024 estimates and introduced our fiscal 2025 forecast. Our fiscal 2024 sales target now stands at $20.2 billion, $300 below our prior call. The figure would represent a 4% gain year over year. The BD Medical unit should continue to see nice growth in medication management and pharmaceutical systems. Too, the Interventional segment is generating solid demand in peripheral intervention and urology & critical care. However, there may be some weakness in the Life Sciences arm, where integrated diagnostic solutions continue to see lower COVID-19-related revenues. Meanwhile, we slashed our earnings target by $0.65 per share, to $12.85. Margins are likely to be tighter than previously thought, especially in the first quarter. Profits are expected to pick up in the second half of the year. In our first look at fiscal 2025, we are anticipating sales to advance 6%, to $21.4 billion. Earnings should rise at a slightly higher clip, to $14.00 per share.

The outlook out to 2027-2029 is sound. BD remains one of the top names in the medical device space and continues to churn out new products every year. Too, the company's focus on operating more efficiently should help generate significant profits for the foreseeable future. All told, we are projecting mid-single-digit top- and bottom-line increases out 3- to 5-years.

This issue is a solid choice for risk-averse investors. The stock is ranked to mirror the broader market averages in the year ahead. The outlook out to late decade is about the same, with capital appreciation potential just below the *Value Line* median. For those on the conservative side, BDX has top marks for Safety (1) and Financial Strength (A++). There is also an income component here, although the yield is below average.

Kevin P. O'Sullivan *February 9, 2024*

(A) Fiscal years end September 30th.
(B) Dil. EPS. Qtly EPS may not sum. Excl nonrecurring gains/(losses): '10, $0.55; '12, $0.23; '13, $0.68; '14, ($0.26); '15 ($3.81); '16 ($4.10); '17, ($4.88); '18, ($10.41); '19, ($7.79); '20, ($7.49); '21, ($6.23); '22, ($5.97); '23, ($7.11). Excludes discontinued: '22, $0.50, '23, ($0.16). Next egs report due early May.
(C) Dividends paid in late Dec., late March, late June, and late Sep. ■ DRIP available.
(D) Includes intangibles. In FY'23: $35.5 billion, $122.15 a share. **(E)** In millions.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	70
Earnings Predictability	95

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BWX TECHNOLOGIES NYSE-BWXT

RECENT PRICE 104.38 | P/E RATIO 37.8 (Trailing: 38.8 Median: NMF) | RELATIVE P/E RATIO 2.12 | DIV'D YLD 0.9% | VALUE LINE 1214

TIMELINESS 3 Raised 3/8/24
SAFETY 3 Lowered 3/15/24
TECHNICAL 4 Lowered 3/8/24
BETA .80 (1.00 = Market)

18-Month Target Price Range

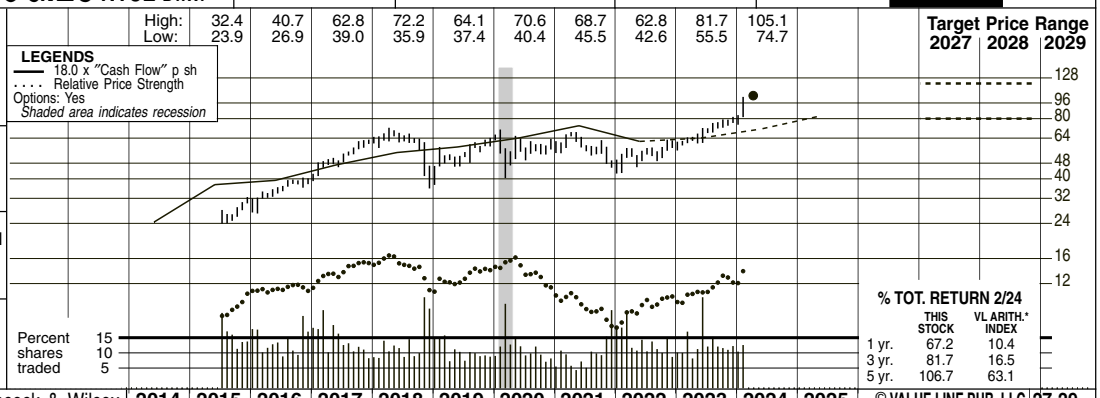
Low-High	Midpoint (% to Mid)
$60-$102	$81 (-20%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+15%)	*6%*
Low	80	(-20%)	*-4%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	192	158	208
to Sell	159	187	197
Hld's(000)	93051	88837	86705



On June 30, 2015, The Babcock & Wilcox Company completed the spinoff of its power generation business. These operations formed a new publicly traded entity, Babcock & Wilcox Enterprises (BWE). The remaining company and stock changed its name to BWX Technologies (BWXT).

CAPITAL STRUCTURE as of 12/31/23
Total Debt $1336.8 mill. **Due in 5 Yrs** $6.3 mill.
LT Debt $1203.4 mill. **LT Interest** $87.3 mill. (56% of Cap'l)

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 91,309,109 shs. **as of 2/22/24**

MARKET CAP: $9.5 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	40.6	41.9	78.7
Receivables	87.3	87.2	86.8
Inventory	- -	- -	- -
Other	645.8	642.5	652.3
Current Assets	773.7	771.6	817.8
Accts Payable	189.8	127.1	126.7
Debt Due	- -	6.3	133.4
Other	269.8	234.5	114.9
Current Liab.	459.6	367.9	375.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	- -	7.5%	*4.5%*
"Cash Flow"	- -	7.5%	*6.5%*
Earnings	- -	7.5%	*6.5%*
Dividends	- -	12.5%	*4.5%*
Book Value	- -	27.5%	*8.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	528.3	505.1	498.7	592.0	2124.1
2022	530.7	554.2	523.7	624.2	2232.8
2023	568.4	612.4	590.0	725.5	2496.3
2024	*600*	*610*	*630*	*700*	*2540*
2025	*630*	*650*	*670*	*710*	*2660*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.73	.62	.63	1.26	3.24
2022	.64	.82	.67	.47	2.60
2023	.67	.64	.66	.71	2.68
2024	*.70*	*.65*	*.70*	*.95*	*3.00*
2025	*.80*	*.80*	*.90*	*1.00*	*3.50*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.19	.19	.19	.19	.76
2021	.21	.21	.21	.21	.84
2022	.22	.22	.22	.22	.88
2023	.23	.23	.23	.23	.92
2024	.24				

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
13.60	13.44	14.51	16.98	18.90	19.88	22.28	23.24	24.47	*27.35*	*28.20*	*29.55*	Revenues per sh	*31.30*
1.35	2.08	2.19	2.61	3.01	3.21	3.56	4.10	3.42	*3.55*	*3.95*	*4.60*	"Cash Flow" per sh	*5.70*
.36	1.31	1.76	2.01	2.27	2.55	2.91	3.24	2.60	2.68	*3.00*	*3.50*	Earnings per sh [A]	*4.55*
- -	.12	.36	.42	.64	.68	.76	.84	.88	.92	*.96*	*1.00*	Div'ds Decl'd per sh [B]	*1.12*
.71	.65	.49	.97	1.15	1.91	2.68	3.40	2.17	*1.65*	*2.50*	*2.50*	Cap'l Spending per sh	*3.60*
9.36	2.52	1.40	2.87	2.47	4.24	6.48	6.97	8.20	*8.95*	*10.65*	*11.10*	Book Value per sh	*12.70*
106.69	105.30	106.87	99.42	95.25	95.31	95.31	91.40	91.25	*91.30*	*90.00*	*90.00*	Common Shs Outst'g [C]	*90.00*
- -	21.0	20.1	25.5	26.6	21.0	19.7	18.0	20.4	25.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*22.0*
- -	1.06	1.06	1.28	1.44	1.12	1.01	.97	1.18	1.43			Relative P/E Ratio	*1.20*
- -	.4%	1.0%	.8%	1.1%	1.3%	1.3%	1.4%	1.7%	1.3%			Avg Ann'l Div'd Yield	*1.1%*
1450.6	1415.5	1550.6	1687.7	1799.9	1894.9	2123.5	2124.1	2232.8	2496.3	*2540*	*2660*	Revenues ($mill)	*2815*
15.7%	17.5%	19.2%	17.5%	18.6%	19.1%	18.4%	17.8%	17.1%	*17.0%*	*17.0%*	*18.5%*	Operating Margin	*19.5%*
105.8	78.6	50.6	56.6	60.1	61.7	60.7	69.1	73.8	78.6	*85.0*	*97.0*	Depreciation ($mill)	*105*
38.4	140.7	183.1	202.8	227.0	244.1	278.7	305.9	238.2	245.8	*270*	*315*	Net Profit ($mill)	*410*
5.3%	36.4%	28.8%	31.4%	18.9%	22.0%	22.9%	22.6%	24.1%	23.4%	*24.0%*	*24.0%*	Income Tax Rate	*24.0%*
2.6%	9.9%	11.8%	12.0%	12.6%	12.9%	13.1%	14.4%	10.7%	9.8%	*10.6%*	*11.8%*	Net Profit Margin	*14.5%*
654.2	293.5	253.7	345.0	165.1	225.1	243.9	314.1	403.7	442.8	*440*	*440*	Working Cap'l ($mill)	*460*
285.0	285.0	497.7	481.1	753.6	809.4	862.7	1189.3	1282.6	1203.4	*1200*	*1200*	Long-Term Debt ($mill)	*1400*
998.7	265.7	150.0	285.4	235.7	404.1	617.8	637.2	748.3	933.4	*960*	*1000*	Shr. Equity ($mill)	*1145*
3.3%	26.5%	28.9%	27.4%	24.3%	21.6%	19.9%	17.7%	13.1%	*12.0%*	*12.0%*	*13.0%*	Return on Total Cap'l	*16.5%*
3.8%	52.9%	122.0%	71.1%	96.3%	60.4%	45.1%	48.0%	31.8%	26.3%	*28.0%*	*31.5%*	Return on Shr. Equity	*36.0%*
3.8%	40.0%	97.1%	56.6%	69.1%	42.6%	33.3%	35.5%	21.3%	*19.5%*	*19.0%*	*22.5%*	Retained to Com Eq	*27.0%*
- -	25%	20%	20%	28%	29%	26%	26%	33%	*34%*	*32%*	*29%*	All Div'ds to Net Prof	*25%*

BUSINESS: BWX Technologies has two reporting segments: Government (propulsion, materials, fuel, components, services, TRISO technology); Commercial (medicine, environmental, disposal, laboratory, research, advanced technologies). BWX derives a significant portion of its revenues and earnings from the U.S. Government (81% of 2023 sales & 83% of operating income). Off & Dir own less than 1% of common stock; T. Rowe Price, 9.6%; Vanguard, 9.2%; William Blair, 6.8%; Wellington, 7.4%; Boston Partners, 5.0%; BlackRock, 5.6%; (3/23 Proxy). Has about 6,250 employees. Pres. & CEO: Rex D. Geveden. Executive Chairman: John A. Fees. Inc.: DE. Address: 800 Main Street, 4th Fl., Lynchburg, VA 24504. Tel.: (434) 522-3800. Internet: www.bwxt.com.

BWX Technologies gives investors undiluted exposure to the nuclear power industry. No other publicly-traded entity does this. Other participants are either too small, illiquid, and/or have nuclear as a relatively small part of their overall business. Those investors who have owned this stock since early 2022 have done very well for themselves, since the equity's price has risen over 82%, compared to under 20% for the S&P 500 and the NASDAQ.

Why is this? Over the last two years, various government funded initiatives have encouraged the medical and military sectors to order nuclear parts, components, and services from BWX. In addition, increased geopolitical instability in the Middle East has prompted the U.S. Navy to buy more nuclear parts to refurbish engines for its submarines and aircraft carriers. More recently, NASA has tapped the company to build nuclear engines for spaceships to Mars. This is a long-term and lucrative contract, and one that investors appear to be excited about. These engines would reduce the time it takes a spaceship to get to Mars from seven months to three; a considerable difference.

We look for the stock price to tread water for most of this year. This is because the company's operations tend to go in cycles, whereby it nails down a number of contracts for a period of time, and then has a few quarters when sales are generally for servicing, repairing, and maintenance. We think that BWXT has now entered the latter period, which is less lucrative. Also, the stock looks a little overvalued at present.

Still, we have raised this issue's 2027-2029 Target Price Range from $50-$80 to $80-$120. BWXT is exploring the medical isotope and renewable energy markets in greater depth. These arenas are higher margin, especially the medical sector. We also believe that over time, nuclear power will gain greater global acceptance as a reliable and secure energy source. Nuclear power production and storage has, in general, become more safeguarded. Moreover, the construction of mini nuclear power reactors will likely become more prevalent, since they are quicker and cheaper to build than the standard plants, which cost around $12 billion.

Jeremy J. Butler *March 15, 2024*

(A) Diluted earnings. Next earnings report due late April.
(B) Quarterly dividends expected to be paid in early March, June, September, and December.
(C) In millions.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	80

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CACI INT'L INC. NYSE-CACI

RECENT PRICE **376.08** | P/E RATIO **22.9** (Trailing: 22.8 Median: 17.0) | RELATIVE P/E RATIO **1.27** | DIV'D YLD **Nil** | **VALUE LINE**

TIMELINESS 2 Raised 2/2/24
SAFETY 3 New 5/31/02
TECHNICAL 3 Raised 3/29/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

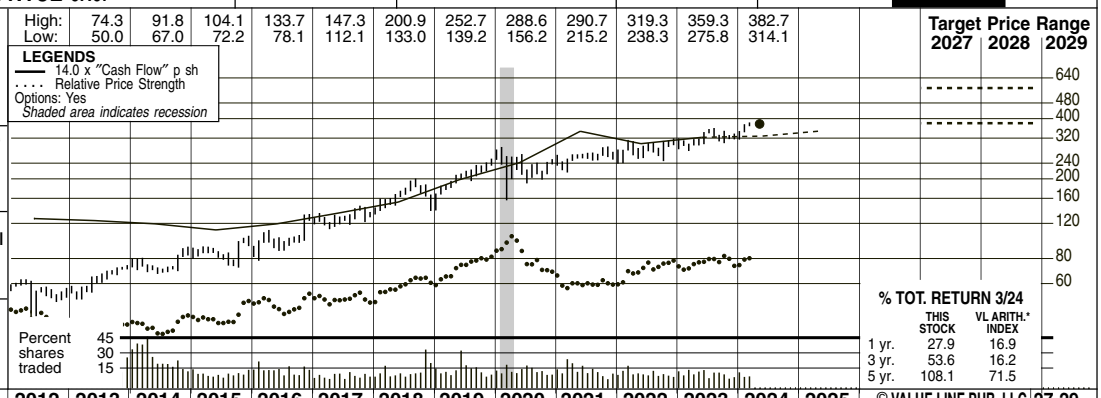
Low-High	Midpoint (% to Mid)
$329-$512	$421 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	570	(+50%)	*11%*
Low	380	(Nil)	*1%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	173	175	202
to Sell	222	214	213
Hld's(000)	21219	19109	19688



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
80.11	91.09	104.11	118.49	153.20	158.56	151.68	137.01	153.93	178.02	180.86	200.42	227.95	256.61	264.90	294.01	*336.35*	*356.30*	Revenues per sh [A]	*495.00*
4.33	4.74	5.27	6.63	9.07	8.86	8.53	7.95	8.53	9.62	10.93	14.13	17.22	24.74	21.42	23.09	*23.40*	*24.90*	"Cash Flow" per sh	*32.75*
2.72	3.14	3.47	4.61	5.96	6.35	5.38	5.17	5.76	6.53	7.84	10.46	12.61	18.30	15.49	16.43	*16.20*	*17.10*	Earnings per sh [AB]	*22.00*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
.45	.41	.74	.48	.74	.66	.65	.72	.86	1.77	1.68	1.93	2.88	3.10	3.18	2.80	*4.70*	*5.00*	Cap'l Spending per sh	*6.95*
30.38	33.14	38.78	43.37	47.16	51.89	57.74	61.20	66.08	73.32	85.28	95.31	106.05	113.15	130.40	141.43	*163.20*	*185.10*	Book Value per sh [C]	*260.00*
30.22	29.97	30.25	30.20	24.64	23.22	23.50	24.18	24.32	24.46	24.70	24.88	25.09	23.55	23.42	22.80	*22.00*	*21.50*	Common Shs Outst'g [D]	*20.00*
17.4	13.6	13.6	11.5	9.3	8.7	13.2	15.8	15.9	17.5	18.2	17.2	18.5	12.9	17.6	17.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*21.5*
1.05	.91	.87	.72	.59	.49	.69	.80	.83	.88	.98	.92	.95	.70	1.02	1.04			Relative P/E Ratio	*1.20*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			Avg Ann'l Div'd Yield	*Nil*
						3564.6	3313.5	3744.1	4354.6	4467.9	4986.3	5720.0	6044.1	6202.9	6702.5	*7400*	*7660*	Revenues ($mill) [A]	*9900*
						9.0%	9.1%	8.8%	8.5%	9.2%	9.3%	9.9%	11.0%	10.2%	10.6%	*9.5%*	*9.5%*	Operating Margin	*8.5%*
						65.2	66.1	64.8	71.8	72.2	85.9	110.7	125.4	134.7	141.6	*160*	*165*	Depreciation ($mill)	*215*
						135.3	126.2	142.8	163.7	197.9	265.6	321.5	457.4	366.8	384.7	*355*	*370*	Net Profit ($mill)	*440*
						38.0%	37.4%	36.1%	34.2%	33.7%	19.0%	20.0%	8.4%	19.3%	20.5%	*22.5%*	*22.5%*	Income Tax Rate	*22.5%*
						3.8%	3.8%	3.8%	3.8%	4.4%	5.3%	5.6%	7.6%	5.9%	5.7%	*4.8%*	*4.8%*	Net Profit Margin	*4.4%*
						313.3	276.8	356.6	353.2	392.2	339.8	316.7	446.4	182.2	216.0	*500*	*750*	Working Cap'l ($mill)	*1500*
						1238.7	1029.3	1402.1	1177.6	1015.4	1618.1	1357.5	1688.9	1702.1	1650.4	*1700*	*1700*	Long-Term Debt ($mill)	*1600*
						1356.9	1480.1	1607.2	1793.6	2106.8	2371.3	2661.2	2665.1	3053.4	3224.2	*3600*	*4000*	Shr. Equity ($mill)	*5200*
						5.9%	5.7%	5.4%	6.3%	7.0%	7.3%	8.7%	11.0%	8.2%	8.8%	*7.5%*	*7.5%*	Return on Total Cap'l	*7.0%*
						10.0%	8.5%	8.9%	9.1%	9.4%	11.2%	12.1%	17.2%	12.0%	11.9%	*10.0%*	*9.5%*	Return on Shr. Equity	*8.5%*
						10.0%	8.5%	8.9%	9.1%	9.4%	11.2%	12.1%	17.2%	12.0%	11.9%	*10.0%*	*9.5%*	Retained to Com Eq	*8.5%*
						--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $1774.7 mill. **Due in 5 Yrs** $1704 mill.
LT Debt $1713.4 mill. **LT Interest** $75.0 mill.
(Total interest coverage: 13.5x) (38% of Cap'l)

Leases, Uncapitalized Annual rentals $58.2 mill.

No Defined Benefit Pension Plan

Common Stock 22,285,108 shs.
as of 1/24/24

MARKET CAP: $8.4 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2022	2023	12/31/23
Cash Assets	114.8	115.8	128.9
Receivables	926.1	894.9	947.5
Other	99.4	199.3	227.4
Current Assets	1209.6	1210.0	1303.8
Accts Payable	303.4	181.2	298.5
Debt Due	30.6	45.9	61.3
Other	693.4	766.9	626.3
Current Liab.	1027.4	994.0	986.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '26-'28
Revenues	6.5%	9.5%	*5.5%*
"Cash Flow"	11.0%	19.0%	*7.0%*
Earnings	11.5%	20.0%	*7.0%*
Dividends	--	--	*Nil*
Book Value	10.5%	11.5%	*12.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [A] Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2021	1459	1468	1551	1564	6044.1
2022	1490	1485	1584	1642	6202.9
2023	1605	1649	1744	1703	6702.5
2024	1850	1834	*1860*	*1856*	*7400*
2025	*1900*	*1900*	*1920*	*1940*	*7660*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2021	3.67	4.18	4.78	5.74	18.30
2022	3.70	3.83	4.04	3.93	15.49
2023	3.76	3.68	4.33	4.68	16.43
2024	3.76	3.74	*4.25*	*4.45*	*16.20*
2025	*4.00*	*4.20*	*4.40*	*4.50*	*17.10*

Calendar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	NO CASH DIVIDENDS BEING PAID				
2022					
2023					
2024					
2025					

BUSINESS: CACI International Inc is a provider of expertise and technology to government enterprise and mission customers, supporting national security missions and government modernization/transformation in the intelligence, defense, and federal civilian sectors. Fiscal 2023 revenue by customer type: Department of Defense (72%), Federal Civilian Agencies (23%) and Commercial and other (5%). Has about 23,000 employees. The Vanguard Group, Inc. owns 10.4% of common stock; BlackRock, Inc., 9.4%; Morgan Stanley, 6.2%; FMR LLC, 5.8%; officers and directors, 1.2% (9/23 proxy). President & CEO: John S. Mengucci. Incorporated: Delaware. Address: 12021 Sunset Hills Road, Reston, VA 20190. Tel.: 703-841-7800. Internet: www.caci.com.

CACI International has solid top-line growth momentum. The company likely had revenues of around $1.86 billion in the March period, up 7% from the year-prior tally. We look for CACI to continue to earn recompete contracts at a high rate with the support of a higher fiscal 2024 U.S. defense budget. The company's bottom line will likely improve significantly in the back half of this year, as the contract with the government to sell $200 million of materials at zero profit is in the rearview mirror. The company has also been looking to lower operating expenses.

Secular trends will likely support long-term growth. Business awards in the the first two quarters of fiscal 2024 (years end June 30th) had a weighted (by revenue) average duration of nearly six years. This will likely provide decent revenue stability moving forward. Artificial intelligence (AI) is advancing rapidly and we expect this will expedite the need for the U.S. government to modernize its network beyond the Department of Defense. The record-level Air Force Enterprise IT-as-a-Service contract is ramping up as planned (worth $5.7 billion). Management noted that market uncertainty has opened the door for CACI to strike opportunistic acquisitions in the near future.

There are some serious business headwinds, too. The book-to-bill rate dropped to 1.2, from 1.7 in the first quarter. This metric measures orders received to billings. The quantity of new work contracts has shown signs of weakness. This is likely tied to the threat of a U.S. government shutdown, which will be reevaluated in September 2024. The temporary spending bill limits foreign aid to Ukraine and Israel, thus hurting revenues. Meanwhile, elevated interest rates will likely weigh on the bottom line.

These shares may appeal to momentum-seeking accounts. The stock is up nearly 10% in price since our February review and is pegged to outpace the broader market averages for year-ahead price performance. The high scores for Stock Price Stability (90) and Price Growth Persistence (95) may appeal to risk-averse investors, too. However, capital appreciation over the 3- to 5-year pull is below the *Value Line* median.

Josh Gribben *May 3, 2024*

(A) Fiscal year ends June 30th.
(B) Diluted earnings. Includes stock option expense. Excludes a nonrecurring gain of $4.09 in '18. May not sum to total due to rounding.
Next quarterly earnings report due early August.
(C) Includes intangibles. In fiscal 2023: $4.6 billion, or $197.95/share.
(D) In millions.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	85

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CASEY'S GEN'L STRS. NDQ-CASY

RECENT PRICE 315.37 | P/E RATIO 23.5 (Trailing: 25.1 Median: 21.0) | RELATIVE P/E RATIO 1.27 | DIV'D YLD 0.6% | VALUE LINE

TIMELINESS 3 Lowered 3/22/24
SAFETY 2 Raised 7/14/23
TECHNICAL 3 Raised 4/12/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$250-$427	$339 (5%)

2027-29 PROJECTIONS

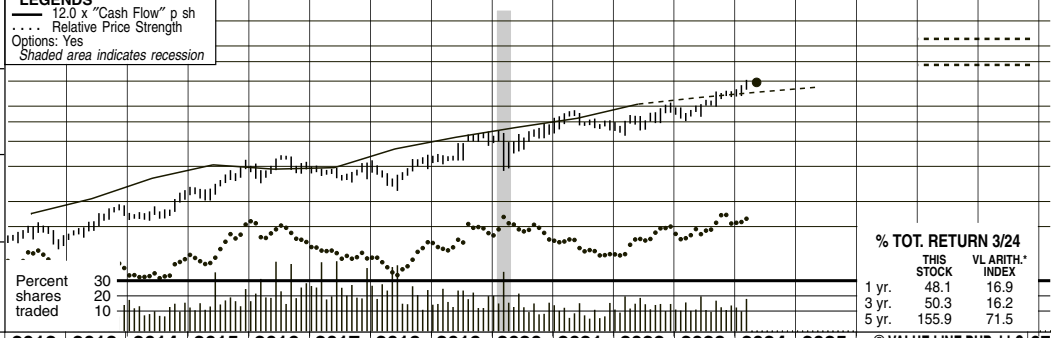
	Price	Gain	Ann'l Total Return
High	520	(+65%)	*14%*
Low	385	(+20%)	*6%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	220	240	266
to Sell	208	225	232
Hld's(000)	32888	31697	31957

	77.6	91.4	129.5	136.2	125.4	137.1	179.2	196.6	229.2	249.9	286.6	324.4
High:	51.4	64.1	80.9	98.8	99.8	90.4	122.9	114.0	175.0	170.8	202.1	268.1
Low:												

LEGENDS
12.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	48.1	16.9
3 yr.	50.3	16.2
5 yr.	155.9	71.5

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
92.20	91.06	148.43	183.21	189.06	203.60	199.74	182.36	193.64	227.56	255.09	249.29	235.65	349.01	405.08	*393.80*	*406.50*	*415.55*	Sales per sh [A]	*475.00*
3.17	3.74	4.66	5.59	5.80	6.90	8.72	10.16	9.68	9.87	12.23	13.99	15.65	17.40	20.44	*22.05*	*23.50*	*24.90*	"Cash Flow" per sh	*32.05*
1.82	2.31	2.22	3.07	2.86	3.46	4.68	5.73	4.48	3.73	5.51	7.10	8.38	9.10	11.91	*12.90*	*14.00*	*15.10*	Earnings per sh [A B]	*21.50*
.29	.32	.46	.60	.66	.71	.80	.86	.96	1.04	1.16	1.28	1.32	1.39	1.52	*1.72*	*1.84*	*1.96*	Div'ds Decl'd per sh [C]	*2.52*
14.18	16.19	10.64	13.27	15.70	18.69	22.51	27.74	30.71	34.47	38.42	44.65	52.31	60.38	71.40	*80.85*	*89.45*	*98.65*	Book Value per sh	*135.40*
50.84	50.93	37.97	38.14	38.35	38.51	38.89	39.06	38.77	36.87	36.67	36.81	36.95	37.11	37.26	*37.10*	*36.90*	*36.70*	Common Shs Outst'g [D]	*36.00*
13.8	12.9	17.8	15.6	19.4	19.6	17.0	18.6	26.8	29.8	21.9	22.3	21.6	21.8	18.0	*20.0*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*21.0*
.83	.86	1.13	.98	1.23	1.10	.89	.94	1.41	1.50	1.18	1.19	1.11	1.18	1.04	*1.12*			Relative P/E Ratio	*1.15*
1.2%	1.1%	1.2%	1.2%	1.2%	1.0%	1.0%	.8%	.8%	.9%	1.0%	.8%	.7%	.7%	.7%	*.7%*			Avg Ann'l Div'd Yield	*.6%*
7767.2	7122.1	7506.6	8391.1	9352.9	9175.3	8707.2	12953	15094	*14610*	*15000*	*15250*	Sales ($mill) [A]	*17100*
18.5%	22.7%	22.4%	21.1%	20.9%	23.4%	27.1%	21.3%	20.4%	*22.5%*	*22.5%*	*22.5%*	Gross Margin	*23.0%*
6.2%	7.9%	6.8%	5.8%	6.0%	7.0%	8.3%	6.2%	6.3%	*7.0%*	*7.2%*	*7.5%*	Operating Margin	*8.5%*
1878	1931	1978	2073	2146	2207	2243	2452	2452	*2670*	*2760*	*2850*	Number of Stores [E]	*3150*
183.0	226.0	177.5	143.0	203.9	263.8	312.9	339.8	446.7	*480*	*515*	*555*	Net Profit ($mill)	*775*
35.66%	35.19%	34.18%	33.31%	22.60%	22.86%	23.19%	22.90%	23.97%	*23.5%*	*24.0%*	*24.0%*	Income Tax Rate	*24.0%*
2.4%	3.2%	2.4%	1.7%	2.2%	2.9%	3.6%	2.6%	3.0%	*3.3%*	*3.5%*	*3.6%*	Net Profit Margin	*4.5%*
d59.6	d61.7	d95.9	d111.1	d180.3	d676.1	110.8	d179.7	d6.1	*50.0*	*75.0*	*125*	Working Cap'l ($mill)	*250*
838.2	822.9	907.4	1291.7	1283.3	714.5	1361.4	1663.4	1620.5	*1580*	*1550*	*1550*	Long-Term Debt ($mill)	*1500*
875.2	1083.5	1190.6	1271.1	1408.8	1643.2	1932.7	2240.8	2660.7	*3050*	*3300*	*3620*	Shr. Equity ($mill)	*4875*
11.9%	12.9%	9.4%	6.6%	8.6%	12.3%	10.2%	9.4%	10.5%	*10.5%*	*10.5%*	*10.5%*	Return on Total Cap'l	*12.0%*
20.9%	20.9%	14.9%	11.2%	14.5%	16.1%	16.2%	15.2%	16.8%	*15.5%*	*15.5%*	*15.5%*	Return on Shr. Equity	*16.0%*
17.5%	17.8%	11.8%	8.2%	11.5%	13.3%	13.7%	12.9%	14.7%	*13.5%*	*14.0%*	*13.5%*	Retained to Com Eq	*14.0%*
16%	15%	21%	27%	20%	17%	15%	15%	12%	*13%*	*13%*	*13%*	All Div'ds to Net Prof	*12%*

CAPITAL STRUCTURE as of 1/31/24
Total Debt $1636.9 mill. **Due in 5 Yrs** $890.0 mill.
LT Debt $1583.6 mill. **LT Interest** $50.0 mill.
(Incl. $99.7 mill. capitalized leases; total interest coverage: 15x)
(36% of Cap'l)

Leases, Uncapitalized Annual rentals $8.0 mill.
No Defined Benefit Pension Plan

Pfd Stock None
Common Stock 37,017,185 shs.
as of 3/7/2024

MARKET CAP: $11.7 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	1/31/24
Cash Assets	158.9	378.9	177.9
Receivables	108.0	120.5	136.7
Inventory (LIFO)	396.2	376.1	414.7
Other	61.9	45.4	51.7
Current Assets	725.0	920.9	781.0
Accts Payable	588.8	560.5	521.9
Debt Due	24.5	52.9	53.3
Other	291.4	313.7	305.7
Current Liab.	904.7	927.1	880.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Sales	7.0%	11.0%	*5.5%*
"Cash Flow"	12.0%	12.5%	*8.0%*
Earnings	13.0%	18.0%	*11.0%*
Dividends	8.5%	6.5%	*8.5%*
Book Value	15.5%	14.0%	*12.0%*

Fiscal Year Begins	QUARTERLY SALES ($ mill.) [A] Jul.31	Oct.31	Jan.31	Apr.30	Full Fiscal Year
2021	3182	3263	3049	3459	12952.6
2022	4454	3979	3333	3329	15094.6
2023	3869	4064	3329	*3348*	*14610*
2024	*4080*	*4100*	*3420*	*3400*	*15000*
2025	*4140*	*4170*	*3480*	*3460*	*15250*

Fiscal Year Begins	EARNINGS PER SHARE [A B] Jul.31	Oct.31	Jan.31	Apr.30	Full Fiscal Year
2021	3.19	2.59	1.71	1.60	9.10
2022	4.08	3.67	2.67	1.49	11.91
2023	4.52	4.24	2.33	*1.81*	*12.90*
2024	*4.80*	*4.50*	*2.60*	*2.10*	*14.00*
2025	*5.00*	*4.60*	*2.95*	*2.55*	*15.10*

Cal-endar	QUARTERLY DIVIDENDS PAID [C] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.32	.32	.32	.32	1.28
2021	.34	.34	.34	.35	1.37
2022	.35	.35	.38	.38	1.46
2023	.38	.38	.43	.43	1.62
2024	.43				

BUSINESS: Casey's General Stores operates convenience stores in sixteen Midwestern states, primarily in Iowa, Missouri, and Illinois. Stores sell gasoline and food (including pizza, doughnuts, hamburgers, etc.), beer and other beverages, and non-food items. In fiscal 2022, Casey's had 2,521 company-owned locations (vs 2,452 in 2021); gasoline accounted for 67% of net sales (vs 64% in 2021); average retail sales/store were $5.1 mill. (vs $5.2 mill. in 2021). Has 20,451 full-time employees. Off. & Dir. own less than 1% of common stock out.; Vanguard Group, 10.0%; BlackRock, Inc., 8.6% (7/23 Proxy). Chair.: H. Lynn Horak. Pres. & CEO: Darren M. Rebelez. Incorporated: IA. Address: One Convenience Blvd., Ankeny, IA 50021. Tel.: 515-965-6100. Internet: www.caseys.com.

Casey's General Stores made decent operational gains in the recent fiscal third quarter. (Fiscal year ends April 30th). Financial results were not particularly exciting. The top line held steady year over year, with strong sales of prepared foods and dispensed beverages offset by a decline in the average retail price of fuel. Earnings came in at $2.33 per share, versus $2.67 in the year-ago period. The decline was largely due to a jump in expenses from new store openings and a related step-up in depreciation charges. Over the last nine months, CASY has opened 110 acquired locations, as well as 23 new-builds, which together have brought the footprint to just under 2,640.

The company looks to register a decent earnings lift in 2024 and 2025. Sales growth from new stores have lagged those from existing locations, but this dynamic should improve as Casey's gradually develops a customer base in its new markets. Greater penetration of private label items and prepared foods should bring about incremental gross margin expansion, too. We presume new openings are planned for the year ahead, as management looks to continue its long-standing expansion strategy.

Future acquisitions should help boost profit growth over the next three to five years. It appears likely that electric and hybrid vehicles will gradually chip away at gasoline consumption, and we believe this expectation has lowered the valuations of acquisition targets. Casey's should initially earn strong returns on the invested capital, but potentially face a long-term headwind from electrification. Shifting the footprint towards electric charging stations will be costly, though longer charging times could drive higher traffic and ticket totals for prepared foods and other in-store items.

At the current share price, we aren't too keen with this neutrally ranked offering. CASY stock is up nearly 50% in value over the last twelve months, which has discounted much of the growth we envision out to 2027-2029. However, this issue does tout an above-average rank for Safety, and scores well for Price Stability, Price Growth Persistence, and Earnings Predictability (90, 85, 85).

Lucas Vanarthos *April 12, 2024*

(A) Fiscal year ends April 30th of the following calendar year. Sales figures exclude royalty income and the revenues from franchised stores.
(B) Diluted egs. Excludes nonrecurring gain/(loss): '17, $4.61. Next earnings report due early June.
(C) Dividends historically paid early February, May, August, and November.
(D) In millions.
(E) Includes only company-owned stores.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	85
Earnings Predictability	85

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CHEMED CORP. NYSE-CHE

RECENT PRICE **644.80** | P/E RATIO **27.5** (Trailing: 30.1 Median: 24.0) | RELATIVE P/E RATIO **1.50** | DIV'D YLD **0.2%** | **VALUE LINE**

TIMELINESS 3 Raised 11/10/23
SAFETY 1 Raised 4/5/24
TECHNICAL 3 Lowered 3/8/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

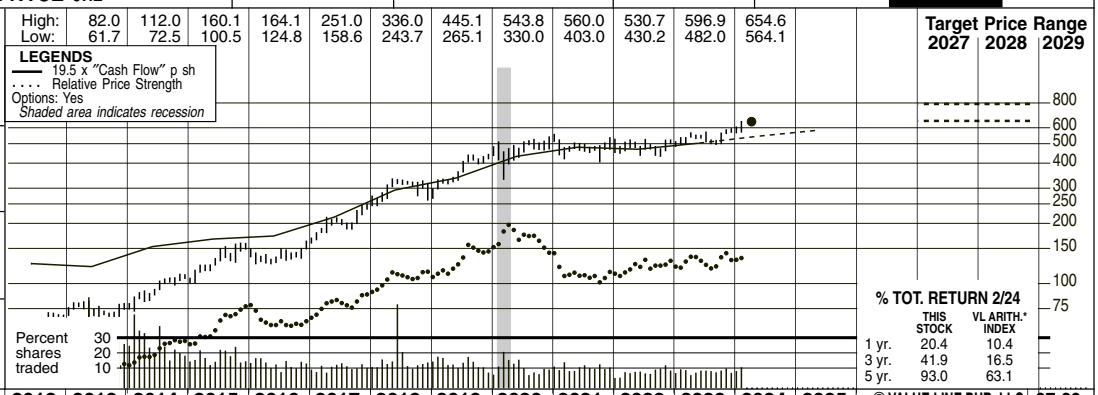
Low-High	Midpoint (% to Mid)
$519-$779	$649 (0%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	790	(+25%)	*6%*
Low	650	(Nil)	*1%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	226	192	253
to Sell	191	214	202
Hld's(000)	14447	14596	14596



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
51.26	52.23	60.18	71.15	77.17	80.37	86.22	91.88	97.42	103.92	112.31	121.59	130.73	143.45	143.53	150.61	*161.35*	*171.35*	Revenues per sh	*203.35*
4.40	4.47	5.21	6.06	6.47	6.23	7.84	8.56	8.86	11.02	15.07	17.29	22.19	24.64	24.04	25.77	*28.00*	*30.00*	"Cash Flow" per sh	*37.00*
3.05	3.24	3.55	4.10	4.62	4.16	5.57	6.33	6.48	8.43	11.93	13.95	18.08	19.35	19.76	21.45	*23.50*	*25.40*	Earnings per sh [A]	*31.30*
.24	.36	.52	.60	.68	.76	.84	.92	1.00	1.08	1.16	1.24	1.32	1.40	1.48	1.56	*1.64*	*1.72*	Div'ds Decl'd per sh [B]■	*1.96*
1.16	.94	1.21	1.55	1.92	1.67	2.58	2.63	2.46	4.01	3.33	3.33	3.70	3.93	3.85	3.78	*3.90*	*4.00*	Cap'l Spending per sh	*4.35*
16.58	20.94	21.71	21.71	24.46	25.53	26.72	30.55	32.38	33.69	37.25	45.58	56.65	41.80	53.70	73.69	*85.00*	*92.00*	Book Value per sh	*118.00*
22.41	22.79	21.28	19.06	18.53	17.58	16.89	16.80	16.19	16.04	15.87	15.94	15.91	14.91	14.88	15.03	*15.00*	*15.00*	Common Shs Outst'g [C]	*15.00*
13.7	13.0	15.6	14.9	13.6	17.7	17.0	20.7	21.4	23.5	25.1	26.5	25.9	24.9	24.5	25.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*23.0*
.82	.87	.99	.93	.87	.99	.89	1.04	1.12	1.18	1.36	1.41	1.33	1.35	1.42	1.40			Relative P/E Ratio	*1.30*
.6%	.9%	.9%	1.0%	1.1%	1.0%	.9%	.7%	.7%	.5%	.4%	.3%	.3%	.3%	.3%	.3%			Avg Ann'l Div'd Yield	*.3%*
1456.3	1543.4	1576.9	1666.7	1782.6	1938.6	2079.6	2139.3	2135.0	2264.4	*2420*	*2570*	Revenues ($mill)	*3050*
13.8%	14.1%	13.8%	15.2%	17.1%	17.9%	22.1%	20.7%	20.7%	21.0%	*21.3%*	*21.6%*	Operating Margin	*23.0%*
33.1	33.5	34.6	35.6	38.9	45.2	56.6	59.1	59.2	61.4	*65.0*	*70.0*	Depreciation ($mill)	*85.0*
99.3	110.3	108.7	141.1	200.4	230.5	296.4	308.4	298.4	326.0	*355*	*380*	Net Profit ($mill)	*470*
39.0%	38.8%	38.6%	24.6%	22.8%	24.6%	25.2%	21.0%	21.2%	19.3%	*22.0%*	*22.0%*	Income Tax Rate	*25.0%*
6.8%	7.1%	6.9%	8.5%	11.2%	11.9%	14.3%	14.4%	14.0%	14.4%	*14.7%*	*14.8%*	Net Profit Margin	*15.4%*
d1.0	d20.5	d1.9	d17.4	d31.9	d71.5	30.3	d72.1	d24.6	188.7	*250*	*325*	Working Cap'l ($mill)	*440*
141.3	83.8	100.0	91.2	89.2	90.0	--	185.0	92.5	92.5	*Nil*	*Nil*	Long-Term Debt ($mill)	*Nil*
451.4	513.3	524.1	540.4	591.3	726.6	901.2	623.3	798.7	1107.9	*1275*	*1380*	Shr. Equity ($mill)	*1770*
17.5%	18.8%	17.7%	22.7%	29.7%	28.5%	33.0%	38.3%	33.7%	29.4%	*28.0%*	*27.5%*	Return on Total Cap'l	*26.5%*
22.0%	21.5%	20.7%	26.1%	33.9%	31.7%	32.9%	49.5%	37.4%	29.4%	*28.0%*	*27.5%*	Return on Shr. Equity	*26.5%*
18.8%	18.4%	17.6%	22.9%	30.7%	29.0%	30.6%	45.9%	34.6%	27.3%	*26.0%*	*25.5%*	Retained to Com Eq	*25.0%*
14%	14%	15%	12%	9%	9%	7%	7%	7%	7%	*7%*	*7%*	All Div'ds to Net Prof	*6%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt Nil **Due in 5 Yrs** Nil
LT Debt Nil **LT Interest** Nil

Leases, Uncapitalized Annual rentals $44.9 mill.
No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 15,117,093 shares
as of 2/9/24
MARKET CAP: $9.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	32.9	74.1	264.0
Receivables	137.2	139.4	181.4
Inventory	10.1	10.3	12.0
Other	50.1	48.8	43.4
Current Assets	230.3	272.6	500.8
Accts Payable	73.0	41.9	64.0
Debt Due	--	5.0	--
Other	229.4	250.3	248.1
Current Liab.	302.4	297.2	312.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	6.5%	7.0%	*5.5%*
"Cash Flow"	15.0%	16.5%	*1.5%*
Earnings	16.5%	17.5%	*7.5%*
Dividends	8.0%	6.5%	*5.0%*
Book Value	9.0%	10.5%	*13.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	527.4	532.3	538.7	541.0	2139.3
2022	530.5	531.3	526.5	546.7	2135.0
2023	560.2	553.8	564.5	585.9	2264.4
2024	*590*	*595*	*600*	*635*	*2420*
2025	*625*	*630*	*640*	*675*	*2570*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	4.44	4.60	5.06	5.25	19.35
2022	4.79	4.84	4.74	5.39	19.76
2023	4.82	4.71	5.32	6.60	21.45
2024	*5.50*	*5.70*	*5.65*	*6.65*	*23.50*
2025	*5.95*	*6.20*	*6.10*	*7.15*	*25.40*

Calendar	QUARTERLY DIVIDENDS PAID [B]■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.32	.32	.34	.34	1.32
2021	.34	.34	.36	.36	1.40
2022	.36	.36	.38	.38	1.48
2023	.38	.38	.40	.40	1.56
2024	.40				

BUSINESS: Chemed Corporation operates two wholly owned subsidiaries: VITAS Healthcare Corp. (58% of '23 sales) and Roto-Rooter (42%). VITAS provides end-of-life care in about 170 locations in 16 states and the District of Columbia. Over 95% of sales are derived from Medicare/Medicaid. Roto-Rooter, through company-owned and independent franchise operations, provides plumbing, drain cleaning, and water restoration services. Sold Service America, 12/04. Has 15,087 employees. Offs. & dirs. own 3.8% of stock; Vanguard, 11.4%; BlackRock, 9.4% (4/6/23 proxy). Chrmn.: George J. Walsh III. Pres. and CEO: Kevin J. McNamara. Incorporated: DE. Addr.: 255 East Fifth Street, Suite 2600, Cincinnati, OH 45202. Tel.: 513-762-6690. Internet: www.chemed.com.

Chemed's stock is up 10% in value over the last 90 days, surpassing the $650 level for the first time. The company closed 2023 with earnings that exceeded expectations, as margins improved at the VITAS Healthcare portion of the portfolio (58% of total sales). This segment provides end-of-life care and posted a net patient revenue increase north of 13% in the fourth quarter. It is performing better than Roto-Rooter (42%), which focuses on plumbing and drain cleaning and has been posting flat results of late.

Wall Street is enthused about VITAS' prospects. The hospice care market in the United States was valued at roughly $38 billion in 2023. A spotlight was placed on this subsector during the pandemic and the elevated level of attention is still there. This case was backed up by medical services industry behemoth UnitedHealth Group purchasing LHC Group, a hospice provider, along with other deals of this nature where larger healthcare concerns purchased an end-of-life services entity to broaden their respective portfolios. Add to this, the estimates for the hospice market's compound annual growth rate out to 2030 is presently above 8%. Not surprisingly, CHE has been spending to bolster its position in this space. Most recently, it acquired all hospice operations and an assisted living facility from Covenant Health for $85 million. The deal is set to close in the current quarter.

Our increased earnings estimate for 2024 equates to a 10% year-over-year gain. Our current top-line call of $2.42 billion represents a 6% annual incline, and does not yet include any acquisitions that have not been fully completed. Also, growth at Roto-Rooter should be pedestrian, barring any serious storms that would trigger a spark in demand. With that, VITAS is apt to carry the growth torch. We look for improvements in admissions and days of care to boost revenue per patient and in turn profitability. A similar backdrop was factored in for our fresh 2025 estimates.

These top-quality shares lack investment appeal. The equity is neutrally ranked, is trading arounbd the lower rung of our 3- to 5-year Target Price Range, and offers a paltry yield.

Erik M. Manning *April 5, 2024*

(A) Diluted earnings. Excl. nonrecurring & disc. ops.: '17, ($2.57); '18, 30¢; '19, (64¢); '20, $1.40; '21, ($2.50); '22, ($3.23); '23, ($3.52). Quarterly figures may not sum to total due to rounding. Next earnings report due late April.
(B) Div'ds historically paid in early March, June, Sept. & Dec. ■ Div'd reinvest. plan avail.
(C) In millions.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	90
Earnings Predictability	95

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CHECK POINT SOFT. NDQ-CHKP

RECENT PRICE 164.28 | P/E RATIO 18.3 (Trailing: 19.5 Median: 18.0) | RELATIVE P/E RATIO 0.99 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 3 Lowered 3/8/24
SAFETY 1 Raised 1/12/18
TECHNICAL 3 Lowered 3/15/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$115-$185	$150 (-10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	295	(+80%)	*16%*
Low	240	(+45%)	*10%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	222	269	299
to Sell	278	258	270
Hld's(000)	83541	81834	76851

	64.9	80.8	88.5	90.0	119.2	120.8	132.8	139.3	137.5	149.6	154.1	168.8
High:	44.4	60.5	65.1	71.6	84.0	93.8	100.6	80.1	107.9	107.5	117.2	147.0
Low:												

LEGENDS
20.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029

320 200 160 120 100 80 60 40 18

Percent shares traded 30 20 10

% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	26.2	16.9
3 yr.	46.5	16.2
5 yr.	29.7	71.5

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
3.85	4.42	5.27	6.06	6.75	7.25	8.14	9.32	10.49	11.66	12.33	13.71	15.05	16.78	19.29	19.99	*21.65*	*22.70*	Revenues per sh	*25.85*
1.57	1.75	2.21	2.68	3.15	3.44	3.64	3.98	4.43	5.66	5.97	6.53	7.15	7.47	9.07	8.64	*9.20*	*10.25*	"Cash Flow" per sh	*12.55*
1.50	1.68	2.13	2.54	2.96	3.27	3.43	3.74	4.20	5.33	5.71	6.13	6.78	7.05	7.40	8.42	*9.00*	*10.00*	Earnings per sh [A]	*12.15*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
.04	.02	.02	.04	.04	.05	.07	.10	.15	.18	.11	.18	.14	.12	.18	.15	*.20*	*.20*	Cap'l Spending per sh	*.25*
9.60	11.09	13.05	14.93	16.81	18.74	19.79	20.19	21.03	22.64	24.28	24.53	25.26	25.23	24.25	23.35	*23.35*	*22.70*	Book Value per sh [B]	*20.70*
210.04	209.10	208.41	205.89	199.03	192.26	183.79	174.90	165.98	159.04	155.38	145.50	137.20	129.10	120.80	120.80	*120.00*	*119.00*	Common Shs Outst'g [C]	*116.00*
14.8	15.5	16.8	21.0	17.5	16.4	20.0	21.9	19.3	19.9	18.6	18.7	16.9	16.9	17.0	15.62	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*22.0*
.89	1.03	1.07	1.32	1.11	.92	1.05	1.10	1.01	1.00	1.00	1.00	.87	.91	.98	.87			Relative P/E Ratio	*1.20*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			Avg Ann'l Div'd Yield	*Nil*
1495.8	1629.8	1741.3	1854.7	1916.5	1994.8	2064.9	2166.8	2329.9	2414.7	*2600*	*2700*	Revenues ($mill)	*3000*
54.2%	52.2%	49.6%	55.9%	53.8%	51.1%	51.0%	49.4%	51.5%	44.7%	*45.0%*	*46.0%*	Operating Margin	*49.0%*
9.2	10.4	10.9	12.9	16.4	16.7	18.9	20.6	22.7	23.1	*25.0*	*30.0*	Depreciation ($mill)	*45.0*
659.6	685.9	724.8	888.0	911.0	933.0	962.7	943.9	1072.6	1020.4	*1080*	*1190*	Net Profit ($mill)	*1410*
20.5%	21.5%	19.2%	17.1%	15.6%	13.9%	12.6%	13.5%	12.1%	11.7%	*12.0%*	*13.0%*	Income Tax Rate	*16.0%*
44.1%	42.1%	41.6%	47.9%	47.5%	46.8%	46.6%	43.6%	46.0%	42.3%	*41.5%*	*44.0%*	Net Profit Margin	*47.0%*
815.0	678.9	726.6	757.5	990.0	737.5	734.8	625.8	492.6	341.6	*400*	*500*	Working Cap'l ($mill)	*800*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Long-Term Debt ($mill)	*Nil*
3637.6	3531.9	3491.1	3600.1	3772.4	3568.8	3466.2	3257.1	2929.3	2821.0	*2800*	*2700*	Shr. Equity ($mill) [B]	*2400*
18.1%	19.4%	20.8%	24.7%	24.2%	26.1%	27.8%	29.0%	36.6%	36.2%	*38.5%*	*44.0%*	Return on Total Cap'l	*59.0%*
18.1%	19.4%	20.8%	24.7%	24.2%	26.1%	27.8%	29.0%	36.6%	36.2%	*38.5%*	*44.0%*	Return on Shr. Equity	*59.0%*
18.1%	19.4%	20.8%	24.7%	24.2%	26.1%	27.8%	29.0%	36.6%	36.2%	*38.5%*	*44.0%*	Retained to Com Eq	*59.0%*
--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 12/31/23

Total Debt None

Leases, Uncapitalized: Annual rentals $6.3 mill.

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 120,800,000 shs.

MARKET CAP: $19.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	1693.7	1637.6	1530.0
Receivables	597.8	644.2	657.7
Other	46.4	50.0	70.0
Current Assets	2337.9	2331.8	2257.7
Accts Payable	454.7	475.8	502.3
Debt Due	--	--	--
Other	1257.4	1363.4	1413.8
Current Liab.	1712.1	1839.2	1916.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	10.5%	9.5%	*5.5%*
"Cash Flow"	10.5%	9.0%	*7.0%*
Earnings	9.5%	7.5%	*8.0%*
Dividends	--	--	*Nil*
Book Value	4.0%	2.0%	*NMF*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	507.6	526.1	534.0	599.1	2166.8
2022	542.7	571.1	577.6	638.5	2329.9
2023	566.2	588.7	596.3	663.5	2414.7
2024	*595*	*625*	*660*	*720*	*2600*
2025	*620*	*645*	*690*	*745*	*2700*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	1.54	1.61	1.65	2.25	7.05
2022	1.57	1.64	1.77	2.45	7.40
2023	1.80	2.00	2.07	2.55	8.42
2024	*2.00*	*2.15*	*2.30*	*2.55*	*9.00*
2025	*2.25*	*2.40*	*2.55*	*2.80*	*10.00*

Calendar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	NO CASH DIVIDENDS BEING PAID				
2021					
2022					
2023					
2024					

BUSINESS: Check Point Software Tech. develops, markets, and supports Internet security solutions, incl. firewall and virtual private networking solutions. The NGX platform delivers unified security architecture for perimeter, internal, Web, and endpoint security solutions that protect business comm., offers resources for corporate networks and applications, remote employees, branch offices, and partner extranets. Employs 6,026. Officers and directors own 25.1% of common stock; Massachusetts Financial Services, 6.3% (6/23 proxy). CEO: Gil Shwed. Inc: DE. Address: 5 Shlomo Kaplan St., Tel Aviv, Israel, 6789159. Telephone: 972-3-753-4555. U.S. address: 959 Skyway Rd., Suite 300, San Carlos, CA 94070 Telephone: 650-628-2000. Internet: www.checkpoint.com.

Check Point Software has posted admirable top-line results. Revenues have increased, thanks to a jump in sales of the company's security subscriptions. The company has introduced two new products, *Check Point Quantum Spark 1900* and *2000,* the latest additions to its next-generation firewall series for small and medium businesses (SMBs). These advanced security gateways are specifically engineered to protect SMBs from ever-evolving cyber threats. In addition, management has announced a new collaboration with Microsoft. This collaboration utilizes the *Microsoft Azure Open AI* (Artificial Intelligence) service to enhance *Check Point Infinity AI Copilot. Check Point Infinity AI Copilot* is a generative AI service that uses automation to accelerate security administration up to 90%. The service also increases security effectiveness through faster incident mitigation and response. We estimate the top line will advance 8%, to $2.6 billion, in 2024, assuming that demand continues to improve. Our 2025 prediction is for a 4% gain, to $2.7 billion.

Share earnings ought to expand nicely. The gross margin has increased, thanks to substantial improvements in the company's supply chain. Operating expenses have risen because of elevated cloud infrastructure, marketing, travel, and acquisition outlays. On a more positive note, costs are declining as a percentage of sales. Net financial income has increased due to higher interest rates and yield on marketable securities, short-term deposits, and cash equivalents. Share earnings will likely advance 7%, to $9.00, in 2024, as stronger operating leverage should lead to better profitability. Next year, the bottom line will probably improve 11%, to $10.00 a share.

Since our January report, this stock's Timeliness rank has dropped one notch, to 3 (Average). Nonetheless, the company's long-term sales prospects are favorable. Corporations and governments likely will boost their cyber security spending, as new threats, such as ransomware, are constantly emerging. Capital appreciation potential to 2027-2029 is attractive. This issue may be suitable for buy-and-hold investors.

Keith R. Foldesi *April 12, 2024*

(A) Diluted earnings. Next earnings report due early May. Earnings may not sum to total due to rounding.

(B) Includes intangibles. In 2023: $1748.5 mill., roughly $14.47 a share.

(C) In millions.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	70
Earnings Predictability	100

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C.H. ROBINSON NDQ-CHRW

RECENT PRICE 74.04 | P/E RATIO 25.1 (Trailing: 24.8 Median: 20.0) | RELATIVE P/E RATIO 1.49 | DIV'D YLD 3.3% | VALUE LINE 376

TIMELINESS 2 Raised 2/2/24
SAFETY 2 Raised 6/5/09
TECHNICAL 3 Raised 2/9/24
BETA .70 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$52-$100	$76 (5%)

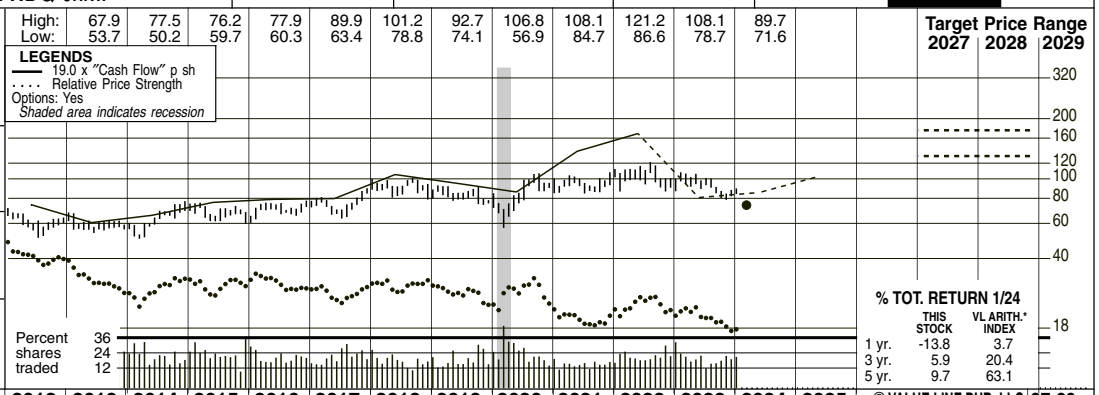
2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	175	(+135%)	*26%*
Low	130	(+75%)	*18%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	270	269	260
to Sell	302	295	287
Hld's(000)	114159	111842	110175

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	67.9	77.5	76.2	77.9	89.9	101.2	92.7	106.8	108.1	121.2	108.1	89.7								
Low:	53.7	50.2	59.7	60.3	63.4	78.8	74.1	56.9	84.7	86.6	78.7	71.6								
	50.40	45.35	55.85	58.29	70.41	85.90	92.05	93.94	93.05	106.56	121.14	113.49	120.68	178.83	212.31	*151.05*	*156.50*	*166.65*	Revenues per sh	*219.05*
	2.29	2.34	2.51	2.62	3.92	3.18	3.46	4.02	4.16	4.20	5.55	5.02	4.53	7.24	8.88	*4.25*	*4.50*	*5.45*	"Cash Flow" per sh	*8.65*
	2.08	2.13	2.33	2.62	3.67	2.65	3.05	3.51	3.59	3.48	4.73	4.19	3.72	6.31	7.40	3.30	*3.50*	*4.50*	Earnings per sh [A]	*7.50*
	.88	.97	1.04	1.20	1.67	1.40	1.43	1.57	1.74	1.81	1.88	2.01	2.04	2.08	2.26	2.44	*2.48*	*2.60*	Div'ds Decl'd per sh [B]	*3.20*
	.14	.21	.17	.30	.31	.32	.20	.20	.52	.29	.33	.27	.17	.26	.53	*.70*	*.80*	*.80*	Cap'l Spending per sh	*.90*
	6.51	6.46	7.25	7.04	9.33	6.33	7.16	8.02	8.90	10.22	11.62	12.39	14.00	15.65	11.64	*12.20*	*12.10*	*12.20*	Book Value per sh [C]	*14.35*
	170.21	167.10	166.05	177.31	161.33	148.46	146.33	143.46	141.26	139.54	137.28	134.90	134.30	129.19	116.32	*116.50*	*115.00*	*112.50*	Common Shs Outst'g [D]	*105.00*
	25.9	24.6	27.0	28.1	16.7	22.3	20.6	19.5	19.8	21.5	19.2	20.0	22.7	15.0	13.9	28.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.0*
	1.56	1.64	1.72	1.76	1.06	1.25	1.08	.98	1.04	1.08	1.04	1.07	1.17	.81	.80	1.58			Relative P/E Ratio	*1.10*
	1.6%	1.9%	1.7%	1.6%	2.7%	2.4%	2.3%	2.3%	2.4%	2.4%	2.1%	2.4%	2.4%	2.2%	2.2%	2.6%			Avg Ann'l Div'd Yield	*2.1%*
							13470	13476	13144	14869	16631	15310	16207	23102	24697	17596	*18000*	*18750*	Revenues ($mill)	*23000*
							6.0%	6.9%	6.9%	5.8%	6.1%	5.8%	4.8%	5.1%	5.5%	*4.0%*	*4.0%*	*4.5%*	Operating Margin	*5.0%*
							57.0	66.4	74.7	93.0	96.7	100.4	101.7	91.3	92.8	99.0	*100*	*103*	Depreciation ($mill)	*110*
							449.7	509.7	513.4	492.8	664.5	577.0	506.4	844.2	940.5	395.1	*415*	*510*	Net Profit ($mill)	*800*
							37.8%	38.1%	36.8%	32.4%	24.5%	22.3%	19.4%	17.4%	19.4%	*15.0%*	*18.0%*	*19.0%*	Income Tax Rate	*20.0%*
							3.3%	3.8%	3.9%	3.3%	4.0%	3.8%	3.1%	3.7%	3.8%	2.2%	*2.3%*	*2.7%*	Net Profit Margin	*3.5%*
							529.6	282.1	162.4	523.4	1319.8	1084.1	1102.0	1477.9	266.3	828.7	*800*	*750*	Working Cap'l ($mill)	*500*
							500.0	500.0	500.0	750.0	1341.4	1092.4	1093.3	1393.6	920.0	1420.5	*1400*	*1375*	Long-Term Debt ($mill)	*1250*
							1047.0	1150.5	1257.8	1425.7	1595.1	1670.7	1879.9	2021.9	1353.4	1418.7	*1395*	*1375*	Shr. Equity ($mill)	*1505*
							29.9%	32.0%	29.9%	23.7%	23.2%	21.7%	17.7%	25.4%	42.7%	*16.0%*	*17.0%*	*20.5%*	Return on Total Cap'l	*30.5%*
							43.0%	44.3%	40.8%	34.6%	41.7%	34.5%	26.9%	41.8%	69.5%	27.8%	*30.0%*	*37.0%*	Return on Shr. Equity	*53.0%*
							22.4%	23.8%	21.3%	16.5%	25.0%	17.9%	15.8%	28.0%	48.4%	*7.5%*	*9.0%*	*15.5%*	Retained to Com Eq	*30.5%*
							48%	46%	48%	52%	40%	48%	41%	33%	30%	*74%*	*71%*	*58%*	All Div'ds to Net Prof	*43%*



CAPITAL STRUCTURE as of 9/30/23
Total Debt $1583.7 mill. **Due in 5 Yrs** $1054 mill.
LT Debt $920.7 mill. **LT Interest** $45.0 mill.
(Total interest coverage '22: 18.1x)
(40% of Cap'l)

Leases, Uncapitalized: Annual rentals $85.9 mill.
No Defined Benefit Pension Plan

Common Stock 116,651,000 shs.
as of 11/1/23

MARKET CAP: $8.6 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	257.4	217.5	174.7
Receivables	3963.5	2991.8	2442.3
Inventory (Avg Cst)	- -	- -	- -
Other	583.3	379.9	342.2
Current Assets	4804.2	3589.2	2959.2
Accts Payable	1813.5	1467.0	1375.5
Debt Due	525.0	1053.7	663.0
Other	987.8	802.2	611.0
Current Liab.	3326.3	3322.9	2649.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	10.5%	12.0%	*3.5%*
"Cash Flow"	8.5%	11.0%	*3.5%*
Earnings	7.5%	10.5%	*3.5%*
Dividends	5.0%	4.5%	*6.0%*
Book Value	5.5%	9.0%	*.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	4804	5533	6263	6502	23102
2022	6816	6799	6015	5067	24697
2023	4611	4422	4341	4222	17596
2024	*4300*	*4400*	*4600*	*4700*	*18000*
2025	*4500*	*4600*	*4800*	*4850*	*18750*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	1.28	1.44	1.85	1.74	6.31
2022	2.05	2.67	1.78	.80	7.40
2023	1.00	.93	.87	.50	3.30
2024	*.70*	*.80*	*.95*	*1.05*	*3.50*
2025	*1.05*	*1.10*	*1.15*	*1.20*	*4.50*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.51	.51	.51	- -	1.53
2021	.51	.51	.51	.51	2.04
2022	.55	.55	.55	.55	2.20
2023	.61	.61	.61	.61	2.44
2024	.61				

BUSINESS: C.H. Robinson Worldwide, Inc. is one of the largest third-party logistics companies in North America. It is a non-asset based provider of multimodal freight transportation & logistic solutions and fresh produce sourcing. Has offices in North America, South America, Europe, Asia, and Oceania. Acquired Freightquote.com (1/15), APC Logistics (9/16), Prime Distribution (3/20). Has about 17,400 employees. Officers & directors own 1.5% of common stock; Vanguard, 12.7%; BlackRock, 12.5%; First Eagle Investment, 9.2%; State Street Corporation, 7.3% (3/23 Proxy). Chair.: Jodee Kozlak. CEO: David Bozeman. Inc.: Delaware. Address: 14701 Charlson Road, Eden Prairie, Minnesota 55347. Telephone: 952-937-8500. Internet: www.chrobinson.com.

C.H. Robinson is feeling the effects of weak freight demand and pricing. The December quarter was particularly challenging, with adjusted earnings slumping 38% year over year, to $0.50 a share, $0.43 below our estimate. The profit pressure was most pronounced in the largest business, North American truckload, where adjusted gross profit per shipment narrowed nearly 30%. The news was only modestly better in CHRW's other core businesses (less-than-truckload, ocean, and air), which each experienced sizable declines in adjusted gross profits versus the previous-year period.

The year ahead is likely to be a challenge, as well. The cyclical freight transportation market will rebound in time, though management doesn't appear to be anticipating any meaningful improvement until at least the second half of 2024. In the meantime, efforts to further tighten the cost structure, which included a 12% reduction in the work force last year, will likely remain a priority under CEO David Bozeman, who joined CHRW last June. The near-term benefits, though, figure to be largely obscured by the difficult operating environment, with 2024 earnings likely staging only a modest rebound from last year's levels.

The company has been favoring debt reduction over share repurchases. While operating cash flow declined by more than half in 2023, these funds were still more than sufficient to cover capital spending and the quarterly dividend. The excess funds went largely toward paying down $393 million in total debt, while the stock buyback plan, which had been in high gear during 2022, was largely put on hold. Overall, the balance sheet remains in solid shape and should provide an advantage over rivals with weaker finances that are trying to ride out the weakness in the freight transportation market.

The stock has slumped to a multi-year low. The worse-than-expected December-quarter results and uncertain timetable for an improvement in freight transportation trends appeared to further rattle investors. The selloff, though, may well present an opportunity for investors seeking good 3- to 5-year recovery potential to establish a position in these timely shares.

Robert M. Greene *February 16, 2024*

(A) Diluted earnings. May not sum due to rounding / changes in shares out. Excludes nonrecurring loss: '23, $0.58. Next earnings report due late April.

(B) Dividends paid in early Jan., April, July, and October since 2021. Historically paid in late March, June, September, and December. '20 Q4 dividend paid on 1/4/21.

(C) Includes intangibles. In 2022: $1534.8 mill., $13.19/share.

(D) In millions.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	60
Earnings Predictability	55

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CENCORA NYSE-COR

RECENT PRICE 218.44 | P/E RATIO 16.5 (Trailing: 18.2 Median: 14.0) | RELATIVE P/E RATIO .96 | DIV'D YLD 0.9% | VALUE LINE

TIMELINESS 1 Raised 2/2/24
SAFETY 2 Raised 6/26/20
TECHNICAL 3 Raised 2/9/24
BETA .80 (1.00 = Market)

18-Month Target Price Range

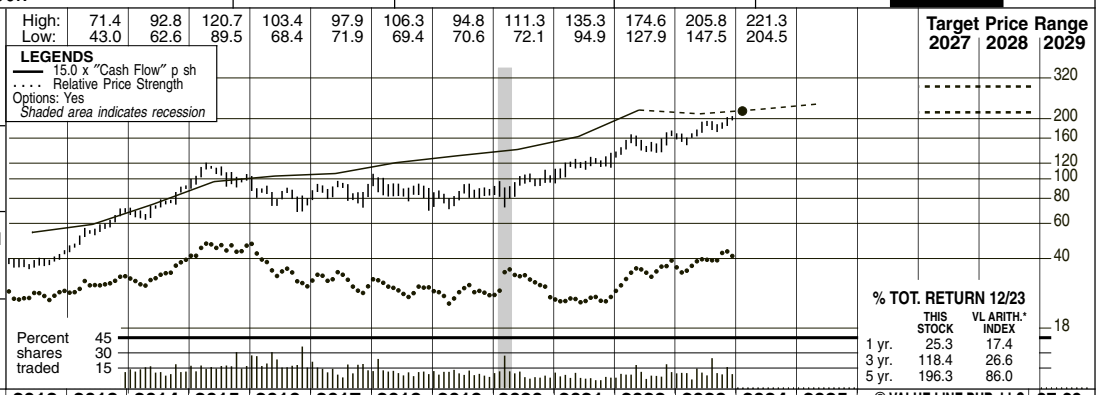
Low-High	Midpoint (% to Mid)
$155-$235	$195 (-10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	290	(+35%)	*8%*
Low	215	(Nil)	*1%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	437	474	433
to Sell	447	419	475
Hld's(000)	156035	157712	160886



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
216.10	243.16	282.09	310.51	337.57	382.38	546.75	657.16	667.34	702.51	787.64	868.58	929.82	1028.4	1157.0	1306.23	*1442.50*	*1525.00*	Sales per sh [A]	*1745.00*
1.81	2.05	2.62	3.15	3.61	3.96	5.00	6.46	6.90	7.09	8.04	8.69	9.36	10.85	13.20	*14.10*	*15.35*	*15.85*	"Cash Flow" per sh	*18.10*
1.44	1.72	2.22	2.54	2.72	3.14	3.97	4.96	5.62	5.88	6.49	7.09	7.90	9.26	11.03	11.99	*13.25*	*13.70*	Earnings per sh [A B]	*15.85*
.15	.24	.34	.46	.60	.83	.94	1.16	1.36	1.46	1.52	1.60	1.66	1.76	1.84	1.94	*2.04*	*2.14*	Div'ds Decl'd per sh [C]	*2.40*
.44	.51	.67	.65	.70	.88	1.21	1.12	2.11	2.14	1.58	1.50	1.81	2.11	2.41	2.28	*2.15*	*2.15*	Cap'l Spending per sh	*2.05*
8.67	9.43	10.69	11.10	10.43	10.08	8.95	3.06	9.68	9.47	13.76	13.92	d4.99	1.07	d1.03	2.60	*3.25*	*4.00*	Book Value per sh	*6.00*
312.44	288.08	276.35	258.34	235.48	230.03	218.69	206.89	220.05	217.99	213.22	206.76	204.23	208.09	206.20	200.71	*200.00*	*200.00*	Common Shs Outst'g [D]	*200.00*
14.7	10.4	12.7	14.7	14.0	16.0	17.6	20.4	15.7	14.4	13.6	11.7	11.6	12.1	12.7	14.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.0*
.88	.69	.81	.92	.89	.90	.93	1.03	.82	.72	.73	.62	.60	.65	.73	.80			Relative P/E Ratio	*.90*
.7%	1.3%	1.2%	1.2%	1.6%	1.7%	1.3%	1.1%	1.5%	1.7%	1.7%	1.9%	1.8%	1.6%	1.3%	1.2%			Avg Ann'l Div'd Yield	*1.0%*
119569	135962	146850	153144	167940	179589	189894	213989	238587	262173	*288500*	*305000*	Sales ($mill) [A]	*349000*
1.4%	1.5%	1.5%	1.5%	1.3%	1.3%	1.3%	1.4%	1.8%	*1.5%*	*1.5%*	*1.5%*	Operating Margin	*1.6%*
169.6	194.5	232.5	241.2	284.0	295.0	280.2	326.8	390.6	*419*	*425*	*430*	Depreciation ($mill)	*450*
923.4	1141.7	1286.0	1303.8	1430.0	1502.2	1632.2	1930.5	2330.3	*2405*	*2650*	*2740*	Net Profit ($mill)	*3170*
38.0%	36.4%	32.5%	30.7%	21.3%	20.6%	20.8%	21.3%	23.7%	19.8%	*24.0%*	*24.0%*	Income Tax Rate	*24.0%*
.8%	.8%	.9%	.9%	.9%	.8%	.9%	.9%	1.0%	*.9%*	*.9%*	*.9%*	Net Profit Margin	*.9%*
d450.0	d2366	d2429	d2515	d1975	d1449	d797.4	d2556	d3888	d6032	*d5000*	*d3500*	Working Cap'l ($mill)	*d200*
1995.6	3493.0	3870.2	3781.6	4510.8	4354.4	3618.3	6383.7	4632.4	4146.1	*4000*	*3800*	Long-Term Debt ($mill)	*3200*
1956.9	633.5	2129.4	2064.5	2932.8	2878.9	d1019	223.4	d211.6	522.0	*650*	*800*	Shr. Equity ($mill)	*1200*
24.2%	28.8%	22.5%	23.5%	20.4%	21.9%	65.4%	30.5%	55.3%	*51.5%*	*57.0%*	*59.5%*	Return on Total Cap'l	*72.0%*
47.2%	NMF	60.4%	63.2%	48.8%	52.2%	- -	NMF	NMF	*NMF*	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
36.2%	NMF	46.8%	47.6%	37.4%	40.4%	- -	NMF	NMF	*NMF*	*NMF*	*NMF*	Retained to Com Eq	*NMF*
23%	22%	22%	25%	23%	23%	21%	19%	17%	*16%*	*16%*	*16%*	All Div'ds to Net Prof	*15%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $4787.4 mill. **Due in 5 Yrs** $1981.2 mill.
LT Debt $4146.1 mill. **LT Interest** $130.0 mill.

(Total interest coverage: 15.2x) (89% of Cap'l)

Leases, Uncapitalized $218.1 mill.

No Defined Pension Benefits Plan

Pfd Stock None
Common Stock 200,712,338 shs.

MARKET CAP: $43.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	2547.1	3388.2	2592.1
Receivables	18167.2	18452.7	20911.1
Inventory (LIFO)	15368.4	15556.4	17454.8
Other	2719.9	2192.5	1840.8
Current Assets	38802.6	39589.8	42798.8
Accts Payable	38009.9	40192.9	45836.0
Other	3348.7	3285.1	2995.2
Current Liab.	41358.6	43788.0	48831.2

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Sales	12.5%	8.5%	*7.5%*
"Cash Flow"	13.5%	11.5%	*6.5%*
Earnings	13.5%	11.0%	*8.0%*
Dividends	11.0%	4.5%	*4.5%*
Book Value	-45.5%	-70.5%	*NMF*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) [A] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2021	52516	49154	53405	58912	213989
2022	59628	57719	60064	61174	238587
2023	62846	63457	66947	68922	262173
2024	72253	*69740*	*73000*	*73507*	*288500*
2025	*74100*	*74175*	*77300*	*79425*	*305000*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2021	2.18	2.53	2.16	2.39	9.26
2022	2.58	3.22	2.62	2.61	11.03
2023	2.71	3.50	2.92	2.86	11.99
2024	3.28	*3.77*	*3.10*	*3.10*	*13.25*
2025	*3.15*	*3.95*	*3.30*	*3.30*	*13.70*

Cal-endar	QUARTERLY DIVIDENDS PAID [C] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.42	.42	.42	.44	1.70
2021	.44	.44	.44	.46	1.78
2022	.46	.46	.46	.485	1.86
2023	.485	.485	.485	.51	1.86
2024					

BUSINESS: AmerisourceBergen was created by the merger of AmeriSource Health and Bergen Brunswig. The company is a full-service wholesale distributor of pharmaceutical products and related health-care services in the U.S. The company changed its name to Cencora in Aug., '23. It operates in two segments: U.S. Healthcare Solutions and International Healthcare Solutions. Acquired Alliance Healthcare in June '21; PharmaLax Holding GmbH, January, 2023. 2023 deprec. rate: 8.8%. Walgreens Boots Alliance owns 15.3% of common; Off. & dir., 15.8% (1/24 Proxy). Has about 46,000 employees. Inc.: DE. President & CEO: Steven H. Collis. Address: 1 West First Avenue, Conshohocken, PA 19428. Telephone: 610-727-7000. Internet: www.cencora.com

Cencora, formerly known as AmerisourceBergen, seems poised for record performances both this fiscal year and next (year ends September 30th). As a reminder, on August 30th of last year, AmerisourceBergen changed its moniker to Cencora, marking the latest stage of the company's evolution as a leader in global pharmaceutical services. The company posted fiscal first-quarter earnings of $3.28 a share, well above our estimate and the year-ago figure, on a better-than-expected 15% jump in sales. The top line reaped the rewards of strong demand for its extensive line up of products, with U.S. Healthcare Solutions and International Healthcare Solutions revenues up 15.9% and 6.9%, respectively, in the first quarter of fiscal 2024. And the bottom line reaped the rewards of a widening in gross margins. Since the good times seem sustainable, we now look for the company to post earnings of $13.25 a share in the current fiscal year, with a solid uptick in the bottom line likely in the cards for fiscal 2024.

And investors have certainly taken notice of the company's prospects. To wit, COR stock is up about 17% in value since our early November review, roughly in line with the S&P 500 Index's performance over the same time frame.

The company is certainly dedicated to boosting shareholder value. Notably, Cencora's board of directors recently upped the quarterly dividend by 3.1%, to $0.51 a share, bringing the annual payout to $2.04. What's more, in early November, the company agreed to repurchase $250 million shares of its common stock from Walgreens Boots Alliance Holdings, which augurs well for share-net growth over the coming years.

Momentum-seeking accounts may wish to consider staking a position here. Indeed, COR stock carries a Timeliness rank of 1 (Highest), making it a recommended choice for the coming six to 12 months.

Conversely, we suggest investors with a long-term bias wait on the sidelines for a more enticing entry point. At the recent quotation, the issue offers uninspiring capital appreciation three to five years hence.

Kenneth A. Nugent *February 9, 2024*

(A) Fiscal year ends Sept. 30th. **(B)** Diluted earnings. Excludes n/r (losses)/gains: '07, $0.09; '10, $0.06. Next egs. report due early May. Eps may not tally due to rounding.

(C) Dividend historically paid in early March, June, September, and Dec. **(D)** In millions.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	50
Earnings Predictability	100

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CSG SYSTEMS INT'L NDQ-CSGS

RECENT PRICE **49.23** | P/E RATIO **19.4** (Trailing: 22.5 Median: 21.0) | RELATIVE P/E RATIO **1.08** | DIV'D YLD **2.4%** | **VALUE LINE**

TIMELINESS 3 Raised 5/19/23
SAFETY 3 Lowered 5/3/24
TECHNICAL 4 Lowered 5/3/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$41-$91	$66 (35%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+115%)	*22%*
Low	80	(+65%)	*15%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	119	102	120
to Sell	102	122	107
Hld's(000)	29051	29189	30652

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	29.8	32.1	38.8	49.8	51.3	48.8	58.7	54.9	59.5	66.6	69.4	55.6						
Low:	18.0	23.2	23.7	32.4	35.5	30.4	31.3	36.3	42.6	52.4	46.2	45.3						

LEGENDS
11.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029: 128, 96, 80, 64, 48, 40, 32, 24, 16, 12

Percent shares traded: 30, 20, 10

% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-1.9	16.9
3 yr.	22.1	16.2
5 yr.	34.9	71.5

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	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenues per sh	13.60	14.26	16.10	21.72	22.44	22.15	22.13	23.12	23.59	23.56	26.39	30.31	30.28	32.20	34.85	39.58	*44.75*	*49.45*
"Cash Flow" per sh	2.59	2.59	3.13	3.38	3.39	3.47	2.75	3.34	3.23	3.11	3.88	4.56	3.84	4.47	3.87	4.65	*6.45*	*7.15*
Earnings per sh A	1.70	1.64	1.90	1.41	1.47	1.84	1.36	1.93	1.90	1.87	2.01	2.55	1.82	2.26	1.41	2.20	*3.00*	*3.40*
Div'ds Decl'd per sh B	- -	- -	- -	- -	- -	.45	.62	.70	.74	.79	.84	.89	.94	1.00	1.06	1.12	*1.20*	*1.28*
Cap'l Spending per sh	.62	1.15	.42	.66	.98	.89	.77	.58	.44	.86	1.72	1.13	.90	.82	1.18	.95	*1.15*	*1.20*
Book Value per sh C	4.31	6.04	6.95	8.12	9.68	10.85	10.83	10.62	7.79	10.23	10.89	12.06	12.91	13.44	11.36	9.25	*14.05*	*16.95*
Common Shs Outst'g D	34.72	35.13	34.12	33.82	33.73	33.75	33.95	32.56	32.26	33.52	33.16	32.89	32.71	32.50	31.27	29.54	*28.50*	*28.00*
Avg Ann'l P/E Ratio	8.4	9.3	10.4	12.1	12.1	12.6	19.6	16.1	21.7	22.0	20.2	18.6	24.4	21.2	42.2	24.2	*Bold figures are Value Line estimates*	
Relative P/E Ratio	.51	.62	.66	.76	.77	.71	1.03	.81	1.14	1.11	1.09	.99	1.25	1.15	2.44	1.36		
Avg Ann'l Div'd Yield	- -	- -	- -	- -	- -	1.9%	2.3%	2.3%	1.8%	1.9%	2.1%	1.9%	2.1%	2.1%	1.8%	2.1%		
Revenues ($mill)							751.3	752.5	761.0	789.6	875.1	996.8	990.5	1046.5	1089.8	1169.3	*1275*	*1385*
Operating Margin							18.3%	21.3%	24.7%	21.6%	22.2%	22.0%	20.3%	21.7%	18.5%	18.1%	*20.0%*	*20.0%*
Depreciation ($mill)							47.6	44.1	41.2	42.9	62.6	67.1	66.9	72.8	77.0	71.3	*100*	*105*
Net Profit ($mill)							45.6	64.6	62.9	61.4	66.1	82.8	58.7	72.3	44.1	66.2	*84.0*	*95.0*
Income Tax Rate							39.6%	35.1%	37.1%	30.0%	24.0%	21.7%	31.2%	28.3%	27.5%	28.3%	*23.0%*	*22.0%*
Net Profit Margin							6.1%	8.6%	8.3%	7.8%	7.6%	8.3%	5.9%	6.9%	4.0%	5.7%	*6.6%*	*6.9%*
Working Cap'l ($mill)							266.9	158.1	307.9	331.7	249.2	250.4	278.4	53.1	238.8	301.4	*400*	*450*
Long-Term Debt ($mill)							233.3	135.0	327.0	309.2	352.3	346.5	337.2	137.2	375.5	535.0	*500*	*375*
Shr. Equity ($mill) B							367.7	345.8	251.4	342.7	361.0	396.7	422.4	436.6	355.2	273.3	*400*	*475*
Return on Total Cap'l							8.5%	14.6%	12.3%	10.7%	10.5%	12.3%	8.8%	13.9%	7.2%	10.1%	*10.0%*	*12.0%*
Return on Shr. Equity							12.4%	18.7%	25.0%	17.9%	18.3%	20.9%	13.9%	16.6%	12.4%	24.2%	*21.0%*	*20.0%*
Retained to Com Eq							6.8%	12.2%	15.4%	10.1%	10.6%	13.5%	6.5%	9.1%	3.0%	11.8%	*12.5%*	*12.5%*
All Div'ds to Net Prof							45%	34%	38%	44%	42%	35%	53%	45%	76%	51%	*41%*	*38%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $542.5 mill. **Due in 5 Yrs** $243.0 mill.
LT Debt $535.0 mill. **LT Interest** $28.0 mill.
(Total interest coverage: 3.8x) (66% of Cap'l)

Leases, Uncapitalized Annual rentals $17.0 mill.
No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 29,540,000 shares

MARKET CAP: $1.5 billion (Small Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	233.7	150.4	186.3
Receivables	280.1	327.0	349.8
Other	234.4	288.6	326.1
Current Assets	748.2	766.0	862.2
Accts Payable	35.4	47.7	46.4
Debt Due	237.5	37.5	7.5
Other	422.2	442.0	506.9
Current Liab.	695.1	527.2	560.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	5.0%	7.5%	*7.5%*
"Cash Flow"	2.5%	5.0%	*12.0%*
Earnings	2.0%	.5%	*15.5%*
Dividends	- -	6.0%	*5.5%*
Book Value	1.5%	3.5%	*9.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	253.1	255.1	263.2	275.1	1046.5
2022	264.4	262.2	273.3	289.9	1089.8
2023	298.7	286.3	286.9	297.4	1169.3
2024	*310*	*315*	*320*	*330*	*1275*
2025	*335*	*345*	*350*	*355*	*1385*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.61	.60	.50	.54	2.26
2022	.19	.17	.40	.66	1.41
2023	.68	.45	.62	.44	2.20
2024	*.70*	*.65*	*.75*	*.90*	*3.00*
2025	*.75*	*.85*	*.85*	*.95*	*3.40*

Calendar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.235	.235	.235	.235	.94
2021	.25	.25	.25	.25	1.00
2022	.265	.265	.265	.265	1.06
2023	.28	.28	.28	.28	1.12
2024	.30				

BUSINESS: CSG Systems International, Inc. provides business support solutions and services to the majority of the global communications service providers, including Comcast, DISH, Charter, and AT&T, among many others. Broadband/Cable/Satellite (51% of '23 revenues); Telecommunications (21%); Other (28%). Acquired U.K-based Intec Telecom, 11/10. Has about 5,700 employees. R&D spending: 12% of 2023 revenues. The Vanguard Group, Inc owns 13.1% of common stock; BlackRock, Inc., 17.3%; Officers & directors, 3.1% (4/24 proxy). Incorporated: Delaware. Chairman: Ron Cooper. President & CEO: Brian Shepherd. Address: 6175 S. Willow Drive, 10th Floor, Greenwood Village, CO 80111. Telephone: 303-200-2000. Internet: www.csgi.com.

CSG Systems International ended 2023 on a good note. The provider of technology solutions to global communication companies posted fourth-quarter revenues of $297 million and earnings of $0.44 per share. The former advanced modestly year over year, thanks to strong demand for the company's revenue management solutions and solid organic growth, while the latter slipped notably versus the previous-year tally. This was due mainly to restructuring charges during the period.

The stage is set for respectable top- and bottom-line expansion this year and next. On par with management's recent outlook, our model suggests that 2024 revenue and earnings growth of 9% and 37%, respectively, is in the cards. Likewise, our preliminary 2025 projections call for similar rates of growth.

Capital ought to continue to make its way to shareholders. The board of directors recently raised the quarterly distribution 7%, to $0.30 per share, with the raise likely being prompted by solid near- to intermediate-term financial outlooks. Meanwhile, management repurchased more than $100 million worth of stock last year, and is poised to continue to do so under the current buyback authorization. Cash reserves are ample, although we are keeping an eye on slowly rising debt levels.

Long-term business prospects are decent. CSG Systems is well positioned amongst its major telecommunications customers, particularly Charter and Comcast. Looking forward, assuming a healthier macroeconomic landscape is in place, the company should capture additional market share as potential client spending perks up. On balance, given the notable global technological shift and push toward 5G and the cloud, we look for strong annual revenue growth over the pull to late decade.

Total return potential over both the 18-month and 3- to 5-year windows is attractive. This is partly supported by an above-average dividend yield. On the other hand, the stock is ranked to move in line with the broader market over the coming six to 12 months and, thus, probably won't pique the interest of momentum-driven investors.

Nicholas Patrikis *May 3, 2024*

(A) Diluted earnings. Excl. n/r gain/(losses): '08, 14¢; '09, (42¢); '10, ($1.23); '11, (13¢); '12, (4¢); '13, (25¢); '14, (26¢); '15, (6¢). Excl. discontinued ops.: '07, 2¢; '08, 1¢; '09, 4¢. Egs. may not sum due to rounding. Next earnings report due early August. **(B)** Dividends historically paid in late March, June, Sept., and Dec. **(C)** Includes intangibles. At 12/31/23: $413.1 million, or $13.98 a share. **(D)** In millions.

Company's Financial Strength	B+
Stock's Price Stability	75
Price Growth Persistence	55
Earnings Predictability	65

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CSW INDUSTRIALS NDK-CSWI

RECENT PRICE 235.29 | P/E RATIO 32.0 (Trailing: 37.8 Median: NMF) | RELATIVE P/E RATIO 1.79 | DIV'D YLD 0.3% | VALUE LINE

TIMELINESS 4 Lowered 2/16/24
SAFETY 2 Raised 7/31/20
TECHNICAL 3 Lowered 4/26/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

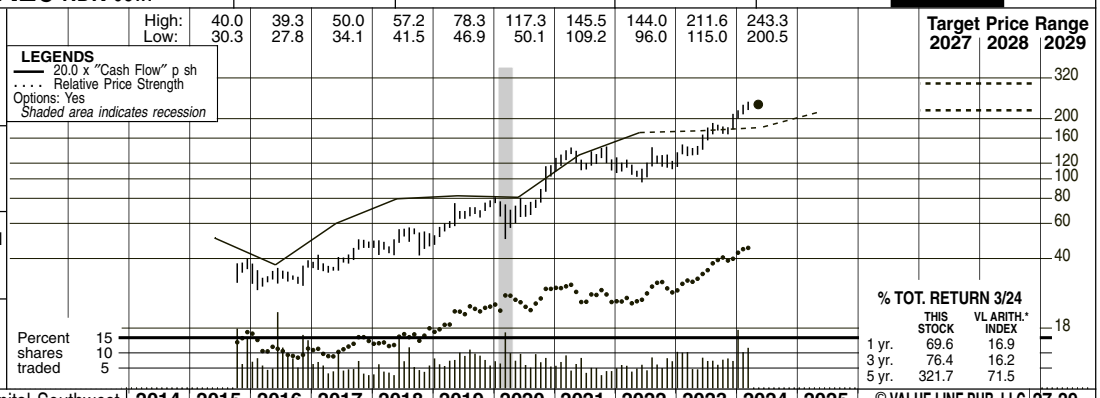
Low-High	Midpoint (% to Mid)
$188-$320	$254 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	300	(+30%)	*7%*
Low	220	(-5%)	*-1%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	108	102	117
to Sell	61	78	95
Hld's(000)	12951	12687	12860



On September 30, 2015, Capital Southwest spun off its industrial subdidiaries to form a company called CSW Industrials. On November 15, 2015, the company became an independent publicly-traded entity when it issued 15 million shares to the public at $35.20 a share. The underwriting syndicate included BoFA Merril Lynch, Wells Fargo, and Citibank. The stock trades on the NASDAQ under the symbol CSWI.

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	--	20.42	20.64	20.55	23.28	26.17	26.78	39.88	48.97	*50.35*	*50.65*	*50.90*	Revenues per sh	*60.00*
	--	2.53	1.86	3.00	3.98	4.12	4.05	6.57	8.53	*9.35*	*10.30*	*10.90*	"Cash Flow" per sh	*13.70*
	--	1.62	.87	2.09	2.96	3.02	2.66	4.20	6.20	*7.30*	*7.55*	*7.80*	Earnings per sh [A]	*10.00*
	--	--	--	--	--	.54	.54	.59	.68	.74	*.82*	*.88*	Div'ds Decl'd per sh	*1.04*
	--	.71	.59	.35	.50	.78	.56	1.00	.90	*.95*	*1.00*	*1.05*	Cap'l Spending per sh	*1.20*
	--	16.48	17.19	16.74	17.53	18.77	26.33	29.86	33.97	*36.75*	*41.25*	*43.65*	Book Value per sh	*47.45*
	--	15.66	15.85	15.88	15.04	14.74	15.65	15.71	15.48	*15.50*	*16.00*	*16.50*	Common Shs Outst'g [B]	*17.50*
	--	21.1	39.0	20.4	17.3	22.8	34.5	29.8	19.5	*22.5*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*26.0*
	--	1.06	2.05	1.03	.93	1.21	1.77	1.61	1.13	*1.25*			Relative P/E Ratio	*1.45*
	--	--	--	--	--	.8%	.6%	.5%	.6%	.5%			Avg Ann'l Div'd Yield	*.4%*
	--	319.8	327.1	326.2	350.2	385.9	419.2	626.4	757.9	*780*	*810*	*840*	Revenues ($mill)	*1050*
	--	19.3%	13.0%	20.1%	21.2%	17.4%	19.7%	21.4%	23.0%	*23.5%*	*23.5%*	*23.0%*	Operating Margin	*24.5%*
	--	14.2	15.8	14.9	13.8	14.8	23.0	36.9	35.6	*40.0*	*45.0*	*50.0*	Depreciation ($mill)	*65.0*
	--	25.5	13.7	32.7	46.1	45.9	40.3	66.4	96.4	*115*	*120*	*130*	Net Profit ($mill)	*175*
	--	42.4%	46.4%	32.3%	25.0%	20.4%	21.2%	26.4%	23.3%	*23.0%*	*23.0%*	*23.5%*	Income Tax Rate	*24.0%*
	--	8.0%	4.2%	10.0%	13.2%	11.9%	9.6%	10.6%	12.7%	*14.7%*	*14.8%*	*15.5%*	Net Profit Margin	*16.7%*
	--	123.9	108.6	82.7	102.1	90.9	131.8	182.8	215.1	*205*	*210*	*220*	Working Cap'l ($mill)	*240*
	--	89.1	72.6	23.5	30.9	10.3	241.8	252.2	253.0	*175*	*200*	*240*	Long-Term Debt ($mill)	*320*
	--	258.0	272.4	265.8	263.7	276.7	412.0	469.1	525.7	*570*	*660*	*720*	Shr. Equity ($mill)	*830*
	--	7.8%	4.4%	11.7%	15.9%	16.2%	6.3%	9.6%	13.2%	*15.0%*	*13.0%*	*13.0%*	Return on Total Cap'l	*16.5%*
	--	9.9%	5.0%	12.3%	17.5%	16.6%	9.8%	14.2%	18.3%	*20.0%*	*18.0%*	*18.0%*	Return on Shr. Equity	*21.0%*
	--	9.9%	5.0%	12.3%	17.5%	13.6%	7.8%	12.1%	16.3%	*18.0%*	*16.5%*	*16.0%*	Retained to Com Eq	*19.0%*
	--	--	--	--	--	18%	20%	14%	11%	*10%*	*11%*	*11%*	All Div'ds to Net Prof	*10%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $173.0 mill. **Due in 5 Yrs** $67.4 mill.
LT Debt $173.0 mill. **LT Interest** $9.5 mill.
(Total interest coverage 12.2x) (23% of Cap'l)

Leases, Uncapitalized Annual rentals $.6 mill.
No Defined Benefit Pension Plan
Pfd Stock None
Common Stock 15,532,975 shs.
as of 1/29/24

MARKET CAP: $5.0 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	39.9	16.2	25.0
Receivables	57.6	90.7	104.5
Inventory	57.3	127.4	151.4
Other	3.8	16.4	26.6
Current Assets	158.6	250.7	307.5
Accts Payable	17.7	39.5	43.4
Debt Due	.6	.6	--
Other	35.0	58.3	67.7
Current Liab.	53.3	98.4	111.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	--	15.5%	*6.5%*
"Cash Flow"	--	20.5%	*11.5%*
Earnings	--	21.5%	*12.5%*
Dividends	--	--	*8.0%*
Book Value	--	13.0%	*6.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Jun.30	Sep.30	Dec.31	Mar.31	Full Year
2021	161.3	155.6	136.3	173.2	626.4
2022	199.9	191.2	171.1	195.7	757.9
2023	203.4	203.7	175.0	*197.9*	*780*
2024	*210*	*220*	*180*	*200*	*810*
2025	*215*	*230*	*190*	*205*	*840*

Calendar	EARNINGS PER SHARE [A] Jun.30	Sep.30	Dec.31	Mar.31	Full Year
2021	1.27	1.14	.52	1.17	4.20
2022	1.88	1.57	1.01	1.74	6.20
2023	1.97	1.93	1.59	*1.81*	*7.30*
2024	*1.85*	*2.10*	*1.60*	*2.00*	*7.55*
2025	*1.90*	*2.20*	*1.65*	*2.05*	*7.80*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.135	.135	.135	.135	.54
2021	.135	.15	.15	.15	.59
2022	.17	.17	.17	.17	.68
2023	.17	.19	.19	.19	.74
2024	.19				

BUSINESS: CSW Industrials, Inc., is a diversified industrial holding company. It has three business segments: Contractor Solutions (67% of fiscal 2023 sales and 77% of operating income), Specialized Reliability (19%, and 14%), and Engineered Building (14% and 9%). Serves the following markets; HVAC, refrigeration, coatings and sealants, railroad, industrial, plumbing, building safety, energy, mining, and specialty lubricants. CSW has about 2,400 employees. Incorp.: DE. Off. & Dir. own 1.3% of stock; Allspring, 8.6%; T. Rowe Price, 8.1%; Neuberger Berman, 7.2%; BlackRock, 6.4%; Vanguard, 5.3% (7/23 Proxy). C.E.O.: Joseph B. Armes. Address: 5420 Lyndon B. Johnson Freeway, Ste. 500, Dallas, TX 75240. Tel.: (214) 884-3777. Internet: www. cswindustrials.com.

Since March, 2020, CSW Industrials' stock price has risen 365%. The vast majority of equities have recovered strongly since the initial depths of the pandemic, but few have done so like CSWI. This is mainly due to the fact that quarterly sales have risen for 14 successive periods, and share earnings have done the same for 10 successive quarters. This is a remarkable achievement, and one that we don't think will end with the fiscal third (December) interim. However, we think the growth rate for both the top and bottom lines will likely slow.

We look for fiscal 2023 share net of $7.30 on sales of $780 million (fiscal year ended March 31st). Full-year results are scheduled to be released on May 23rd. Backlog in all three of the company's operating segments remains solid, thanks to minor tack-on acquisitions. Business at the core Contractor Solutions unit appears to be continuing strong. This is a result of heavy demand for CSW's electrical, plumbing, and flood protection equipment as a result of unusually cold and wet weather around the country in the March quarter.

Sales and earnings should continue to grow through fiscal 2024 (ends March 31, 2025). Capital Southwest certainly knew what it was doing when it spun off CSW Industrials on November 15, 2015. The company has a very good business model, doesn't bite off more than it can chew when it comes to acquisitions in geographic markets not presently served, and has been in the right business at the right time. In addition, as far as we can tell, it has an adept management team. All these positives, combined with a decent economic environment, thanks to potentially lower interest rates, ought to keep the ball rolling into 2025.

This issue's price is at the lower end of our 3- to 5-year Target Price Range. There comes a time when all good things must come to an end, meaning a lull in GDP growth must surely occur at some point within the next few years. This doesn't mean that investors should pull out of this stock, but at this juncture, we would certainly recommend that they take some profits. The stock has had a very good run, and we would be loath to see our subscribers tempt fate.

Jeremy J. Butler *April 26, 2024*

(A) Diluted earnings. Next earnings report due early May. Earnings may not sum due to change in shares outstanding. Fiscal year ends March 31st of following year.
(B) In millions.
(C) Quarterly dividend payment of $0.135 a share initiated in the second quarter of 2019. Dividends paid in mid Feb, May, August, and Nov.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	70

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CVS HEALTH NYSE-CVS

RECENT PRICE 74.44 | P/E RATIO 9.0 (Trailing: 8.5 Median: 11.0) | RELATIVE P/E RATIO 0.49 | DIV'D YLD 3.7% | VALUE LINE

TIMELINESS 1 Raised 1/12/24
SAFETY 2 Lowered 9/11/20
TECHNICAL 4 Lowered 3/8/24
BETA .90 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$63-$112 $88 (20%)

2027-29 PROJECTIONS

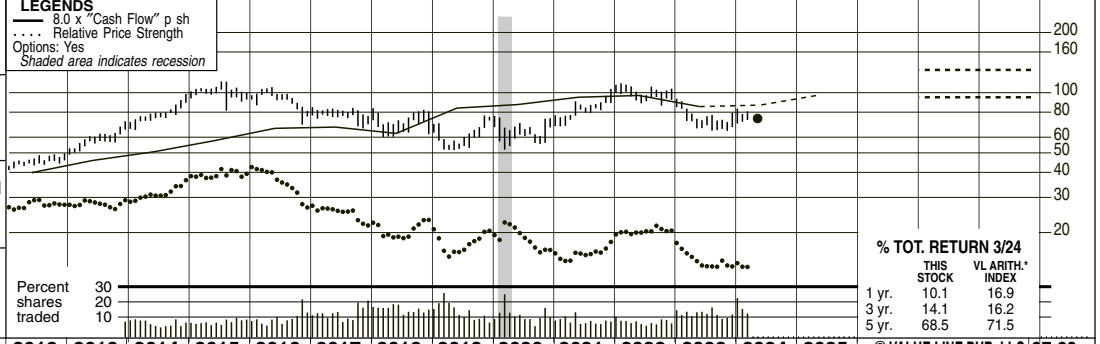
	Price	Gain	Ann'l Total Return
High	130	(+75%)	*18%*
Low	95	(+30%)	*10%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	1031	854	917
to Sell	1053	1155	1177
Hld's(000)	985512	986272	1020980

High:	72.0	98.6	113.6	106.7	84.7	83.9	77.0	76.4	104.6	111.3	93.4	83.3
Low:	49.0	64.9	81.4	69.3	66.4	60.1	51.7	52.0	68.0	86.3	64.4	70.2

LEGENDS
8.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	10.1	16.9
3 yr.	14.1	16.2
5 yr.	68.5	71.5

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
60.80	70.98	70.74	82.51	100.03	107.42	122.25	139.23	167.32	182.21	150.25	197.22	205.12	220.96	248.05	277.78	*299.45*	*318.20*	Sales per sh	*373.90*
3.37	3.73	3.79	4.11	4.99	5.74	6.33	7.20	8.30	8.43	7.82	10.46	10.91	11.86	12.11	10.66	*10.85*	*12.20*	"Cash Flow" per sh	*15.15*
2.44	2.63	2.69	2.80	3.43	4.00	4.51	5.16	5.84	5.90	7.08	7.08	7.50	8.40	8.69	8.74	*8.30*	*9.05*	Earnings per sh A	*11.25*
.26	.31	.35	.50	.65	.90	1.10	1.40	1.70	2.00	2.00	2.00	2.00	2.05	2.26	2.64	*2.66*	*2.90*	Div'ds Decl'd per sh B■	*3.60*
23.90	25.71	27.66	29.32	30.63	32.15	33.30	33.78	34.71	37.17	44.96	49.05	52.97	56.79	54.63	59.36	*66.60*	*73.80*	Book Value per sh D	*98.55*
1438.8	1391.0	1363.0	1298.0	1231.0	1180.0	1140.0	1101.0	1061.0	1014.0	1295.0	1302.0	1310.0	1322.0	1300.0	1288.0	*1240.0*	*1210.0*	Common Shs Outst'g C	*1130.0*
15.0	12.0	12.1	12.9	13.2	14.7	17.4	19.7	15.9	13.2	10.0	8.7	8.6	9.8	11.5	8.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*10.0*
.90	.80	.77	.81	.84	.83	.92	.99	.83	.66	.54	.46	.44	.53	.66	.48			Relative P/E Ratio	*.55*
.7%	1.0%	1.1%	1.4%	1.4%	1.5%	1.4%	1.4%	1.8%	2.6%	2.8%	3.3%	3.1%	2.5%	2.3%	3.5%			Avg Ann'l Div'd Yield	*3.2%*
139367	153290	177526	184765	194579	256776	268706	292111	322467	357776	*371300*	*385000*	Sales ($mill)	*422500*
19.6%	18.7%	17.6%	16.8%	21.0%	39.9%	40.6%	20.2%	18.7%	15.9%	*17.5%*	*18.0%*	Gross Margin	*19.0%*
8.5%	8.2%	7.8%	7.3%	7.9%	7.7%	8.2%	7.5%	6.8%	6.2%	*5.5%*	*5.5%*	Operating Margin	*6.0%*
7800	9600	9709	9803	9967	9941	9962	9940	9674	9395	*9250*	*9100*	Number of Stores	*9100*
5287.0	5837.0	6332.0	6064.0	7406.0	9247.0	9855.4	11165	11499	11272	*10455*	*11145*	Net Profit ($mill)	*12945*
39.8%	39.1%	38.6%	38.1%	26.5%	25.6%	25.9%	25.6%	25.3%	24.5%	*25.5%*	*25.5%*	Income Tax Rate	*25.0%*
3.8%	3.8%	3.6%	3.3%	3.8%	3.6%	3.7%	3.8%	3.6%	3.2%	*2.8%*	*2.9%*	Net Profit Margin	*3.1%*
6956.0	7209.0	4792.0	581.0	1234.0	d3001	d5648	d7799	d4054	d11331	*d11000*	*d11000*	Working Cap'l ($mill)	*d9000*
11695	26267	25615	22181	71444	64699	59207	51971	50476	58638	*55865*	*52080*	Long-Term Debt ($mill)	*39685*
37958	37196	36830	37691	58225	63864	69389	75075	71015	76461	*82615*	*89275*	Shr. Equity ($mill)	*111350*
11.1%	9.7%	10.7%	10.7%	6.7%	8.4%	8.8%	9.8%	10.4%	9.3%	*8.5%*	*8.5%*	Return on Total Cap'l	*9.0%*
13.9%	15.7%	17.2%	16.1%	12.7%	14.5%	14.2%	14.9%	16.2%	14.7%	*12.5%*	*12.5%*	Return on Shr. Equity	*11.5%*
10.5%	11.5%	12.2%	10.7%	9.2%	10.4%	10.4%	11.4%	12.1%	10.6%	*8.5%*	*8.5%*	Retained to Com Eq	*8.0%*
24%	27%	29%	34%	28%	28%	27%	24%	25%	28%	*32%*	*32%*	All Div'ds to Net Prof	*32%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $61610 mill. **Due in 5 Yrs** $18951 mill.
LT Debt $58638 mill. **LT Interest** $2700 mill.
(Total interest coverage; 5.2x)
(45% of Cap'l)
Leases, Uncapitalized Annual rentals $2716 mill.

Pension Assets-12/23 $5379 mill. **Oblig.** $4736 mill.

Pfd Stock None

Common Stock 1,258,449,553 shs.
as of 1/31/24
MARKET CAP: $93.7 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	12525	15723	11455
Receivables	24431	27276	35227
Inventory (FIFO)	17760	19090	18025
Other	5292	3593	3151
Current Assets	60008	65682	67858
Accts Payable	12544	14838	14897
Debt Due	4205	1778	2972
Other	51058	53120	61320
Current Liab.	67807	69736	79189

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	10.0%	8.5%	*7.0%*
"Cash Flow"	9.0%	7.0%	*5.5%*
Earnings	9.5%	6.5%	*5.0%*
Dividends	13.0%	4.0%	*8.0%*
Book Value	6.5%	8.0%	*9.5%*

Calendar	QUARTERLY SALES ($ mill.) Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2021	69097	72616	73794	76604	292111
2022	76826	80636	81159	83846	322467
2023	85278	88921	89764	93813	357776
2024	*89200*	*92250*	*92250*	*95800*	*370000*
2025	*93500*	*95500*	*96000*	*10000*	*385000*

Calendar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2021	2.04	2.42	1.97	1.97	8.40
2022	2.22	2.40	2.09	1.98	8.69
2023	2.20	2.21	2.21	2.12	8.74
2024	*1.70*	*2.20*	*2.25*	*2.15*	*8.30*
2025	*2.00*	*2.40*	*2.40*	*2.25*	*9.05*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.50	.50	.50	.50	2.00
2021	.50	.50	.50	.50	2.00
2022	.55	.55	.55	.55	2.20
2023	.605	.605	.605	.605	2.42
2024	.665	.665			

BUSINESS: CVS Health Corp. is the nation's foremost integrated health-care services provider, combining a leading pharmacy benefit manager and a leading health insurer with the U.S.'s largest pharmacy chain (9,000-plus locations). It fills or manages 4 bill. prescriptions per year via its Pharmacy & Consumer Wellness (29% of '23 revenue before intersegment eliminations) and Health Services (46%) segments. The Health Care Benefits segment (25%) covered 25.7 million medical members. Acq'd Caremark in 11/06 and Aetna in 11/18. Has roughly 300,000 empl. Off./Dir. own less than 1.0% of common stock; Vanguard, 8.9%; BlackRock, 7.4% (4/24 proxy). CEO: Karen S. Lynch. Inc.: DE. Addr: One CVS Drive, Woonsocket, RI 02895. Telephone: 401-765-1500. Internet: www.cvs.com.

The Street appears to be focusing, not so much on CVS's prospects this year as on those of 2025. On April 2nd, the share price fell as much as 9% from the day-earlier's close before partly recovering. Indeed, those of all health insurers (CVS owns Aetna) with a substantial Medicare Advantage (MA) business were hurt. MA are private plans that follow the rules of Medicare. They are usually more profitable than other health insurance market segments and have become increasingly popular. In 2023, CVS's MA members accounted for 13% of its insured membership, but 45% of the Health Care Benefits revenue. The declines followed the release of the final decision for 2025 MA payments by the Centers for Medicare & Medicaid Services (CMS). The new rates implied an average .16% decline in payment amounts, while medical costs are rising. It also remains to be seen how successful CVS is in recovering the quality scores of its MA plans (measured in Stars), lost for 2024, to regain bonus dollars from the CMS. Meantime, CVS has been working to adjust its plans to account for the new rates.

The health insurer lowered its performance expectations for 2024. In its fourth-quarter 2023 earnings release conference call, management raised its forecast for 2024 revenues provided during its Investor Day, held previously, to "at least" $371.3 billion from $366.0 billion. However, it cut its expected adjusted operating income to "at least" $16.9 billion from $17.2 billion, and share earnings to "at least" $8.30, from $8.50. The cause is the elevated medical utilization by MA members and rising medical costs. This is in addition to the decline in Stars, which will cost CVS $800 million this year. Partly offsetting these negative trends is CVS Caremark's decision to replace the pricey drug Humira (for arthritis and skin disorders) from its commercial insurance formularies to a lower-cost biosimilar. Other positives we see are more closures of underperforming stores and higher customer bases seen for each of its segments.

CVS stock is timely. Too, income-oriented investors may like its decent dividend yield, and risk-averse investors, its high Safety rank. It also has above-average long-term total return potential.

Phillip M. Seligman *April 19, 2024*

(A) From cont. oper.; based on diluted shares. Excl. net nonrecurring items: '10 (18¢); '11 (23¢); '12; (42¢); '13, (26¢); '14, (46¢); '15 (50¢); '16, (93¢); '17, (55¢); '18, ($5.06); '19, ($2.00); '20, ($2.04); '21, ($2.45); '22, ($5.55); '23, ($2.27). Next egs. report due early May. **(B)** Dividends are historically paid in early Jan., May, Aug., Nov. ■ Div'd reinvest. plan avail. May not add due to rounding. **(C)** In mill. **(D)** Includes intangibles of $120.5 billion, or $93.56 a share, as of 12/31/23.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	20
Earnings Predictability	100

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CASELLA WASTE SYS. NDQ-CWST

RECENT PRICE **86.16** | P/E RATIO **NMF** (Trailing: NMF Median: NMF) | RELATIVE P/E RATIO **NMF** | DIV'D YLD **Nil** | VALUE LINE **404**

TIMELINESS 5 Lowered 9/1/23
SAFETY 3 New 2/21/20
TECHNICAL 3 Lowered 2/16/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

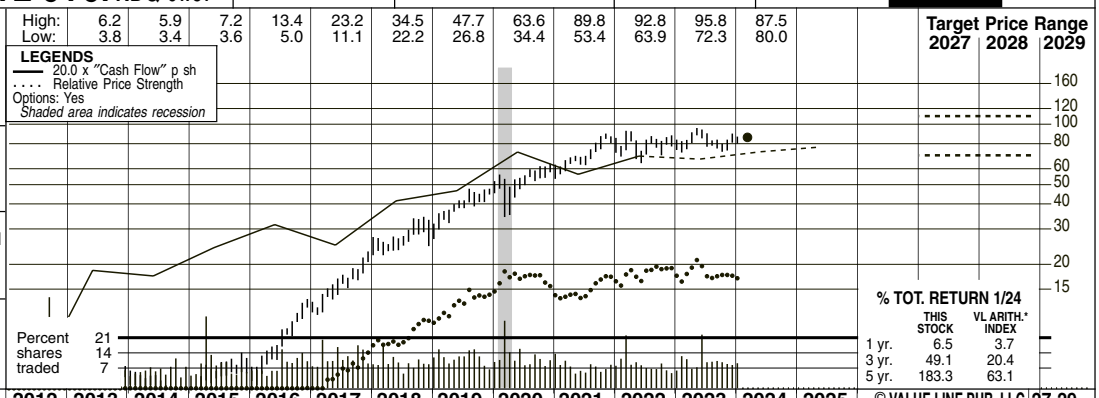
Low-High	Midpoint (% to Mid)
$72-$137	$105 (20%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+30%)	7%
Low	70	(-20%)	-5%

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	114	177	158
to Sell	117	93	135
Hld's(000)	50442	55259	57121



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
21.59	20.14	17.54	17.82	11.78	12.42	9.08	13.31	13.93	14.17	15.39	15.55	15.46	17.30	20.99	*21.90*	*25.40*	*26.90*	Revenues per sh [D]	*28.35*
2.81	2.04	2.05	.79	.17	.93	.87	1.21	1.58	1.24	2.08	2.33	3.63	2.81	3.47	*3.35*	*3.65*	*3.85*	"Cash Flow" per sh	*4.50*
d.02	d.55	d.14	d1.37	d1.62	d.58	d.15	d.32	.05	d.52	.15	.66	1.86	.80	1.03	*.65*	*.90*	*1.10*	Earnings per sh [A]	*1.65*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
2.25	2.10	2.08	2.21	1.42	1.15	1.36	1.22	1.34	1.71	1.88	2.16	2.16	2.40	2.53	*1.70*	*1.85*	*2.00*	Cap'l Spending per sh	*2.00*
2.58	1.94	3.54	.61	.29	d.21	d.30	d.52	d.60	d.90	d.37	2.57	7.23	8.22	9.63	*18.10*	*18.40*	*19.75*	Book Value per sh [B]	*22.50*
25.67	25.93	26.58	26.98	38.66	40.07	40.58	41.05	40.57	42.29	42.93	47.79	50.10	51.41	51.69	*58.00*	*59.00*	*59.50*	Common Shs Outst'g [C]	*60.00*
--	--	--	--	--	--	--	--	NMF	--	NMF	NMF	28.4	NMF	NMF	*NMF*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*NMF*
--	--	--	--	--	--	--	--	NMF	--	NMF	NMF	1.46	NMF	NMF	*NMF*			Relative P/E Ratio	*NMF*
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			Avg Ann'l Div'd Yield	*Nil*
368.4	546.5	565.0	599.3	660.7	743.3	774.6	889.2	1085.1	*1270*	*1500*	*1600*	Revenues ($mill)	*1700*
17.4%	16.7%	19.1%	21.2%	20.4%	19.1%	20.2%	21.1%	21.1%	*21.0%*	*21.5%*	*22.0%*	Operating Margin	*22.5%*
41.5	62.7	61.9	74.4	82.7	79.8	90.8	103.6	126.4	*155*	*160*	*165*	Depreciation ($mill)	*170*
d6.0	d13.0	2.1	d21.8	6.4	31.7	91.1	41.1	53.1	*40.0*	*55.0*	*65.0*	Net Profit ($mill)	*100*
--	--	71.9%	--	--	--	--	29.2%	29.2%	*29.5%*	*29.5%*	*29.5%*	Income Tax Rate	*29.5%*
NMF	NMF	.4%	NMF	1.0%	4.3%	11.8%	4.6%	4.9%	*3.1%*	*3.7%*	*4.1%*	Net Profit Margin	*5.9%*
d7.7	d8.7	d3.8	d4.2	d14.4	d27.8	116.1	d5.7	29.9	*165*	*185*	*200*	Working Cap'l ($mill)	*250*
534.1	522.2	504.0	477.6	542.0	509.0	530.4	542.5	585.0	*1010*	*1000*	*950*	Long-Term Debt ($mill)	*850*
d12.3	d21.5	d24.5	d37.9	d15.8	122.8	362.1	422.5	497.9	*1050*	*1085*	*1175*	Shr. Equity ($mill)	*1350*
1.3%	1.4%	4.5%	NMF	3.5%	7.0%	11.5%	5.4%	6.0%	*3.0%*	*3.5%*	*4.0%*	Return on Total Cap'l	*5.5%*
--	--	--	--	--	25.8%	25.2%	9.7%	10.7%	*3.5%*	*5.0%*	*5.5%*	Return on Shr. Equity	*7.5%*
--	--	--	--	--	25.8%	25.2%	9.7%	10.7%	*3.5%*	*5.0%*	*5.5%*	Retained to Com Eq	*7.5%*
--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $1046.2 mill. **Due in 5 Yrs** $500 mill.
LT Debt $1012.2 mill. **LT Interest** $35.0 mill.
(LT int. earned: 3.4x)
(50% of Cap'l)
Leases, Uncapitalized Annual rentals $9.7 mill.

No Defined Benefit Pension Plan
Pfd Stock None.

Common Stock 57,982,724 shs.
(includes Cl. B shs. 988,200)
as of 10/15/23
MARKET CAP: $5.0 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	33.8	71.2	219.1
Receivables	87.0	100.9	140.3
Other	25.7	35.4	53.9
Current Assets	146.5	207.5	413.3
Accts Payable	63.1	74.3	100.1
Debt Due	9.9	9.0	34.0
Other	79.2	94.3	119.0
Current Liab.	152.2	177.6	253.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	1.5%	5.5%	*7.0%*
"Cash Flow"	12.5%	19.5%	*4.5%*
Earnings	--	--	*4.5%*
Dividends	--	--	*Nil*
Book Value	19.0%	--	*15.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	189.5	215.9	242.0	241.8	889.2
2022	234.0	283.7	295.3	272.1	1085.1
2023	262.6	289.6	352.7	*365.1*	*1270*
2024	*300*	*350*	*400*	*450*	*1500*
2025	*350*	*365*	*425*	*460*	*1600*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.08	.23	.31	.18	.80
2022	.08	.34	.44	.16	1.03
2023	.07	.10	.31	*.17*	*.65*
2024	*.10*	*.15*	*.35*	*.30*	*.90*
2025	*.15*	*.20*	*.35*	*.40*	*1.10*

Calendar	QUARTERLY DIVIDENDS PAID■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	NO CASH DIVIDENDS BEING PAID				
2021					
2022					
2023					
2024					

BUSINESS: Casella Waste Systems, Inc. operates as a regional vertically integrated solid waste, recycling, and resource management services. It provides resource management services to residential, commercial, municipal, and industrial customers in the northeastern US. It owns and operates 50 solid waste collection operations, 65 transfer stations, 23 recycling facilities, eight Subtitle D landfills, three landfill gas-to-energy facilities, and one landfill permitted to accept construction and demolition materials. Has 3,200 employees (12/22). Offs./dirs. own 17.1% of stock. Vanguard, 7.8%; BlackRock, 5.5%; Conestoga, 5.2% (4/23 Proxy). Chairman & CEO: John W. Casella. Inc.: DE. Addr.: 25 Greens Hill Ln., Rutland, VT 05701. Tel.: 802-775-0325. Internet: www.casella.com.

Casella Waste Systems probably reported a weak per-share profit for the full year 2023. The company remained active on the acquisition front last year with two notable business operations of select solid waste operations from GFL Environmental and Twin Bridges. The integration cost associated with these purchases (a non-recurring loss) and high-interest expenses limited the first nine-month profit growth. These factors likely pressured the full-year bottom line, which probably took a step back to $0.65 per share. *(Note: Fourth-quarter results were scheduled to be released soon after we went to press with this report.)*

The near-term profit story looks better. Management expects 2023's acquisitions to contribute approximately 14% to total revenue this year. Other favorable factors should also support its business growth in the coming months. We think the company ought to benefit from relatively solid collection pricing. We note that the trash hauler has a flexible pricing strategy based on its customer mix. Thus, it is highly likely that the company will revise its pricing to attract new customers. In this way, Casella can maximize its revenues and increase its market share. Management is also focused on cost reduction through automation and route optimization. All told, we estimate share profit this year will likely recover sharply to about $0.90 and another 22% in 2025, to $1.10.

Casella has been implementing a multi-year organic growth strategy. Besides favoring expansion through acquisitions, the company has been growing its operations organically. For instance, Casella has been leading renewable natural gas (RNG) development projects at five landfills. It also has a well-placed railway system at its McKean landfill, which has the potential to transport more waste volumes from customers. After completing equipment upgrades at the Boston location, the company is planning technological enhancements at other sites.

Untimely shares of Casella have good 18-month capital appreciation potential. However, costs related to past acquisitions have limited profits here. We think most investors are better off staying on the sidelines, for now.

Emma Jalees *February 16, 2024*

(A) Based on diluted shares. Next earnings report due early May. Egs. may not sum due to rdg./shs. out.
(B) Incl. intang. At '22; $366.2 mill., $7.08/sh.
(C) In millions.
(D) Three- to five-year Target Price Range calculated using 4.0x book value per share.

Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	100
Earnings Predictability	25

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RECENT PRICE 124.00 | P/E RATIO 14.1 (Trailing: 14.2 Median: 15.0) | RELATIVE P/E RATIO 0.81 | DIV'D YLD 2.4% | VALUE LINE

TIMELINESS 3 Raised 8/18/23
SAFETY 2 Raised 3/20/09
TECHNICAL 2 Raised 3/1/24
BETA .75 (1.00 = Market)

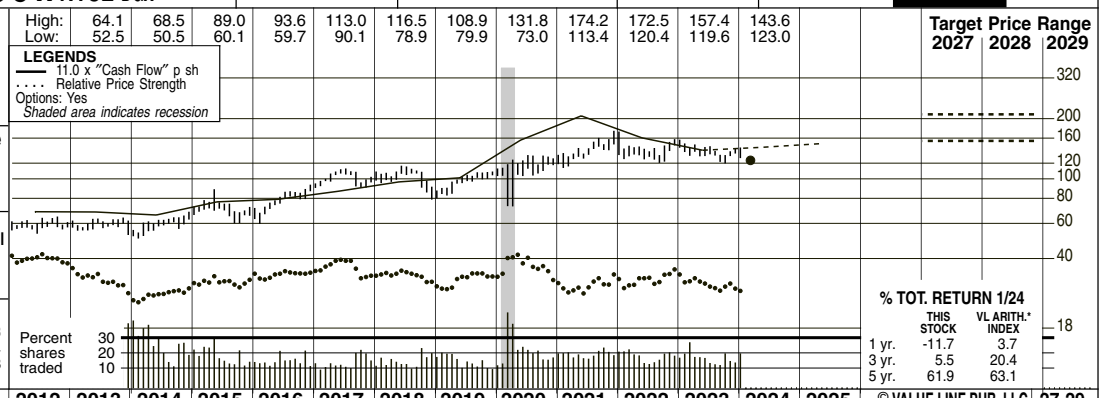
18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$105-$170 $138 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	210	(+70%)	*16%*
Low	155	(+25%)	*8%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	320	324	294
to Sell	420	389	408
Hld's(000)	98660	98751	98657



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
38.04	41.67	43.05	47.71	46.63	49.63	51.63	52.40	54.85	57.10	55.79	58.09	70.95	90.66	89.04	83.35	*85.45*	*88.30*	Revenues per sh	*106.35*
4.75	5.52	5.70	6.42	6.23	6.22	6.01	6.99	7.19	7.90	8.79	9.22	14.20	18.78	14.57	12.66	*13.10*	*13.70*	"Cash Flow" per sh	*17.80*
3.27	3.88	4.05	4.53	4.36	4.00	4.10	4.77	5.15	5.67	6.31	6.56	11.18	14.24	9.95	8.71	*9.00*	*9.50*	Earnings per sh A	*13.00*
.40	.40	.40	.47	.81	1.20	1.32	1.52	1.65	1.80	1.95	2.12	2.21	2.42	2.64	2.79	*2.96*	*3.15*	Div'ds Decl'd per sh B	*3.95*
1.12	.93	1.20	1.03	1.15	1.60	2.14	1.84	2.14	1.87	2.84	3.01	3.14	3.39	3.64	3.68	*3.75*	*3.85*	Cap'l Spending per sh	*4.25*
18.92	22.30	23.57	23.46	26.29	27.42	29.87	32.76	33.78	36.45	38.64	42.41	50.82	54.15	53.09	56.81	*61.35*	*65.20*	Book Value per sh C	*76.35*
190.57	178.92	171.16	157.42	158.33	144.00	144.00	143.00	137.00	135.00	135.00	133.00	133.00	119.00	111.00	111.00	*110.00*	*110.00*	Common Shs Outst'g D	*110.00*
15.1	13.7	13.0	12.2	13.6	14.8	14.5	14.8	15.2	17.7	16.2	14.9	10.0	9.7	13.9	15.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.0*
.91	.91	.83	.77	.87	.83	.76	.75	.80	.89	.88	.79	.51	.52	.80	.88			Relative P/E Ratio	*.80*
.8%	.8%	.8%	.9%	1.4%	2.0%	2.2%	2.2%	2.1%	1.8%	1.9%	2.2%	2.0%	1.7%	1.9%	2.0%			Avg Ann'l Div'd Yield	*2.5%*
7435.0	7493.0	7515.0	7709.0	7531.0	7726.0	9437.0	10788	9883.0	9252.0	*9400*	*9710*	Revenues ($mill)	*11700*
17.4%	18.4%	19.8%	18.6%	20.4%	19.7%	25.9%	26.8%	21.3%	*19.5%*	*19.8%*	*20.3%*	Operating Margin	*22.5%*
314.0	304.0	249.0	270.0	309.0	329.0	361.0	408.0	437.0	439.0	*450*	*460*	Depreciation ($mill)	*525*
551.0	695.0	736.0	796.0	878.0	897.0	1528.0	1827.0	1180.0	966.8	*990*	*1045*	Net Profit ($mill)	*1430*
30.9%	34.3%	36.4%	21.1%	17.0%	21.8%	23.5%	24.6%	18.0%	*23.0%*	*23.0%*	*23.0%*	Income Tax Rate	*25.0%*
7.4%	9.3%	9.8%	10.3%	11.7%	11.6%	16.2%	16.9%	11.9%	10.4%	*10.5%*	*10.8%*	Net Profit Margin	*12.2%*
d106.0	328.0	550.0	249.0	d95.0	500.0	1282.0	988.0	347.0	557.0	*650*	*750*	Working Cap'l ($mill)	*1100*
3244.0	3492.0	3728.0	3748.0	3429.0	3966.0	4013.0	4010.0	3978.0	4410.0	*4200*	*4000*	Long-Term Debt ($mill)	*3500*
4301.0	4684.0	4628.0	4921.0	5216.0	5641.0	6759.0	6444.0	5893.0	6307.0	*6750*	*7175*	Shr. Equity ($mill)	*8400*
8.4%	9.4%	9.7%	10.0%	11.0%	10.1%	14.9%	18.2%	12.7%	10.1%	*10.0%*	*10.5%*	Return on Total Cap'l	*13.0%*
12.8%	14.8%	15.9%	16.2%	16.8%	15.9%	22.6%	28.4%	20.0%	15.3%	*14.5%*	*14.5%*	Return on Shr. Equity	*17.0%*
8.5%	10.3%	11.1%	11.2%	11.7%	10.8%	18.2%	23.6%	14.8%	10.4%	*10.0%*	*9.5%*	Retained to Com Eq	*12.0%*
34%	31%	30%	31%	30%	32%	19%	17%	26%	32%	*33%*	*33%*	All Div'ds to Net Prof	*30%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $4866 mill. **Due in 5 Yrs** $1650 mill.
LT Debt $4410 mill. **LT Interest** $245 mill.
(41% of Cap'l)

Leases, Uncapitalized: Ann'l rentals $169.0 mill.
No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 111,000,000 shares

MARKET CAP: $13.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	872	315	686
Receivables	1438	1195	1210
Inventory (FIFO)	208	192	190
Other	223	196	286
Current Assets	2741	1898	2372
Payables & Other	1600	1396	1359
Debt Due	153	155	456
Current Liab.	1753	1551	1815

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	6.5%	10.0%	*3.5%*
"Cash Flow"	10.0%	16.0%	*1.5%*
Earnings	11.0%	16.0%	*1.5%*
Dividends	12.0%	7.0%	*7.0%*
Book Value	7.5%	8.0%	*5.5%*

Calendar	QUARTERLY REVENUES ($ mill.) A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	2720	2550	2774	2744	10788
2022	2611	2453	2486	2333	9883
2023	2331	2338	2295	2288	9252
2024	*2290*	*2390*	*2320*	*2400*	*9400*
2025	*2370*	*2450*	*2400*	*2490*	*9710*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	3.76	3.18	3.96	3.34	14.24
2022	3.22	2.36	2.36	1.98	9.95
2023	2.04	2.30	2.22	2.15	8.71
2024	*1.95*	*2.30*	*2.40*	*2.35*	*9.00*
2025	*2.05*	*2.45*	*2.50*	*2.50*	*9.50*

Calendar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.53	.56	.56	.56	2.21
2021	.56	.62	.62	.62	2.42
2022	.62	.66	.66	.66	2.60
2023	.66	.71	.71	.71	2.79
2024	.71	.75			

BUSINESS: Quest Diagnostics provides diagnostic testing, information, and services to patients, physicians, hospitals, insurers, employers, government agencies, and other commercial clinical labs. It operates a network of patient-service centers and principal labs, and phlebotomists in physicians offices. Offers routine tests, anatomic pathology services, and central laboratory testing performed with clinical research trials. Has 49,000 employees. Vanguard owns 12.3% of common; BlackRock, 10.9%; State Street, 5.2%; officers & directors own less than 2.0% (4/23 proxy). Chairman and CEO: James E. Davis. Incorporated: Delaware. Address: 500 Plaza Drive, Secaucus, New Jersey 07094. Telephone: 973-520-2700. Internet: www.questdiagnostics.com.

Quest Diagnostics is continuing its transition away from COVID-19 testing. Screenings for COVID generated only $37 million in revenues during the 2023 fourth quarter. This figure was down 80% year over year. Still, growth in the base testing business is running at a decent clip, with a gain of nearly 5% using the same time frames. For the full year, legacy testing operations posted a 7% gain, as a combination of innovative solutions and growing relationships with healthcare systems got much of the credit. Particular areas of strength were cardiometabolic, prenatal, genetics, and neurology. These fields, as well as an emphasis on oncology checks, should keep the top line moving north even as the vast majority of the general public now screens for COVID using at-home kits.

Annual revenue advances in the years ahead should be slow but steady. We are projecting rises in the 2% to 4% range per annum, with potential boosts if DGX inks additional deals with hospital chains, healthcare systems, and the like. If not, the purchasing of existing facilities could also pad these stats. Of course, any fresh breakthroughs on the testing front will also help move the needle. For now though, much of the expected gains we are forecasting comes from increases in the customer base via improved heathcare coverage. A recent spike in usage dispayed by health maintenance organizations augurs well for more patients heading to the phlebotomist for testing. If so, our share-earnings targets of $9.00 and $9.50 for 2024 and 2025, respectively, should be well within reach.

These good-quality shares are only an average selection for year-ahead relative price performance. Additionally, long-term capital appreciation potential leaves something to be desired. Any subscribers dialed in on these investment metrics should look elsewhere, for now.

However, the announcement of a dividend hike should bring more income-based accounts into the fold. Starting with the April payout, the quarterly stipend is being raised to $0.75 a share, an increase of 5.6%. With that, DGX's yield moves above the *Value Line* median, which is not commonplace in this industry.

Erik M. Manning *March 1, 2024*

(A) Diluted earnings. Excludes nonrecurring: '11, d$1.61; '12, d8¢; '13, $1.58; '17, 17¢; '18, $1.02; '19, 43¢; '20, d71¢; '21, $1.31; '22, $1.98. Excludes disc. operations gain: '19, 15¢. Quarterly figures may not sum due to rounding. Next earnings report due late April.
(B) Dividends historically paid mid-January, April, July, October.
(C) Includes intangibles. In '23: $8.9 billion, $80.18/sh.
(D) In millions.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	85
Earnings Predictability	55

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DANAHER CORP. NYSE-DHR

RECENT PRICE **247.80** | P/E RATIO **35.7** (Trailing: 43.9 Median: 28.0) | RELATIVE P/E RATIO **1.95** | DIV'D YLD **0.4%** | **VALUE LINE**

TIMELINESS — Suspended 9/22/23
SAFETY 2 Lowered 1/5/24
TECHNICAL — Suspended 9/22/23
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$201-$361	$281 (15%)

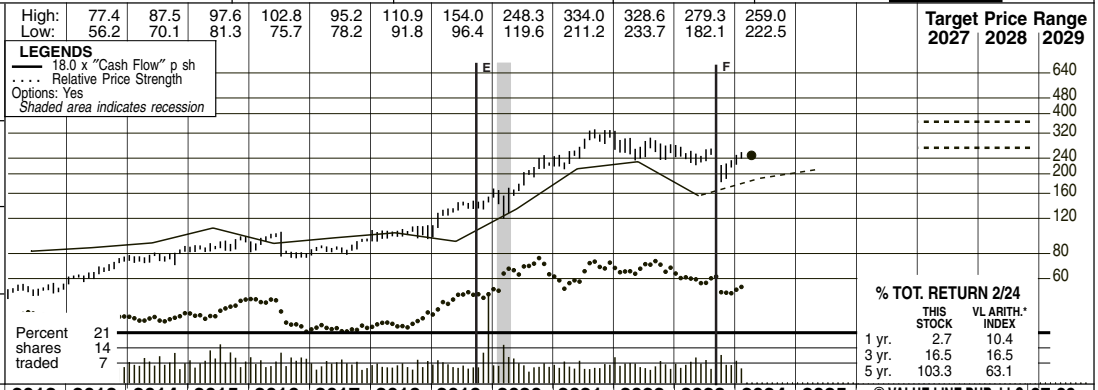
2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	365	(+45%)	*11%*
Low	270	(+10%)	*3%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	917	967	997
to Sell	939	860	941
Hld's(000)	571704	575766	584954

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	77.4	87.5	97.6	102.8	95.2	110.9	154.0	248.3	334.0	328.6	279.3	259.0						
Low:	56.2	70.1	81.3	75.7	78.2	91.8	96.4	119.6	211.2	233.7	182.1	222.5						
Revenues per sh	19.92	17.29	20.03	23.40	26.56	27.39	28.27	29.94	24.39	26.31	28.36	25.75	31.34	41.19	43.21	32.32	*32.50*	*35.35*
"Cash Flow" per sh	2.76	2.39	2.98	3.80	4.57	4.76	5.02	5.96	5.00	5.32	5.64	5.11	7.43	11.80	12.80	8.64	*10.55*	*11.75*
Earnings per sh A	2.12	1.81	2.31	2.83	3.23	3.42	3.63	4.30	3.34	3.50	3.74	3.26	4.89	8.61	9.66	5.65	*7.60*	*8.65*
Div'ds Decl'd per sh B	.06	.06	.08	.09	.13	.08	.33	.54	.58	.55	.62	.67	.71	.81	.96	1.06	*1.16*	*1.30*
Cap'l Spending per sh	.30	.29	.33	.49	.67	.79	.85	.92	.85	.89	.93	.91	1.11	1.81	1.58	1.87	*1.90*	*1.95*
Book Value per sh C	15.39	17.98	20.80	24.58	27.66	32.07	33.19	34.49	33.23	37.84	40.22	41.15	51.33	58.60	66.48	72.36	*76.70*	*80.30*
Common Shs Outst'g D	637.40	646.96	659.18	687.73	687.50	698.10	704.30	686.80	692.20	696.60	701.50	695.50	711.00	715.00	728.30	739.20	*740.00*	*738.00*
Avg Ann'l P/E Ratio	17.0	17.1	17.3	17.3	16.4	19.3	21.3	20.4	25.8	24.5	27.0	41.0	37.9	31.9	27.9	42.5	*Bold figures are Value Line estimates*	
Relative P/E Ratio	1.02	1.14	1.10	1.09	1.04	1.08	1.12	1.03	1.35	1.23	1.46	2.18	1.95	1.72	1.61	2.37		
Avg Ann'l Div'd Yield	.2%	.2%	.2%	.2%	.2%	.1%	.4%	.6%	.7%	.6%	.6%	.5%	.4%	.3%	.4%	.4%		
Revenues ($mill)							19914	20563	16882	18330	19893	17911	22284	29453	31471	23890	*24060*	*26075*
Operating Margin							21.9%	24.4%	23.0%	23.2%	23.7%	24.9%	27.0%	34.6%	34.7%	30.8%	*32.5%*	*33.0%*
Depreciation ($mill)							938.5	1051.3	1128.1	1238.3	1307.7	1189.5	1775.0	2168.0	2222.0	2166.0	*2200*	*2300*
Net Profit ($mill)							2598.4	3045.2	2332.2	2469.8	2650.9	2432.3	3646.0	6433.0	7209.0	4221.0	*5625*	*6385*
Income Tax Rate							25.4%	20.2%	16.4%	16.0%	19.5%	26.4%	18.9%	16.5%	13.1%	16.3%	*20.0%*	*20.0%*
Net Profit Margin							13.0%	14.8%	13.8%	13.5%	13.3%	13.6%	16.4%	21.8%	22.9%	17.7%	*23.4%*	*24.5%*
Working Cap'l ($mill)							4034.9	1666.3	d208.9	2057.7	2252.3	20665	6400.0	3508.0	7494.0	5663.0	*6500*	*7200*
Long-Term Debt ($mill)							3401.5	12025	9674.2	10327	9688.5	21517	21193	22168	19086	16707	*16500*	*16200*
Shr. Equity ($mill)							23378	23690	23003	26358	28214	30271	39766	45167	50082	53486	*56750*	*59275*
Return on Total Cap'l							9.9%	8.8%	7.4%	6.9%	7.2%	4.8%	6.2%	9.7%	10.6%	6.2%	*8.5%*	*9.0%*
Return on Shr. Equity							11.1%	12.9%	10.1%	9.4%	9.4%	8.0%	9.2%	14.2%	14.4%	7.9%	*10.0%*	*10.5%*
Retained to Com Eq							10.1%	11.4%	8.4%	7.9%	7.9%	6.7%	7.9%	13.6%	13.2%	6.4%	*8.5%*	*9.0%*
All Div'ds to Net Prof							9%	12%	17%	15%	16%	22%	21%	12%	11%	19%	*15%*	*15%*



Target Price Range

2027	2028	2029
640	480	400
320	240	200
160	120	80
60		

% TOT. RETURN 2/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	2.7	10.4
3 yr.	16.5	16.5
5 yr.	103.3	63.1

© VALUE LINE PUB. LLC **27-29**

CAPITAL STRUCTURE as of 12/31/23
Total Debt $18402 mill. **Due in 5 Yrs** $7960 mill.
LT Debt $16707 mill. **LT Interest** $920 mill. (24% of Cap'l)

Leases, Uncapitalized Annual rentals $204.0 mill.
Pension Assets-12/23 $2.7 bill.
Oblig. $3.2 bill.

Common Stock 739,701,725 shs. **as of 2/2/24**

MARKET CAP: $183 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	2586	5995	5864
Receivables	4631	4918	3922
Inventory (LIFO)	2767	3110	2594
Other	1664	1860	1557
Current Assets	11648	15883	13937
Accts Payable	2569	2296	1766
Debt Due	8	591	1695
Other	5563	5502	4813
Current Liab.	8140	8389	8274

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	4.0%	8.0%	*2.0%*
"Cash Flow"	9.5%	16.0%	*5.5%*
Earnings	9.5%	17.5%	*7.0%*
Dividends	25.5%	10.0%	*11.0%*
Book Value	9.0%	12.0%	*5.5%*

Calendar	QUARTERLY REVENUES ($ mill.) A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2021	6858	7218	7229	8148	29453
2022	7688	7751	7663	8369	31471
2023	5949	5912	5624	6405	23890
2024	*5620*	*5725*	*6015*	*6700*	*24060*
2025	*6125*	*6225*	*6525*	*7200*	*26075*

Calendar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2021	2.29	2.40	1.54	2.39	8.61
2022	2.31	2.25	2.10	2.99	9.66
2023	1.65	1.24	1.26	1.50	5.65
2024	*1.75*	*1.75*	*1.95*	*2.15*	*7.60*
2025	*2.00*	*2.00*	*2.25*	*2.40*	*8.65*

Calendar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.17	.18	.18	.18	.71
2021	.18	.21	.21	.21	.81
2022	.21	.25	.25	.25	.96
2023	.25	.27	.27	.27	1.06
2024	.27				

BUSINESS: Danaher Corp. is a global science and technology innovator committed to accelerating the power of science and technology to improve human health. The company uses a growth-via-acquisition strategy and is constituted of 15 operating companies divided into three segments: Biotechnology, Life Sciences, and Diagnostics. In 2023, acquired Abcam plc for $5.6 billion. Made 7 acquisitions in 2022 ($582 million); 11 in 2021, $1.3 billion; 1 in 2020 (GE's Biopharma unit, $21 billion. Foreign sales were 60% of '23 revenues. Offs. and dirs. own 11.1% of common; Vanguard, 7.5%; BlackRock, 7.1% (4/23 Proxy). CEO: Rainer M. Blair. Inc.: DE. Addr.: 2200 Pennsylvania Ave., N.W., Suite 800W, Wash., D.C. 20037-1701. Tel.: 202-828-0850. Web: www.danaher.com.

Our 2024 presentation for Danaher includes a full year of contributions from its latest acquisition. The $5.7 billion deal to buy Abcam, a protein consumables manufacturer, closed in the final weeks of 2023, and its run through the Danaher Business System (DBS) is in full swing. Subscribers will also recall that the environmental and applied sciences portion of the portfolio was named Veralto (VLTO) and spun off in late 2023. As such, the company is now reporting in three business segments: biotechnology, life sciences, and diagnostics.

The wheeling and dealing is unlikely to stop any time soon. Danaher uses a growth-via-acquisition strategy and the DBS, which takes purchased assets and wrings out any costs that can be trimmed, needs to be steadily fed. Yes, the takeover of complimentary businesses to its three-pronged segment structure are the most likely targets, but expanding into new markets is always on the table. If leadership deems an area attractive and thinks it can gain new technologies or domain expertise, it has proven its acumen at getting deals done.

For 2024, we think revenues can climb above the $24 billion mark, translating to share earnings of $7.60. Management provides its sales forecasts on a non-GAAP basis due to the difficulty estimating currency translation, acquisitions, and divestitures. That said, the top line is likely to dip on a year-over-year basis in both the first and second quarter, as the pandemic transitions to an endemic state. The race for the vaccine is long over and demand in the life science arena has fallen off of late. The Abcam integration will make up for some of this, and we expect a much improved showing in the back half of the year under brighter economic skies. Profitability will be on the rise, thanks to cost trimming, improved efficiencies, and the reduced comparisons brought about by the restated 2023 numbers (post-spin).

We continue to keep Danaher's good-quality shares suspended for Timeliness. We prefer to wait for an elongated track record with the new portfolio before reassigning a rank. Separately, long-term appreciation potential is subpar and the dividend is not a focus.

Erik M. Manning *April 5, 2024*

(A) Diluted egs. May not sum due to rounding. 2016 and 2023 restated to reflect spinoffs. Excl. nonrecur. gains/(losses); '09, (16¢); '10, 33¢; '15, (63¢); '16, (26¢). Excl. gains/(loss) from discont. ops.; 15, $1.07; '16, 57¢; '17, 3¢; '19, 79¢; '23, 73¢. Next egs. report due late April.
(B) Dividends paid in late March, June, Sept., and Dec. **(C)** Incl. intang. '23: $62.35 mill., $84.35/sh. **(D)** In mills., adj. for stock splits. **(E)** Spun off Envista (NVST) 9/19. **(F)** Spun off Veralto (VLTO) 10/23.

Company's Financial Strength	A+
Stock's Price Stability	80
Price Growth Persistence	85
Earnings Predictability	70

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FASTENAL COMPANY NDQ-FAST

RECENT PRICE 74.79 | P/E RATIO 35.4 (Trailing: 37.0 Median: 26.0) | RELATIVE P/E RATIO 1.99 | DIV'D YLD 2.1% | VALUE LINE 1144

TIMELINESS 3 Lowered 2/23/24
SAFETY 1 Raised 9/15/23
TECHNICAL 3 Lowered 3/1/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$63-$98	$81 (10%)

2027-29 PROJECTIONS

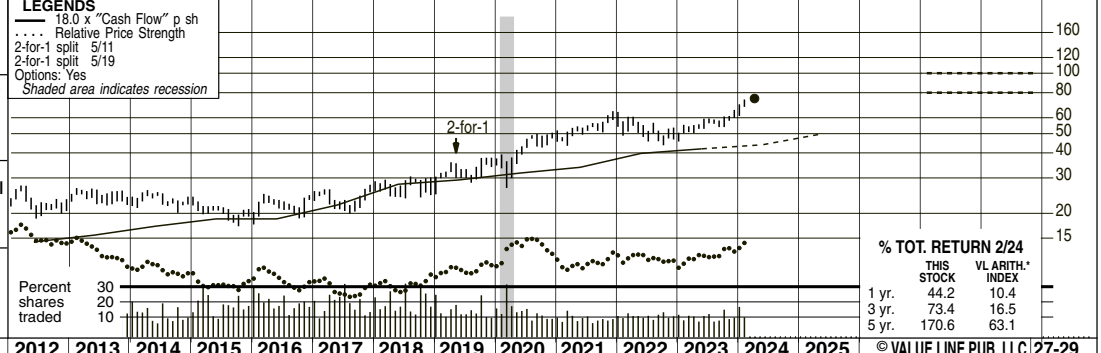
	Price	Gain	Ann'l Total Return
High	100	(+35%)	*10%*
Low	80	(+5%)	*4%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	482	423	509
to Sell	421	469	468
Hld's(000)	451464	450306	471116

	High:	26.7	26.1	24.2	25.0	27.7	30.6	37.9	50.5	64.8	64.1	65.7	75.8
	Low:	21.9	20.1	17.2	17.5	19.9	23.7	24.8	26.7	43.4	43.7	45.7	61.3

LEGENDS
18.0 x "Cash Flow" p sh
Relative Price Strength
2-for-1 split 5/11
2-for-1 split 5/19
Options: Yes
Shaded area indicates recession



Target Price Range 2027 2028 2029
160 120 100 80 60 50 40 30 20 15

% TOT. RETURN 2/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	44.2	10.4
3 yr.	73.4	16.5
5 yr.	170.6	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
3.94	3.27	3.85	4.69	5.28	5.60	6.31	6.68	6.85	7.63	8.68	9.29	9.84	10.45	12.23	12.84	***13.30***	***13.65***	Sales per sh	***14.40***
.54	.38	.52	.68	.80	.86	.96	1.04	1.04	1.22	1.55	1.63	1.76	1.89	2.21	2.33	***2.45***	***2.80***	"Cash Flow"per sh	***4.50***
.48	.31	.45	.61	.71	.76	.84	.89	.87	1.01	1.31	1.38	1.49	1.50	1.89	2.02	***2.15***	***2.30***	Earnings per sh [A]	***3.00***
.13	.18	.21	.33	.37	.40	.50	.56	.60	.64	.77	.86	1.00	1.12	1.24	1.39	***1.56***	***1.72***	Div'ds Decl'd per sh [B]	***1.98***
1.92	2.02	2.17	2.47	2.63	2.99	3.24	3.11	3.34	3.65	4.03	4.64	4.76	5.29	5.54	5.85	***6.00***	***6.15***	Book Value per sh	***6.60***
594.12	589.72	589.72	590.52	593.13	593.51	591.74	579.16	578.32	575.18	571.80	574.13	574.16	575.47	570.81	571.98	***570.00***	***565.00***	Common Shs Outst'g [C]	***560.00***
23.0	28.6	27.9	28.2	31.7	32.3	27.9	23.2	25.3	23.3	20.8	23.6	28.0	35.6	27.7	27.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***30.0***
1.38	1.90	1.77	1.77	2.02	1.81	1.47	1.17	1.33	1.17	1.12	1.26	1.44	1.92	1.60	1.55			Relative P/E Ratio	***1.65***
1.2%	2.0%	1.6%	1.9%	1.6%	1.6%	2.1%	2.7%	2.7%	2.7%	2.8%	2.6%	2.4%	2.1%	2.4%	3.2%			Avg Ann'l Div'd Yield	***2.2%***
						3733.5	3869.2	3962.0	4390.5	4965.1	5333.7	5647.3	6010.9	6980.6	7346.7	***7580***	***7720***	Sales ($mill)	***8075***
						52.8%	52.6%	52.2%	49.3%	51.0%	49.9%	48.2%	48.9%	48.6%	48.1%	***48.0%***	***49.0%***	Gross Margin	***50.0%***
						23.0%	23.6%	22.7%	20.1%	22.8%	22.5%	22.9%	22.9%	23.4%	23.2%	***23.0%***	***23.5%***	Operating Margin	***24.0%***
						2637	2622	2712	2667	2448	2414	2312	2287	2114	2003	***1940***	***1815***	Number of Stores	***1580***
						494.2	516.4	499.5	578.6	751.9	790.9	859.1	925.0	1086.9	1155.0	***1195***	***1300***	Net Profit ($mill)	***1680***
						37.2%	37.5%	36.8%	33.7%	23.8%	24.2%	24.2%	23.4%	24.5%	24.1%	***24.0%***	***24.0%***	Income Tax Rate	***24.0%***
						13.2%	13.3%	12.6%	13.2%	15.1%	14.8%	15.2%	15.4%	15.6%	15.7%	***15.8%***	***16.8%***	Net Profit Margin	***20.8%***
						1207.9	1291.6	1445.2	1584.7	1878.8	1912.5	1886.9	2174.4	2335.0	2359.6	***2300***	***2300***	Working Cap'l ($mill)	***2425***
						- -	303.0	379.5	412.0	497.0	342.0	365.0	330.0	353.2	200.0	***200***	***250***	Long-Term Debt ($mill)	***300***
						1915.2	1801.3	1933.1	2096.9	2302.7	2665.6	2733.2	3042.2	3163.2	3348.8	***3420***	***3480***	Shr. Equity ($mill)	***3700***
						25.8%	24.5%	21.7%	23.2%	27.1%	26.5%	27.9%	27.6%	31.1%	32.7%	***31.0%***	***32.0%***	Return on Total Cap'l	***36.5%***
						25.8%	28.7%	25.8%	27.6%	32.7%	29.7%	31.4%	30.4%	34.4%	34.5%	***35.0%***	***37.5%***	Return on Shr. Equity	***45.0%***
						10.3%	10.5%	7.9%	10.0%	13.5%	11.0%	10.4%	9.2%	11.9%	4.1%	***10.0%***	***9.5%***	Retained to Com Eq	***15.0%***
						60%	63%	69%	64%	59%	63%	67%	70%	65%	88%	***73%***	***75%***	All Div'ds to Net Prof	***66%***

CAPITAL STRUCTURE as of 12/31/23
Total Debt $356.2 mill. **Due in 5 Yrs** $156.2 mill.
LT Debt $200.0 mill. **LT Interest** $11.1 mill.
(6% of Cap'l)
Leases, Uncapitalized Annual rentals $51.2 mill.

No Defined Benefit Pension Plan

Preferred Stock None

Common Stock 572,232,178 shs.
as of 1/18/24

MARKET CAP: $42.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	236.2	230.1	221.3
Receivables	900.2	1013.2	1087.6
Inventory (FIFO)	1523.6	1708.0	1522.7
Other	196.6	173.5	189.3
Current Assets	2856.6	3124.8	3020.9
Accts Payable	233.1	255.0	264.1
Debt Due	150.8	201.8	156.2
Other	298.3	333.0	241.0
Current Liab.	682.2	789.8	661.3

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	8.5%	9.0%	*3.5%*
"Cash Flow"	10.5%	11.0%	*9.0%*
Earnings	10.0%	11.0%	*9.0%*
Dividends	14.0%	15.5%	*6.0%*
Book Value	7.5%	8.5%	*3.0%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1417.0	1507.7	1554.2	1532.0	6010.9
2022	1704.1	1778.6	1802.4	1695.5	6980.6
2023	1859.1	1883.1	1845.9	1758.6	7346.7
2024	*1880*	*1940*	*1900*	*1860*	*7580*
2025	*1920*	*1970*	*1930*	*1900*	*7720*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.37	.42	.42	.39	1.60
2022	.47	.50	.50	.42	1.89
2023	.52	.52	.52	.46	2.02
2024	*.55*	*.55*	*.55*	*.50*	*2.15*
2025	*.55*	*.55*	*.65*	*.55*	*2.30*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.25	.25	.25	.25	1.00
2021	.28	.28	.28	.28	1.12
2022	.31	.31	.31	.31	1.24
2023	.34	.35	.35	.35	1.39
2024	.39				

BUSINESS: Fastenal Company sells and delivers industrial and construction supplies through stores in the U.S., Puerto Rico, Canada, Mexico, Singapore, China, and the Netherlands. Sells threaded fasteners; tools and equipment; cutting tool blades and abrasives; components and accessories for hydraulics, pneumatics, plumbing and HVAC; metals; and janitorial, welding, safety and electrical supplies. At 12/31/23 it had 1,754 stores, 1,822 Onsite locations, 99,013 vending machines, and 18,132 employees. Off. & dir. own less than 1% of stock; Vanguard, 12.3%; BlackRock, 8.0%; BONY Mellon, 5.0% (2/24 proxy). Chrmn.: Willard D. Oberton. Pres. & CEO: Daniel L. Florness. Inc.: MN. Addr.: 2001 Theurer Boulevard, Winona, MN 55987. Tel.: 507-454-5374. Web: www.fastenal.com.

Fastenal's operating results continue to be on target. December-quarter sales and share earnings came in at $1.76 billion and $0.46, respectively, which were better than consensus, but close to our estimates of $1.757 billion and $0.44. The company also announced that it would be raising the qarterly dividend payment by four cents to $0.39 a share in the first quarter. These announcements cheered investors, who promptly sent the stock price up eight percentage points.

Fastenal has had an Earnings Predictability rating of 95 or better for almost seven years. Consequently, we shouldn't have much of an excuse for making an earnings miss, and feel pretty confident about our quarterly profit calls through the rest of 2024. Fastenal's sales contracts are very consistent due to its stalwart reputation for reliability. This factor, combined with Fastenal's vast product and geographic diversity, as well as its highly predictable cost structure, means that profits are fairly easy to predetermine. January sales increased 6.4%, to $640 million, so we are extrapolating a first-quarter tally of about $1.88 billion, which should translate to a rounded per-share profit of $0.55.

The company has little need of debt financing. It has a $200 million revolver, which it uses occasionally, but most of its working capital and capital spending needs are funded by cash flow and retained earnings, as well as cash on the books (when needed). Capital spending (not shown in the array) averages about $0.25-$0.30 per share a year.

We see little that can go wrong with Fastenal's business model over the next three to five years. The company's vast array of fasteners, safety products, and industrial items, plus its word-of-mouth reputation for service, means that its products will be in near-constant demand.

As such, our 2027-2029 Target Price Range is pretty firm. Monthly trading volume of shares outstanding is about 10%, mainly due to sector rotation, tax purposes, and automated trading. The issue's price may not outleg the market, but it won't provide any shocks either, so investors shouldn't lose sleep over it.

Jeremy J. Butler *March 15, 2024*

(A) Basic earnings. Excludes non-recurring gains/(losses): '08, ($0.03). Next earnings report due mid-April. May not sum due to rounding.
(B) Dividends historically paid in late February, May, August, and November. Switched from semi-annual dividend to quarterly dividend in April, 2011. Special dividends paid: $0.27 on 12/15/08, $0.42 on 12/6/10, $0.50 on 12/21/12, $0.40 on 12/22/20.
(C) In millions, adjusted for splits.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	80
Earnings Predictability	100

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FRANKLIN ELECTRIC NDQ-FELE

RECENT PRICE 101.39 | P/E RATIO 24.3 (Trailing: 24.7 Median: 23.0) | RELATIVE P/E RATIO 1.36 | DIV'D YLD 1.0% | VALUE LINE

TIMELINESS 3 Raised 12/22/23
SAFETY 2 Raised 6/25/21
TECHNICAL 3 Lowered 2/2/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$85-$130	$108 (5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	160	(+60%)	*13%*
Low	120	(+20%)	*6%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	154	134	149
to Sell	116	146	159
Hld's(000)	36318	36197	36813

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	46.1	44.8	39.8	44.6	47.2	51.4	57.7	72.6	96.9	96.2	107.4	105.3						
Low:	29.7	33.6	22.7	23.8	36.0	38.4	41.7	41.3	67.7	68.3	78.4	91.4						

LEGENDS
16.0 x "Cash Flow" p sh
Relative Price Strength
2-for-1 split 3/13
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029

% TOT. RETURN 2/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.9	10.4
3 yr.	42.4	16.5
5 yr.	104.9	63.1

16.20	13.53	15.17	17.59	18.91	20.23	22.01	20.01	20.48	24.12	28.02	28.34	26.99	35.75	44.24	44.83	***46.65***	***49.55***
1.48	1.11	1.34	1.89	2.38	2.39	2.27	2.36	2.46	2.71	3.15	2.90	3.00	4.27	5.15	5.33	***5.50***	***5.85***
.95	.56	.83	1.33	1.73	1.68	1.42	1.50	1.65	1.86	2.26	2.07	2.18	3.25	3.97	4.11	***4.30***	***4.50***
.25	.25	.26	.27	.29	.31	.35	.38	.40	.42	.47	.58	.62	.70	.78	.90	***1.00***	***1.10***
.56	.26	.29	.47	.83	1.42	.75	.57	.84	.72	.48	.47	.49	.65	.91	.90	***.95***	***1.00***
7.58	8.39	8.88	9.60	10.91	12.48	12.54	12.07	13.23	15.03	15.84	17.17	18.34	20.36	23.12	26.20	***27.40***	***29.35***
46.04	46.26	47.05	46.68	47.13	47.72	47.59	46.22	46.38	46.63	46.33	46.39	46.22	46.48	46.19	46.07	***46.50***	***46.00***
19.7	23.8	19.4	16.3	15.5	21.6	27.5	21.7	20.9	22.4	19.8	23.7	26.2	25.3	20.7	22.6		
1.19	1.59	1.23	1.02	.99	1.21	1.45	1.09	1.10	1.13	1.07	1.26	1.35	1.37	1.20	1.27		
1.3%	1.9%	1.6%	1.2%	1.1%	.9%	.9%	1.2%	1.2%	1.0%	1.0%	1.2%	1.1%	.9%	1.0%	1.0%		

Bold figures are Value Line estimates

© VALUE LINE PUB. LLC	27-29
Sales per sh [A]	***58.90***
"Cash Flow" per sh	***7.00***
Earnings per sh [AB]	***5.65***
Div'ds Decl'd per sh [C]	***1.20***
Cap'l Spending per sh	***1.15***
Book Value per sh [D]	***31.10***
Common Shs Outst'g [E]	***45.00***
Avg Ann'l P/E Ratio	***25.0***
Relative P/E Ratio	***1.40***
Avg Ann'l Div'd Yield	***.9%***

CAPITAL STRUCTURE as of 12/31/23
Total Debt $100.3 mill. **Due in 5 Yrs** $83.0 mill.
LT Debt $88.0 mill. **LT Interest** $2.5 mill.
(Total int. coverage: over 25.0x) (7% of Cap'l)

Leases, Uncapitalized Annual rentals $19.5 mill.
Pension Assets-12/23 $112 mill. **Oblig.** $143 mill.
Pfd Stock None

Common Stock 46,043,849 shs.
as of 2/7/24

MARKET CAP: $4.7 bill. (Mid Cap)

1047.8	924.9	949.9	1124.9	1298.1	1314.6	1247.3	1661.9	2043.7	2065.1	***2170***	***2280***
14.7%	13.9%	15.3%	13.3%	13.3%	12.7%	13.6%	14.1%	15.0%	15.2%	***15.5%***	***16.0%***
37.2	35.5	35.5	38.5	38.6	37.0	36.5	44.6	50.4	52.3	***55.0***	***60.0***
70.9	73.7	78.7	87.8	107.1	97.6	102.4	153.9	187.3	193.3	***200***	***210***
21.1%	14.6%	23.8%	14.8%	12.5%	17.8%	18.3%	18.3%	19.7%	19.6%	***19.0%***	***19.0%***
6.8%	8.0%	8.3%	7.8%	8.3%	7.4%	8.2%	9.3%	9.2%	9.4%	***9.2%***	***9.2%***
268.4	293.4	326.0	343.2	324.0	381.6	415.6	328.6	452.3	566.7	***570***	***585***
143.7	188.1	156.5	125.6	94.4	93.1	92.0	90.5	89.3	88.1	***75.0***	***70.0***
596.8	557.7	613.4	700.7	733.9	796.5	847.8	946.5	1067.9	1206.7	***1275***	***1350***
10.3%	10.6%	10.8%	11.2%	13.5%	11.4%	11.1%	15.1%	16.7%	15.4%	***15.0%***	***15.0%***
11.9%	13.2%	12.8%	12.5%	14.6%	12.3%	12.1%	16.3%	17.5%	16.0%	***16.0%***	***15.5%***
9.0%	9.8%	9.7%	9.6%	11.5%	8.8%	8.6%	12.7%	14.1%	12.6%	***12.0%***	***12.0%***
25%	26%	24%	23%	21%	28%	29%	22%	20%	22%	***30%***	***24%***

© VALUE LINE PUB. LLC	27-29
Sales ($mill) [A]	***2650***
Operating Margin	***17.0%***
Depreciation ($mill)	***65.0***
Net Profit ($mill)	***250***
Income Tax Rate	***19.0%***
Net Profit Margin	***9.4%***
Working Cap'l ($mill)	***600***
Long-Term Debt ($mill)	***50.0***
Shr. Equity ($mill) [D]	***1400***
Return on Total Cap'l	***17.5%***
Return on Shr. Equity	***18.0%***
Retained to Com Eq	***14.0%***
All Div'ds to Net Prof	***22%***

CURRENT POSITION ($MILL.)

	2021	2022	12/31/23
Cash Assets	40.5	45.8	85.0
Receivables	196.1	230.4	222.4
Inventory (LIFO)	450.0	545.0	508.6
Other	38.0	36.8	37.7
Current Assets	724.6	858.0	853.7
Accts Payable	164.7	139.2	152.4
Debt Due	97.9	126.8	12.3
Other	133.4	139.7	122.3
Current Liab.	396.0	405.7	287.0

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	8.0%	10.5%	*6.0%*
"Cash Flow"	8.0%	11.0%	*6.0%*
Earnings	8.5%	13.5%	*7.0%*
Dividends	10.0%	11.5%	*7.0%*
Book Value	7.0%	8.0%	*5.0%*

QUARTERLY SALES ($ mill.) [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	333.0	437.3	459.1	432.5	1661.9
2022	451.5	551.1	551.7	489.4	2043.7
2023	484.5	569.1	538.4	473.1	2065.1
2024	***490***	***590***	***550***	***540***	***2170***
2025	***500***	***630***	***600***	***550***	***2280***

EARNINGS PER SHARE [A B]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.59	.83	.98	.85	3.25
2022	.63	1.26	1.24	.84	3.97
2023	.79	1.27	1.23	.82	4.11
2024	***.80***	***1.30***	***1.25***	***.95***	***4.30***
2025	***.85***	***1.35***	***1.30***	***1.00***	***4.50***

QUARTERLY DIVIDENDS PAID [C]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.155	.155	.155	.155	.62
2021	.175	.175	.175	.175	.70
2022	.195	.195	.195	.195	.78
2023	.225	.225	.225	.225	.90
2024	.25				

BUSINESS: Franklin Electric Company, Inc. designs, manufactures, and distributes water and fuel pumping systems. Operating segments: Water Systems (58% of '23 sales) produces groundwater and surface pumps, motors, and controls for residential, agricultural, and industrial markets; Fueling Systems (14%) provides products for fuel pumping, containment, monitoring, and control; Distribution (28%) sells groundwater equipment products to well installation contractors. Foreign sales: 30% of '23 total. Has about 6,400 employees. Offs. & dirs. own 2.8% of stock; BlackRock, 17.1%; Vanguard, 10.0% (3/23 Proxy). Chrmn. & CEO: Gregg C. Sengstack. Inc.: IN. Addr.: 9255 Coverdale Road, Fort Wayne, IN 46809. Tel.: 260-824-2900. Internet: www.franklin-electric.com.

Franklin Electric continues to operate in a challenging environment, as highlighted by an uninspired 2023 fourth-quarter performance. During the December period, sales fell 3.3%, to $473.1 million, and earnings declined 2.4%, to $0.82 a share. The top line shortfall was attributed to weakness in the Fuel Systems segment, which has experienced ongoing destocking by Franklin customers. Also, commodity price increases impacted the Distribution business. The anemic sales stream did not help the bottom line either. On a brighter note, the company managed to deliver full-year sales and earnings increases of 1%, to $2.065 billion, and 3.5%, to $4.11 a share, respectively.

The company's near-term outlook appears bright. Over this year and next, we forecast 5% sales growth. Franklin is well positioned to capitalize on anticipated improvements in the economy. Although broader market uncertainties will likely persist, data has been mainly supportive thus far. As such, demand trends in all three categories, Water, Fueling, and Distribution are expected to increase. In 2024 and 2025, share earnings should advance in the 4.5% range. The company may gain market share through ongoing portfolio reconfigurations that cater to the shifting needs of its customer base. Also, the creation of higher-margined products and services ought to boost the bottom line.

Investors do not seem too concerned at the moment. The equity has increased almost 10% in value since our December review. Barring disappointing financial performances in the back half of last year, traders appear more focused on the forward-looking growth path outlined by the company. Improvements in the balance sheet should support expansion platforms such as acquisitions. Also, innovation combined with a better economic picture should support market stabilization. Furthermore, a recent 11% quarterly dividend hike, to $0.25 may have added to FELE's appeal.

These shares are ranked to mirror the broader market in the coming year. Capital appreciation potential over the next 18 months and out to 2027-2029 is not too enticing either. Investors may want to pass, for now.

Nira Maharaj *March 22, 2024*

(A) Year ends Dec. 31st.
(B) Diluted earnings. Excludes nonrecurring losses: '17, 20¢; '18, 3¢; '19, 4¢; '20, 4¢. Next earnings report due late April.
(C) Dividends historically paid in mid-February, May, August, and November.
(D) Includes intangibles. In 2023: $572.4 mill., or $12.42 per share.
(E) In millions, adjusted for split.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	90
Earnings Predictability	90

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ALPHABET INC. NDQ-GOOG

RECENT PRICE 157.95 | P/E RATIO 24.3 (Trailing: 27.2 Median: 25.0) | RELATIVE P/E RATIO 1.35 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 2 Raised 4/12/24
SAFETY 1 Raised 5/12/17
TECHNICAL 3 Raised 5/3/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

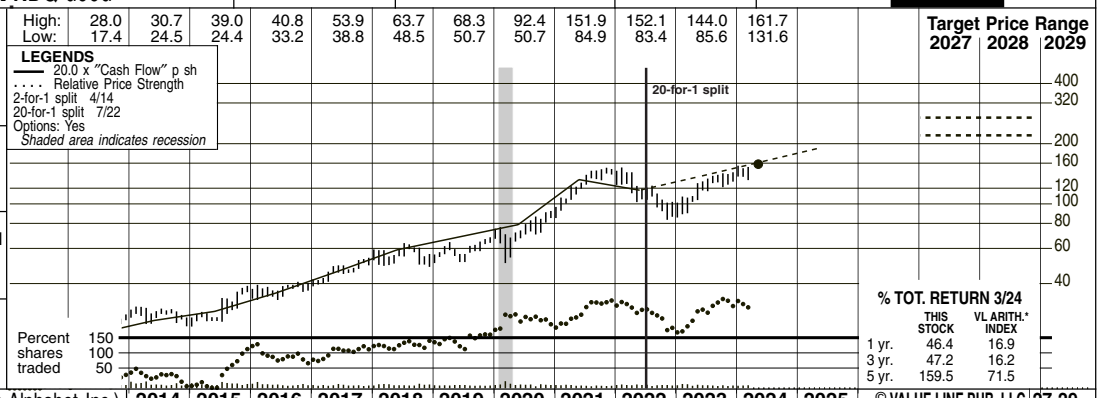
Low-High	Midpoint (% to Mid)
$124-$225	$175 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	270	(+70%)	*14%*
Low	220	(+40%)	*9%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	1365	1460	1677
to Sell	1679	1584	1621
Hld's(000)	345234	443399	345340



Google Inc. (now, officially Alphabet Inc.) undertook its initial public offering on August 19, 2004, selling approximately 19.6 million shares of its Class A Common stock for $85 a share. Of the total shares, the company sold 14.1 million, and selling stockholders sold 5.5 million. The lead underwriters of the offering were Morgan Stanley and Credit Suisse First Boston.

CAPITAL STRUCTURE as of 12/31/23
Total Debt $13253 mill. **Due in 5 Yrs.** $8960 mill.
LT Debt $13253 mill. **LT Interest** $308 mill. (4% of Cap'l)

Leases, Uncapitalized: Annual rentals $3179 mill.
No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 12,433,000,000 shares (5,893,000,000 Class A shares, 869,000,000 Class B shares, and 5,671,000,000 Class C shares) [C] **as of 1/23/24**

MARKET CAP: $2.0 trillion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	139649	113762	110916
Receivables	39304	40258	47964
Inventory	- -	- -	- -
Other	9190	10775	12650
Current Assets	188143	164795	171530
Accts Payable	6036	5128	7493
Debt Due	- -	- -	- -
Other	58218	64172	74321
Current Liab.	64254	69300	81814

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	20.0%	22.5%	*12.0%*
"Cash Flow"	20.5%	24.5%	*11.5%*
Earnings	19.5%	25.0%	*12.0%*
Dividends	- -	- -	*Nil*
Book Value	15.0%	13.0%	*13.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	55314	61880	65118	75325	257637
2022	68011	69685	69092	76048	282836
2023	68787	74604	76693	86310	307394
2024	*78700*	*83000*	*85000*	*95000*	*341700*
2025	*86300*	*91000*	*94000*	*105000*	*376300*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	1.31	1.36	1.40	1.53	5.61
2022	1.23	1.21	1.06	1.05	4.56
2023	1.17	1.44	1.55	1.64	5.80
2024	*1.50*	*1.65*	*1.70*	*1.90*	*6.75*
2025	*1.75*	*1.95*	*2.00*	*2.20*	*7.90*

Calendar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020					
2021	NO CASH DIVIDENDS BEING PAID				
2022					
2023					
2024					

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	4.85	5.46	6.53	7.98	9.84	11.76	13.52	19.46	22.01	24.67	*27.55*	*31.35*	Revenues per sh	*40.75*
	1.31	1.45	1.79	2.29	2.95	3.41	3.94	6.61	5.86	6.88	*8.10*	*9.55*	"Cash Flow" per sh	*11.60*
	1.04	1.14	1.39	1.80	2.33	2.58	2.93	5.61	4.56	5.80	*6.75*	*7.90*	Earnings per sh [A]	*9.75*
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
	.81	.72	.74	.95	1.81	1.71	1.65	1.86	2.45	2.59	*2.60*	*2.65*	Cap'l Spending per sh	*2.60*
	7.68	8.75	10.06	10.97	12.77	14.63	16.48	19.00	19.94	22.74	*26.20*	*33.35*	Book Value per sh	*44.45*
	13612	13747	13826	13896	13911	13767	13504	13242	12849	12460	*12400*	*12000*	Common Shs Outst'g [B]	*13500*
	27.0	26.3	26.7	25.6	23.8	23.1	25.2	22.3	25.3	20.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*25.0*
	1.42	1.32	1.40	1.29	1.29	1.23	1.29	1.21	1.46	1.15			Relative P/E Ratio	*1.40*
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -			Avg Ann'l Div'd Yield	*Nil*
	66001	74989	90272	110855	136819	161857	182527	257637	282836	307394	*341700*	*376300*	Revenues ($mill)	*550000*
	30.9%	31.3%	32.2%	31.0%	29.0%	29.0%	29.7%	35.0%	31.9%	31.3%	*31.0%*	*31.5%*	Operating Margin	*30.0%*
	3523.0	4132.0	5267.0	6103.0	8164.0	10856	12905	11555	15287	*11946*	*17000*	*20000*	Depreciation ($mill)	*25000*
	14306	15826	19478	25705	32814	36025	40269	76033	59972	73795	*83700*	*94800*	Net Profit ($mill)	*131625*
	18.9%	16.8%	19.3%	12.1%	11.3%	12.8%	16.2%	16.2%	15.9%	13.9%	*15.0%*	*15.0%*	Income Tax Rate	*16.0%*
	21.7%	21.1%	21.6%	23.2%	24.0%	22.3%	22.1%	29.5%	21.2%	24.0%	*24.5%*	*25.0%*	Net Profit Margin	*24.0%*
	63880	70804	88652	100125	101056	107357	117462	123889	95495	89716	*92000*	*95000*	Working Cap'l ($mill)	*105000*
	3228.0	1995.0	3935.0	3969.0	4012.0	4554.0	13932	14817	14701	13253	*13500*	*14000*	Long-Term Debt ($mill)	*18000*
	104500	120331	139036	152502	177628	201442	222544	251635	256144	283379	*325000*	*400000*	Shr. Equity ($mill)	*600000*
	13.3%	13.0%	13.7%	16.5%	18.1%	17.5%	17.1%	28.6%	22.2%	25.0%	*25.0%*	*23.0%*	Return on Total Cap'l	*21.5%*
	13.7%	13.2%	14.0%	16.9%	18.5%	17.9%	18.1%	30.2%	23.4%	26.0%	*26.0%*	*23.5%*	Return on Shr. Equity	*22.0%*
	13.7%	13.2%	14.0%	16.9%	18.5%	17.9%	18.1%	30.2%	23.4%	26.0%	*26.0%*	*23.5%*	Retained to Com Eq	*22.0%*
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

BUSINESS: Alphabet Inc. is the successor and parent holding company of Google Inc., which operates the world's leading Internet search engine. The company derives revenues primarily through delivering targeted advertising. Revenues are also derived from the licensing of search technology and solutions to enterprises. Revenues in 2023: United States, 47%; International, 53%. Has 182,502 employees. Off. & dir. own less than 1% of Class A common stock, 52.9% of Class B; The Vanguard Group, 3.3%; BlackRock, 2.8% of Class A (4/23 Proxy). CEO & Dir.: Sundar Pichai. Co-founder & Dir.: Larry Page. Co-founder & Dir.: Sergey Brin. Inc.: DE. Addr.: 1600 Amphitheatre Parkway, Mountain View, CA 94043. Telephone: 650-253-0000. Internet: www.google.com.

Alphabet Inc. will probably post solid results for the March period, building on a healthy performance from the December period. (Note: Alphabet was scheduled to issue its first quarter earnings release shortly after this report went to press.) The company wrapped up 2023 with higher sales figures (Year over year, fourth-quarter net sales increased 13% from $76.048 billion to $86.310 billion) and we estimate this trend to have continued. March sales are forcast to have increased 13% year over year while the upcoming June quarter will likely show some signs of decelerating growth.

The financial position is in good shape. Alphabet exited the December quarter with $110.9 billion in cash assets and just $13.3 billion in long-term debt. What's more, free cash flow is forecasted to reach a record $83.0 billion in 2024. We think some cash will be used toward capital expenditures (projected to increase in 2024 as the company continues its focus on AI computing activity), and some cash will be returned to shareholders. We wouldn't be surprised if capital allocation takes the familiar form of buybacks or if the tech giant chooses a new approach (following the path recently taken by Meta Platforms) with the initiation of dividend payments.

We are introducing our 2025 estimates. Gains from the expanded use of AI, through improved *Gemini* models, should make a solid contribution in 2025. Google Advertising ought to support Alphabet's advance next year too. Net profit margins should widen in the next couple of years. We expect 2025 revenues to clock in at $376.3 billion, reflecting a 10% increase year over year. Earnings ought to improve as well, and think 2025 will reflect a sharp increase to $7.90 a share.

Shares of Alphabet are ranked to outperform the broader market averages in the year ahead (Timeliness: 2). Furthermore, our current projections point to above-average upside potential over the 3- to 5-year time frame. Also worth noting is the top-notch grade for Financial Strength (A++) and high scores for Price Stability (85 of 100) and Price Growth Persistence (100). Alphabet stock also possesses our top rank for Safety (1).

Kathleen Uckert *May 3, 2024*

(A) Diluted earnings per share for Class A and B common stock and Class C capital stock. Excludes nonrecurring gains/(losses): '08, ($0.17); '14, ($0.03); '17, ($0.90); '18, ($0.15); '19, (0.12). Qtly egs. may not sum. Next earnings report due late July. **(B)** In millions. **(C)** Class A common stock entitled to one vote per share. Class B common stock entitled to 10 votes per share. Class C common stock is nonvoting.

Company's Financial Strength	A++
Stock's Price Stability	85
Price Growth Persistence	100
Earnings Predictability	70

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HEARTLAND EXPRESS NDQ-HTLD

RECENT PRICE 12.70 | P/E RATIO NMF (Trailing: NMF Median: 23.0) | RELATIVE P/E RATIO NMF | DIV'D YLD 0.6% | VALUE LINE 318

TIMELINESS 2 Raised 2/16/24
SAFETY 2 Raised 8/21/20
TECHNICAL 3 Raised 2/16/24
BETA .75 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$12-$24 $18 (40%)

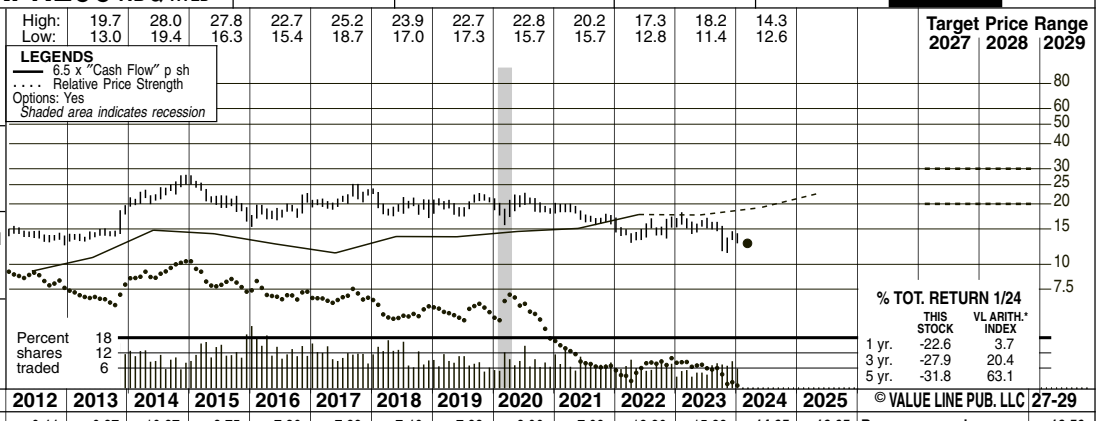
2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	30	(+135%)	24%
Low	20	(+55%)	12%

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	67	56	68
to Sell	90	94	73
Hld's(000)	43028	42267	42307

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	19.7	28.0	27.8	22.7	25.2	23.9	22.7	22.8	20.2	17.3	18.2	14.3								
Low:	13.0	19.4	16.3	15.4	18.7	17.0	17.3	15.7	15.7	12.8	11.4	12.6								
	6.64	5.07	5.51	6.11	6.44	6.87	10.27	8.75	7.36	7.29	7.46	7.28	8.00	7.69	12.26	15.28	*14.95*	*16.05*	Revenues per sh	*18.50*
	1.23	1.28	1.36	1.47	1.42	1.66	2.28	2.19	1.94	1.75	2.11	2.11	2.24	2.32	2.73	2.71	*2.95*	*3.50*	"Cash Flow" per sh	*4.40*
	.73	.62	.68	.78	.71	.83	.96	.84	.68	.51	.88	.89	.87	1.00	1.04	.19	*.30*	*.75*	Earnings per sh [A]	*1.25*
	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	*.08*	*.08*	Div'ds Decl'd per sh [C]	*.08*
	.38	.87	.16	1.46	.79	1.60	2.42	2.58	1.03	2.21	2.07	2.00	2.53	1.68	2.03	2.15	*2.20*	*2.30*	Cap'l Spending per sh	*2.60*
	3.82	4.05	3.69	3.94	3.43	4.69	5.62	5.59	6.07	6.90	7.52	8.35	8.98	9.21	10.83	10.95	*11.20*	*11.80*	Book Value per sh	*14.50*
	94.23	90.69	90.69	86.48	84.77	84.72	84.87	84.12	83.29	83.30	81.93	82.03	80.65	78.92	78.98	79.04	*79.00*	*78.00*	Common Shs Outst'g [B]	*76.00*
	20.9	23.4	22.8	19.8	19.6	17.6	23.8	25.7	27.4	41.4	22.3	22.6	22.5	17.8	14.2	NMF	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.0*
	1.26	1.56	1.45	1.24	1.25	.99	1.25	1.29	1.44	2.08	1.20	1.20	1.16	.96	.82	NMF			Relative P/E Ratio	*1.10*
	.5%	.6%	.5%	.5%	.6%	.5%	.4%	.4%	.4%	.4%	.4%	.4%	.4%	.5%	.5%	.5%			Avg Ann'l Div'd Yield	*.3%*
	871.4	736.3	612.9	607.3	610.8	596.8	645.3	607.3	968.0	1207.5	*1180*	*1250*	Revenues ($mill)	*1400*
	23.7%	26.1%	29.8%	27.5%	27.1%	27.3%	29.2%	34.5%	28.1%	20.0%	*21.5%*	*24.5%*	Operating Margin	*27.0%*
	108.6	111.0	105.6	103.7	100.5	100.2	109.9	104.1	133.4	199.1	*210*	*215*	Depreciation ($mill)	*240*
	84.8	73.1	56.4	42.3	72.7	73.0	70.8	79.3	82.1	14.8	*25.0*	*60.0*	Net Profit ($mill)	*95.0*
	35.5%	37.4%	34.5%	34.4%	20.9%	24.9%	24.9%	25.2%	36.7%	25.6%	*26.0%*	*27.0%*	Income Tax Rate	*27.0%*
	9.7%	9.9%	9.2%	7.0%	11.9%	12.2%	11.0%	13.1%	8.5%	1.2%	*2.0%*	*4.7%*	Net Profit Margin	*6.8%*
	81.9	70.2	136.6	95.5	167.8	88.4	122.0	161.6	73.0	45.9	*55.0*	*70.0*	Working Cap'l ($mill)	*115*
	24.6	- -	- -	- -	- -	- -	- -	- -	399.1	290.7	*225*	*175*	Long-Term Debt ($mill)	*100*
	476.6	469.9	505.8	574.6	616.0	684.7	724.3	727.1	855.5	865.3	*885*	*920*	Shr. Equity ($mill)	*1100*
	17.0%	15.5%	11.1%	7.4%	11.8%	10.7%	9.8%	10.9%	6.9%	2.2%	*3.0%*	*6.0%*	Return on Total Cap'l	*8.0%*
	17.8%	15.5%	11.1%	7.4%	11.8%	10.7%	9.8%	10.9%	9.6%	1.7%	*2.5%*	*6.5%*	Return on Shr. Equity	*8.5%*
	16.3%	14.1%	9.8%	6.2%	10.7%	9.7%	8.9%	10.0%	8.9%	1.0%	*2.0%*	*5.5%*	Retained to Com Eq	*8.0%*
	8%	10%	12%	16%	9%	9%	9%	8%	8%	43%	*26%*	*11%*	All Div'ds to Net Prof	*6%*



CAPITAL STRUCTURE as of 12/31/23

Total Debt $300.0 mill. **Due in 5 Yrs** $300.0 mill.
LT Debt $290.7 mill. **LT Interest** $22.0 mill. (25% of Cap'l)

Leases, Uncapitalized $5.0 mill.

No Defined Pension Benfit Plan

Pfd Stock None

Common Stock 79,039,000 shs. **as of 12/31/23**

MARKET CAP: $1.0 billion (Small Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	157.7	49.5	28.1
Receivables	52.8	139.8	102.7
Other	22.7	40.5	38.5
Current Assets	233.2	229.8	169.3
Accts Payable	20.5	62.7	37.8
Debt Due	- -	14.0	9.3
Other	51.1	80.1	76.4
Current Liab.	71.6	156.8	123.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	4.5%	3.5%	*11.5%*
"Cash Flow"	5.5%	4.5%	*9.5%*
Earnings	3.0%	7.5%	*2.0%*
Dividends	- -	- -	*Nil*
Book Value	10.0%	9.5%	*7.5%*

Calendar	QUARTERLY REVENUES ($ mill.)[A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	152.4	154.1	152.6	148.1	607.3
2022	151.3	187.8	274.0	354.9	968.0
2023	330.9	306.2	295.0	275.4	1207.5
2024	*300*	*290*	*300*	*290*	*1180*
2025	*310*	*305*	*320*	*315*	*1250*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.17	.26	.31	.26	1.00
2022	.21	.29	.33	.21	1.04
2023	.16	.11	d.14	.06	.19
2024	*d.05*	*.05*	*.15*	*.15*	*.30*
2025	*.15*	*.20*	*.20*	*.20*	*.75*

Calendar	QUARTERLY DIVIDENDS PAID [C] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.02	.02	.02	.02	.08
2021	.02	.02	.02	.02	.08
2022	.02	.02	.02	.02	.08
2023	.02	.02	.02	.02	.08
2024					

BUSINESS: Heartland Express, Inc. is a short- to medium-haul truckload carrier. Provides nationwide transportation services to major shippers with a combined fleet of company-owned and owner-operator tractors. Primary routes are between locations east of the Rocky Mountains, with selected service to the West. Targets customers that require multiple, time-sensitive shipments. Avg. length of haul: 400-500 miles. Acq'd Smith Transport, 5/22, CFI, 8/22. '22 depr. rate: 15.5%. Has 6,500 employees. Off./dir. own 39.6% of com. stock, incl. Chrmn., CEO & Pres. Michael J. Gerdin, 39.0%; American Century Investments, 10.6% (4/23 Proxy). Inc.: NV. Addr.: 901 N. Kansas Ave. N. Liberty, IA 52317. Telephone: 319-626-3600. Internet: www.heartlandexpress.com.

Heartland Express returned to profitability in the fourth quarter. The company posted a surprising loss in the September quarter. Although sales rose throughout the year, the increase was fully accounted for by the inclusion of two significant acquisitions Heartland has made over the past two years. However, both of these new businesses continue to lose money. Management was able to offset these losses as the year came to a close with gains on the sale of some terminal properties. Earnings of $0.06 per share in the final period were below our estimate of $0.17 and well below historical norms.

We expect 2024 to be another challenging year for the company. Industry conditions are relatively weak these days, as sluggish freight demand is leading to overcapacity and pricing pressure. Fuel costs also remain elevated. Management is taking the measures necessary to improve results at the acquired companies, but it now believes that it will take three to four years (from the 2022 acquisitions) to bring the performance of these businesses up to the level that legacy Heartland has experienced. Considering all these factors, we now estimate profits of $0.30 per share in 2024. In 2025, conditions should be more favorable, and we project net income of $0.75 per share.

The company is making good progress on debt reduction. Heartland has historically avoided debt. But to complete the acquisition of Smith Transport and CFI in 2022, it took on more than $500 million of debt. Interest costs on the debt have had a major negative impact on earnings. To reduce that impact, management has been aggressively paying back its obligations. Last year, it made $114 million in debt payments, and long-term debt now stands at less than $300 million.

The worst appears to be over for the company. Our estimates show gradual but steady improvement in earnings in coming quarters. This should improve investor sentiment, and these shares are ranked to outperform the broad market averages in the coming year. The stock has recently been trading at 20-year lows, and we believe there is good recovery potential for the shares over the three- to five-year time frame.

Stuart J. Benway, CFA *February 16, 2024*

(A) Diluted shares. Excludes non-recurring gains: '17, $0.39; '22, $0.68. Quarterly revenues and/or earnings may not sum due to rounding. Next earnings report due late April.

(B) In millions.

(C) Dividends paid in late March, June, September, and December. Special dividends: $2.00, '07; $1.00, '10; $1.00 '12; $0.50, '21.

Company's Financial Strength	A
Stock's Price Stability	75
Price Growth Persistence	10
Earnings Predictability	60

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J&J SNACK FOODS NDQ-JJSF

RECENT PRICE 142.18 | P/E RATIO 33.1 (Trailing: 33.3 Median: 33.0) | RELATIVE P/E RATIO 1.79 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS 4 Raised 4/12/24
SAFETY 2 Lowered 10/14/22
TECHNICAL 3 Lowered 4/12/24
BETA .90 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$124-$251 $188 (30%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	245	(+70%)	*16%*
Low	145	(Nil)	*3%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	79	101	111
to Sell	96	93	95
Hld's(000)	15279	14650	14856

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	90.8	112.7	125.6	135.0	157.3	162.8	196.8	189.2	181.7	165.9	177.7	169.7								
Low:	63.0	84.3	96.5	97.7	121.2	126.0	138.4	105.7	134.7	117.4	133.3	139.8								
	33.57	35.25	37.68	39.73	44.24	46.46	49.26	52.27	53.18	58.09	60.69	62.79	54.03	59.98	71.84	80.63	*81.55*	*81.50*	Sales per sh [A]	*81.85*
	2.92	3.45	3.94	3.93	4.28	4.99	5.54	5.81	6.22	6.52	6.95	7.59	3.77	5.50	5.22	7.35	*7.40*	*8.00*	"Cash Flow" per sh	*9.45*
	1.47	2.21	2.59	2.58	2.86	3.41	3.82	3.73	4.05	4.21	4.46	5.00	.96	2.91	2.46	4.08	*4.30*	*5.00*	Earnings per sh [A B]	*6.50*
	.37	.39	.43	.47	.52	.64	1.28	1.44	1.56	1.68	1.80	2.00	2.30	2.42	2.60	2.84	*3.00*	*3.10*	Div'ds Decl'd per sh [C]	*3.40*
	1.22	1.47	1.81	1.56	2.28	1.92	2.08	2.68	2.61	3.87	3.20	3.02	3.06	2.81	4.54	5.42	*4.60*	*3.50*	Cap'l Spending per sh	*2.50*
	16.90	18.51	20.58	23.09	25.32	27.66	30.13	32.12	34.17	36.56	40.48	44.13	42.80	44.31	44.91	47.15	*48.05*	*48.75*	Book Value per sh [D]	*51.90*
	18.75	18.53	18.49	18.73	18.78	18.68	18.67	18.68	18.67	18.66	18.75	18.90	18.92	19.08	19.22	19.33	*19.50*	*20.00*	Common Shs Outst'g [E]	*22.00*
	20.6	16.1	16.2	18.3	18.7	20.9	23.8	28.8	27.9	30.7	32.0	32.3	NMF	54.6	59.7	37.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*30.0*
	1.24	1.07	1.03	1.15	1.19	1.17	1.25	1.45	1.46	1.54	1.73	1.72	NMF	2.95	3.45	2.17			Relative P/E Ratio	*1.65*
	1.2%	1.1%	1.0%	1.0%	1.0%	.9%	1.4%	1.3%	1.4%	1.3%	1.3%	1.2%	1.5%	1.5%	1.8%	1.9%			Avg Ann'l Div'd Yield	*1.8%*
							919.5	976.3	992.8	1084.2	1138.3	1186.5	1022.0	1144.6	1380.7	1558.8	*1590*	*1630*	Sales ($mill) [A]	*1800*
							15.1%	15.3%	15.4%	14.8%	13.8%	14.0%	6.9%	10.5%	8.4%	11.2%	*11.5%*	*12.0%*	Operating Margin	*15.0%*
							31.7	38.3	40.1	42.4	46.4	48.6	53.0	49.4	53.1	63.1	*60.0*	*60.0*	Depreciation ($mill)	*65.0*
							71.8	70.2	76.0	79.2	83.9	94.8	18.3	55.6	47.2	78.9	*85.0*	*100*	Net Profit ($mill)	*145*
							35.4%	37.3%	35.0%	35.2%	29.0%	25.1%	14.7%	24.9%	23.5%	26.6%	*26.0%*	*27.0%*	Income Tax Rate	*27.5%*
							7.8%	7.2%	7.7%	7.3%	7.4%	8.0%	1.8%	4.9%	3.4%	5.1%	*5.3%*	*6.1%*	Net Profit Margin	*7.9%*
							179.6	229.7	252.8	262.8	264.9	385.2	365.5	417.2	262.8	250.3	*245*	*275*	Working Cap'l ($mill)	*470*
							.4	1.2	1.2	.9	.8	.7	.4	.4	55.3	27.6	*5.0*	*5.0*	Long-Term Debt ($mill)	*5.0*
							562.5	599.9	638.0	682.3	759.1	833.8	809.5	845.7	863.2	911.5	*935*	*975*	Shr. Equity ($mill)	*1140*
							12.8%	11.7%	11.9%	11.6%	11.0%	11.4%	2.3%	6.6%	5.2%	8.7%	*9.5%*	*10.5%*	Return on Total Cap'l	*13.0%*
							12.8%	11.7%	11.9%	11.6%	11.1%	11.4%	2.3%	6.6%	5.5%	8.7%	*9.0%*	*10.5%*	Return on Shr. Equity	*12.5%*
							9.0%	7.3%	7.4%	7.1%	6.7%	7.0%	NMF	1.3%	NMF	2.7%	*2.5%*	*4.0%*	Retained to Com Eq	*6.0%*
							29%	37%	38%	39%	39%	39%	NMF	81%	103%	68%	*70%*	*62%*	All Div'ds to Net Prof	*52%*

CAPITAL STRUCTURE as of 12/30/23
Total Debt $7.2 mill. **Due in 5 Yrs** $.2 mill.
LT Debt $7.0 mill. **LT Interest** $.01 mill.

Leases, Uncapitalized Annual rentals $94.1 mill.

No Defined Pension Benefit Plan
Pfd Stock None

Common Stock 19,379,847 shs.
as of 2/2/24
MARKET CAP: $2.8 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2022	2023	12/30/23
Cash Assets	39.2	49.6	50.0
Receivables	208.1	198.1	166.2
Inventory	180.5	171.5	172.7
Other	16.8	11.0	8.4
Current Assets	444.6	430.2	397.3
Accts Payable	108.1	90.8	85.3
Debt Due	0.1	0.2	0.2
Other	73.6	88.9	79.8
Current Liab.	181.8	179.9	165.3

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	5.0%	4.5%	*3.5%*
"Cash Flow"	3.0%	-1.5%	*5.5%*
Earnings	.5%	-6.0%	*9.0%*
Dividends	17.0%	9.5%	*6.5%*
Book Value	6.0%	4.0%	*2.5%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) [A] Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2021	241.0	256.2	324.3	323.1	1144.6
2022	318.5	281.5	380.2	400.4	1380.7
2023	351.3	337.8	425.8	443.9	1558.8
2024	348.3	*341*	*445*	*455.7*	*1590*
2025	*365*	*345*	*455*	*465*	*1630*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Dec.Per	Mar.Per	Jun.Per	Sep.Per	Full Fiscal Year
2021	.09	.32	1.52	.98	2.91
2022	.58	.17	.81	.90	2.46
2023	.34	.36	1.82	1.57	4.08
2024	.37	*.35*	*1.85*	*1.73*	*4.30*
2025	*.50*	*.70*	*2.00*	*1.80*	*5.00*

Cal-endar	QUARTERLY DIVIDENDS PAID [C] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.575	.575	.575	.575	2.30
2021	.575	.575	.633	.633	2.42
2022	.633	.633	.633	.70	2.60
2023	.70	.70	.735	.735	2.87
2024	.735				

BUSINESS: J&J Snack Foods Corp. manufactures snack foods and distributes frozen carbonated and juice beverages mainly in the United States, Mexico and Canada. It sells to snack bars, food stands, fast food operators, stadiums, sports arenas, warehouse club stores, schools, colleges, movie theaters, and others. In addition, it sells various food products through a chain of specialty snack food retail outlets. Has 5,000 employees. Officers/directors own 22.2% of company; Trust for Gerald B. Shreiber, 20.2%; BlackRock,12.2; The Vanguard Group, 8.1% (1/24 proxy). Incorporated: New Jersey. President & CEO: Dan Fachner. Chairman: Gerald B. Schreiber. Address: 6000 Central Highway, Pennsauken, NJ 08109. Telephone: 856-665-9533. Internet: www.jjsnack.com.

J&J Snack Foods Corp. got off to a sluggish start in fiscal 2024 (year began October 2, 2023). The company's top line was a bit soft in the fiscal first quarter, as strength across the Retail Supermarket and Frozen Beverages segments were more than offset by a sales decline in the Food Service business. This was due to lower consumer traffic at certain outlets and weakened consumption trends. Meanwhile, earnings rose 9%, to $0.37 a share, as it benefited from moderating inflationary pressures and strategic initiatives to increase efficiencies across the distribution network and supply chain. This was slightly offset by higher operating expenses and incremental promotional and marketing investments made to support new product launches.

We look for a better showing at the Food Service segment, which accounts for the bulk of the business. Sales momentum will likely accelerate by yearend, as the company began the rollout of its churros offerings with a major food distributor. In addition, it secured a new contract in the fiscal first quarter with *Subway* to manufacture a foot-long churro for all U.S. locations. The deal has already exceeded expectations. This is likely to more than offset the negative impact of a lost churros distribution deal with *Costco* at the end of December. What's more, it completed the launch of Peter Piper Pizza and extended a contract with Chuck E. Cheese through 2027. Elsewhere, the Frozen Beverage unit should benefit from the release of a new self-service *ICEE* program and plans to add locations in the second quarter. We project low-single-digit sales growth for fiscal 2024 and fiscal 2025, to $1.59 billion and $1.63 billion, respectively.

The profit outlook remains decent over the next two years. We forecast fiscal 2024 and fiscal 2025 share earnings to advance about 5% and 16%, respectively, to $4.30 and $5.00. The margin will likely widen a bit, as three new regional distribution centers are now operational.

The issue is ranked Below Average (4) for Timeliness. Even at the current low valuation, 3- to 5-year price recovery potential is limited.

Oriatal J. Haiby *April 12, 2024*

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	55
Earnings Predictability	30

(A) Fiscal year ends last Saturday in September. **(B)** Diluted earnings. Qrtly may not sum due to changes in share count. Excludes nonrecurring gain: 2011, $0.35; 2018, $1.05. Next earnings report due late April. **(C)** Dividends historically paid early January, April, July, and October. ■ Div'd reinvest. plan available. **(D)** Includes intangibles. At 9/30/23: $368.6 million, or $19.07 a share. **(E)** In millions.

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J. HENRY & ASSOC. NDQ-JKHY

RECENT PRICE 164.84 | P/E RATIO 29.9 (Trailing: 32.3 Median: 33.0) | RELATIVE P/E RATIO 1.66 | DIV'D YLD 1.3% | VALUE LINE

TIMELINESS 3 Lowered 4/5/24
SAFETY 1 Raised 8/11/17
TECHNICAL 1 Raised 4/12/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$134-$233	$184 (10%)

2027-29 PROJECTIONS

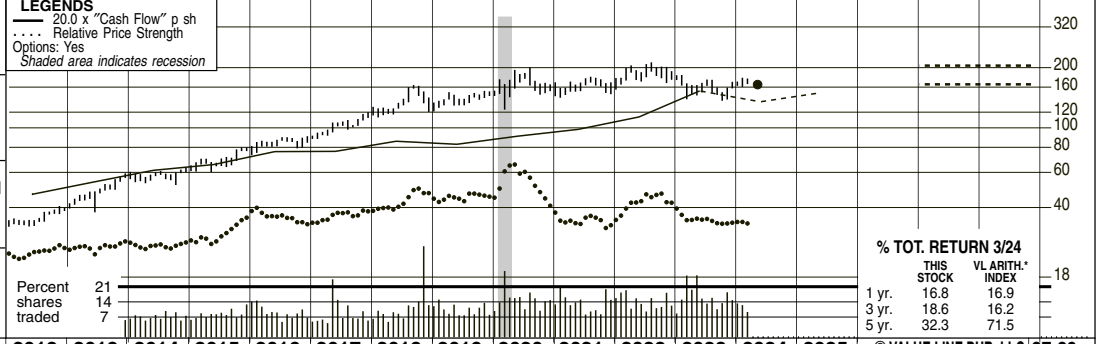
	Price	Gain	Ann'l Total Return
High	205	(+25%)	7%
Low	165	(Nil)	2%

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	298	270	321
to Sell	321	307	309
Hld's(000)	68322	67241	68371

	59.4	63.8	79.9	91.1	119.8	163.7	152.9	201.0	180.0	212.6	184.2	178.4
High:	59.4	63.8	79.9	91.1	119.8	163.7	152.9	201.0	180.0	212.6	184.2	178.4
Low:	37.9	51.9	60.1	73.2	88.1	112.8	121.0	123.6	141.6	155.4	136.6	160.6

LEGENDS
20.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
8.60	8.92	9.80	11.20	11.94	13.25	14.64	15.54	17.21	18.48	19.91	20.17	22.15	23.76	26.66	28.50	*31.10*	*33.05*	Revenues per sh [A]	*36.45*
1.68	1.70	1.81	2.08	2.33	2.68	3.07	3.28	3.81	3.82	4.29	4.15	4.55	4.92	5.68	7.65	*6.75*	*7.50*	"Cash Flow" per sh	*8.65*
1.17	1.22	1.38	1.59	1.78	2.04	2.36	2.59	3.12	3.14	3.65	3.52	3.86	4.12	4.94	5.02	*5.30*	*5.95*	Earnings per sh [A]	*6.85*
.28	.32	.36	.40	.44	.56	.84	.94	1.06	1.18	1.36	1.54	1.66	1.78	1.90	2.02	*2.20*	*2.30*	Div'ds Decl'd per sh [B]	*2.55*
.36	.38	.64	.37	.48	.54	.40	.67	.72	.54	.52	.70	.70	.31	.48	.54	*.75*	*.85*	Cap'l Spending per sh	*.95*
6.96	7.49	8.79	10.19	11.43	12.58	12.56	12.26	12.66	13.33	16.42	18.56	20.22	17.83	18.96	22.07	*24.30*	*26.40*	Book Value per sh [D]	*29.30*
86.40	83.61	85.40	86.36	86.03	85.24	82.64	80.85	78.70	77.42	77.17	76.99	76.63	74.00	72.88	72.89	*72.00*	*71.00*	Common Shs Outst'g [C]	*70.00*
21.5	15.3	17.0	18.1	18.0	20.1	23.3	24.1	24.8	29.1	31.5	39.7	40.0	39.2	35.3	35.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*27.0*
1.29	1.02	1.08	1.14	1.15	1.13	1.23	1.21	1.30	1.46	1.70	2.11	2.05	2.12	2.04	2.04			Relative P/E Ratio	*1.50*
1.1%	1.7%	1.5%	1.4%	1.4%	1.4%	1.5%	1.5%	1.4%	1.3%	1.2%	1.1%	1.1%	1.1%	1.1%	1.1%			Avg Ann'l Div'd Yield	*1.4%*
						1210.1	1256.2	1354.6	1431.1	1536.6	1552.7	1697.1	1758.2	1942.9	2077.7	*2240*	*2345*	Revenues ($mill) [AE]	*2500*
						30.2%	29.6%	30.4%	29.2%	28.5%	25.4%	25.5%	25.7%	27.0%	32.3%	*28.0%*	*29.0%*	Operating Margin	*29.5%*
						52.9	54.2	50.6	49.7	48.0	47.4	52.2	52.5	50.8	190.7	*105*	*110*	Depreciation ($mill)	*125*
						201.1	211.2	248.9	245.8	283.1	271.9	296.7	311.5	362.9	366.6	*380*	*423*	Net Profit ($mill)	*480*
						35.4%	33.3%	31.0%	33.0%	27.6%	21.7%	22.2%	21.7%	23.2%	22.7%	*22.0%*	*22.0%*	Income Tax Rate	*22.0%*
						16.6%	16.8%	18.4%	17.2%	18.4%	17.5%	17.5%	17.7%	18.7%	17.6%	*17.0%*	*18.0%*	Net Profit Margin	*19.0%*
						d44.4	49.9	d11.8	48.8	d19.4	99.5	174.2	22.8	69.7	104.2	*200*	*250*	Working Cap'l ($mill)	*375*
						3.7	50.1	- -	50.0	- -	- -	.2	100.1	115.0	275.0	*200*	*100*	Long-Term Debt ($mill)	*Nil*
						1038.2	991.5	996.2	1032.1	1266.8	1429.0	1549.7	1319.3	1381.6	1608.5	*1750*	*1875*	Shr. Equity ($mill)	*2050*
						19.4%	20.4%	25.1%	22.8%	22.4%	19.1%	19.2%	22.0%	24.3%	19.9%	*19.5%*	*21.5%*	Return on Total Cap'l	*23.5%*
						19.4%	21.3%	25.0%	23.8%	22.3%	19.0%	19.1%	23.6%	26.3%	22.8%	*22.0%*	*22.5%*	Return on Shr. Equity	*23.5%*
						12.5%	13.6%	16.5%	14.9%	14.1%	10.7%	10.9%	13.5%	16.2%	13.6%	*12.5%*	*14.0%*	Retained to Com Eq	*14.5%*
						35%	36%	34%	37%	37%	44%	43%	43%	38%	40%	*42%*	*39%*	All Div'ds to Net Prof	*37%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $255.0 mill. **Due in 5 Yrs** $255.0 mill.
LT Debt $255.0 mill. **LT Interest** $4.5 mill. (14% of Cap'l)
Leases, Uncapitalized: Annual rentals $11.4 mill.

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 72,867,000 shs.

MARKET CAP: $12.0 billion (Large Cap)

CURRENT POSITION ($MILL.)	2022	2023	12/31/23
Cash Assets	48.8	12.2	26.7
Receivables	348.1	361.3	270.6
Other	216.6	254.5	257.0
Current Assets	613.5	628.0	554.3
Accts Payable	21.0	19.2	18.7
Debt Due	- -	- -	- -
Other	522.8	504.6	385.3
Current Liab.	543.8	523.8	404.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	8.0%	7.5%	*5.5%*
"Cash Flow"	10.0%	9.0%	*6.0%*
Earnings	10.0%	7.5%	*6.5%*
Dividends	15.0%	9.5%	*5.0%*
Book Value	5.5%	7.0%	*7.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [AE] Sep. 30	Dec. 31	Mar. 31	Jun. 30	Full Fiscal Year
2021	451.8	422.4	433.8	450.2	1758.2
2022	488.1	493.9	478.3	482.6	1942.9
2023	529.2	505.3	508.6	534.6	2077.7
2024	571.4	545.7	*555*	*567.9*	*2240*
2025	*610*	*575*	*585*	*575*	*2345*

Fiscal Year Ends	EARNINGS PER SHARE [A] Sep. 30	Dec. 31	Mar. 31	Jun. 30	Full Fiscal Year
2021	1.19	.94	.95	1.04	4.12
2022	1.38	1.30	1.16	1.10	4.94
2023	1.46	1.10	1.12	1.34	5.02
2024	1.39	1.26	*1.25*	*1.40*	*5.30*
2025	*1.60*	*1.40*	*1.45*	*1.50*	*5.95*

Cal-endar	QUARTERLY DIVIDENDS PAID [B] Mar.31	June.30	Sept.30	Dec.31	Full Year
2020	.43	.43	.43	.43	1.72
2021	.46	.46	.46	.46	1.78
2022	.49	.49	.49	.49	1.90
2023	.52	.52	.52	.52	2.08
2024	.55				

BUSINESS: Jack Henry & Associates Inc. provides integrated computer systems and services to banks and other financial institutions. It has developed several banking application software systems that it markets, along with computer hardware, to financial institutions. In addition, it performs data conversion, software installation, and software customization for the implementation of its systems. Acquired BancData Solutions, 4/00; Symitar Systems, 6/00; Transcend Systems, 3/02. It has a business partnership with SEDONA, an IBM Advanced Business Partner. Has about 7,120 employees. Off. & dir. own less than 1% of stock (10/23 Proxy). Chairman, Pres., and CEO: Dave Foss. Inc.: DE. Addr.: 663 Highway 60, P.O. Box 807, Monett, MO 65708. Tel.: 417-235-6652. Web: www.jackhenry.com.

Jack Henry posted strong year-over-year profit growth in the December period (fiscal year ends June 30th). Second-quarter earnings clocked in at $1.26 per share, improving 15% versus the previous-year tally. Although cost of revenues and SG&A expenses rose modestly, higher revenues and a decline in research & development costs supported operating margins. For the full fiscal-year, we are reiterating our share earnings call, at $5.30, representing a 6% annual advance.

Our 2025 top- and bottom-line estimates are being introduced. Jack Henry's primary operations, namely data processing, hosting, and digital/remote banking services, are performing well, even amidst a choppy economic climate. The client roster should continue to swell, as prospective customers look to modernize their operations. All told, we are initiating our fiscal 2025 revenue and earnings estimates at $2.345 billion and $5.95 per share, respectively.

The company is returning capital to shareholders. Most recently, the board of directors raised the quarterly dividend payment 6%, to $0.55 per share. Meanwhile, it is likely that periodic stock repurchases may accelerate from here. All told, given the company's sound financial position, we expect shareholder-friendly policies to remain in place going forward.

Secular product demand ought to be buoyed by a healthier macroeconomic backdrop out to late decade. In addition to the global financial industry's increasing adoption of cloud-based technology services, other pockets of growth, including the emerging and accelerating financial crimes arena, presents significant long-term upside, in our view. To that end, Jack Henry's recently introduced AI-driven *Financial Crime Defender* is being well received. Meanwhile, customer IT spending budgets ought to ramp up assuming more-supportive operating conditions are in place further out.

Neutrally ranked Jack Henry stock does not warrant an investment at this juncture. Capital gains potential over both the 18-month and 3- to 5-year windows is limited. And, from a price-to-earnings perspective, the equity appears to be fairly valued.

Nicholas Patrikis *May 3, 2024*

(A) Fiscal year ends June 30th. Diluted earnings per share. Next earnings report due mid-May. Quarterly earnings may not sum due to rounding.
(B) Dividends historically paid in early March, June, September, and December.
(C) In millions.
(D) Includes intangibles, as of fiscal '23: $1456.0 million, $19.98/share.
(E) Adopted accounting standards update No. 2014-09 as of 7/1/18.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	80
Earnings Predictability	95

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RECENT PRICE 211.98 | P/E RATIO 31.0 (Trailing: 32.9 Median: NMF) | RELATIVE P/E RATIO 1.77 | DIV'D YLD 2.2% | VALUE LINE

TIMELINESS 3 Raised 9/22/23
SAFETY 2 New 1/17/20
TECHNICAL 4 Lowered 2/16/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

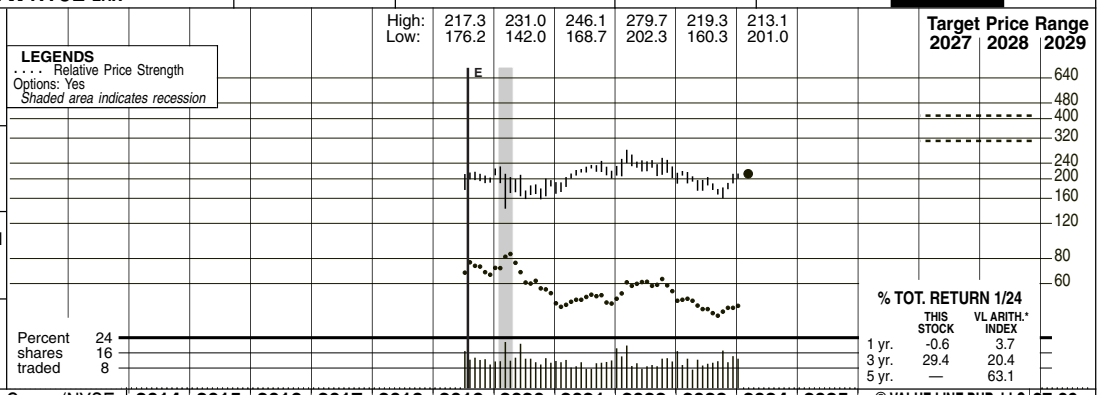
Low-High	Midpoint (% to Mid)
$176-$293	$235 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	415	(+95%)	*20%*
Low	310	(+45%)	*12%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	555	481	531
to Sell	503	569	505
Hld's(000)	154155	155010	153584



On July 1, 2019, Harris Corp. (NYSE: HRS) and L3 Technologies (NYSE: LLL) completed a merger of equals. The newly formed company was incorporated as L3Harris Technologies, and began trading on the NYSE under the ticker LHX.

CAPITAL STRUCTURE as of 12/29/23
Total Debt $12762 mill. **Due in 5 Yrs** $4280 mill.
LT Debt $11160 mill. **LT Interest** $543.0 mill.
(Total interest coverage: 4.4x)
(37% of Cap'l)

Leases, Uncapitalized $134.0 mill.

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 189,540,249 shs.

MARKET CAP: $40.2 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/29/23
Cash Assets	941	880	560
Receivables	1045	1251	1230
Inventory	982	1291	1472
Other	3391	3332	4793
Current Assets	6359	6754	8055
Accts Payable	1769	1945	2106
Debt Due	11	820	1602
Other	2771	3011	4296
Current Liab.	4551	5776	8004

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	- -	- -	*7.0%*
"Cash Flow"	- -	- -	*7.5%*
Earnings	- -	- -	*10.5%*
Dividends	- -	- -	*3.5%*
Book Value	- -	- -	*1.0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) AF Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Fiscal Year
2021	4567	4668	4229	4350	17814
2022	4103	4135	4246	4578	17062
2023	4471	4693	4915	5340	19419
2024	*5110*	*5140*	*5365*	*5585*	*21200*
2025	*5310*	*5340*	*5565*	*5785*	*22000*

Fiscal Year Ends	EARNINGS PER SHARE ABF Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Fiscal Year
2021	3.18	2.01	2.39	2.46	9.09
2022	2.44	2.42	d1.56	2.17	5.49
2023	1.76	1.83	2.02	.83	6.44
2024	*1.90*	*1.95*	*2.15*	*1.00*	*7.00*
2025	*2.15*	*2.20*	*2.40*	*1.25*	*8.00*

Cal-endar	QUARTERLY DIVIDENDS PAID C Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.85	.85	.85	.85	3.40
2021	1.02	1.02	1.02	1.02	4.08
2022	1.12	1.12	1.12	1.12	4.48
2023	1.14	1.14	1.14	1.14	4.56
2024					

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
	--	--	--	--	--	42.71	88.51	92.27	89.51	*102.45*	*112.15*	*117.00*	Sales per sh A	*134.05*
	--	--	--	--	--	5.83	10.47	14.58	10.49	*12.45*	*13.20*	*14.25*	"Cash Flow" per sh	*18.55*
	--	--	--	--	--	3.68	5.19	9.09	5.49	6.44	*7.00*	*8.00*	Earnings per sh AB	*12.10*
	--	--	--	--	--	1.50	3.40	4.08	4.48	4.56	*4.64*	*4.70*	Div'ds Decl'd per sh C	*4.96*
	--	--	--	--	--	.80	1.79	1.74	1.32	*2.35*	*1.35*	*1.35*	Cap'l Spending per sh	*1.40*
	--	--	--	--	--	104.14	100.81	99.52	97.18	*99.35*	*100.00*	*101.05*	Book Value per sh	*104.30*
	--	--	--	--	--	216.90	205.57	193.07	190.60	*189.50*	*189.00*	*188.00*	Common Shs Outst'g D	*185.00*
	--	--	--	--	--	54.8	36.2	23.4	42.4	*30.0*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*30.0*
	--	--	--	--	--	2.92	1.86	1.26	2.45	*1.70*			Relative P/E Ratio	*1.65*
	--	--	--	--	--	.7%	1.8%	1.9%	1.9%	2.4%			Avg Ann'l Div'd Yield	*1.5%*
	--	--	--	--	--	9263.0	18194	17814	17062	19419	*21200*	*22000*	Sales ($mill)	*24800*
	--	--	--	--	--	13.8%	12.1%	16.0%	16.8%	*15.5%*	*16.0%*	*17.0%*	Operating Margin	*20.0%*
	--	--	--	--	--	442.0	1032.0	967.0	938.0	*1165*	*1170*	*1175*	Depreciation ($mill)	*1190*
	--	--	--	--	--	823.0	1121.0	1847.0	1061.0	*1195*	*1325*	*1505*	Net Profit ($mill)	*2235*
	--	--	--	--	--	8.0%	17.7%	19.3%	16.7%	*2.0%*	*2.0%*	*3.0%*	Income Tax Rate	*6.0%*
	--	--	--	--	--	8.9%	6.2%	10.4%	6.2%	*6.0%*	*6.0%*	*7.0%*	Net Profit Margin	*9.0%*
	--	--	--	--	--	2303.0	2427.0	1808.0	978.0	*50*	*100*	*200*	Working Cap'l ($mill)	*500*
	--	--	--	--	--	6694.0	6908.0	7048.0	6225.0	*11160*	*11200*	*11300*	Long-Term Debt ($mill)	*11600*
	--	--	--	--	--	22587	20724	19213	18523.0	*18830*	*18900*	*19000*	Shr. Equity ($mill)	*19300*
	--	--	--	--	--	3.0%	4.5%	7.5%	4.9%	*5.0%*	*5.5%*	*6.0%*	Return on Total Cap'l	*8.0%*
	--	--	--	--	--	3.6%	5.4%	9.6%	5.7%	*6.5%*	*7.0%*	*8.0%*	Return on Shr. Equity	*11.5%*
	--	--	--	--	--	2.2%	1.9%	5.4%	1.1%	*2.0%*	*2.5%*	*3.0%*	Retained to Com Eq	*7.0%*
	--	--	--	--	--	41%	65%	44%	81%	*72%*	*66%*	*59%*	All Div'ds to Net Prof	*41%*

BUSINESS: L3Harris Technologies was formed on 7/1/19 as a merger between Harris Corp. and L3 Technologies. It develops, manufactures, markets, and services high-technology communications systems for commercial customers and governments (70% of total '22 sales were to the U.S. gov't). In '19, L3 Harris sold its Vision Night Business to Elbit Systems of America for $350 mill. R&D was 3.9% of sales in '22. Depreciation rate: 5.4%. Has about 47,000 employees. Officers and directors own 1.0% of common stock; The Vanguard Group, 8.6%; Capital World Investors 7.6% (3/23 proxy). Chairman. & CEO: William M. Brown. Incorporated: DE. Address: 1025 West NASA Boulevard, Melbourne, Fl. 32919. Telephone: 321-727-9100. Internet: www.l3harris.com.

The completed acquisition of Aerojet Rocketdyne (AJRD) ought to benefit L3Harris in the long run. AJRD is a manufacturer of rocket engines and propulsion systems for space vehicles, ballistic missiles, and military tactical weapons. The $4.7 billion all-cash transaction closed in July, 2023. This deal should give L3Harris more opportunities to compete in the missile defense systems and advanced rocket engine markets.

L3Harris' top line is on the right trajectory. The Space & Airborne Systems (SAS) segment has benefited from new program ramps in Space, Mission Networks, and Intelligence & Cyber businesses, driven by record backlog. At the Communication Systems (CS) segment, sales have increased thanks to higher domestic volume in tactical communications, driven by improved electronic component availability. The acquisition of AJRD is also helping to bolster results. Long-term prospects for this company are favorable, as countries throughout the world are increasing their defense spending in response to the conflicts in Ukraine and Israel. We expect the top line to step up 9%, to $21.2 billion, this year, assuming demand continues to expand. In 2025, we anticipate a 4% sales gain, to $22.0 billion.

The bottom line should advance, notwithstanding headwinds. Elevated inflation in the U.S. has led to higher labor input costs. In response, L3Harris is deploying operational improvement strategies combined with pricing opportunities to mitigate cost growth. The company has launched an enterprise transformation program called LHX NeXt. LHX NeXt ought to help to lessen expenses. We believe the bottom line will advance 9%, to $7.00 a share, in 2024, as stronger operating leverage should lead to better profitability. Looking ahead to next year, share earnings may increase 14%, to $8.00.

L3Harris is neutrally ranked for year-ahead relative price performance. The company has an above-average rank for Safety (2). L3Harris also offers a decent dividend yield. Capital appreciation potential to 2027-2029 is attractive. This stock may be appealing to buy-and-hold investors.

Keith R. Foldesi *March 1, 2024*

(A) Fiscal years end around December 31st.
(B) Fully diluted earnings. Next earnings report due late April.
(C) Quarterly dividends historically paid mid-March, June, September, and December.
(D) In millions.
(E) 2019 data only includes financials from post merger, which was completed on July 1st.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	35
Earnings Predictability	NMF

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MCKESSON NYSE-MCK

RECENT PRICE **486.46** | P/E RATIO **17.3** (Trailing: 17.6 Median: NMF) | RELATIVE P/E RATIO **1.01** | DIV'D YLD **0.5%** | **VALUE LINE**

TIMELINESS 1 Raised 1/19/24
SAFETY 1 Raised 11/12/21
TECHNICAL 3 Raised 2/2/24
BETA .85 (1.00 = Market)

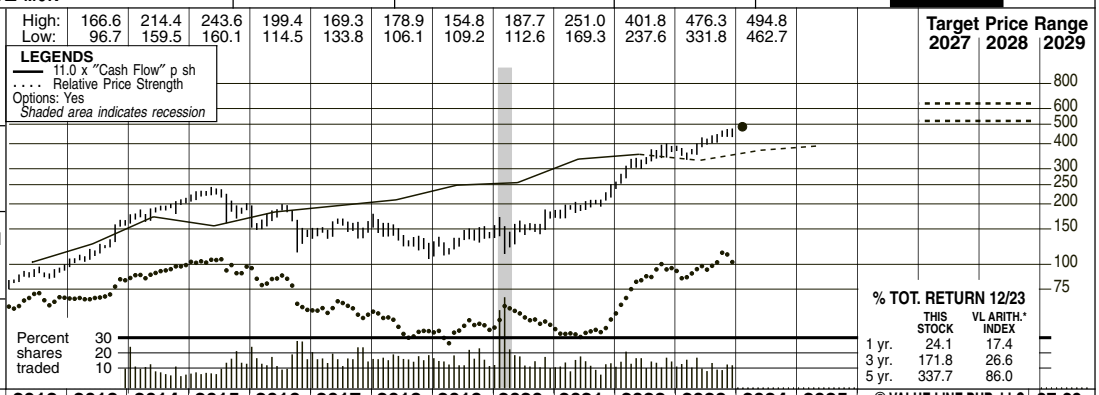
18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$396-$620 $508 (5%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	635	(+30%)	*8%*
Low	520	(+5%)	*3%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	452	578	560
to Sell	654	558	589
Hld's(000)	114554	112196	110825



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
393.48	401.11	444.78	522.27	540.38	596.80	773.23	848.37	940.91	1031.5	1128.0	1435.1	1506.0	1820.5	2040.64	*2259.25*	*2429.10*	*2594.00*	Sales per sh [A]	*2920.00*
6.03	6.37	7.19	8.57	9.30	11.50	15.68	14.11	16.58	17.80	19.07	22.60	23.23	30.43	30.75	*32.00*	*33.75*	*35.50*	"Cash Flow" per sh	*41.80*
4.28	4.58	5.00	5.83	6.33	8.35	11.11	9.84	11.61	12.62	13.57	14.95	17.21	23.69	25.98	*27.30*	*28.90*	*30.60*	Earnings per sh [AB]	*36.00*
.48	.48	.72	.80	.80	.92	.96	1.08	1.12	1.30	1.51	1.62	1.67	1.83	2.00	*2.40*	*2.48*	*2.64*	Div'ds Decl'd per sh [C■]	*3.28*
1.45	1.39	1.54	1.71	1.79	1.80	1.62	2.17	1.91	2.01	2.24	2.25	2.85	2.68	2.88	*2.95*	*3.05*	*3.05*	Cap'l Spending per sh	*2.89*
22.85	27.79	28.65	29.07	31.20	36.96	34.55	39.66	52.58	48.53	42.60	31.63	d.13	d15.67	d13.69	*d13.70*	*d13.05*	*d11.30*	Book Value per sh [D]	*6.00*
271.00	271.00	252.00	235.00	226.61	230.58	231.55	225.00	211.00	202.00	190.00	161.00	158.19	145.00	135.60	*135.00*	*134.00*	*133.00*	Common Shs Outst'g [E]	*125.00*
11.2	11.8	13.6	13.8	14.9	16.8	17.9	20.1	14.1	12.1	9.7	9.3	9.4	9.3	13.5		*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.0*
.67	.79	.87	.87	.95	.94	.94	1.01	.74	.61	.52	.50	.48	.50	.78				Relative P/E Ratio	*.90*
1.0%	.9%	1.1%	1.0%	.8%	.7%	.5%	.5%	.7%	.9%	1.1%	1.2%	1.0%	.8%	.8%				Avg Ann'l Div'd Yield	*.6%*
179045	190884	198533	208357	214319	231051	238228	263966	276711	*305000*	*325500*	*345000*	Sales ($mill) [A]	*365000*
2.9%	2.3%	2.3%	1.8%	2.0%	1.6%	2.1%	2.1%	2.0%	*2.0%*	*2.0%*	*2.0%*	Operating Margin	*2.0%*
1017.0	885.0	910.0	951.0	949.0	922.0	887.0	760.0	608.0	*635*	*645*	*655*	Depreciation ($mill)	*725*
2614.0	2290.0	2589.0	2644.0	2674.0	2716.0	2788.0	3652.0	3560.0	*3685*	*3875*	*4070*	Net Profit ($mill)	*4500*
30.6%	27.9%	24.2%	19.7%	17.8%	18.4%	18.6%	18.1%	19.5%	*20.0%*	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
1.5%	1.2%	1.3%	1.3%	1.2%	1.2%	1.2%	1.4%	1.3%	*1.2%*	*1.2%*	*1.2%*	Net Profit Margin	*1.2%*
3173.0	3366.0	1336.0	451.0	839.0	d402.0	1279.0	d2235	d3665	*d3650*	*d2750*	*d2500*	Working Cap'l ($mill)	*750*
8180.0	6535.0	7305.0	6751.0	7265.0	6335.0	6406.0	5080.0	4626.0	*5535*	*5300*	*5100*	Long-Term Debt ($mill)	*3900*
8001.0	8924.0	11095	9804.0	8094.0	5092.0	d21.0	d2272	d1857	*d1850*	*d1750*	*d1500*	Shr. Equity ($mill) [D]	*750*
17.3%	16.0%	14.9%	16.8%	18.2%	24.8%	45.3%	133.2%	NMF	*NMF*	*NMF*	*NMF*	Return on Total Cap'l	*97.0%*
32.7%	25.7%	23.3%	27.0%	33.0%	53.3%	- -	- -	NMF	*NMF*	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
29.8%	22.9%	21.1%	24.3%	29.4%	47.6%	- -	- -	NMF	*NMF*	*NMF*	*NMF*	Retained to Com Eq	*NMF*
9%	11%	10%	10%	11%	11%	10%	8%	8%	*8%*	*8%*	*8%*	All Div'ds to Net Prof	*9%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $5584 mill. **Due in 5 Yrs** $5283 mill.
LT Debt $5535 mill. **LT Interest** $165 mill.

Leases, Uncapitalized Annual rentals $340 mill.
No Defined Benefit Pension

Preferred Stock None
Common Stock 133,062,485 shares
as of 9/30/23
MARKET CAP: $65.0 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	3532	4678	2524
Receivables	18583	19410	22494
Inventory	18702	19691	21945
Other	5414	513	568
Current Assets	46231	44292	47531
Accts Payable	38066	42490	46795
Debt Due	799	968	49
Other	9581	5008	4303
Current Liab.	48466	47957	51147

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '27-'29
Sales	12.5%	12.0%	*7.5%*
"Cash Flow"	12.0%	11.5%	*7.5%*
Earnings	13.0%	13.5%	*8.0%*
Dividends	8.0%	7.0%	*8.0%*
Book Value	- -	- -	*NMF*

Fiscal Year Begins	QUARTERLY SALES ($ mill.) [A] Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2021	62674	66576	68614	66102	263966
2022	67154	70157	70490	68910	276711
2023	74483	77215	*77860*	*75442*	*305000*
2024	*79700*	*83250*	*82250*	*80300*	*325500*
2025	*84450*	*88250*	*87200*	*85100*	*345000*

Fiscal Year Begins	EARNINGS PER SHARE [AB] Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2021	5.56	6.15	6.15	5.83	23.69
2022	5.83	6.06	6.90	7.19	25.98
2023	7.27	6.23	*7.05*	*6.75*	*27.30*
2024	*7.70*	*6.60*	*7.45*	*7.15*	*28.90*
2025	*8.15*	*7.00*	*7.90*	*7.55*	*30.60*

Cal-endar	QUARTERLY DIVIDENDS PAID [C■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.41	.41	.41	.42	1.65
2021	.42	.42	.47	.47	1.78
2022	.47	.47	.54	.54	2.02
2023	.54	.54	.62	.62	2.32
2024	.62				

BUSINESS: McKesson Corporation provides supply, information, and care management products and services designed to reduce costs and improve quality across the healthcare industry. It reports financial results in four reportable segments: U.S. Pharmaceutical (87% of 2022 sales), International (7%), Medical-Surgical Solutions (4%), and Prescription Technology Solutions (2%). New reporting structure began in September, 2020. Employs about 51,000. The Vanguard Group owns 9.5% of common stock; BlackRock, Inc., 8.7%; officers & directors, less than 1% (6/23 proxy). Chairman: Donald Knauss, CEO: Brian Tyler. Incorporated: Delaware. Address: 6555 State Hwy 161, Irving, Texas 75039. Telephone: (800) 826-9360. Internet: www.mckesson.com.

We look for McKesson to post record performances over the next couple of years. The company registered fiscal second-quarter (year ends March 31st) earnings of $6.23 a share, a dime ahead of our estimate and 3% above the year-ago figure, on a 10% increase in sales. McKesson's top line reaped the rewards of growth in the United States Pharmaceutical segment, the result of increased prescription volumes, including higher volumes from retail national account customers, specialty products, and GLP-1 medications. This offered a counterbalance to lower revenues in the International segment, the result of the recent divestitures of McKesson's European businesses. As a result, we have upped our earnings estimates for fiscal 2023 and 2024 by a dime and a nickel a share, to $27.30 and $28.90, respectively. What's more, we have initiated a fiscal 2025 earnings call of $30.60 a share.

The investment community has certainly taken notice of the company's good fortune. MCK stock is currently testing new highs, after increasing about 9% in value since our early November review.

McKesson is in strong financial shape. The company ended the September interim with $2.524 billion in cash on its ledger (down from $2.916 billion this time last year), and long-term debt of $5.535 billion (up from $4.813 billion a year ago). And we expect management to continue to put McKesson's spare cash to good use going forward. Indeed, glancing at the above array, it is quite apparent that the company has amassed an impressive track record of increasing its annual payout, and an additional increase in the dividend is likely in the cards during the most recent quarter.

So what is an investor to do? Momentum-seeking accounts may wish to consider staking a position here, as MCK stock is ranked to best the market over the coming year. Conversely, those willing to commit funds over the long haul should wait on the sidelines. Given the aforementioned increase in its value, the issue is trading in close proximity to our three- to five-year Target Price Range, thereby discounting much of the sales and earnings growth we envision over that time frame.

Kenneth A. Nugent *February 9, 2024*

(A) Fiscal years end March 31st of following year. **(B)** Diluted earnings. Excludes nonrecurring: '08, ($1.33); '09, 4¢; '10, (43¢); '11, (24¢); '12 (74¢); '16, $11.67; '17, ($12.32); '18, ($13.40), '19 ($9.96), '20, ($45.47); '21, ($13.05). Next earnings report due in early May. **(C)** Dividends paid in January, April, July & October. ■ Dividend reinvestment plan available. **(D)** Includes intangibles. In '22: $12.2 billion, $90.15 a share. **(E)** In millions.

Company's Financial Strength	A++
Stock's Price Stability	90
Price Growth Persistence	40
Earnings Predictability	95

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McCORMICK NYSE-MKC

RECENT PRICE **76.62** | P/E RATIO **27.3** (Trailing: 28.1 Median: 26.0) | RELATIVE P/E RATIO **1.48** | DIV'D YLD **2.2%** | **VALUE LINE**

TIMELINESS 5 Lowered 4/5/24
SAFETY 1 Raised 5/1/09
TECHNICAL 5 Lowered 3/22/24
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$57-$109	$83 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	105	(+35%)	*10%*
Low	85	(+10%)	*5%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	360	372	445
to Sell	440	451	447
Hld's(000)	209343	212275	216354

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	37.6	38.5	43.7	53.9	53.3	78.0	86.7	105.5	98.8	107.4	94.4	77.8								
Low:	30.4	31.4	35.3	39.2	44.8	49.2	59.5	56.1	77.9	71.2	59.1	63.9								
	12.21	12.11	12.54	13.90	15.13	15.72	16.54	16.87	17.60	18.45	20.47	20.12	20.99	23.64	23.69	24.85	*25.15*	*25.65*	Sales per sh [A]	*29.60*
	1.41	1.53	1.70	1.78	1.92	2.00	2.12	2.18	2.36	2.56	3.08	3.30	3.47	3.78	3.30	3.46	*3.60*	*3.90*	"Cash Flow" per sh	*4.60*
	1.07	1.17	1.33	1.40	1.52	1.57	1.69	1.74	1.89	2.13	2.49	2.68	2.83	3.05	2.53	2.70	*2.85*	*3.10*	Earnings per sh [A B]	*3.70*
	.44	.48	.52	.56	.62	.68	.74	.80	.86	.94	1.04	1.14	1.24	1.36	1.48	1.56	*1.69*	*1.79*	Div'ds Decl'd per sh ■ [C]	*2.24*
	.33	.31	.33	.36	.42	.38	.52	.50	.61	.70	.64	.65	.84	1.04	.98	.98	*.95*	*.95*	Cap'l Spending per sh	*1.10*
	4.06	5.06	5.49	6.08	6.41	7.42	7.05	6.56	6.49	9.77	12.00	12.96	14.71	16.50	17.46	18.88	*20.00*	*21.00*	Book Value per sh [D]	*23.60*
	260.20	263.60	266.20	266.10	265.36	262.33	256.54	254.60	250.60	262.00	264.20	265.80	266.90	267.30	268.10	268.10	*268.50*	*269.00*	Common Shs Outst'g [E]	*267.00*
	17.2	13.7	14.8	17.1	18.7	22.0	20.6	22.5	25.1	22.9	23.3	28.3	30.9	28.7	35.6	29.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*26.0*
	1.04	.91	.94	1.07	1.19	1.24	1.08	1.13	1.32	1.15	1.26	1.51	1.59	1.55	2.06	1.65			Relative P/E Ratio	*1.40*
	2.4%	3.0%	2.6%	2.3%	2.2%	2.0%	2.1%	2.0%	1.8%	1.9%	1.8%	1.5%	1.4%	1.6%	1.6%	2.0%			Avg Ann'l Div'd Yield	*2.0%*
							4243.2	4296.3	4411.5	4834.1	5408.9	5347.4	5601.3	6317.9	6350.5	6662.2	*6675*	*6850*	Sales ($mill) [A]	*7900*
							16.8%	16.8%	17.4%	18.4%	20.2%	21.3%	21.1%	20.2%	17.6%	18.4%	*19.5%*	*20.5%*	Operating Margin	*20.5%*
							102.7	105.9	108.7	125.2	150.7	158.8	165.0	186.3	200.6	199.3	*205*	*210*	Depreciation ($mill)	*240*
							441.6	449.5	483.4	546.7	663.0	717.5	760.9	822.8	683.9	727.3	*765*	*835*	Net Profit ($mill)	*995*
							26.3%	26.2%	25.8%	23.8%	15.3%	19.5%	19.5%	20.7%	20.9%	22.0%	*21.5%*	*21.5%*	Income Tax Rate	*21.0%*
							10.4%	10.5%	11.0%	11.3%	12.3%	13.4%	13.6%	13.0%	10.8%	10.9%	*11.4%*	*12.1%*	Net Profit Margin	*12.6%*
							294.2	166.3	d.9	d330.3	d521.8	d604.2	d962.9	d1028	d1046	d1097	*d975*	*d750*	Working Cap'l ($mill)	*100*
							1014.1	1052.7	1054.0	4443.9	4052.9	3625.8	3753.8	3973.3	3642.3	3339.9	*3300*	*3300*	Long-Term Debt ($mill)	*4000*
							1809.4	1670.2	1626.6	2559.9	3170.9	3444.2	3926.1	4411.0	4680.5	5060.7	*5475*	*5655*	Shr. Equity ($mill)	*6300*
							16.5%	17.5%	19.1%	8.5%	10.3%	11.2%	10.8%	10.6%	9.1%	9.9%	*9.0%*	*9.5%*	Return on Total Cap'l	*9.5%*
							24.4%	26.9%	29.7%	21.4%	20.9%	20.8%	19.4%	18.7%	14.6%	14.4%	*14.5%*	*14.5%*	Return on Shr. Equity	*16.0%*
							13.8%	14.6%	16.3%	12.1%	12.3%	12.1%	11.0%	10.4%	6.1%	6.1%	*6.0%*	*6.0%*	Retained to Com Eq	*9.5%*
							44%	46%	45%	43%	41%	42%	43%	44%	58%	58%	*58%*	*58%*	All Div'ds to Net Prof	*54%*

CAPITAL STRUCTURE as of 2/28/24
Total Debt $4457.0 mill. **Due in 5 Yrs** $2.6 bill.
LT Debt $3329.1 mill. **LT Interest** $160 mill.
(LT interest earned: $30 mill.) (40% of Cap'l)
Leases, Uncapitalized Annual rentals $61 mill.
Pension Assets-11/23 $897.8 mill.
Oblig. $936.2 mill.

Pfd Stock None
Common Stock 268,237,168 shs
(Includes 251,440,730 non-voting shs.)

MARKET CAP: $19.3 billion (Large Cap)

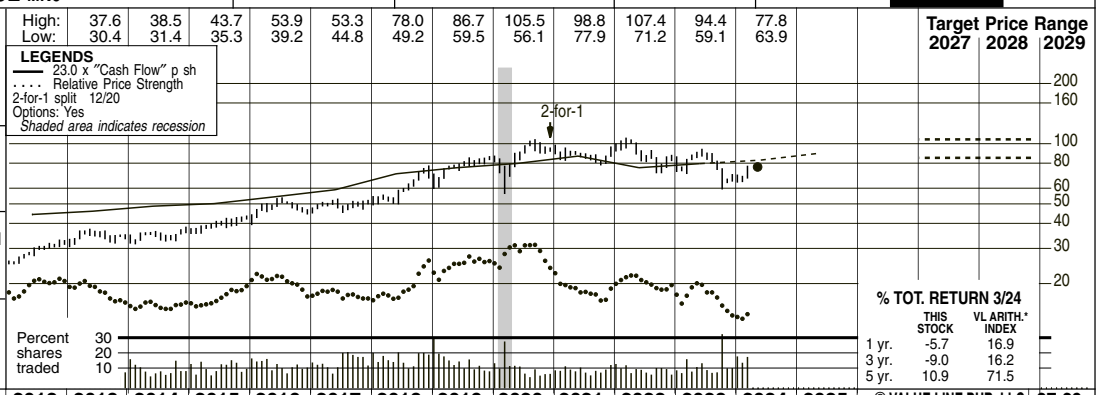
CURRENT POSITION ($MILL.)	2022	2023	2/28/24
Cash Assets	334.0	166.6	178.0
Receivables	573.7	587.5	567.5
Inventory (Avg. Cost)	1340.1	1126.5	1129.6
Other	138.9	121.0	145.1
Current Assets	2386.7	2001.6	2020.2
Accts Payable	1171.0	1119.3	1133.3
Debt Due	1507.3	1071.5	1127.9
Other	754.1	908.1	712.6
Current Liab.	3432.4	3098.9	2973.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	5.0%	5.0%	*4.0%*
"Cash Flow"	6.5%	5.5%	*4.5%*
Earnings	6.5%	5.0%	*4.5%*
Dividends	9.0%	9.0%	*6.5%*
Book Value	10.0%	13.5%	*8.0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.)[A] Feb.28	May 31	Aug.31	Nov.30	Full Fiscal Year
2021	1481	1556	1549	1730	6317.9
2022	1522	1536	1595	1695	6350.5
2023	1565	1659	1684	1752	6662.2
2024	1603	*1630*	*1665*	*1777*	*6675*
2025	*1615*	*1700*	*1750*	*1785*	*6850*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Feb.28	May 31	Aug.31	Nov.30	Full Fiscal Year
2021	.72	.69	.80	.84	3.05
2022	.63	.48	.69	.73	2.53
2023	.59	.60	.65	.86	2.70
2024	.63	*.64*	*.68*	*.90*	*2.85*
2025	*.70*	*.70*	*.75*	*.95*	*3.10*

Calendar	QUARTERLY DIVIDENDS PAID [C] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.31	.31	.31	.31	1.24
2021	.34	.34	.34	.34	1.36
2022	.37	.37	.37	.37	1.48
2023	.39	.39	.39	.39	1.56
2024	.42				



BUSINESS: McCormick & Company, Inc. is a manufacturer, marketer, and distributor of spices, seasonings, flavorings, mixes, and condiments for the consumer, industrial, and foodservice markets. Has two segments: Consumer (accounted for 57% of total sales in fiscal 2023) and Flavor Solutions (43%). Acq. Reckitt Benckiser's Food Division (French's Mustard and Frank's RedHot), 8/17; Cholula Hot Sauce, 11/20; FONA Int'l, 12/20. For'gn operations were 39% of sales in 2023. Has 13,800 employees. Off./dir. own 23% of common stock, (including Lawrence E. Kurzius, 12.3%) (2/24 Proxy). Chrmn. Lawrence Kurtzius. CEO & Pres.: Brendan Foley. Inc.: MD. Addr.: 24 Schilling Road, Suite 1, Hunt Valley, MD 21031. Tel.: 410-771-7301. Internet: www.mccormick.com.

McCormick's latest quarterly report was well received by Wall Street. (Fiscal years end November 30th.) February-quarter results exceeded earnings per share estimates by a couple of pennies, though the top line declined versus the year-ago period. Volumes improved sequentially in both the Flavor Solutions and Consumer businesses, and pricing was relatively stable overall. Bright spots included spice and seasoning revenue gains in Eastern Europe, recipe unit growth in the U.K., and a few new launches (e.g., *Cholula*). On the negative side, China remained a drag on profitability, though, and management cautioned that investors should expect results to stay near last year's depressed levels. Still, the stock popped over 10% in the next trading session, perhaps due to the idea that management's $2.80-to-$2.85 adjusted earnings per share view may be conservative.

Management might have a few levers to pull in order to boost revenues. Although the earnings-per-share outlook did not change, some small sustainable tailwinds may have emerged. For one, initial efforts to repackage certain spice and seasoning offerings translated into better sell-throughs. Plus, many customers are resetting shelf space at a time when more effective brand marketing is beginning. Finally, more distribution points were garnered in the recent quarter, and we suspect that the full impact of better packaging and advertising is still ahead. McCormick de Mexico, the company's largest joint venture, will also play a bigger role. Income from this venture is expected to rise by 15% in fiscal 2024.

The Comprehensive Continuous Effectiveness (CCI) cost-cutting program continues. Higher advertising and R&D spending is being fueled by savings from restructuring moves begun last year. The net effect of a higher gross margin and elevated brand investments should be slightly wider operating margins.

This equity's risk-reward outlook seems unfavorable at the current stock price. Our Highest (1) Safety Rank and the prospect of better near-term results provide some appeal, but the current valuation still looks excessive, given the modest long-term growth potential.

Charles C. Moran *April 12. 2024*

(A) Fiscal year ends Nov. 30th. **(B)** Diluted Non=GAAP earnings. Excl. nonrecurring gains/(losses): '13, (11¢); '14, (2¢); '17, (27¢); '18, $1.02; '19, (6¢); '20, (5¢); '21, (25¢); '22 (1¢); '23 Q1-Q2, (11¢). Next earnings report due late June. Earnings may not add due to rounding. **(C)** Divs. historically paid in mid-Jan., Apr., July & Oct. ■ Div'd reinvestment plan available. **(D)** Includes intangibles. In fiscal 2023: $9616.8 million, $35.87/sh. **(E)** In mill., adjusted for split.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	70
Earnings Predictability	95

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NEWMARKET CORP. NYSE-NEU

RECENT PRICE 597.28 | P/E RATIO 16.8 (Trailing: 14.8 Median: 20.0) | RELATIVE P/E RATIO 0.97 | DIV'D YLD 1.5% | VALUE LINE

TIMELINESS 3 Lowered 2/16/24
SAFETY 1 Raised 8/28/20
TECHNICAL 3 Raised 2/9/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$384-$622	$503 (-15%)

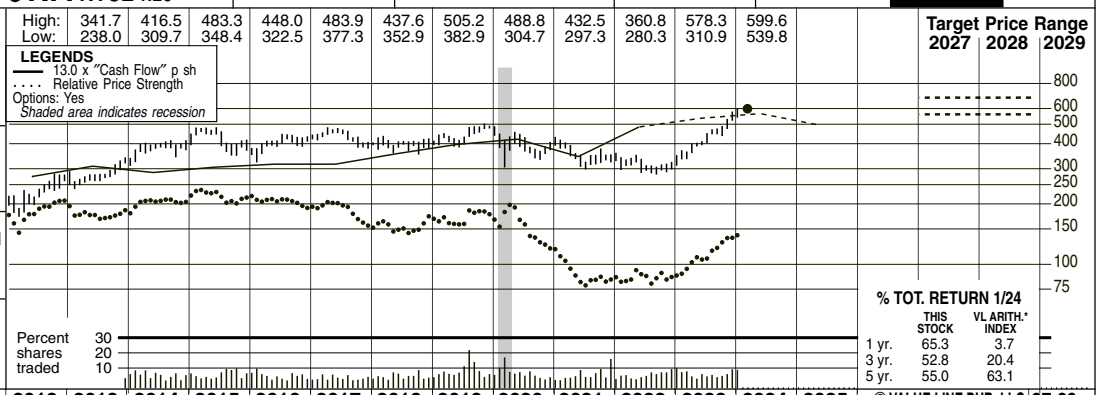
2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	680	(+15%)	*5%*
Low	560	(-5%)	*Nil*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	121	109	126
to Sell	103	132	113
Hld's(000)	5918	5875	5858

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	341.7	416.5	483.3	448.0	483.9	437.6	505.2	488.8	432.5	360.8	578.3	599.6								
Low:	238.0	309.7	348.4	322.5	377.3	352.9	382.9	304.7	297.3	280.3	310.9	539.8								
	106.42	100.60	128.07	160.36	165.70	174.08	187.55	179.18	173.01	186.62	204.73	195.75	184.13	227.36	284.97	281.48	*294.10*	*265.65*	Revenues per sh	*311.75*
	6.66	12.75	15.30	18.67	21.09	23.73	22.07	23.51	24.34	24.34	27.40	30.55	32.47	26.56	37.29	48.69	*51.45*	*44.90*	"Cash Flow" per sh	*45.90*
	4.75	10.65	12.09	15.09	17.85	19.90	18.38	19.45	20.54	19.54	20.34	22.73	24.64	17.71	27.77	40.44	*42.30*	*35.00*	Earnings per sh [A]	*34.45*
	.80	1.08	1.57	2.39	3.00	3.55	4.40	5.60	6.40	6.85	7.00	7.15	7.60	7.80	8.40	8.70	*9.00*	*9.30*	Div'ds Decl'd per sh [B]	*9.75*
	2.09	2.47	5.54	3.99	2.89	4.46	4.80	10.59	12.06	12.62	6.67	5.31	8.54	7.62	5.79	5.04	*6.50*	*7.20*	Cap'l Spending per sh	*9.35*
	19.15	30.12	35.03	41.00	29.98	43.70	33.81	32.44	40.79	51.07	43.80	61.05	69.57	73.54	78.58	112.31	*118.20*	*132.20*	Book Value per sh [C]	*147.05*
	15.20	15.21	14.03	13.40	13.42	13.10	12.45	11.95	11.85	11.78	11.18	11.19	10.92	10.36	9.70	9.59	*9.35*	*9.00*	Common Shs Outst'g [D]	*8.50*
	12.4	6.7	8.9	10.7	12.6	14.2	20.8	21.9	19.6	22.3	19.6	19.4	16.1	20.1	11.3	10.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
	.75	.45	.57	.67	.80	.80	1.09	1.10	1.03	1.12	1.06	1.03	.83	1.09	.65	.58			Relative P/E Ratio	*1.00*
	1.4%	1.5%	1.5%	1.5%	1.3%	1.3%	1.2%	1.3%	1.6%	1.6%	1.8%	1.6%	1.9%	2.2%	2.7%	2.1%			Avg Ann'l Div'd Yield	*2.2%*
							2335.4	2140.8	2049.5	2198.4	2289.7	2190.3	2010.9	2356.1	2764.8	2698.4	*2750*	*2400*	Revenues ($mill)	*2650*
							16.7%	18.6%	19.9%	17.8%	15.9%	19.4%	19.7%	14.5%	15.8%	*21.0%*	*22.0%*	*17.0%*	Operating Margin	*13.0%*
							41.5	42.3	44.9	55.3	71.8	87.6	84.0	84.3	82.3	78.0	*86.0*	*89.0*	Depreciation ($mill)	*95.0*
							233.3	238.6	243.4	231.3	234.7	254.3	270.6	190.9	279.5	388.9	*395*	*315*	Net Profit ($mill)	*295*
							31.2%	29.6%	29.1%	26.7%	19.1%	23.3%	18.3%	22.9%	19.6%	20.5%	*21.0%*	*21.0%*	Income Tax Rate	*23.0%*
							10.0%	11.1%	11.9%	10.5%	10.3%	11.6%	13.5%	8.1%	10.1%	14.4%	*14.4%*	*13.1%*	Net Profit Margin	*11.1%*
							537.5	511.1	542.3	516.9	542.1	570.5	585.6	663.1	768.2	675.5	*700*	*740*	Working Cap'l ($mill)	*860*
							363.5	494.6	507.3	602.9	771.0	642.9	598.8	789.9	1003.7	643.6	*650*	*680*	Long-Term Debt ($mill)	*750*
							421.0	387.6	483.3	601.6	489.9	683.1	759.8	762.1	762.4	1077.1	*1105*	*1190*	Shr. Equity ($mill)	*1250*
							30.7%	27.8%	25.4%	20.1%	19.7%	20.3%	20.9%	13.4%	16.8%	*17.0%*	*16.5%*	*12.5%*	Return on Total Cap'l	*9.0%*
							55.4%	61.6%	50.4%	38.5%	47.9%	37.2%	35.6%	25.0%	36.7%	36.2%	*36.0%*	*26.5%*	Return on Shr. Equity	*23.5%*
							41.3%	43.3%	34.7%	24.7%	31.5%	25.3%	24.6%	13.8%	25.6%	28.3%	*28.0%*	*19.5%*	Retained to Com Eq	*17.0%*
							25%	30%	31%	36%	34%	32%	31%	45%	30%	21%	*21%*	*27%*	All Div'ds to Net Prof	*28%*



CAPITAL STRUCTURE as of 12/31/23
Total Debt $643.6 mill. **Due in 5 Yrs** $140.3 mill.
LT Debt $643.6 mill. **LT Interest** $37.2 mill.
(Total interest coverage: 4.8x) (37% of Cap'l)

Leases, Uncapitalized Annual rentals $5.3 mill.
Pension Assets-12/23: $51.2 mill.
Oblig.: $67.8 mill.
Pfd Stock None

Common Stock 9,591,239 shs.

MARKET CAP: $5.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	459.2	68.7	111.9
Receivables	316.8	453.7	432.3
Inventory (FIFO)	498.5	631.4	456.2
Other	113.7	38.3	39.2
Current Assets	1388.2	1192.1	1039.6
Accts Payable	246.1	273.3	231.1
Debt Due	349.4	- -	- -
Other	129.6	150.6	133.0
Current Liab.	725.1	423.9	364.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	4.5%	6.5%	*4.5%*
"Cash Flow"	4.0%	4.5%	*5.0%*
Earnings	2.5%	2.5%	*5.5%*
Dividends	10.5%	3.5%	*3.0%*
Book Value	7.0%	11.0%	*10.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	566.6	590.7	622.2	576.6	2356.1
2022	662.6	723.6	696.0	682.6	2764.8
2023	702.8	685.1	667.2	643.3	2698.4
2024	*690*	*690*	*680*	*690*	*2750*
2025	*640*	*620*	*580*	*560*	*2400*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	6.38	4.75	4.80	1.65	17.71
2022	5.75	6.54	6.32	9.26	27.77
2023	10.10	10.36	11.60	8.38	40.44
2024	*9.80*	*9.00*	*8.50*	*8.00*	*42.30*
2025	*8.50*	*8.75*	*8.75*	*9.00*	*35.00*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.90	1.90	1.90	1.90	7.60
2021	1.90	1.90	1.90	2.10	7.80
2022	2.10	2.10	2.10	2.10	8.40
2023	2.10	2.10	2.25	2.25	8.70
2024	2.25				

BUSINESS: NewMarket Corporation develops, manufactures, and blends chemical additives through its Afton Chemical and Ethyl Corp. units. Has two segments: Petroleum Additives (99% of '23 revenues) provides lubricant, engine oil, driveline, industrial, and fuel additives under the HiTEC, GREENBURN, TecGARD, BioTEC, and MMT brands and TEL name. Other (1%) sells high-octane fuel. Has about 2,100 employees. Bruce C. Gottwald owns 12.7% of stock; Thomas Gottwald, 5.8%; Floyd Gottwald, 5.7%; Bank of America, 9.6%; Vanguard, 7.3%; BlackRock, 6.3%; The London Co., 7.0% (3/23 Proxy). Chairman, Pres. & CEO: Thomas E. Gottwald. Incorp.: VA. Address: 330 South Fourth St, Richmond, VA 23219-4350. Tel.: 804-788-5000. Internet: www.newmarket.com.

NewMarket's margins have been expanding dramatically. Although 2023 revenue was down to $2.7 billion, share net expanded 46%, to $40.44. This was thanks to lower feedstock costs (specifically oil), selected layoffs (due to high compensation expenses), supply chains being untangled, and the absence of costs related to new technology used to shore up barriers to entry. Too, a lower share count helped increase the profit-per-share tally.

Where do operations go from here? The top and bottom lines are likely to rise a little. Electric vehicle (EV) sales, while still growing, are stalling. The absence of selling price discounts on most EVs and the lack of charging stations, as well as the time it takes non-homeowners to charge their vehicles, is taking a toll on demand. This is good news for NewMarket since it means more cars with internal combustion engines will be sold. Also, the December acquisition of AMPAC for $700 million ought to add $150 million to sales and $1.50 a share to profits this year. The purchase was funded with cash on hand and revolving debt. Feedstock costs will probably stay low, and the company's share of a flat-growth additives market ought to be maintained, if not increased slightly. All told, we look for 2024 sales and share earnings of $2.75 billion and $42.30, respectively.

NewMarket stock is closely held. About 53% of shares are held by institutions and 47% by insiders. On average, over the last three months, 30,000 shares have traded per day. Less than 1% of the float is available for the small retail investor. Still, those interested in buying a fraction of a share should be best served by buying it through eToro brokerage services. No research firm other than *Value Line* covers this equity.

The stock price has continued to skyrocket since our mid-November report. Even so, with a trailing P/E multiple of 14.8, it still looks fairly valued. However, caution is advised. The huge margin expansion is likely to reverse course, and organic sales growth will continue mild. In the near term, We don't look for the stock price to drop, but we feel its near-term upside is limited. New investors have probably missed the boat for a while.

Jeremy J. Butler *February 23, 2024*

(A) Diluted earnings. Excl. non-recurring gains/(losses): '13, $1.65. Next earnings report due late April.
(B) Dividends historically paid in first week of January, April, July, and October. Special cash dividend of $.90 a share paid in 4Q, 2012.
(C) Incl. intangibles: At 12/31/22, $137.6 mill., $14.12/share.
(D) In millions.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	20
Earnings Predictability	65

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NORTHROP GRUMMAN NYSE-NOC

RECENT PRICE 450.96 | P/E RATIO 18.6 (Trailing: 19.4 Median: 16.0) | RELATIVE P/E RATIO 1.06 | DIV'D YLD 1.8% | VALUE LINE

TIMELINESS 5 Lowered 2/9/24
SAFETY 1 Raised 9/21/07
TECHNICAL 2 Lowered 2/16/24
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$379-$646	$513 (15%)

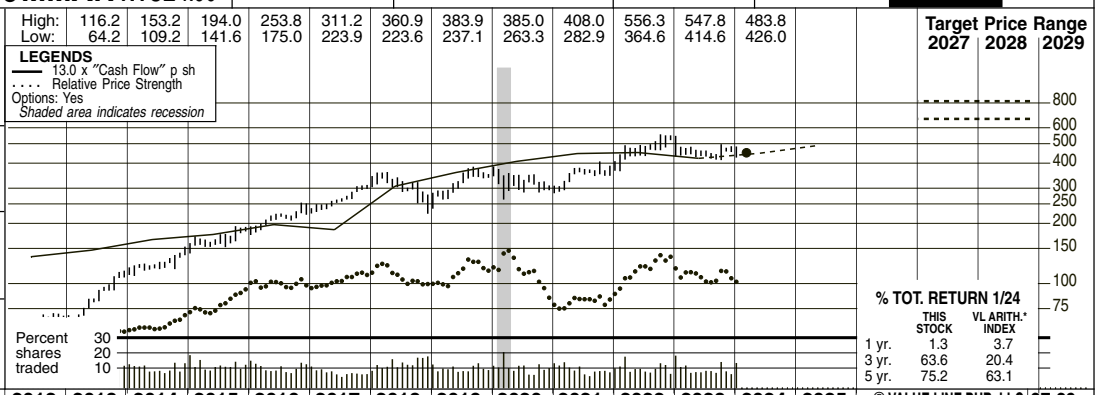
2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	815	(+80%)	*17%*
Low	665	(+45%)	*12%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	598	565	575
to Sell	698	655	613
Hld's(000)	124592	125488	124929

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	116.2	153.2	194.0	253.8	311.2	360.9	383.9	385.0	408.0	556.3	547.8	483.8								
Low:	64.2	109.2	141.6	175.0	223.9	223.6	237.1	263.3	282.9	364.6	414.6	426.0								
	103.63	110.00	119.46	104.03	106.35	113.78	120.86	129.76	139.99	148.22	176.40	201.87	220.73	228.49	238.98	261.74	*281.50*	*304.25*	Revenues per sh	*400.00*
	7.77	7.52	8.52	10.36	10.49	11.29	12.76	13.55	15.17	14.30	23.62	27.58	31.37	34.35	34.71	32.49	*34.40*	*37.85*	"Cash Flow" per sh	*52.80*
	5.32	4.87	5.80	7.41	7.81	8.35	9.75	10.39	12.19	11.47	18.49	21.21	23.65	25.63	25.54	23.29	*24.65*	*27.25*	Earnings per sh [A]	*39.00*
	1.57	1.69	1.84	1.97	2.15	2.38	2.71	3.10	3.50	3.90	4.70	5.16	5.67	6.16	6.76	7.34	*8.00*	*8.75*	Div'ds Decl'd per sh [B]■	*12.00*
	2.08	2.13	2.65	1.92	1.40	1.68	2.83	2.60	5.26	5.33	7.32	7.54	8.52	9.06	9.37	11.82	*12.15*	*12.50*	Cap'l Spending per sh	*15.50*
	36.45	41.34	46.59	40.71	40.12	49.00	36.47	30.46	30.04	40.49	47.99	52.61	63.45	82.80	99.98	98.56	*104.95*	*111.95*	Book Value per sh [C]	*140.75*
	327.01	306.87	290.96	253.89	237.13	216.74	198.41	181.30	175.07	174.09	170.61	167.64	166.72	156.10	153.16	150.11	*146.00*	*142.00*	Common Shs Outst'g [D]	*130.00*
	12.4	9.9	10.5	8.3	8.2	10.4	12.9	16.1	17.4	23.0	16.8	15.1	13.8	13.6	18.3	19.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*19.0*
	.75	.66	.67	.52	.52	.58	.68	.81	.91	1.16	.91	.80	.71	.73	1.06	1.10			Relative P/E Ratio	*1.05*
	2.4%	3.5%	3.0%	3.2%	3.4%	2.7%	2.1%	1.9%	1.6%	1.5%	1.5%	1.6%	1.7%	1.8%	1.4%	1.6%			Avg Ann'l Div'd Yield	*1.7%*
							23979	23526	24508	25803	30095	33841	36799	35667	36602	39290	*41100*	*43200*	Revenues ($mill)	*52000*
							15.3%	15.1%	14.9%	14.6%	15.2%	14.7%	14.5%	13.8%	13.7%	13.6%	*13.8%*	*14.0%*	Operating Margin	*15.0%*
							462.0	467.0	456.0	475.0	800.0	1018.0	1267.0	1239.0	1342.0	1338.0	*1375*	*1450*	Depreciation ($mill) [E]	*1750*
							2069.0	1990.0	2200.0	2015.0	3229.0	3606.0	3963.0	4123.0	3974.0	3539.0	*3645*	*3925*	Net Profit ($mill)	*5115*
							29.6%	28.7%	24.7%	33.9%	13.7%	17.1%	16.8%	10.4%	14.9%	16.2%	*17.0%*	*17.0%*	Income Tax Rate	*17.0%*
							8.6%	8.5%	9.0%	7.8%	10.7%	10.7%	10.8%	11.6%	10.9%	9.0%	*8.9%*	*9.1%*	Net Profit Margin	*9.8%*
							2292.0	877.0	1226.0	9384.0	1406.0	1251.0	5764.0	2896.0	901.0	1764.0	*2100*	*2350*	Working Cap'l ($mill)	*3100*
							5925.0	6416.0	7058.0	14399	13883	12770	14261	12777	11805	13786	*14000*	*14000*	Long-Term Debt ($mill)	*14000*
							7235.0	5522.0	5259.0	7048.0	8187.0	8819.0	10579	12926	15312	14795	*15325*	*15900*	Shr. Equity ($mill)	*18300*
							16.8%	17.9%	19.1%	10.2%	15.9%	17.9%	17.1%	17.1%	15.6%	13.3%	*13.5%*	*14.0%*	Return on Total Cap'l	*17.0%*
							28.6%	36.0%	41.8%	28.6%	39.4%	40.9%	37.5%	31.9%	26.0%	23.9%	*24.0%*	*24.5%*	Return on Shr. Equity	*28.0%*
							20.8%	25.1%	29.7%	18.8%	29.4%	30.9%	28.5%	24.3%	19.1%	16.4%	*16.0%*	*17.0%*	Retained to Com Eq	*19.5%*
							27%	30%	29%	34%	25%	24%	24%	24%	26%	32%	*32%*	*32%*	All Div'ds to Net Prof	*30%*



CAPITAL STRUCTURE as of 12/31/23
Total Debt $13856 mill. **Due in 5 Yrs** $4979 mill.
LT Debt $13786 mill. **Total Interest** $545 mill.
(Total Interest Coverage: 8.7x)
(48% of Cap'l)
Leases, Uncapitalized $363 mill.
Pension Assets-12/23 $30.25 bill. **Oblig.** $30.4 bill.

Pfd Stock None

Common Stock 150,035,705 shs.
as of 1/22/24

MARKET CAP: $67.7 billion (Large Cap)

CURRENT POSITION ($MILL)	2021	2022	12/31/23
Cash Assets	3530	2577	3109
Receivables	1467	1511	1454
Inventory (Avg Cost)	811	978	1109
Other	6618	7422	8034
Current Assets	12426	12488	13706
Accts Payable	2197	2587	2110
Debt Due	6	1072	70
Other	7327	7928	9762
Current Liab.	9530	11587	11942

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	8.5%	9.5%	*8.0%*
"Cash Flow"	12.0%	14.0%	*8.0%*
Earnings	12.0%	12.0%	*8.0%*
Dividends	12.0%	11.0%	*10.0%*
Book Value	8.0%	19.0%	*7.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	9157	9151	8720	8639	35667
2022	8797	8801	8971	10033	36602
2023	9301	9576	9775	10638	39290
2024	*9800*	*10050*	*10175*	*11075*	*41100*
2025	*10300*	*10550*	*10700*	*11650*	*43200*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	6.57	6.42	6.63	6.00	25.63
2022	6.10	6.06	5.89	7.50	25.54
2023	5.50	5.34	6.18	6.27	23.29
2024	*5.75*	*5.95*	*6.30*	*6.65*	*24.65*
2025	*6.35*	*6.60*	*6.95*	*7.35*	*27.25*

Calendar	QUARTERLY DIVIDENDS PAID [B]■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.32	1.45	1.45	1.45	5.67
2021	1.45	1.57	1.57	1.57	6.16
2022	1.57	1.73	1.73	1.73	6.76
2023	1.73	1.87	1.87	1.87	7.34
2024	1.87				

BUSINESS: Northrop Grumman Corporation operates in several main sectors. It is a leading maker of manned and unmanned airborne systems; a designer of electronic warfare items; makes space systems and provides advanced information systems. Acquired satellite and missile systems maker Orbital ATK in 2018. Has approximately 101,000 employees. Consolidated backlog at 12/31/23: $84.2 billion. U.S. Government accounted for 86% of total revenues in '23. Officers & directors own less than 1% of common stock; State Street Corp., 10.1%; Capital Int'l Investors, 10.0%; Vanguard Group, 7.9% (4/23 Proxy). CEO & Pres.: Kathy Warden. Inc.: DE. Address: 2980 Fairview Park Drive, Falls Church, VA 22042. Tele.: 703-280-2900. Internet: www.northropgrumman.com.

Northrop Grumman reported mixed year-end results. On the bright side, the company managed to grow its sales 7% in 2023 and 6% for the fourth quarter (each on a year-over-year basis). And, after normalizing earnings for two significant non-cash charges, Northrop managed to handily exceed the fourth-quarter consensus estimate. A $2.08-per-share mark-to-market charge is of little consequence. The $7.68-per-share writedown of the B-21 Raider stealth bomber program requires further explanation (more below).

Leadership's conservative outlook for 2024 is nothing to write home about. The $40.8 billion to $41.2 billion top-line targets, which represent about 5% growth at the high end of the range and 4.5% at the midpoint, aren't going to excite investors much. Notably, last year's aggregate sales figure totalled to over $1 billion more than leadership's initial forecast. A repeat on that front would translate to 7% sales growth, a healthy rate in our view.

Two high-profile projects are drawing investor angst. Regarding the B-21 Raider program for the U.S. Air Force, Northrop initially bid on this project back in 2015. Funding and material costs have increased to the point that the LRIP (low rate initial production) phase over the next few years will not be profitable. The situation does not impact later phases, and what the company learns through these builds may be of value. The other project of consequence is the EMD (engineering and manufacturing development) phase of the LGM-35 Sentinel, which is set to replace the aging Minuteman III land-based ICBM. The EMD phase represents a $13 billion contract for Northrop. What's taken place here is that the Air Force has raised its cost projections on upcoming production phases. This has triggered a Department of Defense review of the whole project. The reveiw will take months to complete and may result in ongoing headline risk for Northrop.

The equity is untimely. But, the company keeps winning contracts, grew its record backlog 7% last year, to $84.2 billion, and had a 2023 full-year book-to-bill ratio of 1.14. Hence, orders are healthy here. We think investors with a longer-term leaning will do fine holding this stock.

Anthony J. Glennon *March 1, 2024*

(A) Diluted earnings. Excl. net nonrecurring gains/(losses): '08, ($9.09); '09, 34¢; '10, $1.02; '11, 11¢; '19, ($7.99); '20, ($4.62); '21, $17.91; '22, $5.93; '23, ($9.76). Next earnings report due late April.
(B) Div'd historically paid in March, June, Sept., and Dec. ■ Div'd reinvest. plan available.
(C) Incl. intang. assets. In 2023: $17.8 bill., $118.72/sh.
(D) In millions.
(E) Depreciation on accelerated basis.

Company's Financial Strength	A++
Stock's Price Stability	95
Price Growth Persistence	90
Earnings Predictability	90

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ORACLE NYSE-ORCL

RECENT PRICE 114.53 | P/E RATIO 19.3 (Trailing: 20.4 Median: 15.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 1.4% | VALUE LINE

TIMELINESS 3 Raised 3/29/24
SAFETY 1 Raised 5/22/09
TECHNICAL 2 Raised 5/3/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

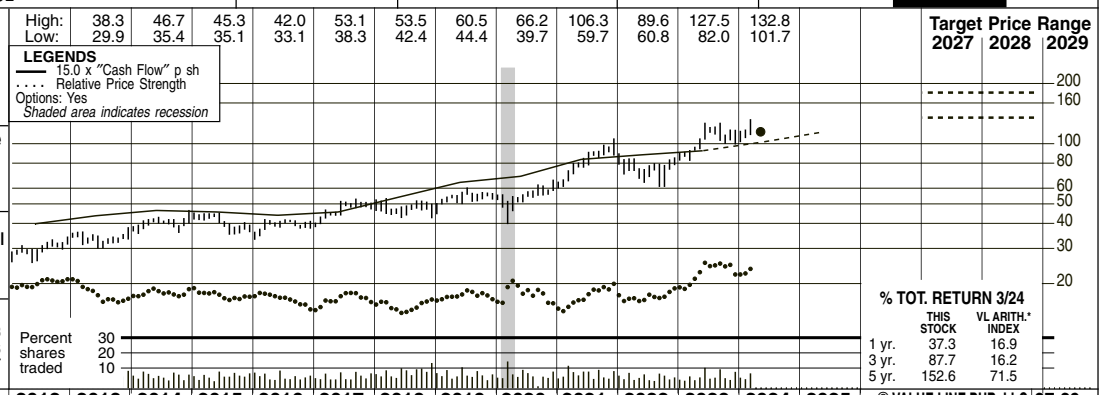
Low-High	Midpoint (% to Mid)
$95-$170	$133 (15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	175	(+50%)	*13%*
Low	140	(+20%)	*6%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	1128	1145	1316
to Sell	1074	1080	1047
Hld's(000)	1157084	1151083	1180111



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
4.39	4.69	5.38	7.07	7.59	8.02	8.58	8.81	8.97	9.16	9.98	11.77	12.74	14.39	15.93	18.41	*19.50*	*21.80*	Sales per sh [A]	*30.00*
1.37	1.53	1.75	2.32	2.65	2.91	3.10	3.04	2.93	3.04	3.61	4.28	4.59	5.57	5.87	6.16	*6.80*	*7.65*	"Cash Flow" per sh	*10.70*
1.30	1.44	1.67	2.22	2.46	2.68	2.87	2.77	2.61	2.74	3.13	3.52	3.85	4.67	4.90	5.12	*5.60*	*6.25*	Earnings per sh [AB]	*8.75*
- -	.05	.20	.20	.24	.30	.48	.51	.60	.64	.76	.81	.96	1.04	1.28	1.36	*1.52*	*1.64*	Div'ds Decl'd per sh [E]	*2.40*
.05	.11	.05	.09	.13	.14	.13	.32	.29	.49	.43	.49	.51	.76	1.69	3.21	*2.75*	*3.75*	Cap'l Spending per sh	*4.00*
4.47	5.01	6.13	7.85	8.91	9.61	10.50	11.21	11.45	13.02	11.44	6.49	3.94	1.86	d2.33	.40	*2.35*	*3.90*	Book Value per sh [D]	*8.00*
5150.0	5005.0	5026.0	5068.0	4905.0	4646.0	4464.0	4343.0	4131.0	4137.0	3997.0	3359.0	3067.0	2814.0	2665.0	2713.0	*2748.0*	*2650.0*	Common Shs Outst'g [C]	*2500.0*
15.8	13.1	13.7	13.0	12.0	12.0	12.5	15.1	14.8	15.0	15.5	14.1	14.0	13.4	17.4	15.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
.95	.87	.87	.82	.76	.67	.66	.76	.78	.75	.84	.75	.72	.72	1.01	.92			Relative P/E Ratio	*1.00*
- -	.3%	.9%	.7%	.8%	.9%	1.3%	1.2%	1.6%	1.6%	1.6%	1.6%	1.8%	1.7%	1.5%	1.7%			Avg Ann'l Div'd Yield	*1.5%*
38305	38253	37056	37900	39878	39526	39073	40481	42440	49954	*53600*	*57800*	Sales ($mill) [A]	*75000*
48.9%	47.3%	44.9%	45.3%	47.0%	47.1%	48.0%	50.7%	50.8%	46.9%	*47.8%*	*47.5%*	Operating Margin	*47.0%*
608.0	712.0	871.0	1000.0	1165.0	1230.0	1382.0	1537.0	1972.0	2526.0	*3000*	*3200*	Depreciation ($mill)	*4200*
13214	12489	11236	11560	13244	13137	12683	14125	13661	14176	*15635*	*17030*	Net Profit ($mill)	*22480*
22.5%	23.6%	23.2%	22.8%	21.1%	18.5%	18.4%	15.9%	16.3%	16.3%	*18.0%*	*18.0%*	Income Tax Rate	*19.0%*
34.5%	32.6%	30.3%	30.5%	33.2%	33.2%	32.5%	34.9%	32.2%	28.4%	*29.2%*	*29.5%*	Net Profit Margin	*30.0%*
33749	47892	47105	50337	56769	27756	34940	31403	12122	d2086	*d2500*	*d1600*	Working Cap'l ($mill)	*9000*
22667	39959	40105	48112	56128	51673	69226	75995	72110	86420	*82000*	*80000*	Long-Term Debt ($mill)	*80000*
46878	48663	47289	53860	45726	21785	12074	5238.0	d6220	1073.0	*6500*	*10270*	Shr. Equity ($mill)	*20000*
19.7%	14.7%	13.7%	12.2%	14.0%	19.3%	16.8%	18.9%	22.7%	18.2%	*17.5%*	*19.0%*	Return on Total Cap'l	*22.5%*
28.2%	25.7%	23.8%	21.5%	29.0%	60.3%	105.0%	269.7%	269.7%	321.2%	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
23.5%	21.0%	18.4%	16.6%	22.1%	46.8%	79.6%	211.2%	211.2%	979.3%	*NMF*	*NMF*	Retained to Com Eq	*NMF*
16%	18%	23%	23%	24%	22%	24%	22%	25%	26%	*27%*	*26%*	All Div'ds to Net Prof	*27%*

CAPITAL STRUCTURE as of 2/29/24
Total Debt $87980 mill. **Due in 5 Yrs** $35277 mill.
LT Debt $82470 mill. **LT Interest** $3250 mill.
(99% of Cap'l)
Leases, Uncapitalized Annual rentals $906.0 mill.

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 2,748,514,000 shs.
as of 3/7/24

MARKET CAP: $315 billion (Large Cap)

CURRENT POSITION ($MILL.)	2022	2023	2/29/24
Cash Assets	21902	10187	9904
Receivables	5953	6915	7297
Other	3778	3902	3862
Current Assets	31633	21004	21063
Accts Payable	1317	1204	1658
Debt Due	3749	4061	5510
Deferred Revenue	8357	8970	8931
Other	6088	8855	8786
Current Liab.	19511	23090	24885

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '26-'28
Sales	8.0%	11.5%	*11.5%*
"Cash Flow"	8.5%	13.0%	*10.0%*
Earnings	7.0%	11.5%	*10.0%*
Dividends	17.5%	13.0%	*11.5%*
Book Value	- -	- -	*NMF*

Fiscal Year Ends	QUARTERLY SALES ($ mill.)[A] Aug.Per	Nov.Per	Feb.Per	May.Per	Full Fiscal Year
2021	9368	9800	10086	11227	40481
2022	9728	10360	10513	11839	42440
2023	11445	12275	12398	13837	49954
2024	12453	12941	13280	*14926*	*53600*
2025	*13500*	*14000*	*14300*	*16000*	*57800*

Fiscal Year Ends	EARNINGS PER SHARE [AB] Aug.Per	Nov.Per	Feb.Per	May.Per	Full Fiscal Year
2021	.93	1.06	1.16	1.54	4.67
2022	1.03	1.21	1.13	1.53	4.90
2023	1.03	1.21	1.22	1.66	5.12
2024	1.19	1.34	1.41	*1.66*	*5.60*
2025	*1.35*	*1.50*	*1.55*	*1.85*	*6.25*

Calendar	QUARTERLY DIVIDENDS PAID [E] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.24	.24	.24	.24	.96
2021	.24	.32	.32	.32	1.20
2022	.32	.32	.32	.32	1.28
2023	.32	.40	.40	.40	1.52
2024	.40	.40			

BUSINESS: Oracle Corporation provides products and services that adresss all aspects of corporate information technology environments. Oracle's products are delivered via a range of deployment models, including on-premise, cloud-based, and hybrid. 2022 revenue breakdown: cloud services and license support, 82%; hardware systems, 6.5%; Services, 11.5%. Foreign sales, 37.4%. R&D, 17.0% of 2023 sales. Employed 164,000 at 5/31/23. Stock owners: Lawrence J. Ellison, 42.1%; other officers & directors, 0.7%; Vanguard Group: 5.0%. (9/23 proxy). Chairman & CTO: Lawrence J. Ellison; Chief Executive Officer: Safra A. Catz. Inc.: Delaware. Address: 2300 Oracle Way, Austin, TX 78741. Telephone: 737-867-1000. Internet: www.oracle.com.

Oracle's operating momentum returned in the February interim. (Fiscal year 2024 ends May 31st.) After disappointing Wall Street in both the two prior quarters, Oracle saw its stock price leap 12% after the release of its third quarter results. Oddly, like the previous two periods, revenues were less than 1% off consensus estimates. However, instead of a double-digit selloff in the share price, ORCL firmed thanks to an unexpectedly decent margin increase. Adjusted earnings per share came in at $1.41, or $0.03 better than our call.

We are initiating a $6.25 earnings per share estimate for fiscal 2025. Cloud revenue increased 24% in the most recent quarter. The combined total of $5.1 billion included a $1.8 billion tally from the Infrastructure segment, marking a 49% jump over the year-ago level. And news of more large contracts signed during the quarter contributed to greater investor confidence. Progress on the margin front (non-GAAP operating margins increased 179 basis points to 28% in the third quarter), occurred due to better-than-expected leveraging of fixed costs. It is not clear how much further leverage is possible, but the costs associated with the data center rollout and *Cerner's* ultimate profitability once fully integrated make us more conservative in terms of estimates.

The ambitious data center buildout and *Cerner's* performance may provide further upside to our long-term estimates. Our projections now assume double-digit revenue growth through 2027-2029 due to the large-scale datacenter buildout. The enormous capital project is based on higher demand expectations for infrastructure software. *Cerner's* eventual success is critical, as well, but its profitability is more of an unknown once it is finally integrated. The recent migration of most of *Cerner's* customers to the *Gen2Cloud* infrastructure, featuring enhanced tools, may help boost the company's competitive stature.

This high-quality equity appears fairly valued at its current price. Total-return potential out to late decade looks roughly average, unless the P/E multiple expands from well-established historical levels.

Charles C. Moran *May 3, 2024*

(A) Fiscal year ends May 31st.
(B) Diluted earnings. Excl. nonrec. items: '08, d24¢; '09, d35¢; '10, d46¢; '11, d55¢; '12, d50¢; '13, d60¢; '14, d49¢; '15, d56¢; '16, d54¢; '17, d53¢; '18, d$2.23; '19, d55¢; '20, d77¢; '21, d12¢; '22, d2.47. Quarters may not sum to annual figure, due to changes in diluted shares outstanding. Next earnings report due late June.
(C) In millions. **(D)** Incl. intang. In 2023, $91.3 bill., $33.35 a share. **(E)** Div'ds usually paid late January, April, July, and October.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	100
Earnings Predictability	100

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OSI SYSTEMS, INC. NDQ-OSIS

RECENT PRICE 130.30 | P/E RATIO 17.6 (Trailing: 15.7 Median: 26.0) | RELATIVE P/E RATIO 1.03 | DIV'D YLD Nil | VALUE LINE

TIMELINESS 2 Raised 2/9/24
SAFETY 2 Raised 5/12/23
TECHNICAL 2 Raised 1/5/24
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$74-$154	$114 (-15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	200	(+55%)	*11%*
Low	150	(+15%)	*4%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	80	98	108
to Sell	94	89	97
Hld's(000)	15405	14932	14842

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	78.5	74.8	96.8	88.3	96.6	82.9	114.4	102.6	102.2	103.2	139.9	139.6						
Low:	39.0	51.8	66.0	48.2	53.8	50.5	70.2	50.0	88.0	69.3	78.4	120.4						
Sales per sh A	35.12	33.91	32.47	33.63	40.01	40.28	45.47	48.60	43.87	51.42	60.41	65.07	64.74	64.24	70.14	76.14	*89.70*	*95.50*
"Cash Flow" per sh	1.87	1.66	2.30	2.66	3.32	3.60	5.12	6.30	4.45	4.78	5.32	6.66	6.94	6.60	9.13	7.76	*9.40*	*10.15*
Earnings per sh AB	.78	.63	1.28	1.71	2.24	2.15	2.33	3.17	1.30	1.07	1.40	3.46	4.05	4.03	6.45	5.34	*7.10*	*7.50*
Div'ds Decl'd per sh	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*
Cap'l Spending per sh	.68	.62	.99	.69	3.46	7.90	2.74	.78	.94	.91	2.40	1.51	1.13	.88	.88	.94	*1.20*	*1.20*
Book Value per sh D	15.67	15.85	17.12	19.73	21.90	24.03	26.69	29.51	28.60	30.46	27.14	30.37	31.77	35.84	37.84	43.25	*47.05*	*55.20*
Common Shs Outst'g C	17.74	17.41	18.33	19.51	19.82	19.91	19.94	19.72	18.91	18.69	18.03	18.17	18.01	17.85	16.87	16.79	*17.00*	*16.75*
Avg Ann'l P/E Ratio	30.9	27.6	18.5	20.7	22.5	30.2	27.7	22.0	54.4	66.4	53.7	24.0	22.6	21.9	13.9	20.9	*Bold figures are Value Line estimates*	
Relative P/E Ratio	1.86	1.84	1.18	1.30	1.43	1.70	1.46	1.11	2.86	3.34	2.90	1.28	1.16	1.18	.80	1.21		
Avg Ann'l Div'd Yield	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
Sales ($mill) A	906.7	958.2	829.7	961.0	1089.3	1182.1	1166.0	1146.9	1183.2	1278.4	*1525*	*1600*						
Operating Margin	16.3%	16.8%	14.3%	15.4%	14.7%	14.2%	13.8%	14.8%	14.2%	13.3%	*13.0%*	*13.4%*						
Depreciation ($mill)	54.2	59.0	57.9	68.2	69.8	56.2	49.8	43.9	38.7	38.5	*40.0*	*45.0*						
Net Profit ($mill)	47.9	65.2	26.2	21.1	26.2	64.8	75.3	74.1	115.4	91.8	*120*	*125*						
Income Tax Rate	36.9%	26.7%	26.3%	18.1%	29.0%	24.8%	12.6%	24.9%	17.7%	17.6%	*20.0%*	*20.0%*						
Net Profit Margin	5.3%	6.8%	3.2%	2.2%	2.4%	5.5%	6.5%	6.5%	9.7%	7.2%	*7.9%*	*7.9%*						
Working Cap'l ($mill)	269.2	292.2	187.5	306.9	207.4	258.9	287.6	364.6	132.2	268.2	*300*	*300*						
Long-Term Debt ($mill)	10.4	8.6	6.1	241.8	249.0	257.8	267.1	276.4	48.7	136.5	*130*	*125*						
Shr. Equity ($mill)	532.2	581.8	540.8	569.2	489.4	551.7	572.2	639.8	638.4	726.2	*800*	*925*						
Return on Total Cap'l	8.8%	11.1%	4.8%	3.0%	4.4%	8.7%	9.7%	8.8%	17.1%	*11.2%*	*13.5%*	*12.5%*						
Return on Shr. Equity	9.0%	11.2%	4.8%	3.7%	5.3%	11.7%	13.2%	11.6%	18.1%	12.6%	*16.0%*	*14.5%*						
Retained to Com Eq	9.0%	11.2%	4.8%	3.7%	5.3%	11.7%	13.2%	11.6%	18.1%	12.6%	*16.0%*	*14.5%*						
All Div'ds to Net Prof	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*						

% TOT. RETURN 12/23

	THIS STOCK	VL ARITH.* INDEX
1 yr.	62.3	17.4
3 yr.	38.4	26.6
5 yr.	76.1	86.0

Target Price Range 2027 2028 2029: 200, 160, 100, 80, 60, 50, 40, 30, 20

LEGENDS: 15.5 x "Cash Flow" p sh; Relative Price Strength; Options: Yes; *Shaded area indicates recession*

Percent shares traded: 45, 30, 15

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CAPITAL STRUCTURE as of 12/31/23
Total Debt $140.9 mill. **Due in 5 Yrs** $132.8 mill.
LT Debt $132.8 mill. **LT Interest** $9.0 mill.

Leases, Uncapitalized Annual rentals $22.5 mill.

Pension Assets-6/23 $6.5 mill. **Oblig.** $18.2 mill.

Common Stock 17,046,247 shares
as of 1/22/24

MARKET CAP: $2.2 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2022	2023	12/31/23
Cash Assets	64.2	76.8	127.3
Receivables	307.9	380.8	370.2
Inventory (FIFO)	333.9	338.0	445.8
Other	40.1	44.3	59.8
Current Assets	746.1	839.9	1003.1
Accts Payable	125.2	139.0	163.7
Debt Due	244.6	8.1	8.1
Other	244.1	424.6	528.6
Current Liab.	613.9	571.7	700.4

BUSINESS: OSI Systems, Inc. manufactures electronic systems and components for applications in homeland security, healthcare, defense, and aerospace markets worldwide. Operates three units: Security, Healthcare, and Optoelectronics & Manufacturing. The Security (Rapidscan) division offers screening devices and inspection systems. The Healthcare segment provides patient monitoring and diagnostic cardiology systems. The Optoelectronics & Manufacturing unit offers specialized electronic components and value-added manufact'g svcs. Has 6,298 empls. BlackRock owns 15.6% of comm.; off./dirs., 4.9% (9/23). Chrmn./CEO/Pres.: Deepak Chopra. Inc.: DE. Addr.: 12525 Chadron Ave., Hawthorne, CA 90250. Tel.: (310) 978-0516. Internet: www.osi-systems.com.

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Sales	6.0%	5.5%	*6.0%*
"Cash Flow"	9.5%	10.0%	*7.0%*
Earnings	10.0%	33.0%	*10.5%*
Dividends	- -	- -	*Nil*
Book Value	5.5%	5.0%	*8.0%*

Fiscal Year Ends	QUARTERLY SALES ($ mill.) A Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2021	254.9	276.0	283.8	332.2	1146.9
2022	279.2	276.7	290.5	336.8	1183.2
2023	268.1	295.6	302.9	411.8	1278.4
2024	279.2	373.2	*405*	*467.6*	*1525*
2025	*300*	*370*	*430*	*500*	*1600*

Fiscal Year Ends	EARNINGS PER SHARE AB Sep.30	Dec.31	Mar.31	Jun.30	Full Fiscal Year
2021	.51	1.10	1.03	1.40	4.03
2022	1.04	1.09	2.41	1.94	6.45
2023	.65	.96	1.27	2.46	5.34
2024	.75	2.11	*1.64*	*2.60*	*7.10*
2025	*1.05*	*1.75*	*1.95*	*2.75*	*7.50*

Calendar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020					
2021	NO CASH DIVIDENDS BEING PAID				
2022					
2023					
2024					

OSI Systems delivered record fiscal second-quarter results (ended December 31st). Sales came in at $373 million, a 26% increase from the same quarter of the prior year. For the bottom line, reported earnings were $2.11 per share, versus $0.96 per share last year, topping our estimate by 36%. While the gross margin expanded in each division, the most notable improvement was seen in Security, which is benefiting from an expanding order book and continued strong adoption of its solutions.

Revenue recognition on the two major cargo programs has commenced. As a reminder, these carry a value of $700 million and were booked last year. This led to Security division revenues increasing 49% year over year, with double-digit growth in aviation, checkpoint security, and vehicle inspection services. Security division bookings were solid and, importantly, despite the sizable conversion of backlog to revenue in the quarter, the overall backlog remains comparable to the first quarter, sequentially. Including maintenance and service elements, both of these awards create ample opportunities for recurring revenue going forward and highlight the multiplie platforms available in OSI's broad portfolio. Furthermore, OSI expects to integrate these inspection systems into a national command center through its proprietary *CertScan* platform, providing an additional layer of product differentiation from competitors.

We have raised our fiscal 2024 top- and bottom-line estimates by $20 million and $0.50 per share, respectively, to $1.525 billion and $7.10. This correlates with OSI Systems expecting revenue growth in excess of 19%, while our bottom line would represent an increase of 33% over last year. The company's backlog stands at approximately $1.8 billion and its opportunity pipeline is robust, providing confidence for continued outperformance this fiscal year.

This issue is ranked 2 (Above Average) for Timeliness. OSIS stock has increased 25% since our November review and 40% over the trailing twelve-months. At the moment, however, this leaves little room for appreciation potential on either an 18-month or 3- to 5-year basis.

Michal Worth *February 9, 2024*

(A) Fiscal years end June 30th.
(B) GAAP. Diluted earnings. Excludes nonrecurring loss: '18, $2.97 U.S. tax reform chrg. only. Quarterly earnings may not sum due to rounding differences. Next earnings report due late April.
(C) In millions.
(D) Includes intangibles, at 12/31/23: $496.2 mill., $29.11/share.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	45
Earnings Predictability	60

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PRESTIGE CON NYSE-PBH

RECENT PRICE 71.98 | P/E RATIO 16.1 (Trailing: 16.9 Median: NMF) | RELATIVE P/E RATIO 0.90 | DIV'D YLD Nil | VALUE LINE 1198

TIMELINESS 3 Raised 3/15/24
SAFETY 2 Raised 3/15/24
TECHNICAL 4 Lowered 3/8/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$59-$95	$77 (5%)

2027-29 PROJECTIONS

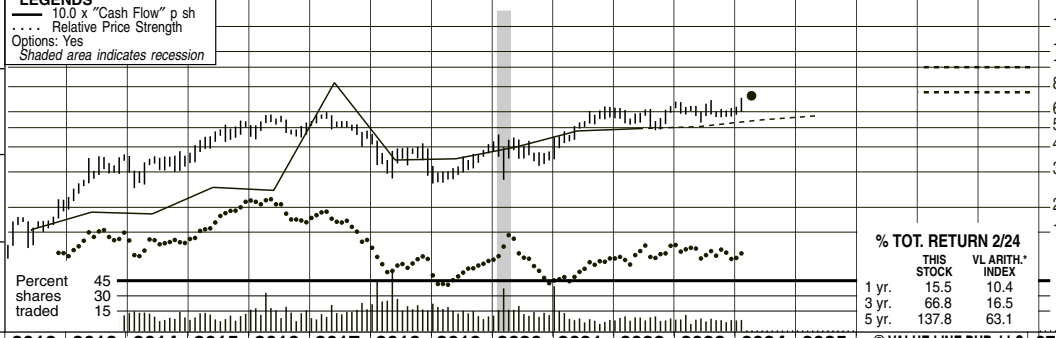
	Price	Gain	Ann'l Total Return
High	100	(+40%)	*9%*
Low	75	(+5%)	*1%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	111	126	135
to Sell	156	141	131
Hld's(000)	49832	50855	50617

	36.7	38.2	54.3	58.1	59.6	46.4	41.4	46.1	63.8	64.1	68.5	72.0
High:	19.5	24.9	33.3	43.6	40.1	27.8	26.3	27.4	34.7	48.5	52.9	57.9
Low:												

LEGENDS
10.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



Target Price Range 2027 2028 2029
160 120 100 80 60 50 40 30 20 15

% TOT. RETURN 2/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	15.5	10.4
3 yr.	66.8	16.5
5 yr.	137.8	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
6.26	6.04	6.71	8.77	12.20	11.62	13.81	15.28	16.66	19.63	18.94	19.23	18.90	21.62	22.90	*23.05*	*24.20*	*25.25*	Revenues per sh	*29.45*
d.27	.89	.78	.95	1.54	1.89	1.85	2.51	2.43	8.38	3.44	3.50	4.00	4.81	4.94	*5.05*	*5.45*	*5.75*	"Cash Flow" per sh	*6.95*
d.49	.65	.58	.73	1.27	1.62	1.49	1.88	1.93	7.55	2.79	2.78	3.25	4.04	4.22	*4.30*	*4.60*	*4.90*	Earnings per sh A	*5.75*
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	*Nil*	Div'ds Decl'd per sh	*Nil*
.01	.01	.01	.01	.20	.05	.12	.07	.06	.24	.20	.29	.45	.19	.20	*.20*	*.30*	*.40*	Cap'l Spending per sh	*.50*
5.90	6.58	7.22	8.00	9.34	10.87	12.13	14.11	15.53	22.22	21.27	23.38	27.21	31.38	29.37	*33.55*	*37.85*	*42.25*	Book Value per sh B	*55.55*
49.94	50.03	50.12	50.29	51.13	51.82	51.76	52.76	52.96	53.04	51.53	50.09	49.91	50.28	49.27	*49.50*	*49.00*	*48.50*	Common Shs Outst'g C	*45.00*
- -	10.9	16.8	16.3	14.5	19.2	22.9	25.3	27.0	6.3	12.2	12.5	11.9	13.6	13.7	*Bold figures are Value Line estimates*			Avg Ann'l P/E Ratio	*15.0*
- -	.73	1.07	1.02	.92	1.08	1.21	1.27	1.42	.32	.66	.67	.61	.73	.80				Relative P/E Ratio	*.85*
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -				Avg Ann'l Div'd Yield	*Nil*
714.6	806.2	882.1	1041.2	975.8	963.0	943.4	1086.8	1127.7	*1140*	*1185*	*1225*	Revenues ($mill)	*1325*
31.5%	36.3%	32.1%	34.2%	33.5%	33.6%	35.3%	33.7%	34.0%	*34.0%*	*34.5%*	*34.5%*	Operating Margin	*35.0%*
17.7	32.7	25.4	40.2	31.8	32.8	35.1	36.3	32.6	*34.0*	*36.0*	*38.0*	Depreciation ($mill)	*48.0*
78.3	99.9	103.1	404.5	145.5	142.3	164.7	205.4	210.6	*215*	*230*	*240*	Net Profit ($mill)	*265*
38.6%	36.4%	36.6%	- -	24.0%	25.6%	19.3%	21.7%	25.0%	*25.0%*	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
11.0%	12.4%	11.7%	38.9%	14.9%	14.8%	17.5%	18.9%	18.7%	*18.9%*	*19.4%*	*19.6%*	Net Profit Margin	*20.0%*
102.7	142.3	172.4	180.3	173.9	215.8	147.7	149.9	231.0	*315*	*465*	*625*	Working Cap'l ($mill)	*1000*
1588.7	1625.3	2193.7	1993.0	1798.6	1734.9	1486.5	1481.2	1347.5	*1200*	*1100*	*1000*	Long-Term Debt ($mill)	*700*
627.6	744.3	822.5	1178.6	1095.8	1171.0	1358.3	1577.6	1447.1	*1660*	*1855*	*2050*	Shr. Equity ($mill)	*2500*
5.4%	6.0%	5.0%	14.4%	6.8%	6.6%	7.2%	7.8%	9.0%	*8.5%*	*9.0%*	*9.0%*	Return on Total Cap'l	*9.0%*
12.5%	13.4%	12.5%	34.3%	13.3%	12.2%	12.1%	13.0%	14.5%	*13.0%*	*12.5%*	*11.5%*	Return on Shr. Equity	*10.5%*
12.5%	13.4%	12.5%	34.3%	13.3%	12.2%	12.1%	13.0%	14.5%	*13.0%*	*12.5%*	*11.5%*	Retained to Com Eq	*10.5%*
- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	*Nil*	All Div'ds to Net Prof	*Nil*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $1201.7 mill. **Due in 5 Yrs** 10.0 mill.
LT Debt $1199.5 mill. **LT Interest** $64.0 mill.
(Total interest coverage: 19.9x) (43% of Cap'l)

Leases, Uncapitalized Annual rentals $30.9 mill.
No Defined Benefit Plan

Pfd Stock None
Common Stock 49,649,288 shares
as of 2/2/24

MARKET CAP: $3.6 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	27.2	58.5	63.6
Receivables	139.4	167.0	174.3
Inventory	120.3	162.1	148.6
Other	6.4	4.1	7.3
Current Assets	293.3	391.7	393.8
Accts Payable	55.8	62.7	39.3
Debt Due	2.8	2.8	2.2
Other	84.8	95.2	85.9
Current Liab.	143.4	160.7	127.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '27-'29
Revenues	7.0%	3.5%	*5.0%*
"Cash Flow"	12.5%	- -	*5.5%*
Earnings	13.0%	- -	*6.0%*
Dividends	- -	- -	*Nil*
Book Value	13.0%	10.0%	*10.5%*

Calendar	QUARTERLY REVENUES ($ mill.) E Jun.Per.	Sep.Per.	Dec.Per.	Mar.Per.	Full Year
2021	269.2	276.2	274.5	266.9	1086.8
2022	277.0	289.2	275.5	285.9	1127.7
2023	279.3	286.3	282.7	*291.7*	*1140*
2024	*290*	*295*	*300*	*300*	*1185*
2025	*295*	*310*	*310*	*310*	*1225*

Calendar	EARNINGS PER SHARE A Jun.Per.	Sep.Per.	Dec.Per.	Mar.Per.	Full Year
2021	1.14	.89	.99	1.02	4.04
2022	1.09	1.02	1.04	1.07	4.22
2023	1.06	1.07	1.06	*1.11*	*4.30*
2024	*1.15*	*1.15*	*1.15*	*1.15*	*4.60*
2025	*1.22*	*1.23*	*1.22*	*1.23*	*4.90*

Calendar	QUARTERLY DIVIDENDS PAID Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	NO CASH DIVIDENDS BEING PAID				
2021					
2022					
2023					
2024					

BUSINESS: Prestige Consumer Healthcare, Inc., engages in the marketing, sale, and distribution of over-the-counter (OTC) healthcare and household cleaning products, primarily in the United States, Canada (North America) and Australia. The company has two operating segments: North American OTC Healthcare (86% of '22 sales) and International OTC Healthcare (14%). Prestige Consumer distributes its products through various retail channels. Has about 560 employees. All directors and officers own 1.6% of common stock; BlackRock, 16.2%; Vanguard, 11.0% (6/23 proxy). Chairman, CEO & President: Ronald M. Lombardi. Address: 660 White Plains Road NA, Tarrytown, NY 10591. Telephone: (914) 524-6800. Internet: www.prestigebrands.com.

Prestige Consumer Healthcare's stock shot up some 19% since our mid-December review. The company's performance has been solid for much of fiscal 2023 (year ends March 31, 2024). Although the fiscal third-quarter showing of $1.06 a share was not particularly exciting (+$0.02 from a year ago), investors were probably pleased that the result came in ahead of consensus ($1.04 vs our call of $1.07), though not by much. We look for earnings to come in at $1.11 for the March period, on the strength of firming sales trends and improved cost control.

On the operational front, the company is poised to pick up the pace in fiscal 2024. Although we expect that Prestige's top and bottom lines will probably continue to face uneven consumer spending trends and higher costs over the next several months. That said, pockets of respectable demand, particularly from the international segment where growth has been solid, ought to provide a tailwind. Meanwhile, there are a few products that have been bright spots in the North American segment, including *Luden's*, *Chloraseptic*, and *Dramamine*. All told, these factors should help revive positive momentum over the next 12 to 18 months.

We are optimistic about the long-term prospects here, as well. Prestige Consumer Healthcare's over-the-counter portfolio (OTC) continues to benefit from resilient demand for core products. What's more, favorable pricing actions and cost-saving measures that have helped to offset inflation will assuredly lend margin support, as the economy stabilizes and market trends even out. These factors ought to drive steady long term top-line growth. In addition, broader pricing strength across a number of categories is reassuring, especially in the e-commerce channel, which has seen promising consumption growth over the past several years. We look for effective marketing and investments in Prestige's e-commerce channel to enhance the sales mix going forward.

However, recent price strength has already discounted much of the sales and earnings growth we envision here. The stock is trading near the low end of our Target Price Range out to 2027–2029.

Simon R. Shoucair *March 15, 2024*

(A) Fiscal year ends March 31st of the following calendar year. Diluted non-GAAP earnings. Next earnings report due early May.

(B) Incl. intangibles. In '22: $2869.4 mill., $58.24 p/sh.

(C) In millions.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	40
Earnings Predictability	45

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PFIZER INC. NYSE-PFE

RECENT PRICE **27.72** | P/E RATIO **28.0** (Trailing:NMF Median: 23.0) | RELATIVE P/E RATIO **1.55** | DIV'D YLD **6.1%** | **VALUE LINE**

TIMELINESS 3 Lowered 3/1/24
SAFETY 2 Lowered 12/22/23
TECHNICAL 4 Lowered 3/22/24
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$23-$41	$32 (15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+80%)	*19%*
Low	40	(+45%)	*14%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	1452	1265	1099
to Sell	1403	1534	1802
Hld's(000)	3861265	3835606	3882719

	2017	2018	2019	2020	2021	2022	2023	2024	2025
High:	37.3	46.5	44.6	43.1	61.7	58.6	51.6	30.3	
Low:	30.9	33.2	34.0	27.9	33.4	41.4	25.8	25.6	

LEGENDS
10.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029

Percent shares traded 18 12 6

% TOT. RETURN 2/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-31.1	10.4
3 yr.	-10.6	16.5
5 yr.	-26.0	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
7.16	6.20	8.46	8.90	8.11	8.06	7.89	7.91	8.70	8.79	9.38	9.35	7.53	14.46	17.87	10.36	*10.60*	*11.15*	Sales per sh	*12.90*
1.94	1.66	2.09	2.34	2.35	2.77	2.32	1.96	2.13	2.82	3.07	4.03	2.11	4.91	6.49	1.49	*3.30*	*3.85*	"Cash Flow" per sh	*4.90*
1.18	1.23	1.03	1.11	1.26	1.65	1.41	1.11	1.17	1.73	1.87	2.87	1.24	3.93	5.47	.37	*2.20*	*2.70*	Earnings per sh [A]	*3.75*
1.28	.80	.72	.80	.88	.96	1.04	1.12	1.20	1.28	1.36	1.44	1.52	1.56	1.60	1.64	*1.68*	*1.72*	Div'ds Decl'd per sh [B]■	*1.84*
.25	.15	.19	.22	.18	.19	.19	.23	.30	.33	.36	.39	.40	.48	.58	.69	*.70*	*.70*	Cap'l Spending per sh	*.75*
8.52	11.15	10.95	10.84	11.16	11.92	11.33	10.48	9.81	11.92	11.09	11.41	11.36	13.74	17.03	15.77	*15.60*	*15.95*	Book Value per sh [C]	*17.15*
6746.0	8070.0	8012.0	7575.0	7276.0	6399.0	6291.0	6175.0	6070.0	5979.0	5717.0	5534.0	5567.0	5620.0	5616.0	5646.0	*5650.0*	*5650.0*	Common Shs Outst'g [D]	*5650.0*
16.4	12.8	16.3	17.6	18.4	17.6	21.5	30.3	28.1	19.7	20.9	13.9	29.5	10.7	9.1	NMF	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*12.0*
.99	.85	1.04	1.10	1.17	.99	1.13	1.53	1.47	.99	1.13	.74	1.51	.58	.53	NMF			Relative P/E Ratio	*.65*
6.6%	5.1%	4.3%	4.1%	3.8%	3.3%	3.4%	3.3%	3.7%	3.8%	3.5%	3.6%	4.1%	3.7%	3.2%	4.4%			Avg Ann'l Div'd Yield	*4.1%*
						49605	48851	52824	52546	53647	51750	41908	81288	100330	58496	*60000*	*63000*	Sales ($mill)	*73000*
						46.5%	44.8%	44.6%	47.8%	49.1%	47.4%	40.5%	35.8%	44.8%	24.3%	*33.0%*	*35.0%*	Operating Margin	*40.0%*
						5537.0	5157.0	5757.0	6269.0	6384.0	6010.0	4777.0	5191.0	5064.0	6290.0	*6000*	*6100*	Depreciation ($mill)	*6400*
						9088.0	6949.0	7198.0	10606	11143	16269	6984.0	22414	31366	2134.0	*12430*	*15250*	Net Profit ($mill)	*21180*
						25.5%	22.2%	13.4%	13.4%	5.9%	7.8%	6.4%	7.6%	9.6%	9.6%	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*
						18.3%	14.2%	13.6%	20.2%	20.8%	31.4%	16.7%	27.6%	31.3%	3.6%	*20.7%*	*24.2%*	Net Profit Margin	*29.0%*
						36071	14405	7834.0	10714	18068	d4501	9147.0	17022	9121.0	d4461	*9000*	*10000*	Working Cap'l ($mill)	*15000*
						31541	28818	31398	33538	32909	35955	37133	36195	32884	61538	*57000*	*53000*	Long-Term Debt ($mill)	*40000*
						71301	64720	59544	71308	63407	63143	63238	77201	95661	89014	*88000*	*90000*	Shr. Equity ($mill)	*97000*
						9.4%	8.0%	8.6%	10.7%	12.3%	17.2%	7.7%	20.3%	24.9%	2.2%	*9.0%*	*11.0%*	Return on Total Cap'l	*16.0%*
						12.7%	10.7%	12.1%	14.9%	17.6%	25.8%	11.0%	29.0%	32.8%	2.4%	*14.0%*	*17.0%*	Return on Shr. Equity	*22.0%*
						3.5%	NMF	NMF	4.1%	5.0%	13.0%	NMF	17.7%	23.4%	NMF	*3.5%*	*6.0%*	Retained to Com Eq	*11.0%*
						73%	100%	102%	72%	72%	49%	121%	39%	29%	NMF	*76%*	*64%*	All Div'ds to Net Prof	*49%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $71888 mill. **Due in 5 Yrs** $21129 mill.
LT Debt $61538 mill. **LT Interest** $2209 mill.
(41% of Cap'l)

Leases, Uncapitalized Annual rentals $639.0 mill.

Pension Assets-12/23 $17.5 bill. **Oblig.** $18.0 bill.

Common Stock 5,646,778,425 shs.
as of 2/15/24

MARKET CAP: $157 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	31069	22732	12690
Receivables	11479	10952	11177
Inventory (LIFO)	9059	8981	10189
Other	8086	8594	9277
Current Assets	59693	51259	43333
Accts Payable	5578	6809	6710
Debt Due	2241	2945	10350
Other	34852	32384	30734
Current Liab.	42671	42138	47794

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	5.5%	9.5%	*-1.5%*
"Cash Flow"	5.5%	10.0%	*2.0%*
Earnings	9.5%	15.5%	*2.5%*
Dividends	6.0%	4.5%	*2.5%*
Book Value	3.0%	7.0%	*1.5%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	14516	18899	24035	23838	81288
2022	25661	27742	22638	24289	100330
2023	18282	12734	13232	14249	58496
2024	*14400*	*14800*	*15200*	*15600*	*60000*
2025	*15100*	*15500*	*16000*	*16400*	*63000*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.86	1.02	1.43	.62	3.93
2022	1.37	1.73	1.51	.87	5.47
2023	.97	.41	d.42	d.60	.37
2024	*.53*	*.46*	*.60*	*.61*	*2.20*
2025	*.58*	*.61*	*.74*	*.77*	*2.70*

Calendar	QUARTERLY DIVIDENDS PAID [B]■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.38	.38	.38	.38	1.52
2021	.39	.39	.39	.39	1.56
2022	.40	.40	.40	.40	1.60
2023	.41	.41	.41	.41	1.64
2024	.42				

BUSINESS: Pfizer Inc. is a research-based, global biopharmaceutical company engaged in the discovery, development, manufacture, and distribution of healthcare products. Its core Biopharma operating segment includes three customer groups; Primary Care (internal medicine, migraine, vaccines, and COVID-19 products); Specialty Care (inflammation & immunology, rare disease, and hospital products); and Oncology. Completed spinoff of consumer healthcare (8/19); Upjohn generics (11/20). Acq. Seagen (12/23). Has 88,000 employees. Off./dirs. own less than 1% of comm. stock; Vanguard, 9.0%; BlackRock, 7.7%; State St., 5.1% (3/24 proxy). Chrmn./CEO: Albert Bourla. Inc.: DE. Addr.: 66 Hudson Boulevard East, New York, NY 10001. Tel.: 212-733-2323. Internet: www.pfizer.com.

Pfizer is looking to rebound from a challenging 2023 campaign. Earnings and sales fell markedly last year due to an expected deterioration in COVID-19 product demand. The impact was clearly more substantial than what leadership had anticipated at the onset, resulting in multiple downward revisions during the course of 2023. In total, the *Comirnaty* vaccine franchise saw its sales plummet 70% on a year-over-year basis, while *Paxlovid* (therapeutic) reported a 93% drop.

Leadership is targeting a modest return to top-line growth in 2024. The company's outlook calls for full-year sales in a range of $58.5 billion to $61.5 billion, implying annual improvement of 3% at the midpoint. Much of the upside ought to come from the recent acquisition of Seagen (closed in December), which is expected to add $3.1 billion to the top line in 2024. New product launches and further development of several non-COVID assets should also be supportive, helping to mitigate lingering pressure from *Comirnaty* declines. Pfizer expects the vaccine to pull in $5 billion in sales this year, down from $11.2 billion in 2023.

The company is clearly focused on bolstering its oncology portfolio. Pfizer shelled out $43 billion last year to purchase cancer specialist Seagen. The addition roughly doubled the size of its oncology portfolio, with 60 programs spanning multiple modalities, including antibody-drug conjugates, small molecules, biospecifics, and other immunotherapies. Leadership believes that Seagen's pipeline has the potential to deliver at least eight blockbuster products by 2030.

The stock is neutrally ranked for year-ahead relative price performance (Timeliness: 3). PFE shares have lagged the broader market averages considerably over the past 12 months, shedding about 30% in value. In our view, the deterioration of the company's COVID-19 business, coupled with concerns surrounding the long-term growth story, have clearly weighed on investor sentiment. That being said, we see value here at these levels. Our current projections suggest above-average total return potential over the pull to 2027-2029, underpinned by the stock's robust 6.1% dividend yield.

Michael Ratty *March 29, 2024*

(A) Diluted earnings (GAAP). May not sum due to change in share count. Excludes tax gain of $1.79/sh. in '17; Discontinued ops. of $0.47/sh in '20. Next earnings report due early May.
(B) Dividends paid in early Mar., Jun, Sep., Dec.■ Div'd reinvest. plan.
(C) Includes intangibles. In '23: $132.68 bill., $23.50/sh.
(D) In millions.
(E) Completed spinoff of Upjohn (11/20).

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	45
Earnings Predictability	45

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PROGRESSIVE CORP. NYSE-PGR

RECENT PRICE **189.09** | P/E RATIO **20.1** (Trailing: 29.0 Median: 15.0) | RELATIVE P/E RATIO **1.15** | DIV'D YLD **0.2%** | **VALUE LINE**

TIMELINESS 2 Lowered 3/1/24
SAFETY 1 Raised 9/4/20
TECHNICAL 4 Raised 3/1/24
BETA .70 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$159-$258 $209 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	285	(+50%)	*11%*
Low	235	(+25%)	*6%*

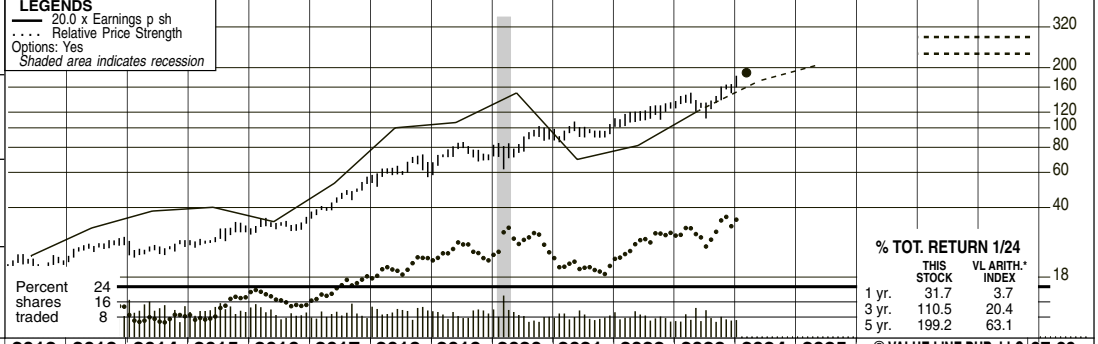
Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	541	500	525
to Sell	522	605	548
Hld's(000)	496836	492496	497986

	28.5	27.5	33.9	35.9	57.2	73.7	85.0	102.1	107.6	134.5	165.6	191.9
High:	21.4	22.5	25.2	29.3	35.2	50.8	58.1	62.2	84.9	100.8	111.4	159.3
Low:												

LEGENDS
20.0 x Earnings p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029



% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	31.7	3.7
3 yr.	110.5	20.4
5 yr.	199.2	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
20.15	20.83	21.61	24.31	26.49	28.71	31.30	34.10	38.76	44.23	53.04	61.91	67.09	75.92	84.19	100.27	***113.50***	***121.60***	P/C Prem Earned per sh [A]	***147.00***
.94	.75	.79	.78	.73	.71	.69	.78	.83	.97	1.41	1.78	1.60	1.47	2.15	3.23	***3.75***	***4.25***	Investment Inc per sh	***6.50***
1.09	1.75	1.62	1.71	1.14	1.40	2.78	2.57	1.90	2.92	5.61	5.65	8.26	3.50	2.93	5.11	***7.95***	***9.75***	Underwriting Inc per sh	***16.15***
d.10	1.57	1.51	1.48	1.15	1.58	1.92	2.01	1.70	2.65	5.01	5.32	7.47	3.48	4.08	6.11	***8.60***	***10.40***	Earnings per sh [B]	***13.00***
.15	.16	.40	.40	.41	.28	.49	.69	.89	.68	1.12	2.81	2.65	6.40	.40	1.15	***.44***	***.48***	Div'ds Decl'd per sh [C]	***.75***
6.23	8.55	9.13	9.47	9.94	10.39	11.79	13.29	14.56	15.96	17.71	22.54	28.26	30.35	26.32	34.66	***41.05***	***46.15***	Book Value per sh	***65.45***
676.50	672.60	662.40	613.00	604.60	595.80	587.80	583.60	579.90	581.70	583.20	584.60	585.20	584.40	584.90	585.07	***585.00***	***585.00***	Common Shs Outst'g [D]	***585.00***
279%	179%	213%	208%	213%	246%	212%	218%	224%	278%	352%	330%	301%	314%	445%	405%			Price to Book Value	***395%***
- -	9.7	12.9	13.3	18.4	16.2	13.0	14.4	19.2	16.8	12.4	14.0	11.4	27.4	28.7	23.0			Avg Ann'l P/E Ratio	***20.0***
- -	.65	.82	.83	1.17	.91	.68	.73	1.01	.84	.67	.75	.59	1.48	1.66	1.28			Relative P/E Ratio	***1.10***
.8%	1.1%	2.0%	2.0%	1.9%	1.1%	2.0%	2.4%	2.7%	1.5%	1.8%	3.8%	3.1%	6.7%	.3%	.8%			Avg Ann'l Div'd Yield	***.3%***
																Bold figures are Value Line estimates			
						18399	19899	22474	25730	30933	36192	39262	44368	49241	58664	***66400***	***71150***	P/C Premiums Earned [A]	***86000***
						72.3%	72.1%	75.1%	73.1%	70.2%	70.4%	64.0%	75.8%	77.4%	77.6%	***75.0%***	***74.0%***	Loss to Prem Earned	***71.0%***
						18.8%	20.4%	20.0%	20.3%	19.2%	20.5%	23.7%	19.6%	19.1%	17.3%	***18.0%***	***18.0%***	Expense to Prem Writ	***18.0%***
						8.9%	7.5%	4.9%	6.6%	10.6%	9.1%	12.3%	4.6%	3.5%	5.1%	***7.0%***	***8.0%***	Underwriting Margin	***11.0%***
						13.4%	16.0%	- -	25.7%	17.6%	38.8%	20.2%	49.1%	20.6%	***20.0%***	***20.0%***	***20.0%***	Income Tax Rate	***20.0%***
						1145.0	1185.6	995.9	1551.5	2939.7	3156.6	4423.6	2143.5	2251.3	3574.4	***5030***	***6085***	Net Profit ($mill)	***7600***
						2.4%	2.4%	2.4%	2.3%	2.6%	2.8%	2.2%	1.7%	2.5%	2.9%	***3.3%***	***3.7%***	Inv Inc/Total Inv	***5.0%***
						25788	29819	33428	38701	46575	54895	64098	71132	75465	88691	***95000***	***100000***	Total Assets ($mill)	***125000***
						6928.6	7754.3	8440.8	9284.8	10822	13673	17039	18232	15891	20277.1	***24000***	***27000***	Shr. Equity ($mill)	***38300***
						16.5%	15.3%	11.8%	16.7%	27.2%	23.1%	26.0%	11.8%	14.2%	17.6%	***21.0%***	***22.5%***	Return on Shr. Equity	***20.0%***
						12.3%	10.1%	5.7%	12.5%	22.0%	11.3%	17.2%	NMF	12.9%	14.3%	***20.0%***	***21.5%***	Retained to Com Eq	***18.5%***
						25%	34%	52%	25%	23%	53%	36%	NMF	12%	19%	***5%***	***5%***	All Div'ds to Net Prof	***6%***

CAPITAL STRUCTURE as of 12/31/23
Total Debt $6888.6 mill. **Due in 5 Yrs** Nil
LT Debt $6888.6 mill. **LT Interest** $415.0 mill. (25% of Cap'l)
Leases, Uncapitalized Annual rentals $69 mill.
No Defined Pension Benefit Plan
Pfd Stock $902.1 mill. **Pfd Dividend** $37.6 mill. (3% of Cap'l)

Common Stock 585,070,000 shs.

MARKET CAP: $110.6 billion (Large Cap)

FINANCIAL POSITION ($MILL.)	2021	2022	12/31/23
Bonds	39091.8	46651.9	60378.2
Stocks	6065.7	4034.7	3830.5
Premiums Due	9218.8	10416.9	11958.2
Other	11037.0	14361.5	12523.9
Total Assets	65413.3	75465.0	88690.8
Loss Reserves	21063.7	30359.3	34389.2
Unearned Prems	15045.9	17293.6	20133.7
Other	11467.2	11931.1	13890.8
Total Liabilities	47576.8	59584.0	68413.7

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Premium Inc	11.5%	12.0%	*10.0%*
Invest Income	9.5%	11.0%	*20.5%*
Earnings	10.5%	4.0%	*14.5%*
Dividends	25.0%	30.5%	*NMF*
Book Value	11.0%	12.0%	*12.5%*

Calendar	NET PREM. EARNED ($ mill.) [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	10420	10982	11364	11601	44368
2022	11803	12148	12398	12891	49241
2023	13533	14464	14894	15772	58664
2024	***16000***	***16400***	***16800***	***17200***	***66400***
2025	***17350***	***17600***	***17900***	***18300***	***71150***

Calendar	EARNINGS PER SHARE [B E] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.72	.72	.14	.90	3.48
2022	1.12	.96	.49	1.51	4.08
2023	.65	.40	2.09	2.97	6.11
2024	***2.34***	***2.00***	***2.10***	***2.16***	***8.60***
2025	***2.40***	***2.55***	***2.70***	***2.75***	***10.40***

Calendar	QUARTERLY DIVIDENDS PAID [C] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	2.35	.10	.10	.10	2.65
2021	4.60	.10	.10	1.60	6.40
2022	.10	.10	.10	.10	.40
2023	.10	.10	.10	.10	.40
2024	.85				

BUSINESS: The Progressive Corporation is an insurance holding company that writes standard and nonstandard (i.e., high risk) private passenger automobile coverage. Also writes recreational vehicle, mobile home, nonstandard commercial vehicle, and credit-related insurance. Progressive has a significant presence in Florida, Texas, California, New York, Georgia, and Michigan, among other states. Has 55,100 employees. Officers and directors control less than 1% of common stock outstanding; The Vanguard Group, 8.6%; BlackRock, 7.4% (3/23 Proxy). President and Chief Executive Officer: Tricia Griffith. Incorporated: OH. Address: 6300 Wilson Mills Road, Mayfield Village, Ohio 44143. Telephone: 440-461-5000. Internet: www.progressive.com.

Progressive ended a good year with solid December-quarter results. Earnings from operations, excludes capital gains and losses from the investment portfolio, dialed in at $2.97 a share during the December quarter, which was nearly double the previous year's tally. For the full year, earnings climbed nearly 50% to $6.11 per share. The company's underwriting margin was profitable, which is no small feat, given above average industrywide auto frequency and severity trends over the past several months. Furthermore, investment income trended markedly higher, thanks to historically high bond reinvestment rates. Bond yields have been propped up by several interest rate increases by the Federal Reserve, which did so to combat stubbornly high inflation. Insurers, it should be noted, keep the lion's share of their portfolios in bonds due to their conservative nature.

We look for the positive momentum to continue this year, while our newly introduced 2025 expectations suggest further improvement. Progressive is firing on all cylinders, as its pricing model is adequately accounting for the increased industry losses. (This can be difficult at times due to the lag between when an accident occurs and when premium costs are raised.)

A healthy balance sheet is just one of the reasons why we are optimistic about the company's long-term fortunes. Another factor is Progressives disciplined underwriting approach, which ought to continue to result in attractive combined ratios relative to the industry average over the long term. Progressive's strong brand-name recognition and savvy advertising campaigns are other reasons for optimism.

These shares carry an Above Average rank for Timeliness. This reflects the company's strong recent earnings momentum and the consequent share-price increase. In fact, they have soared since our review three months ago, handily outpacing the broader market averages. Even so, these shares offer worthwhile risk-adjusted total return potential for the pull to 2027-2029. Conservative investors seeking an insurance company should consider this selection.

Alan G. House *March 1, 2024*

(A) Incl. some D&O liab. insurance. **(B)** Dil. EPS. Inc. cap. gains/(losses): '08, $1.39; '10, 10¢; '11, 11¢; '12, 33¢; '13, 35¢; '14, 23¢; '15, 14¢; '16, 6¢; '18, (59¢); '19, $1.41; '20, $2.19; '21, $2.18; '22, ($2.90). Next qrtly. egs report mid-April. **(C)** Beginning in 2007, a variable div'd is considered once a year at yearend. Returned to quarterly payout policy effective 2019. Approx. pmt. dates: mid.-Jan, April, July, and Oct. Has paid special dividend intermittently. **(D)** In millions. **(E)** Qtrs. may not sum due to change in sh. count.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	100
Earnings Predictability	55

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RLI CORP. NYSE-RLI

RECENT PRICE 141.55 | P/E RATIO 25.4 (Trailing: 28.7 Median: 29.0) | RELATIVE P/E RATIO 1.45 | DIV'D YLD 0.8% | VALUE LINE

TIMELINESS 3 Lowered 12/15/23
SAFETY 2 Raised 6/5/20
TECHNICAL 3 Raised 2/9/24
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$119-$209	$164 (15%)

2027-29 PROJECTIONS

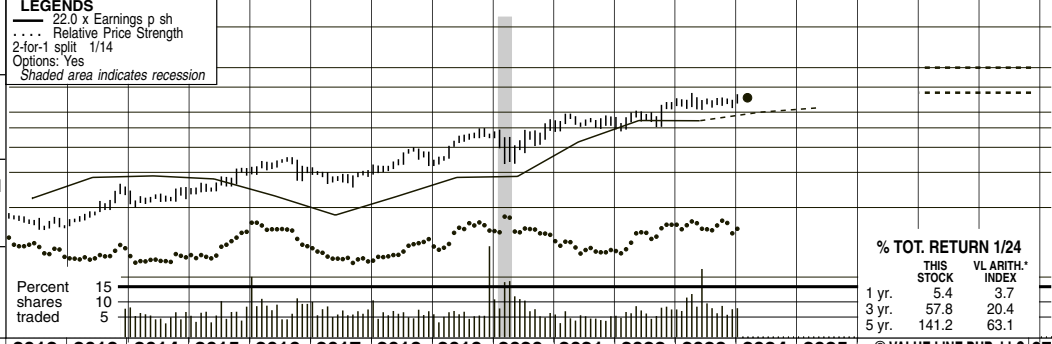
	Price	Gain	Ann'l Total Return
High	200	(+40%)	*10%*
Low	150	(+5%)	*2%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	140	167	154
to Sell	151	154	157
Hld's(000)	38690	37388	36080

High:	52.6	50.7	63.2	71.5	63.7	80.0	99.9	110.6	117.8	134.8	149.6	147.5
Low:	32.3	40.0	46.6	54.3	50.3	58.5	64.5	66.0	95.5	96.2	123.0	132.3

LEGENDS
22.0 x Earnings p sh
Relative Price Strength
2-for-1 split 1/14
Options: Yes
Shaded area indicates recession



% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	5.4	3.7
3 yr.	57.8	20.4
5 yr.	141.2	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
12.31	11.57	11.77	12.72	13.56	14.68	15.95	16.08	16.58	16.72	17.78	18.70	19.18	21.66	25.17	28.36	*35.20*	*43.20*	P/C Prem Earned per sh	*53.35*
1.84	1.58	1.59	1.50	1.38	1.23	1.29	1.26	1.21	1.24	1.40	1.54	1.50	1.52	1.89	2.65	*3.00*	*3.60*	Investment Inc per sh	*5.00*
1.94	2.04	2.27	2.78	1.49	2.48	2.48	2.49	1.74	.60	.94	1.51	1.54	2.87	3.92	3.80	*4.95*	*5.85*	Underwriting Inc per sh	*5.05*
2.50	2.35	2.66	2.80	2.02	2.57	2.62	2.53	2.08	1.67	2.06	2.57	2.60	3.87	4.95	4.94	*5.45*	*5.75*	Earnings per sh [A]	*8.00*
.49	.54	.57	.60	.63	.67	.71	.75	.79	.83	.87	.91	.95	.99	1.03	1.07	*1.11*	*1.15*	Div'ds Decl'd per sh [B]■	*1.40*
16.49	19.57	18.87	19.35	18.73	19.29	19.61	18.91	18.74	19.34	18.13	22.18	25.16	27.14	25.89	30.97	*37.80*	*45.00*	Book Value per sh	*57.80*
42.95	42.53	41.93	42.32	42.53	42.98	43.10	43.54	43.95	44.15	44.50	44.87	45.14	45.29	45.47	45.64	*45.00*	*45.00*	Common Shs Outst'g [C]	*45.00*
163%	130%	146%	159%	182%	208%	230%	283%	346%	296%	379%	379%	349%	396%	441%	432%			Price to Book Value	*255%*
10.8	10.8	10.4	11.0	16.9	15.6	17.2	21.1	31.1	34.3	33.4	32.7	33.8	27.8	23.1	27.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*22.0*
.65	.72	.66	.69	1.08	.88	.91	1.06	1.63	1.73	1.80	1.74	1.74	1.50	1.33	1.51			Relative P/E Ratio	*1.20*
1.8%	2.1%	2.1%	1.9%	1.8%	1.7%	1.6%	1.4%	1.2%	1.4%	1.3%	1.1%	1.1%	.9%	.9%	.8%			Avg Ann'l Div'd Yield	*.9%*
						687.4	700.2	728.6	737.9	791.3	839.1	865.7	980.9	1144.4	1294.3	*1585*	*1945*	P/C Premiums Earned	*2400*
						43.2%	42.7%	48.0%	54.4%	54.1%	49.3%	51.2%	46.5%	44.9%	46.7%	*47.0%*	*48.0%*	Loss to Prem Earned	*50.0%*
						41.3%	41.8%	41.5%	42.0%	40.6%	42.7%	40.8%	40.2%	39.5%	39.9%	*39.0%*	*38.5%*	Expense to Prem Writ	*37.0%*
						15.6%	15.5%	10.5%	3.6%	5.3%	8.1%	8.0%	13.2%	15.6%	13.4%	*14.0%*	*13.5%*	Underwriting Margin	*13.0%*
						20.5%	30.7%	26.5%	8.8%	12.3%	16.9%	35.3%	54.1%	13.9%	*15.0%*	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*
						115.2	112.0	92.9	74.6	92.2	117.4	118.4	178.1	209.4	225.0	*245*	*260*	Net Profit ($mill)	*360*
						2.9%	2.7%	2.6%	2.5%	2.8%	2.6%	2.3%	2.1%	2.6%	3.3%	*3.7%*	*4.0%*	Inv Inc/Total Inv	*5.0%*
						2776	2737	2778	2947	3105	3546	3938	4508	4767	5180	*5500*	*6000*	Total Assets ($mill)	*7500*
						845.1	823.5	823.6	853.6	806.8	995.4	1136.0	1229.4	1177.3	1413.5	*1700*	*2025*	Shr. Equity ($mill)	*2600*
						13.6%	13.6%	11.3%	8.7%	11.4%	11.8%	10.4%	14.5%	17.8%	15.9%	*14.5%*	*13.0%*	Return on Shr. Equity	*14.0%*
						10.0%	9.7%	7.1%	4.5%	6.6%	7.7%	6.7%	10.8%	13.8%	12.5%	*11.5%*	*10.0%*	Retained to Com Eq	*11.5%*
						27%	29%	37%	49%	42%	35%	36%	25%	22%	22%	*20%*	*20%*	All Div'ds to Net Prof	*18%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $100.0 mill. **Due in 5 Years** Nil

(7% of Cap'l)
Leases,Uncapitalized Annual rentals $5.6 million

No Defined Benefit Pension Plan
Pfd Stock None

Common Stock 45,640,000 shs.

MARKET CAP: $6.5 billion (Mid Cap)

FINANCIAL POSITION ($MILL.)	2021	2022	12/31/23
Bonds	2409.9	2667.0	2855.8
Stocks	613.8	498.4	590.0
Other	1484.6	1601.7	1734.4
Total Assets	4508.3	4767.1	5180.2
Unearned Prems	680.4	785.1	892.3
Reserves	2043.6	2315.6	2446.0
Other	554.9	489.0	428.4
Total Liab'ties	3278.9	3589.7	3766.7

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Premium Inc	5.5%	6.5%	*13.5%*
Invest Income	2.0%	6.0%	*17.5%*
Earnings	6.0%	18.0%	*11.0%*
Dividends	5.0%	4.0%	*5.0%*
Book Value	3.5%	7.0%	*12.0%*

Calendar	NET PREMIUMS EARNED ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	228.6	241.0	253.4	257.9	980.9
2022	269.2	282.8	291.5	301.0	1144.5
2023	307.7	322.3	318.4	345.9	1294.3
2024	*365*	*380*	*410*	*430*	*1585*
2025	*455*	*475*	*500*	*515*	*1945*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.87	1.09	.65	1.26	3.87
2022	1.43	1.49	.50	1.53	4.95
2023	1.63	1.16	.61	1.54	4.94
2024	*1.56*	*1.37*	*1.10*	*1.42*	*5.45*
2025	*1.65*	*1.48*	*1.22*	*1.40*	*5.75*

Calendar	QUARTERLY DIVIDENDS PAID [B]■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.23	.24	.24	.24	.95
2021	.24	.25	.25	.25	.99
2022	.25	.26	.26	.26	1.03
2023	.26	.27	.27	.27	1.07
2024					

BUSINESS: RLI Corp., through its subsidiaries RLI Insurance and Mt. Hawley, writes multiple lines of insurance on an admitted basis in all 50 states. Also underwrites specialty property and casualty insurance on an admitted basis and excess and surplus business on a non-admitted basis. Underwrites earthquake risks (in California). Other companies in the group include: Replacement Lens, Inc.; License Express Services, Inc. Has 1,001 employees. The Vanguard Group owns 10.5% of common stock; BlackRock 10.5%; State Street 10.2%; officers & directors, 5.0% (3/23 proxy). President and Chief Executive Officer: Craig Kliethermes. Incorporated: Illinois. Address: 9025 North Lindbergh Drive, Peoria, Illinois 61615. Telephone: 309-692-1000. Internet: www.rlicorp.com.

RLI posted roughly flat results for 2023. This doesn't come as much of a surprise to us, given that many P/C companies under our review registered an earnings decline last year. While secular fundamentals were generally strong, which resulted in rate hikes, positive investment income trends, and other favorable variables, increased industrywide catastrophe levels put a dent in bottom-line growth. That being said, RLI still managed to register a very favorable combined ratio for the full year, at 86.6%, which was far above the P/C insurance industry average. This implies that the company generated $13.40 in pretax income for every $100 in policies insured. It should be noted that 2023 results were up against healthy 2022 comparisons.

Earnings per share ought to improve this year, while our newly introduced 2025 estimates suggest further traction. Catastrophes can be a bit of a double-edged sword. On one hand, they cut into profits as claims are paid out. However, they also provide insurers with greater bargaining power in the following year's renewal season. Hence, we think RLI will enjoy healthy rate increases this year, based on last year's elevated catastrophe level. What's more, investment income trends ought to remain favorable, as interest rates should remain high for a while yet, which helps support bond yields. We are also penciling in some improvement in the combined ratio this year, though this depends on the weather.

We have rolled out our projections to the 2027-2029 period and now look for earnings per share of $8.00. This implies double-digit annual earnings per share growth, on average, over that time frame. Above industry average combined ratios and healthy rate increases underpin our long-term projections. A relatively solid economy would be a plus, too.

These shares are neutrally ranked for year-ahead relative price action. They do offer worthwhile gains potential over the 18 months ahead, however. While its relatively modest dividend falls short of many of its peers, it does pay a special dividend from time to time. While not set in stone, this is an added bonus for shareholders.

Alan G. House *March 1, 2024*

(A) Dil. egs. Excl. nonrecurr. (net): '08, (70¢); '09, (19¢); '10, 35¢; '11, 25¢; 12, 38¢; '13, 66¢; '14, 47¢; '15, 59¢; '16, 48¢; 17, (69¢); '18, (63¢); '19, $1.66; '20, 86¢; '21, $2.24; '22, $7.79. Next egs. report due late April. **(B)** Div'ds. paid late March, June, Sept., and Dec. ■ Div'd. reinvest. plan avail. Pays a special dividend intermittently. **(C)** In mill., adj. for split.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	85
Earnings Predictability	85

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STEPAN COMPANY NYSE-SCL

RECENT PRICE **92.41** | P/E RATIO **28.4** (Trailing: 40.7 Median: NMF) | RELATIVE P/E RATIO **1.64** | DIV'D YLD **1.6%** | **VALUE LINE**

TIMELINESS 4 Raised 10/20/23
SAFETY 2 Raised 5/26/23
TECHNICAL 4 Lowered 2/23/24
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$77-$150	$114 (25%)

2027-29 PROJECTIONS

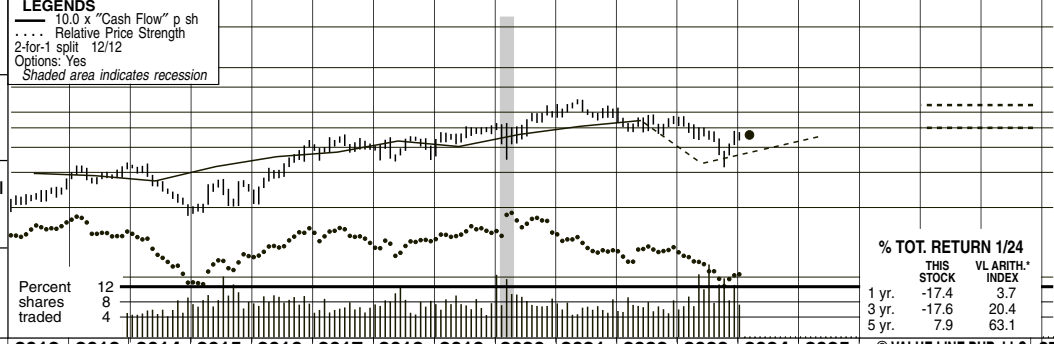
	Price	Gain	Ann'l Total Return
High	130	(+40%)	*10%*
Low	100	(+10%)	*4%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	89	79	96
to Sell	95	102	92
Hld's(000)	17552	18230	17905

	67.2	66.5	55.7	87.0	93.0	91.0	103.0	129.6	139.3	126.2	114.5	95.3
High:	52.3	36.3	37.2	41.4	68.5	68.1	72.1	69.3	109.1	91.6	63.6	86.7
Low:												

LEGENDS
10.0 x "Cash Flow" p sh
Relative Price Strength
2-for-1 split 12/12
Options: Yes
Shaded area indicates recession



Target Price Range 2027 2028 2029
320 200 160 120 100 80 60 40 18

% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-17.4	3.7
3 yr.	-17.6	20.4
5 yr.	7.9	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
83.06	64.15	70.81	89.94	82.12	84.22	86.59	79.72	78.76	85.52	88.59	82.56	83.21	104.64	124.75	*104.45*	*108.90*	*115.55*	Sales per sh	*122.20*
3.19	5.00	5.24	5.84	5.92	5.78	5.43	6.42	7.19	7.58	8.61	8.08	9.29	10.20	10.88	*6.65*	*7.80*	*9.15*	"Cash Flow" per sh	*10.65*
1.20	2.92	2.95	3.21	3.49	3.18	2.49	3.32	3.73	3.92	4.83	4.42	5.45	5.92	6.38	*2.20*	*3.35*	*4.50*	Earnings per sh [A]	*5.75*
.42	.45	.49	.53	.58	.65	.69	.73	.78	.84	.93	1.03	1.13	1.25	1.28	1.47	*1.53*	*1.60*	Div'ds Decl'd per sh [B] ■	*1.80*
2.58	2.14	3.65	4.06	3.79	4.16	4.58	5.36	4.60	3.49	3.85	4.69	5.60	8.67	13.57	*9.50*	*10.00*	*10.00*	Cap'l Spending per sh	*12.50*
10.09	13.85	16.65	18.95	21.74	24.73	24.06	25.00	28.30	32.88	34.82	39.61	43.91	47.91	52.46	*54.45*	*57.80*	*61.10*	Book Value per sh [C]	*71.10*
19.26	19.90	20.21	20.49	21.97	22.33	22.26	22.28	22.42	22.51	22.51	22.51	22.47	22.42	22.23	*22.50*	*22.50*	*22.50*	Common Shs Outst'g [D]	*22.50*
17.7	8.0	10.9	11.3	13.2	18.6	21.0	14.0	16.8	20.9	16.6	20.9	18.2	21.0	16.5	42.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.0*
1.07	.53	.69	.71	.84	1.05	1.11	.70	.88	1.05	.90	1.11	1.01	1.17	.95	2.43			Relative P/E Ratio	*1.10*
2.0%	1.9%	1.5%	1.5%	1.3%	1.1%	1.3%	1.6%	1.2%	1.0%	1.2%	1.1%	1.1%	1.0%	1.2%	1.6%			Avg Ann'l Div'd Yield	*1.6%*
1927.2	1776.2	1766.2	1925.0	1993.9	1858.7	1869.8	2346.0	2773.3	*2350*	*2450*	*2600*	Sales ($mill)	*2750*
8.2%	10.9%	12.7%	12.1%	11.7%	11.2%	13.6%	11.1%	10.9%	*9.0%*	*9.5%*	*10.0%*	Operating Margin	*12.0%*
63.8	67.0	75.0	79.0	81.1	78.7	81.9	90.9	94.7	*100*	*100*	*105*	Depreciation ($mill)	*110*
57.1	76.0	86.2	91.6	112.8	103.1	126.8	137.8	147.2	*50.0*	*75.0*	*100*	Net Profit ($mill)	*130*
24.4%	26.1%	24.3%	34.3%	19.4%	18.1%	25.4%	20.1%	22.0%	*20.0%*	*20.0%*	*20.0%*	Income Tax Rate	*20.0%*
3.0%	4.3%	4.9%	4.8%	5.7%	5.5%	6.8%	5.9%	5.3%	*2.1%*	*3.1%*	*3.9%*	Net Profit Margin	*4.7%*
326.1	376.4	388.2	468.4	463.9	479.7	489.1	412.9	374.2	*450*	*550*	*550*	Working Cap'l ($mill)	*600*
246.9	313.8	288.9	268.3	239.0	198.5	160.8	322.9	455.0	*400*	*425*	*450*	Long-Term Debt ($mill)	*500*
535.5	557.0	634.6	740.1	783.8	891.8	986.7	1074.2	1166.1	*1225*	*1300*	*1375*	Shr. Equity ($mill) [C]	*1600*
8.1%	9.6%	10.0%	9.6%	11.5%	9.7%	11.3%	10.1%	9.1%	*3.0%*	*4.5%*	*5.5%*	Return on Total Cap'l	*6.0%*
10.7%	13.6%	13.6%	12.4%	14.4%	11.6%	12.9%	12.8%	12.6%	*4.0%*	*6.0%*	*7.5%*	Return on Shr. Equity	*8.0%*
7.8%	10.7%	10.9%	9.8%	11.7%	9.0%	9.8%	9.8%	9.7%	*4.0%*	*6.0%*	*7.5%*	Retained to Com Eq	*8.0%*
27%	21%	20%	21%	18%	22%	21%	21%	20%	*67%*	*46%*	*36%*	All Div'ds to Net Prof	*31%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $649.4 mill. **Due in 5 Yrs** $536 mill.
LT Debt $422.4 mill. **LT Interest** $10.0 mill.
(Total interest coverage: 6.0x)
(26% of Capital)

Leases, Uncapitalized: Annual rentals $14.7 mill.
Pension Assets-12/22 $136.7 mill.
Oblig. $130.5 mill.

Common Stock 22,367,381 mill. shares
as of 11/26/23
MARKET CAP: $1.7 billion (Small Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	159.2	173.8	105.5
Receivables	419.5	436.9	418.2
Inventory (LIFO)	305.5	402.9	284.5
Other	29.2	31.2	41.2
Current Assets	913.4	1044.8	849.4
Accts Payable	323.4	375.7	242.6
Debt Due	40.7	132.1	227.0
Other	136.4	162.8	112.5
Current Liab.	500.5	670.6	582.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Sales	1.5%	.5%	*7.0%*
"Cash Flow"	8.5%	7.0%	*6.0%*
Earnings	10.5%	7.5%	*7.5%*
Dividends	8.0%	8.0%	*8.5%*
Book Value	12.0%	9.0%	*6.5%*

Calendar	QUARTERLY SALES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	537.7	595.5	602.7	610.1	2346.0
2022	675.3	751.6	719.2	627.2	2773.3
2023	651.4	580.0	562.2	*556.4*	*2350*
2024	*660*	*620*	*650*	*520*	*2450*
2025	*700*	*660*	*690*	*550*	*2600*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	1.75	1.85	1.59	.73	5.92
2022	1.93	2.26	1.71	.47	6.38
2023	.70	.55	.55	*.40*	*2.20*
2024	*.80*	*.95*	*1.10*	*.50*	*3.35*
2025	*1.05*	*1.30*	*1.50*	*.65*	*4.50*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.275	.275	.275	.305	1.13
2021	.305	.305	.305	.335	1.25
2022	.335	.335	.335	.365	1.37
2023	.365	.365	.365	.375	1.47
2024					

BUSINESS: Stepan Company produces specialty and intermediate chemicals that are sold to manufacturers. Has three reportable segments: Surfactants (68% of 2022 net sales) makes basic cleaning agents usually found in agricultural products and floor polishes; Polymers (28%) produces chemicals often used in the construction industry, such as polyurethane and resins; Specialty Products (4%) makes chemicals used in food, flavoring, and supplements. Has 2,453 employees. Officers & directors own 6.9% of common stock; BlackRock, Inc., 16.5%; The Vanguard Group, Inc., 11.5% (3/23 proxy). President and CEO: Scott Behrens. Incorporated: Delaware. Address: Edens and Winnetka Road, Northfield, IL 60093. Telephone: 847-446-7500. Internet: www.stepan.com.

Stepan Company had a difficult year in 2023. Note: The company was scheduled to report its annual results shortly after we went to press with this Issue. A consistent decline in volumes across all segments throughout the year likely led to an expected 15% decline in sales. Soft demand in most markets and inventory destocking trends were primary drivers for the decreases during the year. High-cost inventories and weaker demand led to pricing pressures which squeezed margins. The net profit margin, at 2.1%, was likely less than half that of the year before. Profits probably declined by more than 65% due to the high operating leverage and overhead expenses relating to manufacturing sites. On the plus side, strategic investments in new products provide a ramp towards growth, while cost management and restructuring efforts are likely to support earnings and efficiency beyond the current market conditions.

A protracted recovery is probable until late in the decade. We expect the business cycle will soon begin to reverse and then normalize, and increasing demand will help to spur a steady recovery. Volumes and margins are expected to begin to bounce back, with higher demand for rigid polyols, increased surfactant volumes from new business, and lower raw material costs each showing signs for initial improvements. Given Stepan's diverse functional and geographic end markets, we are expecting a staggered and slow recovery while different customer groups' demand is likely to materialize across varying time horizons. One of the markets we are expecting to recover quickest in 2024 is agricultural products.

Stepan's finances are in good shape overall. Even at recent levels, the company's liquidity ratios, such as the quick ratio, are adequate. Likewise, solvency ratios, such as interest coverage and debt-to-equity, are well within normal bounds.

However, the shares lack investment appeal at the recent quotation. The shares are ranked to underperform broader market averages over the next six to 12 months (Timeliness: 4, Below Average). At the same time, total capital appreciation potential to late decade is lacking at the current juncture.

Earl B. Humes *February 23, 2024*

(A) Diluted earnings. Quarterly figures may not sum due to rounding and/or change in share count. Next earnings report due late February.
(B) Div'd historically paid in mid-Mar., mid-Jun., mid-Sep., and mid-Dec. ■ Div'd reinvestment plan available.
(C) Includes intangibles. In '22: $153.9 million, $7.05 a share.
(D) In millions, adjusted for stock split.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	65
Earnings Predictability	60

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SELECTIVE INSUR. NDQ-SIGI

RECENT PRICE **103.73** | P/E RATIO **14.3** (Trailing: 17.6 Median: 14.0) | RELATIVE P/E RATIO **0.82** | DIV'D YLD **1.4%** | **VALUE LINE**

TIMELINESS 2 Raised 11/17/23
SAFETY 2 Raised 3/1/24
TECHNICAL 3 Raised 2/16/24
BETA .85 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$87-$140 $114 (10%)

2027-29 PROJECTIONS

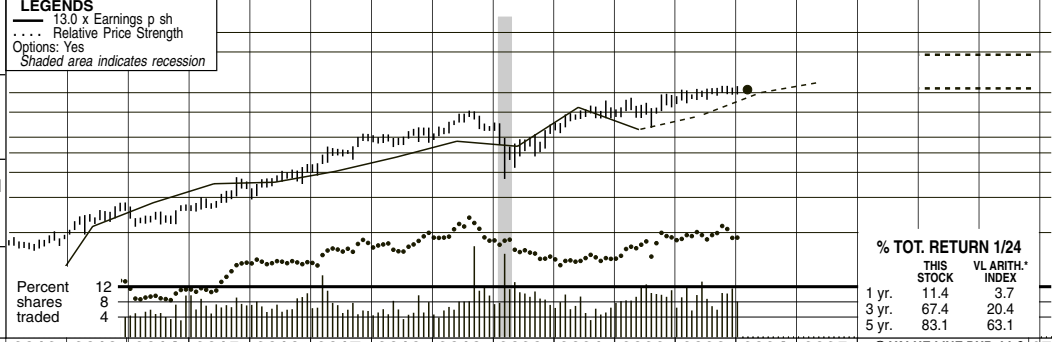
	Price	Gain	Ann'l Total Return
High	155	(+50%)	*12%*
Low	105	(Nil)	*2%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	124	118	134
to Sell	122	130	132
Hld's(000)	53037	52372	50305

High:	28.3	27.7	37.9	44.0	62.4	67.2	81.4	70.9	91.5	98.8	108.2	107.9
Low:	19.5	21.4	25.5	29.3	38.5	53.6	58.1	37.1	62.8	66.8	87.7	95.0

LEGENDS
13.0 x Earnings p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	11.4	3.7
3 yr.	67.4	20.4
5 yr.	83.1	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
28.28	26.88	26.39	26.45	28.72	31.04	33.93	34.69	37.08	39.17	41.33	43.68	44.77	50.13	55.91	63.12	*68.85*	*69.35*	P/C Prem Earned per sh	*70.75*
2.48	2.23	2.71	2.71	2.39	2.41	2.54	2.12	2.26	2.77	3.31	3.74	3.79	5.43	4.78	6.41	*6.45*	*6.50*	Investment Inc per sh	*6.65*
d.26	d.04	d.44	d1.94	d1.14	.61	1.29	2.64	2.61	2.72	2.19	2.84	1.98	3.34	20.91	22.15	*22.20*	*22.25*	Underwriting Inc per sh	*22.40*
1.43	1.39	1.35	.34	.59	1.65	2.17	2.70	2.75	3.11	3.66	4.40	4.15	6.50	5.03	5.89	*7.70*	*8.70*	Earnings per sh [A]	*10.00*
.52	.52	.52	.52	.52	.52	.53	.57	.61	.66	.74	.83	.94	1.03	1.14	1.25	*1.45*	*1.65*	Div'ds Decl'd per sh [B■]	*2.25*
16.84	18.83	19.96	20.39	19.77	20.63	23.36	24.37	26.42	29.28	30.40	36.91	42.38	46.24	38.63	48.72	*49.20*	*50.00*	Book Value per sh	*52.30*
52.88	53.24	53.68	54.41	55.16	55.92	54.59	57.36	57.97	58.50	58.95	59.46	59.91	60.18	60.25	60.64	*61.00*	*62.00*	Common Shs Outst'g [C]	*65.00*
133%	80%	81%	80%	91%	117%	103%	124%	141%	172%	198%	190%	134%	165%	198%	204%	*Bold figures are Value Line estimates*		Price to Book Value	*272%*
15.7	10.8	12.0	48.1	30.5	14.6	11.1	11.2	13.5	16.2	16.4	15.9	13.7	11.8	15.2	16.9			Avg Ann'l P/E Ratio	*13.0*
.94	.72	.76	3.02	1.94	.82	.58	.56	.71	.81	.89	.85	.70	.64	.88	.94			Relative P/E Ratio	*.70*
2.3%	3.5%	3.2%	3.2%	2.9%	2.2%	2.2%	1.9%	1.6%	1.3%	1.2%	1.2%	1.7%	1.3%	1.5%	1.3%			Avg Ann'l Div'd Yield	*2.5%*
1852.6	1989.9	2149.6	2291.0	2436.2	2597.2	2681.8	3017.3	3373.4	3827.6	*4200*	*4300*	P/C Premiums Earned	*4600*
62.5%	57.7%	57.4%	58.7%	61.5%	59.7%	61.0%	60.1%	62.7%	64.9%	*64.0%*	*63.0%*	Loss to Prem Earned	*60.0%*
33.7%	34.7%	35.5%	34.4%	33.2%	13.1%	13.7%	12.5%	32.3%	31.4%	*32.0%*	*32.0%*	Expense to Prem Writ	*32.0%*
3.8%	7.6%	7.0%	6.9%	5.3%	27.1%	25.3%	27.4%	5.0%	3.7%	*4.0%*	*5.0%*	Underwriting Margin	*8.0%*
27.0%	28.4%	28.1%	27.7%	18.0%	18.9%	18.7%	20.8%	20.0%	20.3%	*21.0%*	*22.0%*	Income Tax Rate	*25.0%*
124.5	157.1	161.7	184.9	218.6	264.4	249.7	403.8	303.1	357.2	*470*	*540*	Net Profit ($mill)	*650*
3.0%	2.5%	2.5%	2.9%	3.5%	3.5%	3.2%	4.3%	3.7%	4.5%	*5.0%*	*5.5%*	Inv Inc/Total Inv	*7.0%*
6582	6904	7356	7686	7953	8797	9688	10461	10802	11803	*11900*	*12000*	Total Assets ($mill)	*12300*
1275.6	1398.0	1531.4	1713.0	1791.8	2194.9	2738.9	2982.9	2527.6	2954.4	*3000*	*3100*	Shr. Equity ($mill)	*3400*
9.8%	11.2%	10.6%	10.8%	12.2%	12.0%	9.1%	13.5%	13.0%	12.1%	*15.5%*	*17.5%*	Return on Shr. Equity	*19.0%*
7.5%	9.0%	8.4%	8.6%	9.8%	9.9%	7.7%	12.0%	10.0%	9.6%	*12.5%*	*12.5%*	Retained to Com Eq	*14.5%*
23%	20%	21%	20%	19%	18%	22%	17%	23%	21%	*19%*	*19%*	All Div'ds to Net Prof	*23%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $503.9 mill. **Due in 5 Yrs** $503.9 mill.
LT Debt $503.9 mill. **LT Interest** $28.8 mill. (15% of Cap'l)
Leases, Uncapitalized $7.2 million.
Pension Assets-12/23 $343 mill. **Oblig.** $312 mill.
Pfd Stock None

Common Stock 60,641,846 shs.
as of 1/31/24

MARKET CAP: $6.3 billion (Mid Cap)

FINANCIAL POSITION ($MILL.)	2021	2022	12/31/23
Bonds	6738.8	6643.3	7521.9
Stocks	335.5	162.0	187.2
Mortgages	- -	- -	- -
Other	3387.1	3997.0	4093.4
Total Assets	10461.4	10802.3	11802.5
Unearned Prems	1803.2	1992.8	2330.7
Reserves	4580.9	5144.8	5336.9
Other	1094.4	1137.1	1180.6
Total Liab.	7478.5	8274.7	8848.2

ANNUAL RATES (of change (per sh))	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Premium Inc	6.5%	6.0%	*4.0%*
Invest Income	7.5%	13.0%	*3.5%*
Earnings	21.0%	12.5%	*12.0%*
Dividends	7.5%	10.0%	*16.0%*
Book Value	7.5%	8.0%	*2.0%*

Calendar	NET PREM. EARNED ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	725.0	740.5	767.3	784.5	3017.3
2022	812.3	834.4	853.9	872.8	3373.4
2023	902.3	942.2	981.9	1001.2	3827.6
2024	*990*	*1030*	*1070*	*1110*	*4200*
2025	*1015*	*1055*	*1095*	*1135*	*4300*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1.76	1.97	1.18	1.59	6.50
2022	1.41	1.17	.99	1.46	5.03
2023	1.44	.99	1.51	1.94	5.89
2024	*1.85*	*1.70*	*1.75*	*2.40*	*7.70*
2025	*2.10*	*1.95*	*2.00*	*2.65*	*8.70*

Calendar	QUARTERLY DIVIDENDS PAID [B■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.23	.23	.23	.25	.94
2021	.25	.25	.25	.28	1.03
2022	.28	.28	.28	.30	1.14
2023	.30	.30	.30	.35	1.25
2024	.35				

BUSINESS: Selective Insurance Group, Inc. is a holding company for five property/casualty insurance companies. (Main subsidiary: Selective Insurance Company of America.) Markets products primarily in the East and Midwest. New Jersey accounted for 18% of premiums written in '22. Mix of 2022 premiums written: personal lines, 27%; commercial lines, 73%. Commercial premiums by industry (as percentage of total): automobile, 29%; general liability, 33%; workers' compensation, 12%; other, 26%. Has 2,520 employees. Officers/directors own 2.0% of common stock; BlackRock, 11.8% (4/23 Proxy). Chairman, Pres. & CEO: John J. Marchioni. Inc.: NJ. Address: 40 Wantage Ave., Branchville, NJ 07890. Telephone: 973-948-3000. Internet: www.selective.com.

Selective Insurance's top line should continue to trend favorably in the coming quarters. Net premiums written and earned have risen, thanks to higher renewal prices, exposure growth, new business, and strong retention (above 85%). The excess & surplus and personal lines have increased in step with the core business. Net investment income has benefited from elevated interest rates, active portfolio management, and operating and investing cash flow. Net realized and unrealized investment losses have decreased due to a credit loss benefit recorded on Selective's fixed-income securities portfolio. An uptick in valuations reflecting the current public equities market has also been a plus. The company has plans to extend its Commercial Lines footprint into West Virginia, Maine, Washington, Oregon, and Nevada this year. We estimate net premiums earned will expand 10%, to $4.2 billion, in 2024, as new business should continue to grow. Next year, we forecast a 2% gain, to $4.3 billion.

Selective's combined ratio has increased because of catastrophe losses attributable to storms affecting the company's Midwest and East Coast footprint states. Meanwhile, the loss & loss expense ratio has risen due to prior-year claims adjustments. At the Standard Commercial Lines segment, non-catastrophe property loss & loss expense has declined because of fewer large fire losses and claims related to water damage and freezing. At the Standard Personal Lines segment, non-catastrophe property loss & loss expense has expanded due to higher personal automobile physical damage and homeowners property losses. Selective's underwriting expense ratio has decreased because of premium growth outpacing the uptick in underwriting expenses. All told, as a result of these factors, we predict the bottom line will step up 31%, to $7.70 a share, in 2024, as expenses should fall. Thereafter, we expect share earnings will improve 13%, to $8.70, in 2025.

Short-term investors may find the equity of interest. This stock is ranked 2 (Above Average) for Timeliness. However, capital appreciation potential to 2027-2029 is not attractive.

Keith R. Foldesi *March 1, 2024*

(A) Non-GAAP operating income per diluted share. Excl. loss from discontinued ops.: '08, 1¢; '09, 15¢; '10, 7¢; '11, 1¢. Excl. nonrecurring charge: '22, $1.49. EPS may not total due to rounding. Next earnings report due early May.
(B) Dividends historically paid in early March, June, September, December.
■ Div'd reinvestment plan available.
(C) In millions.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	90
Earnings Predictability	70

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UNIFIRST 'A' NYSE-UNF

RECENT PRICE 170.20 | P/E RATIO 22.5 (Trailing: 28.5 Median: 23.0) | RELATIVE P/E RATIO 1.34 | DIV'D YLD 0.8% | VALUE LINE 401

TIMELINESS 3 Raised 10/6/23
SAFETY 2 Raised 5/27/16
TECHNICAL 3 Raised 12/22/23
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$140-$232	$186 (10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	320	(+90%)	*18%*
Low	240	(+40%)	*10%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	109	100	103
to Sell	120	137	121
Hld's(000)	14781	14593	14501

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	108.3	124.6	123.9	147.6	171.8	193.0	214.4	217.9	258.9	214.7	205.6	183.8								
Low:	74.2	91.6	100.8	96.9	124.9	133.2	132.4	121.9	189.8	154.7	150.5	159.5								
	52.95	52.32	51.74	57.06	62.97	67.72	69.57	72.46	72.44	78.47	88.63	95.54	95.47	96.78	107.18	119.41	*131.10*	*135.15*	Revenues per sh [A]	*154.15*
	5.94	6.90	6.96	7.10	8.09	9.31	9.56	10.02	9.73	9.69	12.82	14.09	12.73	13.62	11.37	12.03	*14.60*	*15.40*	"Cash Flow" per sh	*19.15*
	3.15	3.92	3.90	3.85	4.76	5.81	5.95	6.15	5.70	5.28	7.45	8.52	7.13	7.94	5.46	5.53	*7.55*	*8.05*	Earnings per sh [AB]	*11.20*
	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.30	.45	1.00	1.00	1.20	1.24	*1.30*	*1.40*	Div'ds Decl'd per sh [C]	*1.75*
	3.82	3.37	2.52	3.21	3.74	5.17	4.58	5.03	4.85	5.35	5.89	6.33	6.18	7.08	7.73	9.20	*9.70*	*10.15*	Cap'l Spending per sh	*11.90*
	28.81	32.37	35.71	40.15	44.96	50.63	56.58	61.80	67.35	71.67	76.53	86.67	92.14	99.26	102.63	107.17	*116.20*	*120.25*	Book Value per sh [D]	*137.50*
	19.32	19.37	19.83	19.88	19.95	20.01	20.05	20.10	20.27	20.28	19.14	18.94	18.90	18.87	18.67	18.70	*18.50*	*18.50*	Common Shs Outst'g [E]	*18.00*
	13.2	8.6	11.9	13.5	12.2	14.5	17.2	18.3	19.3	25.8	22.3	18.8	26.2	26.9	34.6	32.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*25.0*
	.79	.57	.76	.85	.78	.81	.91	.92	1.01	1.30	1.20	1.00	1.35	1.45	2.00	1.87			Relative P/E Ratio	*1.40*
	.4%	.4%	.3%	.3%	.3%	.2%	.1%	.1%	.1%	.1%	.2%	.3%	.5%	.5%	.6%	.7%			Avg Ann'l Div'd Yield	*.6%*
							1394.9	1456.6	1468.0	1591.0	1696.5	1809.4	1804.2	1826.2	2000.8	2233.0	*2425*	*2500*	Revenues ($mill) [A]	*2775*
							19.0%	19.1%	19.3%	16.4%	16.4%	17.4%	15.4%	16.5%	12.2%	11.4%	*13.0%*	*13.5%*	Operating Margin	*14.5%*
							71.7	77.1	81.6	88.9	96.7	103.3	104.7	106.0	108.8	121.2	*130*	*135*	Depreciation ($mill)	*145*
							119.9	124.3	115.6	107.7	148.7	163.6	135.8	151.1	103.4	103.7	*140*	*150*	Net Profit ($mill)	*200*
							38.6%	38.3%	40.4%	38.9%	20.6%	26.4%	23.7%	23.2%	23.0%	25.3%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
							8.6%	8.5%	7.9%	6.8%	8.8%	9.0%	7.5%	8.3%	5.2%	4.6%	*5.8%*	*6.0%*	Net Profit Margin	*7.2%*
							398.3	477.7	625.0	636.3	586.3	724.0	759.2	849.1	820.1	572.9	*675*	*700*	Working Cap'l ($mill)	*775*
							.2	- -	- -	- -	- -	- -	- -	- -	- -	- -	*Nil*	*Nil*	Long-Term Debt ($mill)	*Nil*
							1134.5	1242.2	1364.8	1453.2	1465.0	1641.2	1741.1	1873.0	1915.9	2004.0	*2150*	*2225*	Shr. Equity ($mill)	*2475*
							10.6%	10.0%	8.5%	7.4%	10.2%	10.0%	7.8%	8.1%	5.4%	5.2%	*6.5%*	*6.5%*	Return on Total Cap'l	*8.0%*
							10.6%	10.0%	8.5%	7.4%	10.2%	10.0%	7.8%	8.1%	5.4%	5.2%	*6.5%*	*6.5%*	Return on Shr. Equity	*8.0%*
							10.3%	9.8%	8.3%	7.2%	9.9%	9.5%	6.9%	7.1%	4.3%	4.1%	*5.5%*	*5.5%*	Retained to Com Eq	*7.0%*
							2%	2%	2%	3%	3%	5%	12%	12%	20%	21%	*17%*	*17%*	All Div'ds to Net Prof	*16%*

Target Price Range 2027 2028 2029

400 320 200 160 120 100 80 60 40

% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-14.0	3.7
3 yr.	-18.9	20.4
5 yr.	25.7	63.1

CAPITAL STRUCTURE as of 11/25/23
Total Debt None

Leases, Uncapitalized Annual rentals $19.6 mill.
Pension Assets-8/23 $3.0 mill. **Oblig.** $3.5 mill.

Common Stock 18,701,323 shs.
as of 12/29/23
(Incl. 15,111,028 Comm. Stock and 3,590,295 Class B shares. Class B shrs. have 10 votes for every Comm. shr., but are paid 80% of Common div'd.)
MARKET CAP: $3.2 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2022	2023	11/25/23
Cash Assets	376.4	79.4	77.4
Receivables	249.2	279.1	299.5
Inventory (LIFO)	151.5	148.3	148.5
Other	286.7	333.3	333.5
Current Assets	1063.8	840.1	858.9
Accts Payable	82.1	92.7	86.3
Debt Due	- -	- -	- -
Other	161.6	174.5	172.5
Current Liab.	243.7	267.2	258.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	5.5%	6.0%	*6.0%*
"Cash Flow"	4.0%	3.0%	*7.5%*
Earnings	3.0%	.5%	*10.0%*
Dividends	22.5%	41.5%	*7.5%*
Book Value	8.5%	7.5%	*5.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [A] Nov.Per	Feb.Per	May Per	Aug.Per	Full Fiscal Year
2021	446.8	449.8	464.3	465.3	1826.2
2022	486.2	486.7	511.5	516.4	2000.8
2023	541.8	542.7	576.7	571.8	2233.0
2024	593.5	*590*	*600*	*641.5*	*2425*
2025	*615*	*610*	*630*	*645*	*2500*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Nov.Per	Feb.Per	May Per	Aug.Per	Full Fiscal Year
2021	2.20	1.71	2.21	1.82	7.94
2022	1.77	.97	1.33	1.39	5.46
2023	1.82	.95	1.29	1.47	5.53
2024	2.26	*1.45*	*1.80*	*2.04*	*7.55*
2025	*2.40*	*1.55*	*1.95*	*2.15*	*8.05*

Calendar	QUARTERLY DIVIDENDS PAID [C] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.25	.25	.25	.25	1.00
2021	.25	.25	.25	.30	1.05
2022	.30	.30	.30	.31	1.21
2023	.31	.31	.31	.33	1.26
2024					

BUSINESS: UniFirst Corporation is a leading company in the industrial laundry business. Manufactures, rents, cleans, and delivers uniforms, as well as some non-garment items. Serves over 300,000 customer locations in the United States, Canada, and Europe. Sales breakdown: U.S. & Canadian Rental and Cleaning and Corporate segments, 88% of 2023 revenues; Specialty Garments, 8%; and First Aid, 4%. '23 depreciation rate: 5.4%. Has about 14,000 employees. Ronald Croatti Trust owns 5.5% of shares outstanding (20.3% of voting rights); Officers & directors, 1.1% (12/23 proxy). President and CEO: Steve Sintros. Incorporated: Massachusetts. Address: 68 Jonspin Road, Wilmington, MA. 01887. Telephone: 978-658-8888. Internet: www.unifirst.com.

UniFirst had a solid performance during the November period. The company reported positive year-over-year comparisons for both revenue and share earnings in the first fiscal quarter of 2024. The 9.5% increase in total revenue was mainly due to growth in the company's Core Laundry Operations, which benefited from the acquisition of Clean Uniform in March of 2023 and price increases. Additionally, the Specialty Garments and First Aid segments also experienced revenue growth, although at a smaller rate. Furthermore, UniFirst's operating margin improved by 100 basis points, to 9%, due to lower merchandise costs as a percentage of revenue and lower fleet and energy costs. These improved margins helped share profits advance by 24%, to $2.26, in the quarter. Overall, we believe the company will end fiscal 2024 with revenue of $2.425 billion and earnings per share of $7.55.

We are confident that UniFirst will do well in the long-term. The company is one of the leading providers of workplace uniforms and protective work wear clothing in the U.S. It can design, manufacture, personalize, rent, clean, deliver, and sell a wide range of uniforms and protective clothing across various industries. The growing demand for its services, along with price increases, should allow for a 4% annualized growth in the top line over the next five years. Additionally, we think the operating margin could expand another 300 basis points thanks to its Key Initiatives, which will focus on supply chain and utilization of automation and technology.

Shareholders can also expect to be well-rewarded. As of November 25, 2023, the company still had $99.7 million remaining under its share repurchase program.

Conservative long-term investors should consider adding this equity to their portfolio. The company's A-grade for Financial Strength sets it apart from its peers. It also holds an Above Average rank (2) for Safety and has an excellent score for Price Stability. However, investors should note that the stock carries a relatively high price-to-earnings multiple, indicating that they will have to buy at a premium. Still, this issue is a solid addition to a well-rounded portfolio.

Collin Cicconi *February 16, 2024*

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	70
Earnings Predictability	80

(A) Fiscal year ends last Saturday in August. **(B)** Diluted earnings. Excludes nonrec. gains/(losses): '12, 21¢; '15, (11¢); '16, 47¢; '17, ($1.84); '18, 76¢; '19, 81¢. Next earnings report due early April. **(C)** Amount listed is for comm. stock. Class B shares receive 80% of comm. div'd. Div'd. payment dates are typically in early March, June, September, and December. **(D)** Incl. intangibles in '23: $690.1 mill., $36.91/sh. **(E)** In millions.

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UNITED PARCEL SVC. NYSE-UPS

RECENT PRICE 139.08 | P/E RATIO 17.0 (Trailing: 15.8 Median: 17.0) | RELATIVE P/E RATIO 1.01 | DIV'D YLD 4.7% | VALUE LINE 314

TIMELINESS 4 Lowered 10/6/23
SAFETY 2 Lowered 11/18/22
TECHNICAL 3 Raised 2/16/24
BETA .80 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$131-$220 $176 (25%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	260	(+85%)	*20%*
Low	190	(+35%)	*12%*

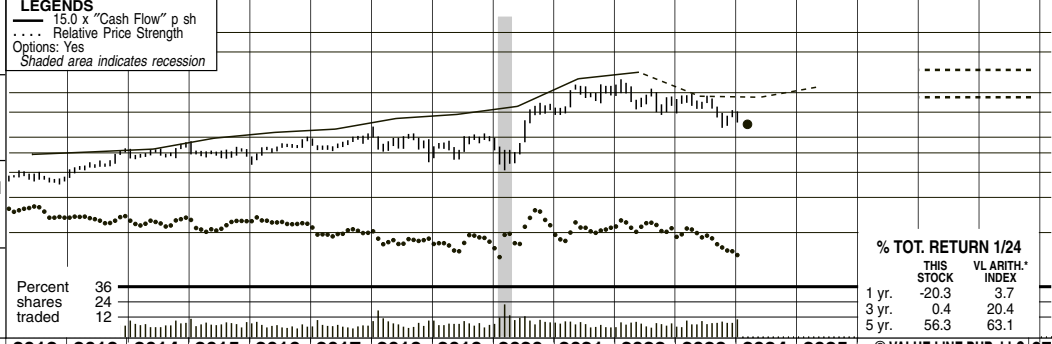
Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	1096	987	986
to Sell	862	1065	1031
Hld's(000)	511205	503100	500247

	105.4	113.1	114.4	120.4	125.2	135.5	125.3	178.0	220.2	233.7	197.8	161.5
High:	105.4	113.1	114.4	120.4	125.2	135.5	125.3	178.0	220.2	233.7	197.8	161.5
Low:	75.0	93.2	93.6	87.3	102.1	89.9	92.6	82.0	154.8	154.9	133.7	138.9

LEGENDS
15.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2027 2028 2029



% TOT. RETURN 1/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-20.3	3.7
3 yr.	0.4	20.4
5 yr.	56.3	63.1

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
51.72	45.62	50.19	55.15	56.80	60.00	64.34	65.87	70.17	76.68	83.75	86.50	97.88	111.86	116.84	*106.75*	*111.50*	*118.05*	Revenues per sh	*134.45*
5.42	4.09	5.43	6.20	6.56	6.75	6.97	7.91	8.44	8.78	9.92	10.39	11.41	15.64	16.90	*12.80*	*12.65*	*14.35*	"Cash Flow" per sh	*18.60*
3.50	2.31	3.56	4.23	4.53	4.61	4.75	5.43	5.75	6.01	7.24	7.53	8.23	12.13	12.94	8.78	*8.40*	*9.80*	Earnings per sh A	*14.00*
1.77	1.80	1.88	2.08	2.28	2.48	2.68	2.92	3.12	3.12	3.64	3.84	4.04	4.08	6.08	6.48	*6.52*	*6.84*	Div'ds Decl'd per sh B■	*7.90*
2.65	1.61	1.41	2.08	2.26	2.23	2.57	2.69	3.42	6.09	7.32	7.45	6.26	4.82	5.55	*6.05*	*5.40*	*5.95*	Cap'l Spending per sh	*7.00*
6.81	7.69	8.08	7.31	4.88	7.01	2.37	2.79	.47	1.16	3.52	3.81	.76	16.39	23.04	*20.30*	*23.35*	*24.70*	Book Value per sh C	*32.00*
995.44	992.85	987.12	963.00	953.00	924.00	905.00	886.00	868.00	859.00	858.00	856.60	864.60	869.70	858.80	*852.00*	*835.00*	*830.00*	Common Shs Outst'g D	*820.00*
18.4	22.6	18.1	16.7	16.7	19.3	21.2	18.5	18.4	18.6	15.6	14.7	15.8	15.7	14.6	19.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.0*
1.11	1.51	1.15	1.05	1.06	1.08	1.12	.93	.97	.94	.84	.78	.81	.85	.84	1.16			Relative P/E Ratio	*.90*
2.7%	3.5%	2.9%	2.9%	3.0%	2.8%	2.7%	2.9%	2.9%	2.8%	3.2%	3.5%	3.1%	2.1%	3.2%	3.8%			Avg Ann'l Div'd Yield	*3.5%*
58232	58363	60906	65872	71861	74094	84628	97287	100338	90958	*93100*	*98000*	Revenues ($mill)	*110250*
15.5%	16.9%	17.0%	16.1%	13.3%	14.2%	13.5%	16.5%	17.0%	14.6%	*14.0%*	*15.0%*	Operating Margin	*17.0%*
1923.0	2084.0	2224.0	2282.0	2207.0	2360.0	2698.0	2953.0	3188.0	3366.0	*3500*	*3550*	Depreciation ($mill)	*3750*
4389.0	4923.0	5104.0	5259.0	6301.0	6543.0	7166.0	10652	11326	7554	*7080*	*8375*	Net Profit ($mill)	*11500*
35.5%	34.0%	34.5%	33.8%	21.3%	22.0%	23.5%	22.0%	22.0%	21.8%	*23.5%*	*23.5%*	Income Tax Rate	*23.0%*
7.5%	8.4%	8.4%	8.0%	8.8%	8.8%	8.5%	10.9%	11.3%	8.3%	*7.6%*	*8.6%*	Net Profit Margin	*10.4%*
3169.0	2512.0	2119.0	2840.0	2123.0	1690.0	3200.0	7365.0	4077.0	1737.0	*1200*	*1000*	Working Cap'l ($mill)	*2500*
9864.0	11316	12394	20278	19931	21818	22031	19784	17321	18916	*17900*	*17900*	Long-Term Debt ($mill)	*15150*
2141.0	2470.0	405.0	1000.0	3021.0	3267.0	657.0	14253	19786	17306	*19500*	*20500*	Shr. Equity ($mill)	*24000*
38.0%	36.9%	41.4%	25.8%	28.8%	27.4%	33.1%	32.3%	31.5%	20.9%	*19.0%*	*22.0%*	Return on Total Cap'l	*29.5%*
205.0%	199.3%	260.2%	525.9%	208.6%	200.3%	1090.7%	74.7%	57.2%	43.7%	*39.0%*	*41.0%*	Return on Shr. Equity	*48.0%*
94.5%	97.1%	607.7%	248.8%	108.9%	102.5%	577.2%	50.6%	31.4%	11.3%	*8.0%*	*12.0%*	Retained to Com Eq	*19.0%*
54%	51%	52%	53%	48%	49%	47%	32%	45%	74%	*78%*	*70%*	All Div'ds to Net Prof	*56%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $21125 mill. **Due in 5 Yrs** $6982 mill.
LT Debt $18882 mill. **LT Interest** $775 mill.
(50% of Cap'l)

Leases, Uncapitalized: Annual rentals $668 mill.
Pension Assets-12/22 $42058 mill.
Oblig. $43504 mill.

Pfd Stock None
Common Stock 851,925,589 shs.
as of 10/19/23

MARKET CAP: $118 billion (Large Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	10593	7595	7278
Receivables	12669	12729	9593
Other	1672	1893	2380
Current Assets	24934	22217	19251
Accts Payable	7523	7512	5972
Debt Due	2131	2341	2243
Other	7915	8287	7602
Current Liab.	17569	18140	15817

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	7.5%	9.0%	*2.5%*
"Cash Flow"	9.0%	12.0%	*3.0%*
Earnings	10.5%	14.0%	*2.5%*
Dividends	8.5%	9.0%	*8.0%*
Book Value	7.0%	55.5%	*14.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	22908	23424	23184	27771	97287
2022	24378	24766	24161	27033	100338
2023	22925	22055	21061	24917	90958
2024	*22000*	*22200*	*22450*	*26450*	*93100*
2025	*23000*	*23450*	*23700*	*27850*	*98000*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	2.77	3.06	2.71	3.59	12.13
2022	3.05	3.29	2.99	3.62	12.94
2023	2.20	2.54	1.57	2.47	8.78
2024	*1.60*	*2.00*	*2.10*	*2.70*	*8.40*
2025	*2.00*	*2.35*	*2.35*	*3.10*	*9.80*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.01	1.01	1.01	1.01	4.04
2021	1.02	1.02	1.02	1.02	4.08
2022	1.52	1.52	1.52	1.52	6.08
2023	1.62	1.62	1.62	1.62	6.48
2024	1.63				

BUSINESS: United Parcel Service, Inc. is the world's second-largest integrated air and ground package delivery carrier. Also provides specialized transportation and logistics services. Service is offered throughout the U.S. and in over 220 other countries and territories. Domestic package operations accounted for 64% of '22 revenues; international (20%); supply chain & freight (16%). Fleet owned and leased (at 12/31/22): 586 planes and 125,000 ground vehicles. Has about 536,000 employees (over 62% unionized). Officers and directors own less than 1.0% of common stock; BlackRock Inc., 8.0%; Vanguard, 9.3% (3/23 Proxy). CEO: Carol B. Tomé. Incorporated: Delaware. Address: 55 Glenlake Pkwy., NE, Atlanta GA 30328. Tel.: 404-828-6000. Internet: www.ups.com.

United Parcel Service concluded a challenging 2023 with disappointing fourth-quarter results. Revenue dropped 7.8% year over year, as average daily volume (ADV) fell 7.5% on continued macroeconomic pressures, which caused more customers to trade down from air to ground. Total domestic air ADV decreased 15%, while ground declined 5.8%. Demand from large enterprise clients has dwindled either because their business is down in general or they have encouraged more buy online, pick up in-store activity. U.S. business-to-business ADV (35.5% of total volume) shrank 6.8%, driven by weakness from retail, manufacturing, and high-tech clients. The B2B space also continues to be hurt by customers who switched to FedEx or the U.S. Postal Service when disruptions seemed likely during UPS' negotiations with the Teamsters Union last summer. By the end of December, the company claimed to have won back nearly 60% of the volume diverted during the labor dispute. Internationally, soft demand continued to pressure volumes out of Asia and Europe, as several vital economies remain in recession and face continued inflation, pressuring demand and driving a shift away from express services. Regarding 2024, total ADV is expected to go from negative in the year's first half to positive in the back half. This should be driven by UPS lapping the impact of the volume diversion.

Management is taking action to right-size the cost structure. Tailwinds from the pandemic are well in the rear-view mirror, and UPS now has to adjust the business for lower volumes. As such, a workforce reduction of 12,000 was announced, as this is expected to save around $1 billion in 2024. We note that the savings pale in comparison to the total cost of the Teamsters contract, which is reportedly no more than $30 billion over the course of the five-year deal, with roughly half of the total booked in 2023. Elsewhere, UPS is exploring strategic alternatives for its truckload business known as Coyote, owing to its cyclical nature and considerable earnings volatility.

It will likely take a few quarters before results turn around for these untimely shares.

Kevin Downing *February 16, 2024*

(A) Pro forma diluted earnings. May not sum due to changes in share count. Next earnings report due late April.
(B) Dividends historically paid early March, June, September, and December. ■ Dividend reinvestment plan available.
(C) Includes intangibles. In 2022: $7019 mill., $8.17 per share.
(D) In millions.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	70
Earnings Predictability	85

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UNIVERSAL CORP. NYSE-UVV

RECENT PRICE **51.01** | P/E RATIO **7.9** (Trailing: 9.6 Median: 14.0) | RELATIVE P/E RATIO **0.43** | DIV'D YLD **6.3%** | **VALUE LINE**

TIMELINESS 2 Lowered 2/2/24
SAFETY 2 Raised 4/12/24
TECHNICAL 3 Lowered 4/12/24
BETA .80 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$40-$70 $55 (10%)

2027-29 PROJECTIONS

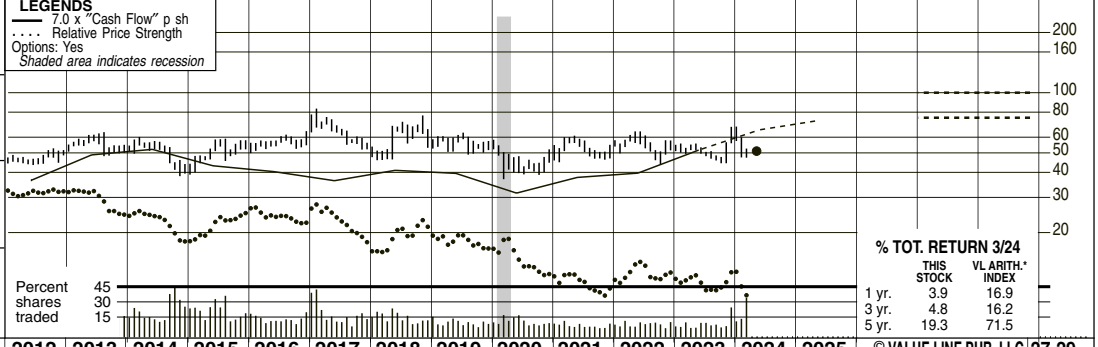
	Price	Gain	Ann'l Total Return
High	100	(+95%)	*22%*
Low	75	(+45%)	*15%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	89	79	91
to Sell	87	94	91
Hld's(000)	19231	18996	19904

	63.6	60.1	58.9	64.2	83.4	77.0	63.2	58.3	60.9	64.1	67.5	67.8
High:	48.1	38.3	39.0	49.9	52.1	45.9	49.1	37.0	44.9	43.6	44.4	47.4

LEGENDS
7.0 x "Cash Flow" p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession



% TOT. RETURN 3/24

	THIS STOCK	VL ARITH.* INDEX
1 yr.	3.9	16.9
3 yr.	4.8	16.2
5 yr.	19.3	71.5

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
102.19	102.43	110.65	105.21	105.45	109.50	100.55	93.33	81.95	81.58	89.12	78.21	80.90	85.69	104.66	*112.00*	*111.55*	*111.10*	Revenues per sh [A]	*110.00*
6.35	8.10	7.90	5.21	6.98	7.45	6.17	5.77	5.19	5.84	5.65	4.51	5.39	5.67	7.39	*7.75*	*9.30*	*10.40*	"Cash Flow" per sh	*13.65*
4.32	5.68	5.30	3.25	4.66	5.25	4.06	3.92	3.87	3.97	4.11	2.86	3.53	3.47	4.97	*6.00*	*7.00*	*8.00*	Earnings per sh [A B]	*11.00*
1.82	1.86	1.90	1.94	1.98	2.02	2.06	2.10	2.14	2.18	2.80	3.04	3.08	3.10	3.14	3.18	*3.22*	*3.26*	Div'ds Decl'd per sh [C ■]	*3.38*
1.43	2.37	1.68	1.64	1.32	1.97	2.58	2.08	1.41	1.37	1.55	1.44	2.70	2.17	2.23	*2.20*	*2.10*	*2.20*	Cap'l Spending per sh	*2.50*
32.66	37.39	41.85	41.73	44.79	50.19	50.95	52.94	50.90	53.85	53.50	51.05	53.33	54.60	56.90	*56.80*	*57.70*	*59.25*	Book Value per sh	*63.35*
25.00	24.33	23.24	23.26	23.34	23.22	22.59	22.72	25.27	24.93	24.99	24.42	24.52	24.55	24.56	*25.00*	*26.00*	*27.00*	Common Shs Outst'g [D]	*30.00*
10.2	7.4	7.9	13.0	10.6	10.5	11.9	13.5	15.5	14.8	14.7	18.8	13.1	15.4	10.9	*9.5*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*8.0*
.61	.49	.50	.82	.67	.59	.63	.68	.81	.74	.79	1.00	.67	.83	.63	*.50*			Relative P/E Ratio	*.45*
4.1%	4.4%	4.5%	4.6%	4.0%	3.7%	4.3%	4.0%	3.6%	3.7%	4.6%	5.6%	6.7%	5.8%	5.8%	5.7%			Avg Ann'l Div'd Yield	*4.0%*
2271.8	2120.4	2071.2	2033.9	2227.2	1910.0	1983.4	2103.6	2569.8	*2800*	*2900*	*3000*	Revenues ($mill) [A]	*3300*
8.8%	10.3%	10.6%	10.1%	9.8%	9.0%	10.6%	10.5%	9.3%	*10.0%*	*11.0%*	*12.0%*	Operating Margin	*15.0%*
39.7	36.8	35.9	34.8	37.1	38.4	44.7	52.5	57.3	*58.0*	*60.0*	*65.0*	Depreciation ($mill)	*80.0*
114.6	109.0	106.3	110.8	104.1	71.7	87.4	86.6	124.1	*135*	*180*	*215*	Net Profit ($mill)	*330*
24.0%	31.5%	33.5%	33.5%	27.2%	31.1%	23.4%	27.2%	8.3%	*9.0%*	*10.0%*	*11.0%*	Income Tax Rate	*14.0%*
5.0%	5.1%	5.1%	5.4%	4.7%	3.8%	4.4%	4.1%	4.8%	*5.0%*	*6.5%*	*7.0%*	Net Profit Margin	*10.0%*
1363.7	1392.3	1293.4	1321.3	1334.4	1212.2	1262.2	1229.3	1360.9	*1400*	*1500*	*1600*	Working Cap'l ($mill)	*1900*
370.0	370.0	368.7	369.1	368.5	368.8	518.2	518.5	616.8	*620*	*700*	*800*	Long-Term Debt ($mill)	*1100*
1362.7	1414.2	1286.5	1342.4	1337.1	1246.7	1307.3	1340.5	1397.1	*1420*	*1500*	*1600*	Shr. Equity ($mill)	*1900*
7.1%	6.5%	6.9%	6.9%	6.5%	5.0%	5.4%	5.4%	7.4%	*8.0%*	*10.0%*	*10.5%*	Return on Total Cap'l	*12.0%*
8.4%	7.7%	8.3%	8.3%	7.8%	5.7%	6.7%	6.5%	8.9%	*9.5%*	*12.0%*	*13.5%*	Return on Shr. Equity	*17.5%*
4.6%	3.9%	3.5%	4.2%	2.6%	NMF	.9%	.8%	3.3%	*4.0%*	*6.5%*	*8.0%*	Retained to Com Eq	*12.0%*
54%	57%	57%	49%	67%	105%	86%	88%	62%	*57%*	*46%*	*41%*	All Div'ds to Net Prof	*31%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $617.2 mill. **Due in 5 Yrs** $445.0 mill.
LT Debt $617.2 mill. **LT Interest** $64.0 mill.
(Total interest coverage: 4.6x)
(30% of Cap'l)
Leases, Uncapitalized Annual Rentals $40.2 mill.
Pension Assets-3/23 $256.0 mill.
Oblig. $277.1 mill.

Common Stock 24,573,240 shares
as of 2/5/24

MARKET CAP: $1.3 billion (Small Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	81.7	64.7	74.1
Receivables	519.7	585.1	435.3
Inventory	1016.7	1036.8	1205.3
Other	129.9	116.3	298.9
Current Assets	1748.0	1802.9	2013.6
Accts Payable	173.8	89.0	89.3
Debt Due	- -	- -	- -
Other	344.9	353.0	535.6
Current Liab.	518.7	442.0	624.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	-1.0%	2.5%	*3.5%*
"Cash Flow"	- -	3.5%	*14.5%*
Earnings	-.5%	1.0%	*18.5%*
Dividends	4.5%	5.5%	*1.5%*
Book Value	2.0%	1.0%	*2.5%*

Fiscal Year Begins	QUARTERLY REVENUES ($ mill.) [A] Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2021	350.0	454.0	652.6	647.0	2103.6
2022	429.8	651.0	795.0	694.0	2569.8
2023	517.7	638.5	821.5	*822.3*	*2800*
2024	*540*	*660*	*845*	*855*	*2900*
2025	*565*	*685*	*870*	*880*	*3000*

Fiscal Year Begins	EARNINGS PER SHARE [A B] Jun.30	Sep.30	Dec.31	Mar.31	Full Fiscal Year
2021	.26	.78	1.40	1.03	3.47
2022	.27	.88	1.67	2.15	4.97
2023	d.08	1.12	2.12	*2.84*	*6.00*
2024	*.15*	*1.35*	*2.40*	*3.10*	*7.00*
2025	*.40*	*1.60*	*2.65*	*3.35*	*8.00*

Cal-endar	QUARTERLY DIVIDENDS PAID [C ■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.76	.76	.77	.77	3.06
2021	.77	.77	.78	.78	3.10
2022	.78	.78	.79	.79	3.14
2023	.79	.79	.80	.80	3.18
2024	.80				

BUSINESS: Universal Corporation (formerly Universal Leaf Tobacco) is the largest leaf tobacco exporter/importer in the world. Engaged in the purchasing, processing, and selling of tobacco to cigarette, pipe tobacco, and cigar manufacturers. Tobacco sales consist primarily of flue-cured and burley tobaccos. Conducts business in more than 30 countries and employs more than 25,000 permanent and seasonal workers. Sold lumber and building products business, 9/06; majority of agri-products division, 9/06. Officers & directors own 3.1% of stock; BlackRock, Inc., 16.3% (6/23 Proxy). Chairman, President, and CEO: George C. Freeman. Inc.: VA. Address: 9201 Forest Hill Avenue, Richmond, VA 23235. Telephone: 804-359-9311. Internet: www.universalcorp.com.

Universal has posted impressive top-line results. Revenues have increased, thanks to higher tobacco sales prices and an improved product mix. Larger crops in Africa and strong tobacco shipments have also benefited results. However, the company is currently facing challenges. Global supply for all types of leaf tobacco continues to be tight. Recently, Universal's uncommitted tobacco inventory was at a low level of 8%. The business expects global leaf tobacco supply to remain limited in the coming quarters, in part due to El Nino weather conditions. Nonetheless, management is optimistic that Universal will persistently be able to satisfy customer needs. In other news, the company is expanding production at its ingredients facility in Lancaster, Pennsylvania. We estimate the top line rose 9%, to $2.8 billion, in fiscal 2023 (ended March 31st, 2024). In fiscal 2024 and 2025, sales will probably advance 4% and 3%, to $2.9 and $3.0 billion, respectively, assuming demand expands moderately.

Despite facing some obstacles, share earnings ought to improve. The cost of goods sold has increased because of an uptick in green tobacco outlays. At the Tobacco Operations segment, selling, general, and administrative expenses have advanced due to elevated compensation and benefits costs, as well as unfavorable foreign-currency comparisons. SG&A expenditures at the Ingredient Operations segment have risen because of higher expenses related to investment in expanding sales and product development capabilities. On a more positive note, overall costs are declining as a percentage of sales. We estimate the bottom line advanced 21%, to $6.00 a share, in fiscal 2023. In fiscal 2024 and 2025, share earnings will probably step up a more sustainable 17% and 14%, to $7.00 and $8.00, respectively, as healthy volume should ensure solid operating leverage.

Since our January report, this stock's Timeliness rank has dropped one notch, to 2 (Above Average). The company has a high dividend yield, a strong score for Price Stability, and a solid Beta coefficient. Capital appreciation potential to 2027-2029 is attractive. This issue may be alluring to conservative investors.

Keith R. Foldesi *April 12, 2024*

(A) Fiscal year ends March 31st. **(B)** Diluted earnings. Excluding nonrecurring & disc. op. gains (losses): '10, (14¢); '11, ($1.83); '16, $2.99; '17, (41¢). May not sum to total due to change in shares outstanding and conversion of preferred stock. Next earnings report due late May. **(C)** Dividends historically paid in Feb., May, Aug., and Nov. ■ Div'd. reinvestment plan avail. **(D)** In millions.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	20
Earnings Predictability	70

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WERNER ENTERPR'S NDQ-WERN

RECENT PRICE 39.71 | P/E RATIO 17.2 (Trailing: 15.7 Median: 17.0) | RELATIVE P/E RATIO 1.02 | DIV'D YLD 1.4% | VALUE LINE 328

TIMELINESS 5 Lowered 2/16/24
SAFETY 2 Raised 5/19/23
TECHNICAL 4 Lowered 2/2/24
BETA .75 (1.00 = Market)

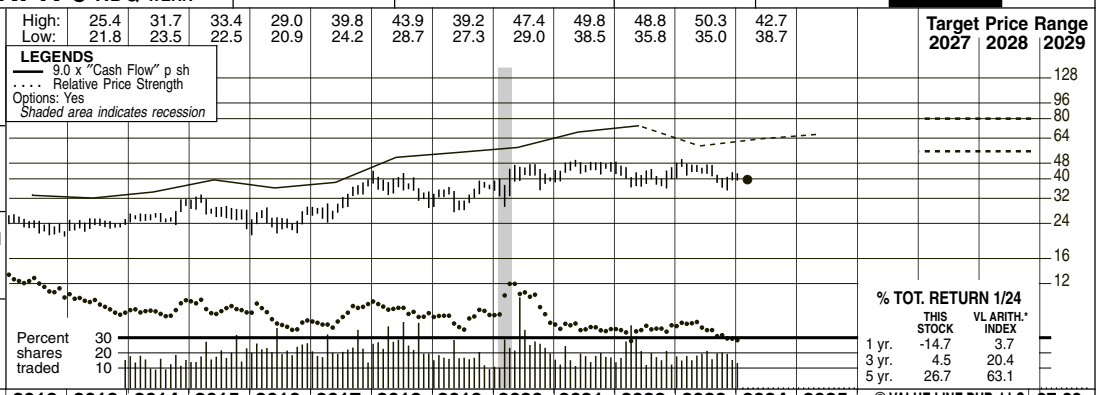
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$36-$58 $47 (20%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+100%)	*20%*
Low	55	(+40%)	*10%*

Institutional Decisions

	1Q2023	2Q2023	3Q2023
to Buy	121	117	142
to Sell	131	143	121
Hld's(000)	55144	54268	53406



2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
30.26	23.18	24.98	27.49	27.80	27.91	29.70	29.08	27.84	29.23	34.89	35.58	34.92	41.56	52.04	*52.05*	*53.95*	*56.35*	Revenues per sh	*62.90*
3.28	2.95	3.20	3.59	3.69	3.57	3.83	4.40	4.00	4.28	5.70	6.01	6.38	7.63	8.21	*6.50*	*7.05*	*7.45*	"Cash Flow" per sh	*8.80*
.94	.79	1.10	1.40	1.40	1.18	1.36	1.71	1.09	1.27	2.38	2.38	2.59	3.45	3.71	*2.00*	*2.45*	*2.70*	Earnings per sh [A]	*3.75*
.20	.20	.20	.20	.20	.20	.20	.22	.24	.27	.34	.36	.36	.43	.51	.54	*.60*	*.64*	Div'ds Decl'd per sh [BE]	*.72*
2.88	2.47	2.42	4.15	3.89	2.91	4.12	6.31	7.45	4.37	7.38	6.08	6.08	5.64	8.02	*10.00*	*10.50*	*11.00*	Cap'l Spending per sh [C]	*12.00*
10.42	9.80	9.21	9.95	9.76	10.62	11.58	13.00	13.78	16.36	17.95	16.04	17.59	20.18	22.83	*24.20*	*26.05*	*28.15*	Book Value per sh	*35.90*
71.58	71.90	72.65	72.85	73.25	72.71	72.04	72.00	72.17	72.41	70.44	69.25	67.93	65.79	63.22	*63.00*	*63.00*	*63.00*	Common Shs Outst'g [D]	*62.00*
20.7	22.0	19.9	17.1	16.8	20.1	19.3	16.4	22.9	24.1	15.3	14.2	15.7	13.2	11.1	*21.5*	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
1.25	1.47	1.27	1.07	1.07	1.13	1.02	.83	1.20	1.21	.83	.76	.81	.71	.64	*1.24*			Relative P/E Ratio	*1.00*
1.0%	1.2%	.9%	.8%	.9%	.8%	.8%	.8%	1.0%	.9%	.9%	1.1%	.9%	.9%	1.2%	1.3%			Avg Ann'l Div'd Yield	*1.1%*
2139.3	2093.5	2009.0	2116.7	2457.9	2463.7	2372.2	2734.4	3290.0	*3280*	*3400*	*3550*	Revenues ($mill)	*3900*
15.8%	18.8%	16.7%	17.2%	18.6%	19.4%	21.0%	21.4%	18.5%	*15.0%*	*15.5%*	*16.0%*	Operating Margin	*17.0%*
177.0	193.2	209.7	217.6	230.2	249.5	253.7	267.7	279.9	*285*	*290*	*295*	Depreciation ($mill)	*310*
98.7	123.7	79.1	92.1	171.4	166.9	179.9	234.3	238.9	*125*	*155*	*175*	Net Profit ($mill)	*235*
39.0%	38.5%	37.9%	37.7%	24.5%	24.8%	24.8%	24.4%	24.9%	*25.0%*	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
4.6%	5.9%	3.9%	4.4%	7.0%	6.8%	7.6%	8.6%	7.3%	*3.8%*	*4.6%*	*4.9%*	Net Profit Margin	*6.0%*
239.8	223.8	158.2	168.0	146.3	157.5	182.9	362.5	453.1	*435*	*205*	*5.0*	Working Cap'l ($mill)	*d700*
75.0	75.0	160.0	75.0	50.0	225.0	175.0	422.5	687.5	*700*	*700*	*700*	Long-Term Debt ($mill)	*800*
833.9	935.7	994.8	1184.8	1264.8	1111.0	1195.0	1327.6	1443.6	*1525*	*1640*	*1775*	Shr. Equity ($mill)	*2225*
10.9%	12.3%	7.0%	7.4%	13.1%	12.7%	13.2%	13.5%	11.5%	*6.5%*	*8.0%*	*8.0%*	Return on Total Cap'l	*8.5%*
11.8%	13.2%	8.0%	7.8%	13.6%	15.0%	15.1%	17.6%	16.5%	*8.0%*	*9.5%*	*10.0%*	Return on Shr. Equity	*10.5%*
10.1%	11.6%	6.2%	6.2%	11.7%	12.7%	13.0%	15.5%	14.3%	*6.0%*	*7.0%*	*7.5%*	Retained to Com Eq [E]	*8.5%*
15%	12%	22%	20%	13%	15%	14%	12%	13%	*27%*	*24%*	*24%*	All Div'ds to Net Prof	*19%*

CAPITAL STRUCTURE as of 9/30/23
Total Debt $690.1 mill. **Due in 5 Yrs** $175.0 mill.

LT Debt $686.3 mill. **LT Interest** $3.0 mill. (31% of Cap'l)

No Defined Benefit Pension Plan

Pfd Stock None

Common Stock 63,390,516 shs.

MARKET CAP: $2.5 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	9/30/23
Cash Assets	54.2	107.2	42.8
Receivables	460.5	518.8	449.8
Other	116.5	136.6	152.2
Current Assets	631.2	762.6	644.8
Accts Payable	94.0	124.5	143.7
Debt Due	5.0	6.3	3.8
Other	169.7	178.7	182.2
Current Liab.	268.7	309.5	329.7

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '20-'22 to '27-'29
Revenues	5.0%	8.5%	*4.5%*
"Cash Flow"	8.0%	12.0%	*2.0%*
Earnings	9.5%	19.0%	*2.0%*
Dividends	8.0%	12.0%	*7.0%*
Book Value	7.5%	7.0%	*8.5%*

Calendar	QUARTERLY REVENUES ($ mill.)[A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	616.4	649.8	702.9	765.2	2734.4
2022	764.6	836.3	827.6	861.5	3290.0
2023	832.7	811.1	817.7	*818.5*	*3280*
2024	*800*	*865*	*860*	*875*	*3400*
2025	*830*	*900*	*900*	*920*	*3550*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.68	.86	.79	1.13	3.46
2022	.96	.87	.90	.99	3.70
2023	.60	.52	.42	*.46*	*2.00*
2024	*.50*	*.65*	*.70*	*.60*	*2.45*
2025	*.55*	*.70*	*.75*	*.70*	*2.70*

Calendar	QUARTERLY DIVIDENDS PAID [BE] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.09	.09	.09	.09	.36
2021	.09	.10	.12	.12	.43
2022	.12	.12	.13	.13	.50
2023	.13	.13	.14	.14	.54
2024	.14				

BUSINESS: Werner Enterprises, Inc. is a truckload carrier of general commodities throughout the continental U.S., Canada, and Mexico. Targets service-sensitive segment of dry-van, flatbed, and temperature-controlled truckload market. Provides dedicated and regional carriage. As of 12/22, the company had 8,600 trucks (8,305 company-owned) and about 29,965 trailers. 2022 depr. rate was 10.1%. Werner has 14,300 employees. Officers/directors, own 1.2% of common stock; BlackRock, 13.1%; Vanguard Group, 9.0%; Macquarie Group, 7.0% (4/23 proxy). Chairman, President, and CEO: Derek J. Leathers. Incorporated: Nebraska. Address: 14507 Frontier Rd., P.O. Box 45308, Omaha, NE 68145. Telephone: 402-895-6640. Internet: www.werner.com.

Werner likely finished up 2023 with an unexciting result. The company's profits probably continued to decline year-to-year in the December period, with earnings set to come in at $0.46 a share, on revenues of roughly $819 million. A number of factors are constraining performance for the trucker, including some push back on higher pricing, as well as rising costs of labor, fuel, supplies, and interest expenses. The inflationary climate, along with the competitive hiring market for qualified truck drivers, have both remained a drag on operations over the past several quarters. We expect that this trend will continue to present challenges in 2024, as well.

On the upside, despite continued unease, the outlook has improved for 2024. Even as pandemic-related market demand fades and pressure from rising borrowing and operating costs take their toll, Werner is capturing market share and working towards greater efficiency. Emphasis on enhancing the utilization of One-Way assets and optimizing the fleet, while maintaining long-term pricing discipline, should bear fruit this year. Despite the shorter length of haul averages, the freight mover is generating decent revenue per mile growth. Based on current backlog, the company should see revenues rise again next year. Moreover, Werner's diversified business model and scale should allow it to bounce back fairly quickly once supply and demand trends even out and economic conditions improve. There are indicators that the trough in freight market dynamics may be bottoming out.

We have introduced 2025 forecasts. Revenues should increase to about $3.6 billion and earnings per share will likely advance to $2.70. Fundamentals in the freight transportation arena are improving, thanks to stronger economic data, including solid gross domestic product growth and employment expansion. We expect this positive cycle to continue next year and beyond.

The stock offers attractive recovery potential to patient investors willing to buy and hold. We expect earnings to improve this year and a firmer economic outlook supports operational growth prospects over the long haul.

Simon R. Shoucair *February 16, 2024*

(A) Diluted shares. May not sum due to rounding. Next earnings report due late April.
(B) Dividends historically paid late Jan., May, July, and Oct.
(C) Net of equipment sales.
(D) In millions.
(E) Excludes special dividend of $2.10/sh., paid 12/08; $1.25/sh., paid 12/09; $1.60/sh., paid 12/10; $0.50, paid 12/11; $1.50, paid 11/12; $3.75, paid 5/19.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	70

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WATSCO, INC. NYSE-WSO

RECENT PRICE 397.41 | P/E RATIO 27.1 (Trailing: 29.1 Median: 25.0) | RELATIVE P/E RATIO 1.52 | DIV'D YLD 2.7% | VALUE LINE 1150

TIMELINESS 5 Lowered 2/23/24
SAFETY 1 Raised 9/18/20
TECHNICAL 2 Lowered 3/15/24
BETA .85 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$241-$466 $354 (-10%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	635	(+60%)	*14%*
Low	520	(+30%)	*10%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	328	297	363
to Sell	288	318	315
Hld's(000)	35134	35754	35691

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
High:	98.1	108.9	133.1	159.5	172.0	192.9	183.0	249.3	319.0	316.0	433.2	427.0								
Low:	73.6	84.3	103.0	106.6	134.1	131.9	136.4	133.0	224.3	220.7	251.5	373.3								
	60.02	62.29	87.66	90.22	99.41	107.79	112.68	116.48	118.79	116.63	121.37	124.90	131.22	161.86	187.73	186.33	*188.40*	*195.00*	Sales per sh	*219.50*
	2.38	1.61	2.82	3.10	3.45	4.19	4.84	5.44	5.71	5.94	7.07	7.08	7.67	11.52	16.33	*14.62*	*16.25*	*17.65*	"Cash Flow" per sh	*23.15*
	2.18	1.40	2.49	2.74	3.03	3.68	4.32	4.90	5.15	5.54	6.49	6.50	7.01	10.78	15.41	13.67	*15.40*	*16.75*	Earnings per sh [A]	*22.20*
	1.75	1.89	2.04	2.23	2.48	1.15	2.00	2.80	3.60	4.60	5.60	6.40	6.93	7.63	8.55	9.80	*10.55*	*11.30*	Div'ds Decl'd per sh [C]	*12.80*
	.14	.18	.26	.42	.36	.42	.61	.67	1.23	.48	.46	.47	.43	.66	.92	1.06	*.85*	*.95*	Cap'l Spending per sh	*1.00*
	20.15	22.96	23.56	24.32	21.67	24.20	25.25	27.11	28.31	34.86	35.98	37.58	38.59	42.91	48.75	57.04	*57.95*	*62.50*	Book Value per sh [D]	*80.50*
	28.33	32.14	32.45	33.01	34.52	34.73	35.01	35.31	35.53	37.23	37.46	38.19	38.52	38.80	38.75	39.09	*39.70*	*40.00*	Common Shs Outst'g [B]	*41.00*
	19.2	32.9	22.7	23.1	23.9	23.8	22.6	24.8	26.3	27.5	26.3	24.7	28.1	25.8	17.6	25.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*26.0*
	1.16	2.19	1.44	1.45	1.52	1.34	1.19	1.25	1.38	1.38	1.42	1.32	1.44	1.39	1.02	1.41			Relative P/E Ratio	*1.45*
	4.2%	4.1%	3.6%	3.5%	3.4%	1.3%	2.1%	2.3%	2.7%	3.0%	3.3%	4.0%	3.5%	2.7%	3.2%	2.8%			Avg Ann'l Div'd Yield	*2.2%*
							3944.5	4113.2	4220.7	4342.0	4546.7	4770.4	5054.9	6280.2	7274.3	7283.8	*7480*	*7800*	Sales ($mill)	*9000*
							8.2%	8.7%	8.7%	8.6%	8.5%	8.0%	8.2%	10.1%	11.6%	11.0%	*11.9%*	*12.3%*	Operating Margin	*14.0%*
							17.9	19.1	20.1	22.0	22.1	24.5	25.9	28.1	31.7	35.1	*35.0*	*35.0*	Depreciation ($mill)	*40.0*
							151.4	172.9	182.8	199.0	242.9	246.0	269.6	418.9	601.2	536.3	*610*	*670*	Net Profit ($mill)	*910*
							30.6%	31.6%	31.0%	28.6%	19.7%	18.5%	19.2%	20.5%	15.2%	19.7%	*19.0%*	*19.0%*	Income Tax Rate	*19.0%*
							3.8%	4.2%	4.3%	4.6%	5.3%	5.2%	5.3%	6.7%	8.3%	8.2%	*8.2%*	*8.6%*	Net Profit Margin	*10.1%*
							870.3	911.0	925.3	920.9	1084.2	1085.0	997.3	1234.7	1392.2	1679.9	*1975*	*2150*	Working Cap'l ($mill)	*2250*
							303.2	245.3	235.3	21.8	135.2	155.7	4.8	98.2	11.4	27.6	*15.0*	*25.0*	Long-Term Debt ($mill)	*100*
							884.0	957.3	1005.8	1298.0	1347.8	1435.4	1486.7	1664.9	1889.2	2229.8	*2300*	*2500*	Shr. Equity ($mill)	*3300*
							13.0%	14.6%	14.9%	15.3%	16.5%	15.6%	18.1%	23.8%	31.7%	*23.9%*	*26.5%*	*26.5%*	Return on Total Cap'l	*27.0%*
							17.1%	18.1%	18.2%	15.3%	18.0%	17.1%	18.1%	25.2%	31.8%	24.1%	*26.5%*	*27.0%*	Return on Shr. Equity	*27.5%*
							9.2%	7.8%	5.5%	2.7%	2.5%	.3%	.3%	7.5%	14.2%	6.8%	*8.5%*	*8.5%*	Retained to Com Eq	*11.5%*
							46%	57%	70%	82%	86%	98%	99%	70%	55%	72%	*69%*	*67%*	All Div'ds to Net Prof	*58%*

CAPITAL STRUCTURE as of 12/31/23
Total Debt $127.9 mill. **Due in 5 Yrs** $127.9 mill.
LT Debt $27.6 mill. **LT Interest** $5.0 mill.
Includes Capital Leases
(Total interest coverage: over 25x)
(5% of Cap'l)
Leases, Uncapitalized: Annual rentals $100 mill.
No Defined Pension Benefit Plan

Common Stock 39,496,598 shs.
includes 5,562,249 Class B shs.
Each Class B share entitled to 10 votes
as of 2/20/24
MARKET CAP: $15.7 billion (Large Cap)

CURRENT POSITION ($MILL.)

	2021	2022	12/31/23
Cash Assets	118.3	147.5	210.1
Receivables	698.5	747.1	797.8
Inventory (FIFO)	1115.5	1370.2	1347.3
Other	29.1	33.9	36.7
Current Assets	1961.4	2298.7	2391.9
Accts Payable	364.2	456.1	369.4
Debt Due	84.5	90.6	100.3
Other	278.0	359.8	242.3
Current Liab.	726.7	906.5	712.0

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Sales	6.0%	8.0%	*4.0%*
"Cash Flow"	14.5%	17.5%	*8.5%*
Earnings	15.5%	18.0%	*9.0%*
Dividends	15.5%	12.0%	*9.0%*
Book Value	7.0%	7.0%	*7.0%*

QUARTERLY SALES ($ mill.)[A]

Calendar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	1136	1850	1783	1512	6281
2022	1524	2133	2036	1581	7274
2023	1551	2003	2127	1603	7284
2024	*1600*	*2050*	*2170*	*1660*	*7480*
2025	*1680*	*2130*	*2250*	*1740*	*7800*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2021	1.39	3.71	3.62	2.02	10.78
2022	2.90	4.93	4.03	3.55	15.41
2023	2.83	4.42	4.35	2.06	13.67
2024	*3.00*	*4.85*	*4.75*	*2.80*	*15.40*
2025	*3.40*	*5.25*	*5.00*	*3.10*	*16.75*

QUARTERLY DIVIDENDS PAID [C]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	1.60	1.775	1.775	1.775	6.925
2021	1.775	1.95	1.95	1.95	7.625
2022	1.95	2.20	2.20	2.20	8.55
2023	2.45	2.45	2.45	2.45	9.80
2024	2.45				

BUSINESS: Watsco, Inc. distributes heating, ventilation, and air conditioning (HVAC) equipment, as well as related parts and supplies, in the United States and overseas. Its HVAC equipment includes residential central ACs; light commercial ACs; gas, electric, and oil furnaces; commercial AC and heating equipment and systems; and other specialized equipment. Officers and directors own 0.9% of Class A stock; BlackRock, Inc., 12.0%; The Vanguard Group, 9.6%; Albert H. Nahmad owns 75.6% of Class B shares (4/23 proxy). Has about 7,425 employees. Chairman & Chief Executive Officer: Albert H. Nahmad. Incorporated: Florida. Address: 2665 South Bayshore Drive, Suite 901, Miami, Florida 33133. Telephone: 305-714-4100. Internet: www.watsco.com.

Watsco should notch decent operating results in 2024. Last year marked the introduction of various federal mandates, requiring higher-efficiency HVAC equipment. The rapid rollout of these systems posed challenges for many manufacturers, causing temporary production delays. These setbacks should be nearly completely resolved, and we now expect an uptick in volume will support sales growth in the full year. Upgraded HVAC equipment (an estimated 60% of units shipped in 2023) is poised to grow as a percentage of units sold, supporting margin expansion as the company transitions away from legacy products. In 2023, the full-year gross margin clocked in at 27.4%, which recently prompted management to raise the long-term gross margin target to 30%.

The company's scale provides it with a number of advantages. Nearly three times the size of the second-largest peer, Watsco holds a unique position through its nationwide distribution and one-stop-shop platform. Economies of scale should enable the company to capitalize in a few areas, including building out an e-commerce channel and inventory capabilities. Even in a challenging market, and compared to a very strong year in 2022, e-commerce sales grew 5% year over year, to represent about 34% of total sales in 2023. E-commerce should, in principle, enhance the productivity of contractors and inspire lower customer attrition rates. Investment in demand planning and inventory optimization should translate into incremental cost savings, and support profit growth.

Acquisitions are an important part of Watsco's long-term strategy. Operating in a fragmented field, management is focused on integrating smaller distributors into its network. Acquisitions and investing in inventory systems should enable Watsco to grow volume at a faster pace, relative to fixed technology and warehousing costs. While future deals are projected to be relatively small and sporadic, we think they'll gradually contribute to larger profits out to 2027-2029.

Watsco shares are not attractive as a near-term investment. (Timeliness: 5, Lowest.) Still, they offer decent risk-adjusted total return prospects for the 2027-2029 pull.

Lucas Vanarthos *March 15, 2024*

(A) Diluted earnings based off of earnings allocated to Watsco shareholders, which is net income less earnings attributed to noncontrolling interest. Excludes nonrecurring gains/(losses): '12, (33¢); '17, 27¢. Next earnings report due late April. May not sum due to change in shares outstanding.
(B) In millions.
(C) Dividend historically paid late-Jan., April, July, and Oct. Excludes $5/share special dividend paid 10/31/12. **(D)** Includes intangibles. In 2023: $675.3 million, $17.10/sh.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	85

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WESTERN UNION NYSE-WU

RECENT PRICE 13.30 | P/E RATIO 8.1 (Trailing: 7.6 Median: 11.0) | RELATIVE P/E RATIO 0.45 | DIV'D YLD 7.1% | VALUE LINE

TIMELINESS 1 Raised 4/19/24
SAFETY 3 New 11/24/06
TECHNICAL 3 Raised 4/26/24
BETA .85 (1.00 = Market)

18-Month Target Price Range

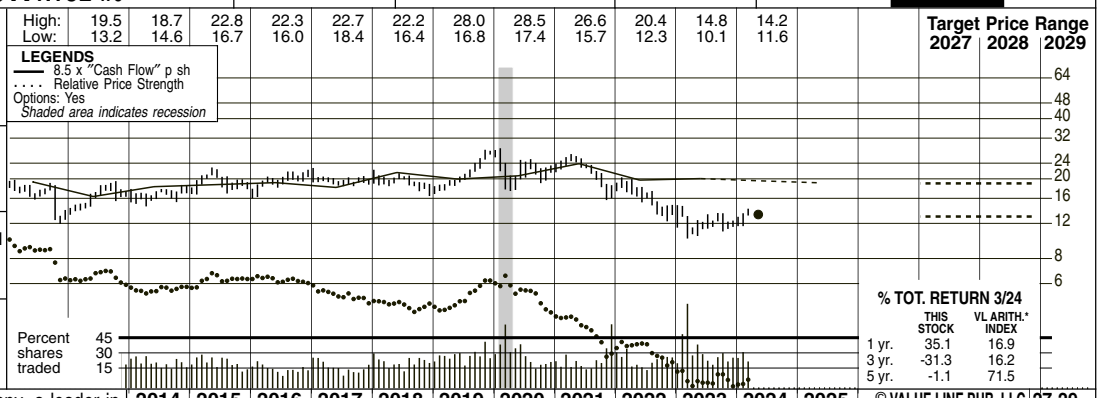
Low-High	Midpoint (% to Mid)
$7-$16	$12 (-15%)

2027-29 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	19	(+45%)	*15%*
Low	13	(Nil)	*7%*

Institutional Decisions

	2Q2023	3Q2023	4Q2023
to Buy	204	183	216
to Sell	234	233	216
Hld's(000)	333369	327404	316388



The Western Union Company, a leader in global money transfer processes and services was spunoff in a 100% tax-free offering to the shareholders of First Data Corp. on September 29, 2006. Approximately 765 million shares of common stock were distributed.

CAPITAL STRUCTURE as of 12/31/23
Total Debt $2504.6 mill. **Due in 5 Yrs** $2000.0 mill.
LT Debt $2504.6 mill. **LT Interest** $50.0 mill.
(Total interest coverage: 7.5x)
(84% of Tot. Cap'l)

Leases, Uncapitalized Annual rentals $45.9 mill.

No Defined Benefit Pension Plan

Common Stock 342,196,928 shares
as of 2/16/24

MARKET CAP: $4.6 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2021	2022	12/31/23
Cash Assets	1208.3	1285.9	1268.6
Receivables	- -	- -	- -
Inventory	- -	- -	- -
Other	- -	- -	- -
Current Assets	1208.3	1285.9	1268.6
Accts Payable	450.2	464.0	453.0
Debt Due	- -	- -	- -
Other	1349.5	1063.8	1075.2
Current Liab.	1799.7	1527.8	1528.2

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '21-'23 to '27-'29
Revenues	2.5%	0.5%	*1.5%*
"Cash Flow"	2.0%	1.5%	*1.5%*
Earnings	2.0%	2.0%	*-.5%*
Dividends	8.5%	6.0%	*2.5%*
Book Value	-3.5%	- -	*NMF*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	1210.0	1289.7	1286.3	1284.8	5070.8
2022	1155.7	1138.3	1089.6	1091.9	4475.5
2023	1037.0	1170.0	1097.8	1052.3	4357.0
2024	*1010*	*1080*	*1050*	*1060*	*4200*
2025	*1015*	*1090*	*1055*	*1070*	*4230*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2021	.44	.54	.63	.64	2.19
2022	.51	.51	.45	.32	1.76
2023	.43	.51	.43	.37	1.74
2024	*.41*	*.44*	*.43*	*.42*	*1.70*
2025	*.43*	*.45*	*.46*	*.46*	*1.80*

Calendar	QUARTERLY DIVIDENDS PAID D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2020	.225	.225	.225	.225	.90
2021	.235	.235	.235	.235	.94
2022	.235	.235	.235	.235	.94
2023	.235	.235	.235	.235	.94
2024	.235				

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	© VALUE LINE PUB. LLC	27-29
10.75	10.92	11.26	12.04	12.67	12.66	11.76	12.88	11.98	12.43	*12.35*	*12.80*	Revenues per sh	*14.55*
2.16	2.21	2.26	2.14	2.53	2.35	2.44	2.81	2.33	2.36	*2.30*	*2.45*	"Cash Flow" per sh	*2.95*
1.59	1.62	1.66	1.60	1.87	1.71	1.87	2.19	1.76	1.74	*1.70*	*1.80*	Earnings per sh A	*2.00*
.50	.62	.64	.70	.76	.80	.90	.94	.94	.94	*.94*	*.94*	Div'ds Decl'd per sh D	*.98*
.13	.19	.14	.15	.31	.12	.09	.10	.09	.07	*.40*	*.10*	Cap'l Spending per sh	*.10*
2.49	2.80	1.87	d1.07	d.70	d.09	.45	.90	1.28	1.37	*1.00*	*.65*	Book Value per sh B	*.20*
521.50	502.40	481.50	459.00	441.20	418.00	411.20	393.80	373.50	350.50	*340.00*	*330.00*	Common Shs Outst'g C	*300.00*
10.5	12.0	11.8	12.3	10.4	12.5	11.9	10.2	9.3	7.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*8.0*
.55	.60	.62	.62	.56	.67	.61	.55	.54	.40			Relative P/E Ratio	*.65*
3.0%	3.2%	3.3%	3.6%	3.9%	3.7%	4.0%	4.2%	5.7%	7.7%			Avg Ann'l Div'd Yield	*4.3%*
5607.2	5483.7	5422.9	5524.3	5589.9	5292.1	4835.0	5070.8	4475.5	4357.0	*4200*	*4230*	Revenues ($mill)	*4360*
25.2%	25.4%	24.3%	21.7%	24.8%	24.7%	25.5%	26.6%	23.9%	23.7%	*21.0%*	*23.0%*	Operating Margin	*25.0%*
271.9	270.2	263.2	262.9	264.7	257.7	225.6	208.2	183.8	183.6	*200*	*220*	Depreciation ($mill)	*280*
852.4	837.8	824.2	718.0	851.9	724.6	777.8	897.1	684.7	645.2	*585*	*595*	Net Profit ($mill)	*610*
12.0%	11.0%	9.7%	11.5%	14.1%	20.4%	13.0%	12.7%	9.9%	15.2%	*16.0%*	*18.0%*	Income Tax Rate	*20.0%*
15.2%	15.3%	15.2%	13.0%	15.2%	13.7%	16.1%	17.7%	15.3%	14.8%	*13.9%*	*14.1%*	Net Profit Margin	*14.0%*
609.8	308.6	d618.4	d1185	d830.3	d465.8	d189.5	d591.4	d241.9	d356.4	*d190*	*d195*	Working Cap'l ($mill)	*d25.0*
3720.4	3225.6	2786.1	3033.6	3308.7	2984.3	2987.2	2733.4	2436.8	2139.7	*2300*	*2200*	Long-Term Debt ($mill)	*2000*
1300.4	1404.9	902.2	d491.4	d309.8	d39.5	186.6	355.6	477.8	479.0	*370*	*230*	Shr. Equity ($mill) B	*d15.0*
18.7%	19.9%	24.4%	31.0%	30.9%	27.2%	26.4%	30.7%	25.2%	26.6%	*22.0%*	*24.5%*	Return on Total Cap'l	*35.0%*
NMF	59.6%	NMF	- -	- -	- -	NMF	NMF	NMF	NMF	*NMF*	*NMF*	Return on Shr. Equity	*NMF*
45.2%	37.1%	NMF	- -	- -	- -	NMF	NMF	67.1%	61.8%	*NMF*	*NMF*	Retained to Com Eq	*NMF*
31%	38%	38%	45%	40%	47%	48%	43%	53%	54%	*55%*	*52%*	All Div'ds to Net Prof	*49%*

BUSINESS: The Western Union Company is a leader in global money movement and payment services. Services are available through a global network of roughly 510,000 agent locations in more than 200 countries. About 90% of locations are outside of the United States. Spunoff from First Data Corp. on 9/29/06. Consumer segment accounted for about 87% of '21 revenues; Business Solutions, 8%; other, 5%. International consisted of 65% of revenues. Employs 11,000. President & CEO: Devin McGranahan. Chrmn: Jack Greenberg. BlackRock owns 10.0% of common stock; The Vanguard Group, 11.2%; Capital Research, 5.3% (4/24 proxy). Inc.: DE. Address: 7001 East Belleview Avenue, Denver, Colorado 80237. Tele.: 866-405-5012. Internet: www.westernunion.com.

Western Union is seeing decent underlying demand trends from its customer base. Consumers who use the company's services tend to reside at the lower end of the socioeconomic spectrum, working in such sectors as agriculture, hospitality, and construction. Strong demand for these occupations have enabled consistent principal per transaction.

The company is making progress on its strategic initiatives. One of Western Union's top priorities lately has been stabilizing the $3 billion per year retail business. It has been doing so by gaining customers and increasing transactions. During the third quarter of 2023, it reached flat transaction growth globally for retail, which was sustained into the fourth quarter. It is now in the process of shrinking the gap in the growth rates between transactions and revenue, which currently stands at around 900 basis points. The company hopes to get this to a 200 to 300 basis point spread, partly driven by price increases.

Western Union is rolling out new financial services. The company has introduced digital wallets in four European countries, Argentina, and Brazil. These wallets facilitate transactions and include a debit card and savings account. Elsewhere, it is gaining traction in retail and digital foreign exchange services, particularly in Europe. Additional services include bill pay and retail money orders. This part of the business has started generating significant revenue (estimated at approximately $350 million) and is projected to grow at a double-digit rate.

The company appears committed to shareholder returns. The capital allocation strategy prioritizes maintaining and protecting dividends, supported by the company's strong investment-grade credit rating. Beyond that, the company seeks value-oriented acquisitions to accelerate its strategic objectives. If suitable acquisition targets do not present themselves, it will likely opt to return value to shareholders through buybacks, as was the case in the fourth quarter of 2023.

These shares are timely. Investors do not appear to be pricing in stable revenue for the retail business, which we are cautiously optimistic about.

Oriatal J. Haiby *May 3, 2024*

(A) Diluted earnings. Next earnings report due late July. Excludes nonrecurring gains/(losses): '11, 27¢; '12, (5¢); '16 ($1.16); '17 ($2.85); '19, 75¢.
(B) Includes intangibles. In 2023: $2414.8 million, $6.89 a share.
(C) In millions.
(D) Quarterly dividend initiated in December, 2009. Dividends are typically paid late March, June, September, and December.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	25
Earnings Predictability	85

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THE VALUE LINE Investment Survey®

Part 1
Summary & Index

File at the front of the *Ratings & Reports* binder. Last week's *Summary & Index* should be removed.

May 3, 2024

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The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

18.0

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
15.7	11.0	18.1

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.2%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
2.4%	3.7%	2.1%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

50%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
75%	145%	45%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

15%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
24%	72%	12%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

	PAGE
Advertising (21)	2386
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Apparel (3)	2101
Asset Management (74)	2208
Automotive (30)	101
Auto Parts (24)	962
*Bank (27)	2501
Bank (Midwest) (20)	769
Beverage (90)	1960
Biotechnology (77)	819
Brokers & Exchanges (45)	1788
Building Materials (8)	1101
Cable TV (68)	1000
Chemical (Basic) (54)	1591
Chemical (Diversified) (41)	2425
Chemical (Specialty) (49)	548
Computers/Peripherals (34)	1408
*Computer Software (53)	2571
Cyber Security (36)	2008
Diversified Co. (60)	1745
Drug (66)	1601
E-Commerce (59)	1808
Educational Services (58)	1983
Electrical Equipment (38)	1301
Electric Util. (Central) (69)	901
Electric Utility (East) (55)	134
Electric Utility (West) (75)	2195
Electronics (57)	1324
Engineering & Const (29)	1009
Entertainment (83)	2331
Entertainment Tech (93)	1993
Environmental (71)	403
*Financial Svcs. (Div.) (4)	2532
Food Processing (48)	1901
Furn/Home Furnishings (70)	1151
Healthcare Information (46)	808
Heavy Truck & Equip (6)	146
Homebuilding (9)	1130
Hotel/Gaming (22)	2353
Household Products (62)	1189
Human Resources (56)	1630
Industrial Services (10)	370
Information Services (86)	419
*IT Services (33)	2602
Insurance (Life) (7)	1549
Insurance (Prop/Cas.) (16)	746
*Internet (18)	2627
Investment Banking (25)	1800
Investment Co. (--)	1202
Investment Co.(Foreign) (--)	412
Machinery (39)	1701
Maritime (63)	330
Medical Services (13)	783
Med Supp Invasive (78)	163
Med Supp Non-Invasive (35)	198
Metal Fabricating (11)	723
Metals & Mining (Div.) (28)	1574
Natural Gas Utility (43)	538
Natural Gas (Div.) (82)	522
Oil/Gas Distribution (52)	589
Oilfield Svcs/Equip. (87)	2408
Packaging & Container (5)	1173
Paper/Forest Products (81)	1165
Petroleum (Integrated) (14)	501
Petroleum (Producing) (65)	2393
Pipeline MLPs (47)	602
Power (72)	1212
Precious Metals (76)	1561
Precision Instrument (67)	112
Public/Private Equity (23)	2435
Publishing (19)	2379
Railroad (44)	337
R.E.I.T. (91)	1510
Recreation (64)	2301
Reinsurance (1)	2001
Restaurant (32)	347
Retail Automotive (73)	2116
Retail Building Supply (89)	1143
Retail (Hardlines) (31)	2162
Retail (Softlines) (51)	2182
Retail Store (17)	2133
Retail/Wholesale Food (15)	1941
Semiconductor (80)	1357
Semiconductor Equip (50)	1394
Shoe (26)	2154
Steel (12)	733
Telecom. Equipment (84)	940
Telecom. Services (37)	916
Thrift (61)	1501
Tobacco (42)	1977
Toiletries/Cosmetics (88)	990
Trucking (79)	315
Water Utility (92)	1781
Wireless Networking (85)	576

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXIX, No. 39.
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THE VALUE LINE Investment Survey®

Part 1
Summary & Index

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April 26, 2024

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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

17.9

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
16.1	11.0	18.1

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.2%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
2.3%	3.7%	2.1%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

50%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
65%	145%	45%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

14%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
19%	72%	12%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

	PAGE		PAGE		PAGE		PAGE
*Advertising (61)	2386	Electric Util. (Central) (73)	901	Investment Co.(Foreign) (--)	412	Reinsurance (1)	2001
Aerospace/Defense (48)	701	Electric Utility (East) (76)	134	Machinery (39)	1701	Restaurant (33)	347
Air Transport (3)	301	Electric Utility (West) (77)	2195	Maritime (62)	330	Retail Automotive (63)	2116
Apparel (2)	2101	Electronics (64)	1324	Medical Services (8)	783	Retail Building Supply (88)	1143
Asset Management (69)	2208	Engineering & Const (23)	1009	Med Supp Invasive (74)	163	Retail (Hardlines) (26)	2162
Automotive (25)	101	*Entertainment (90)	2331	Med Supp Non-Invasive (42)	198	Retail (Softlines) (30)	2182
Auto Parts (22)	962	Entertainment Tech (93)	1993	Metal Fabricating (13)	723	Retail Store (14)	2133
Bank (38)	2501	Environmental (78)	403	Metals & Mining (Div.) (51)	1574	Retail/Wholesale Food (15)	1941
Bank (Midwest) (40)	769	Financial Svcs. (Div.) (6)	2531	Natural Gas Utility (43)	538	Semiconductor (79)	1357
Beverage (89)	1960	Food Processing (60)	1901	Natural Gas (Div.) (82)	522	Semiconductor Equip (32)	1394
Biotechnology (67)	819	Furn/Home Furnishings (52)	1151	Oil/Gas Distribution (53)	589	Shoe (21)	2154
Brokers & Exchanges (35)	1788	Healthcare Information (55)	808	*Oilfield Svcs/Equip. (85)	2408	Steel (5)	733
Building Materials (9)	1101	Heavy Truck & Equip (7)	146	Packaging & Container (4)	1173	Telecom. Equipment (81)	940
Cable TV (28)	1000	Homebuilding (17)	1130	Paper/Forest Products (87)	1165	Telecom. Services (50)	916
Chemical (Basic) (54)	1591	*Hotel/Gaming (29)	2353	Petroleum (Integrated) (11)	501	Thrift (45)	1501
*Chemical (Diversified) (41)	2425	Household Products (68)	1189	*Petroleum (Producing) (70)	2393	Tobacco (27)	1977
Chemical (Specialty) (57)	548	Human Resources (56)	1630	Pipeline MLPs (47)	602	Toiletries/Cosmetics (80)	990
Computers/Peripherals (36)	1408	Industrial Services (10)	370	Power (75)	1212	Trucking (86)	315
Computer Software (37)	2570	Information Services (83)	419	Precious Metals (71)	1561	Water Utility (92)	1781
Cyber Security (24)	2008	IT Services (34)	2601	Precision Instrument (65)	112	Wireless Networking (84)	576
Diversified Co. (59)	1745	Insurance (Life) (12)	1549	*Public/Private Equity (31)	2435		
Drug (72)	1601	Insurance (Prop/Cas.) (19)	746	*Publishing (18)	2379		
E-Commerce (58)	1808	Internet (16)	2624	Railroad (44)	337		
Educational Services (46)	1983	Investment Banking (20)	1800	R.E.I.T. (91)	1510		
Electrical Equipment (49)	1301	Investment Co. (--)	1202	*Recreation (66)	2301		

*Reviewed in this week's issue.

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Part 1
Summary & Index

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April 19, 2024

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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

18.4

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
16.0	11.0	18.1

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.1%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
2.4%	3.7%	2.1%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

45%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
65%	145%	45%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

9%

26 Weeks Ago	Market Low 3-23-20	Market High 3-28-24
20%	72%	12%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

	PAGE		PAGE		PAGE		PAGE
Advertising (62)	2386	Electric Util. (Central) (71)	901	Investment Co.(Foreign) (--)	412	Reinsurance (1)	2001
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Chemical (Basic) (56)	1591	Hotel/Gaming (26)	2353	Petroleum (Integrated) (11)	501	Thrift (43)	1501
Chemical (Diversified) (38)	2425	Household Products (70)	1189	Petroleum (Producing) (52)	2393	Tobacco (40)	1977
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THE VALUE LINE Investment Survey®

Part 1
Summary & Index

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April 12, 2024

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The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

18.5

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
15.9	11.0	17.4

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.1%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
2.4%	3.7%	2.2%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

45%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
65%	145%	45%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

9%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
21%	72%	14%

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April 5, 2024

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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

18.3

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
16.4	11.0	17.4

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.1%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
2.3%	3.7%	2.2%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

45%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
65%	145%	45%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

10%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
19%	72%	14%

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Asset Management (66)	2208	Engineering & Const (37)	1009	Med Supp Invasive (74)	163	Retail (Hardlines) (25)	2162
Automotive (27)	101	Entertainment (91)	2331	Med Supp Non-Invasive (57)	198	Retail (Softlines) (12)	2182
Auto Parts (29)	962	Entertainment Tech (93)	1993	Metal Fabricating (19)	723	Retail Store (8)	2133
Bank (44)	2501	Environmental (79)	403	Metals & Mining (Div.) (76)	1574	Retail/Wholesale Food (9)	1941
Bank (Midwest) (53)	769	Financial Svcs. (Div.) (6)	2531	Natural Gas Utility (48)	538	Semiconductor (78)	1357
Beverage (84)	1960	Food Processing (59)	1901	Natural Gas (Div.) (83)	522	Semiconductor Equip (49)	1394
Biotechnology (63)	819	Furn/Home Furnishings (32)	1151	Oil/Gas Distribution (55)	589	Shoe (24)	2154
*Brokers & Exchanges (31)	1788	Healthcare Information (39)	808	Oilfield Svcs/Equip. (89)	2408	Steel (13)	733
Building Materials (3)	1101	Heavy Truck & Equip (18)	146	Packaging & Container (10)	1173	Telecom. Equipment (69)	940
Cable TV (17)	1000	Homebuilding (14)	1130	Paper/Forest Products (70)	1165	Telecom. Services (43)	916
Chemical (Basic) (45)	1591	Hotel/Gaming (28)	2353	Petroleum (Integrated) (20)	501	Thrift (36)	1501
Chemical (Diversified) (46)	2425	Household Products (68)	1189	Petroleum (Producing) (64)	2393	Tobacco (47)	1977
Chemical (Specialty) (61)	548	Human Resources (77)	1630	Pipeline MLPs (56)	602	Toiletries/Cosmetics (71)	990
Computers/Peripherals (34)	1408	Industrial Services (4)	370	Power (80)	1212	Trucking (85)	315
Computer Software (30)	2570	Information Services (73)	419	Precious Metals (88)	1561	*Water Utility (90)	1781
Cyber Security (26)	2008	IT Services (22)	2601	Precision Instrument (60)	112	Wireless Networking (86)	576
*Diversified Co. (58)	1745	Insurance (Life) (11)	1549	Public/Private Equity (2)	2435		
Drug (67)	1601	Insurance (Prop/Cas.) (21)	746	Publishing (23)	2379		
*E-Commerce (41)	1808	Internet (15)	2624	Railroad (38)	337		
Educational Services (50)	1983	*Investment Banking (35)	1800	R.E.I.T. (92)	1510		
Electrical Equipment (54)	1301	Investment Co. (--)	1202	Recreation (81)	2301		

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXIX, No. 35.
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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

18.1

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
16.5	11.0	17.4

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.1%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
2.3%	3.7%	2.2%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

45%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
60%	145%	45%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

12%

26 Weeks Ago	Market Low 3-23-20	Market High 3-8-24
17%	72%	14%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

	PAGE		PAGE		PAGE		PAGE
Advertising (59)	2386	Electric Util. (Central) (80)	901	Investment Co.(Foreign) (--)	412	Reinsurance (1)	2001
Aerospace/Defense (51)	701	Electric Utility (East) (73)	134	Machinery (42)	1701	Restaurant (40)	347
Air Transport (10)	301	Electric Utility (West) (87)	2195	Maritime (34)	330	Retail Automotive (61)	2116
Apparel (24)	2101	Electronics (43)	1324	Medical Services (8)	783	Retail Building Supply (71)	1143
Asset Management (57)	2208	Engineering & Const (37)	1009	Med Supp Invasive (72)	163	Retail (Hardlines) (26)	2162
Automotive (13)	101	Entertainment (88)	2331	Med Supp Non-Invasive (53)	198	Retail (Softlines) (6)	2182
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Brokers & Exchanges (31)	1789	Healthcare Information (39)	808	Oilfield Svcs/Equip. (89)	2408	Steel (18)	733
Building Materials (2)	1101	Heavy Truck & Equip (20)	146	Packaging & Container (16)	1173	Telecom. Equipment (69)	940
Cable TV (19)	1000	Homebuilding (12)	1130	Paper/Forest Products (81)	1165	Telecom. Services (52)	916
*Chemical (Basic) (56)	1591	Hotel/Gaming (27)	2353	Petroleum (Integrated) (23)	501	*Thrift (49)	1501
Chemical (Diversified) (46)	2425	Household Products (67)	1189	Petroleum (Producing) (68)	2393	Tobacco (47)	1977
Chemical (Specialty) (62)	548	*Human Resources (74)	1630	Pipeline MLPs (65)	602	Toiletries/Cosmetics (70)	990
Computers/Peripherals (30)	1408	Industrial Services (9)	370	Power (82)	1212	Trucking (86)	315
Computer Software (35)	2570	Information Services (76)	419	*Precious Metals (90)	1561	Water Utility (91)	1782
Cyber Security (25)	2008	IT Services (14)	2601	Precision Instrument (58)	112	Wireless Networking (85)	576
Diversified Co. (55)	1745	*Insurance (Life) (4)	1549	Public/Private Equity (3)	2435		
*Drug (66)	1601	Insurance (Prop/Cas.) (21)	746	Publishing (22)	2379		
E-Commerce (36)	1807	Internet (15)	2624	Railroad (38)	337		
Educational Services (50)	1983	Investment Banking (32)	1800	*R.E.I.T. (92)	1510		
Electrical Equipment (54)	1301	Investment Co. (--)	1202	Recreation (78)	2301		

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THE VALUE LINE Investment Survey®

Part 1
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March 22, 2024

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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

17.9

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
16.3	11.0	19.3

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.1%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
2.3%	3.7%	1.7%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

45%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
60%	145%	35%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

11%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
17%	72%	13%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

	PAGE		PAGE		PAGE		PAGE
Advertising (60)	2386	Electric Util. (Central) (79)	901	Investment Co.(Foreign) (--)	412	Reinsurance (1)	2001
Aerospace/Defense (51)	701	Electric Utility (East) (81)	134	Machinery (37)	1701	Restaurant (32)	347
Air Transport (8)	301	Electric Utility (West) (86)	2195	Maritime (46)	330	Retail Automotive (62)	2116
Apparel (13)	2101	*Electronics (42)	1324	Medical Services (6)	783	Retail Building Supply (71)	1143
Asset Management (66)	2208	Engineering & Const (36)	1009	Med Supp Invasive (77)	163	Retail (Hardlines) (28)	2162
Automotive (27)	101	Entertainment (87)	2331	Med Supp Non-Invasive (45)	198	Retail (Softlines) (9)	2182
Auto Parts (21)	962	Entertainment Tech (93)	1993	Metal Fabricating (38)	723	Retail Store (10)	2133
Bank (41)	2501	Environmental (75)	403	Metals & Mining (Div.) (88)	1573	Retail/Wholesale Food (11)	1941
Bank (Midwest) (53)	769	Financial Svcs. (Div.) (5)	2531	Natural Gas Utility (47)	538	*Semiconductor (74)	1357
Beverage (83)	1960	Food Processing (67)	1901	Natural Gas (Div.) (84)	522	*Semiconductor Equip (35)	1394
Biotechnology (57)	819	Furn/Home Furnishings (23)	1151	Oil/Gas Distribution (64)	589	Shoe (14)	2154
Brokers & Exchanges (29)	1789	Healthcare Information (50)	808	Oilfield Svcs/Equip. (89)	2408	Steel (17)	733
Building Materials (3)	1101	Heavy Truck & Equip (18)	146	Packaging & Container (12)	1173	Telecom. Equipment (73)	940
Cable TV (30)	1000	Homebuilding (20)	1130	Paper/Forest Products (80)	1165	Telecom. Services (52)	916
Chemical (Basic) (56)	1590	Hotel/Gaming (24)	2353	Petroleum (Integrated) (22)	501	Thrift (49)	1501
Chemical (Diversified) (43)	2425	Household Products (61)	1189	Petroleum (Producing) (70)	2393	Tobacco (44)	1977
Chemical (Specialty) (68)	548	Human Resources (65)	1631	Pipeline MLPs (55)	602	Toiletries/Cosmetics (59)	990
*Computers/Peripherals (26)	1408	Industrial Services (7)	370	Power (85)	1212	Trucking (82)	315
Computer Software (39)	2570	Information Services (72)	419	Precious Metals (90)	1560	Water Utility (91)	1782
Cyber Security (25)	2008	IT Services (15)	2601	Precision Instrument (48)	112	Wireless Networking (78)	576
Diversified Co. (63)	1745	Insurance (Life) (2)	1548	Public/Private Equity (4)	2435		
Drug (69)	1600	Insurance (Prop/Cas.) (16)	746	Publishing (34)	2379		
E-Commerce (31)	1807	Internet (19)	2624	Railroad (40)	337		
Educational Services (58)	1983	Investment Banking (33)	1800	R.E.I.T. (92)	1510		
*Electrical Equipment (54)	1301	Investment Co. (--)	1202	Recreation (76)	2301		

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THE VALUE LINE Investment Survey®

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March 15, 2024

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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

17.8

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
16.7	11.0	19.3

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.2%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
2.2%	3.7%	1.7%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

45%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
55%	145%	35%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

12%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
14%	72%	13%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

	PAGE		PAGE		PAGE		PAGE
Advertising (71)	2386	Electric Util. (Central) (81)	901	Investment Co.(Foreign) (--)	412	Reinsurance (4)	2001
Aerospace/Defense (40)	701	Electric Utility (East) (79)	134	Machinery (37)	1701	Restaurant (28)	347
Air Transport (10)	301	Electric Utility (West) (86)	2195	Maritime (57)	330	Retail Automotive (60)	2116
Apparel (11)	2101	Electronics (47)	1323	Medical Services (7)	783	*Retail Building Supply (69)	1143
Asset Management (51)	2208	Engineering & Const (36)	1009	Med Supp Invasive (83)	163	Retail (Hardlines) (24)	2162
Automotive (29)	101	Entertainment (74)	2331	Med Supp Non-Invasive (50)	198	Retail (Softlines) (23)	2182
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Bank (41)	2501	Environmental (77)	403	Metals & Mining (Div.) (82)	1573	Retail/Wholesale Food (13)	1941
Bank (Midwest) (56)	769	Financial Svcs. (Div.) (6)	2531	Natural Gas Utility (76)	538	Semiconductor (72)	1356
Beverage (84)	1960	Food Processing (65)	1901	Natural Gas (Div.) (87)	522	Semiconductor Equip (34)	1392
Biotechnology (58)	819	*Furn/Home Furnishings (27)	1151	Oil/Gas Distribution (70)	589	Shoe (2)	2154
Brokers & Exchanges (30)	1789	Healthcare Information (53)	808	Oilfield Svcs/Equip. (89)	2408	Steel (8)	733
*Building Materials (1)	1101	Heavy Truck & Equip (16)	146	*Packaging & Container (20)	1173	Telecom. Equipment (73)	940
Cable TV (9)	1000	*Homebuilding (17)	1130	*Paper/Forest Products (67)	1165	Telecom. Services (49)	916
Chemical (Basic) (62)	1590	Hotel/Gaming (32)	2353	Petroleum (Integrated) (26)	501	Thrift (45)	1501
Chemical (Diversified) (54)	2425	*Household Products (66)	1189	Petroleum (Producing) (75)	2393	Tobacco (42)	1977
Chemical (Specialty) (63)	548	Human Resources (61)	1631	Pipeline MLPs (52)	602	Toiletries/Cosmetics (68)	990
Computers/Peripherals (33)	1406	Industrial Services (12)	370	*Power (88)	1212	Trucking (85)	315
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THE VALUE LINE Investment Survey®

Part 1
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March 8, 2024

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17.4

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
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The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

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*Cable TV (6)	1000	Homebuilding (11)	1130	Paper/Forest Products (66)	1165	*Telecom. Services (54)	916
Chemical (Basic) (85)	1590	Hotel/Gaming (41)	2353	Petroleum (Integrated) (25)	501	Thrift (67)	1501
Chemical (Diversified) (60)	2425	Household Products (71)	1189	Petroleum (Producing) (63)	2393	Tobacco (42)	1977
Chemical (Specialty) (48)	548	Human Resources (46)	1631	Pipeline MLPs (47)	602	*Toiletries/Cosmetics (58)	990
Computers/Peripherals (52)	1406	Industrial Services (12)	370	Power (90)	1212	Trucking (81)	315
Computer Software (26)	2570	Information Services (56)	419	Precious Metals (91)	1560	Water Utility (92)	1782
Cyber Security (15)	2008	IT Services (17)	2601	Precision Instrument (43)	112	Wireless Networking (78)	576
Diversified Co. (57)	1745	Insurance (Life) (1)	1548	Public/Private Equity (14)	2435		
Drug (62)	1600	Insurance (Prop/Cas.) (19)	746	Publishing (22)	2379		
E-Commerce (37)	1807	Internet (10)	2624	Railroad (39)	337		
Educational Services (45)	1983	Investment Banking (21)	1800	R.E.I.T. (89)	1510		
Electrical Equipment (49)	1301	Investment Co. (--)	1202	Recreation (79)	2301		

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXIX, No. 31.
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THE VALUE LINE Investment Survey®

Part 1
Summary & Index

File at the front of the *Ratings & Reports* binder. Last week's *Summary & Index* should be removed.

March 1, 2024

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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

17.5

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
16.7	11.0	19.3

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.2%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
2.3%	3.7%	1.7%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

50%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
60%	145%	35%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

13%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
17%	72%	13%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

	PAGE
Advertising (64)	2386
*Aerospace/Defense (58)	701
Air Transport (12)	301
Apparel (22)	2101
Asset Management (28)	2208
Automotive (41)	101
Auto Parts (34)	962
Bank (51)	2501
*Bank (Midwest) (81)	769
Beverage (86)	1960
*Biotechnology (80)	819
Brokers & Exchanges (53)	1789
Building Materials (4)	1101
Cable TV (62)	1000
Chemical (Basic) (65)	1590
Chemical (Diversified) (57)	2425
Chemical (Specialty) (48)	548
Computers/Peripherals (38)	1406
Computer Software (24)	2570
Cyber Security (10)	2008
Diversified Co. (66)	1745
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E-Commerce (29)	1807
Educational Services (33)	1983
Electrical Equipment (36)	1301
Electric Util. (Central) (74)	901
Electric Utility (East) (84)	134
Electric Utility (West) (88)	2195
Electronics (35)	1323
Engineering & Const (40)	1010
Entertainment (63)	2331
Entertainment Tech (93)	1993
Environmental (69)	403
Financial Svcs. (Div.) (3)	2531
Food Processing (71)	1901
Furn/Home Furnishings (25)	1151
*Healthcare Information (73)	808
Heavy Truck & Equip (16)	146
Homebuilding (17)	1130
Hotel/Gaming (44)	2353
Household Products (77)	1189
Human Resources (27)	1631
Industrial Services (13)	370
Information Services (56)	419
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Investment Co.(Foreign) (--)	412
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*Medical Services (11)	783
Med Supp Invasive (76)	163
Med Supp Non-Invasive (52)	198
*Metal Fabricating (45)	723
Metals & Mining (Div.) (83)	1573
Natural Gas Utility (68)	538
Natural Gas (Div.) (87)	522
Oil/Gas Distribution (70)	589
Oilfield Svcs/Equip. (85)	2408
Packaging & Container (26)	1174
Paper/Forest Products (59)	1165
Petroleum (Integrated) (21)	501
Petroleum (Producing) (75)	2393
Pipeline MLPs (37)	602
Power (91)	1212
Precious Metals (90)	1560
Precision Instrument (49)	112
Public/Private Equity (5)	2435
Publishing (20)	2379
Railroad (46)	337
R.E.I.T. (89)	1510
Recreation (79)	2301
Reinsurance (30)	2001
Restaurant (43)	347
Retail Automotive (50)	2116
Retail Building Supply (61)	1143
Retail (Hardlines) (23)	2162
Retail (Softlines) (31)	2182
Retail Store (14)	2133
Retail/Wholesale Food (6)	1941
Semiconductor (67)	1356
Semiconductor Equip (39)	1392
Shoe (2)	2154
*Steel (8)	733
Telecom. Equipment (72)	940
Telecom. Services (54)	916
Thrift (60)	1501
Tobacco (42)	1977
Toiletries/Cosmetics (47)	990
Trucking (82)	315
Water Utility (92)	1782
Wireless Networking (78)	576

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXIX, No. 30.
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THE VALUE LINE Investment Survey®

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Summary & Index

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February 23, 2024

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Highest Growth Stocks 39

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

17.3

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
16.9	11.0	19.3

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.2%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
2.2%	3.7%	1.7%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

45%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
55%	145%	35%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

11%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
13%	72%	13%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

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Healthcare Information (73)	808
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Hotel/Gaming (41)	2353
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Med Supp Non-Invasive (44)	198
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Oilfield Svcs/Equip. (81)	2408
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*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXIX, No. 29.
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THE VALUE LINE Investment Survey®

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February 16, 2024

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The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

16.8

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
17.0	11.0	19.3

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.2%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
2.2%	3.7%	1.7%

The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

50%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
55%	145%	35%

The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

14%

26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
12%	72%	13%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

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Power (88)	1212
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THE VALUE LINE Investment Survey®

Part 1
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February 9, 2024

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26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
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The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks

2.2%

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The Median Estimated **THREE-TO-FIVE YEAR PRICE APPRECIATION POTENTIAL** of all stocks in the VL Universe

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26 Weeks Ago	Market Low 3-23-20	Market High 1-3-22
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The Median Estimated **18-MONTH APPRECIATION POTENTIAL TO TARGET PRICE RANGE** of all stocks in the VL Universe

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Drug (58)	1600	Insurance (Prop/Cas.) (21)	746	Publishing (32)	2379		
E-Commerce (23)	1807	Internet (12)	2624	Railroad (62)	337		
Educational Services (35)	1983	Investment Banking (40)	1800	R.E.I.T. (82)	1510		
Electrical Equipment (37)	1301	Investment Co. (--)	1202	Recreation (77)	2301		

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXIX, No. 27.
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S&P Capital IQ PRO

American States Water Company | Credit Ratings

NYSE: AWR (MI KEY: 4093614; SPCIQ KEY: 304353)

Agency All

A

S&P Global Ratings

Issuer Credit Rating (Foreign Currency LT)
7/7/2023

Downgrade | CreditWatch/Outlook: Stable
7/7/2023

WR

Moody's

Long Term Rating (Senior Unsec. Shelf Domestic)
9/22/2004

Current Ratings

S&P GLOBAL RATINGS (S&P Entity Name:American States Water Co.)

RATING TYPE	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating							
Foreign Currency LT	A	7/7/2023	4/26/2024	A+	Downgrade | CreditWatch/Outlook	Stable	7/7/2023
Local Currency LT	A	7/7/2023	4/26/2024	A+	Downgrade | CreditWatch/Outlook	Stable	7/7/2023

MOODY'S

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
Ratings Summary				
Long Term Rating (Senior Unsec. Shelf Domestic)	WR	9/22/2004	Withdrawn	
Outlook		1/5/2005		Withdrawn
Ratings Detail				
Senior Unsec. Shelf (Domestic)	WR	9/22/2004	Withdrawn	
Pref. Shelf (Domestic)	WR	9/22/2004	Withdrawn	

Ratings History

S&P GLOBAL RATINGS (S&P Entity Name:American States Water Co.)

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Foreign Currency LT					
Issuer Credit Rating	A	7/7/2023	Downgrade | CreditWatch/Outlook	Stable	7/7/2023
Issuer Credit Rating	A+	7/30/2010	CreditWatch/Outlook	Negative	3/25/2021
Issuer Credit Rating	A+	7/30/2010	CreditWatch/Outlook	Stable	5/22/2015
Issuer Credit Rating	A+	7/30/2010	CreditWatch/Outlook	Positive	7/21/2014
Issuer Credit Rating	A+	7/30/2010	Upgrade | CreditWatch/Outlook	Stable	7/30/2010

S&P Capital IQ PRO

American States Water Company | Credit Ratings

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating	A	8/22/2007	CreditWatch/Outlook	Positive	7/13/2009
Issuer Credit Rating	A	8/22/2007	Upgrade | CreditWatch/Outlook	Stable	8/22/2007
Issuer Credit Rating	A-	4/22/2004	CreditWatch/Outlook	Positive	2/7/2007
Issuer Credit Rating	A-	4/22/2004	CreditWatch/Outlook	Stable	12/22/2005
Issuer Credit Rating	A-	4/22/2004	Downgrade | CreditWatch/Outlook	Negative	4/22/2004
Issuer Credit Rating	A+	1/18/2001	Upgrade | CreditWatch/Outlook	Stable	1/18/2001
Issuer Credit Rating	A	8/21/1998	New Rating | CreditWatch/Outlook	Stable	8/21/1998
Local Currency LT					
Issuer Credit Rating	A	7/7/2023	Downgrade | CreditWatch/Outlook	Stable	7/7/2023
Issuer Credit Rating	A+	7/30/2010	CreditWatch/Outlook	Negative	3/25/2021
Issuer Credit Rating	A+	7/30/2010	CreditWatch/Outlook	Stable	5/22/2015
Issuer Credit Rating	A+	7/30/2010	CreditWatch/Outlook	Positive	7/21/2014
Issuer Credit Rating	A+	7/30/2010	Upgrade | CreditWatch/Outlook	Stable	7/30/2010
Issuer Credit Rating	A	8/22/2007	CreditWatch/Outlook	Positive	7/13/2009
Issuer Credit Rating	A	8/22/2007	Upgrade | CreditWatch/Outlook	Stable	8/22/2007
Issuer Credit Rating	A-	4/22/2004	CreditWatch/Outlook	Positive	2/7/2007
Issuer Credit Rating	A-	4/22/2004	CreditWatch/Outlook	Stable	12/22/2005
Issuer Credit Rating	A-	4/22/2004	Downgrade | CreditWatch/Outlook	Negative	4/22/2004
Issuer Credit Rating	A+	1/18/2001	Upgrade | CreditWatch/Outlook	Stable	1/18/2001
Issuer Credit Rating	A	8/21/1998	New Rating | CreditWatch/Outlook	Stable	8/21/1998

MOODY'S

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
Outlook		**1/5/2005**		**Withdrawn**
Outlook		11/26/2003		Negative
Outlook		11/15/2003		Stable

Subsidiaries

SUBSIDIARY	AGENCY	DEBT TYPE (RATING TYPE)	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	CREDITWATCH / OUTLOOK	CREDITWATCH / OUTLOOK DATE
Golden State Water Co.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A+	7/30/2010	4/26/2024	A+	Stable	7/7/2023
	Moody's	Long Term Rating (Senior Unsecured Domestic)	A2	5/22/2019				

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S&P Capital IQ PRO

American Water Works Company, Inc. | Credit Ratings

NYSE: AWK (MI KEY: 4004387; SPCIQ KEY: 250885)

Agency All

A

S&P Global Ratings

Issuer Credit Rating (Foreign Currency LT)
5/7/2015

Upgrade | CreditWatch/Outlook: Stable
5/7/2015

Baa1

Moody's

Long Term Rating (LT Issuer Rating Domestic)
1/29/2024

Current Ratings

S&P GLOBAL RATINGS (S&P Entity Name:American Water Works Co. Inc.)

RATING TYPE	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating							
Foreign Currency LT	A	5/7/2015	6/26/2023	A-	Upgrade | CreditWatch/Outlook	Stable	5/7/2015
Local Currency LT	A	5/7/2015	6/26/2023	A-	Upgrade | CreditWatch/Outlook	Stable	5/7/2015
Foreign Currency ST	A-1	5/7/2015	6/26/2023	A-2	Upgrade		
Local Currency ST	A-1	5/7/2015	6/26/2023	A-2	Upgrade		

MOODY'S

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
Ratings Summary				
Long Term Rating (LT Issuer Rating Domestic)	Baa1	1/29/2024		
Outlook		1/29/2024		Stable
Ratings Detail				
LT Issuer Rating (Domestic)	Baa1	1/29/2024		

Ratings History

S&P GLOBAL RATINGS (S&P Entity Name:American Water Works Co. Inc.)

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Foreign Currency LT					
Issuer Credit Rating	A	5/7/2015	Upgrade | CreditWatch/Outlook	Stable	5/7/2015
Issuer Credit Rating	A-	5/24/2013	CreditWatch/Outlook	Positive	6/2/2014
Issuer Credit Rating	A-	5/24/2013	Upgrade | CreditWatch/Outlook	Stable	5/24/2013
Issuer Credit Rating	BBB+	6/19/2008	CreditWatch/Outlook	Positive	7/18/2012
Issuer Credit Rating	BBB+	6/19/2008	Downgrade | CreditWatch/Outlook	Stable	6/19/2008
Issuer Credit Rating	A-	10/13/2006	CreditWatch/Outlook	Watch Neg	11/15/2007
Issuer Credit Rating	A-	10/13/2006	CreditWatch/Outlook	Negative	9/19/2007
Issuer Credit Rating	A-	10/13/2006	New Rating | CreditWatch/Outlook	Watch Neg	10/13/2006

S&P Capital IQ PRO

American Water Works Company, Inc. | Credit Ratings

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Local Currency LT					
Issuer Credit Rating	A	5/7/2015	Upgrade | CreditWatch/Outlook	Stable	5/7/2015
Issuer Credit Rating	A-	5/24/2013	CreditWatch/Outlook	Positive	6/2/2014
Issuer Credit Rating	A-	5/24/2013	Upgrade | CreditWatch/Outlook	Stable	5/24/2013
Issuer Credit Rating	BBB+	6/19/2008	CreditWatch/Outlook	Positive	7/18/2012
Issuer Credit Rating	BBB+	6/19/2008	Downgrade | CreditWatch/Outlook	Stable	6/19/2008
Issuer Credit Rating	A-	10/13/2006	CreditWatch/Outlook	Watch Neg	11/15/2007
Issuer Credit Rating	A-	10/13/2006	CreditWatch/Outlook	Negative	9/19/2007
Issuer Credit Rating	A-	10/13/2006	New Rating | CreditWatch/Outlook	Watch Neg	10/13/2006
Foreign Currency ST					
Issuer Credit Rating	A-1	5/7/2015	Upgrade		
Issuer Credit Rating	A-2	10/13/2006	CreditWatch/Outlook	NM	9/19/2007
Issuer Credit Rating	A-2	10/13/2006	New Rating | CreditWatch/Outlook	Watch Neg	10/13/2006
Local Currency ST					
Issuer Credit Rating	A-1	5/7/2015	Upgrade		
Issuer Credit Rating	A-2	10/13/2006	CreditWatch/Outlook	NM	9/19/2007
Issuer Credit Rating	A-2	10/13/2006	New Rating | CreditWatch/Outlook	Watch Neg	10/13/2006

MOODY'S

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
LT Issuer Rating (Domestic)	**Baa1**	**1/29/2024**		
LT Issuer Rating (Domestic)	Baa1	4/1/2019	Downgrade	
LT Issuer Rating (Domestic)	A3	1/19/2018	Rating Affirmation	
LT Issuer Rating (Domestic)	A3	8/7/2015	Upgrade	
LT Issuer Rating (Domestic)	Baa1	4/22/2015	Rating Affirmation	
LT Issuer Rating (Domestic)	Baa1	5/29/2013	Upgrade	
LT Issuer Rating (Domestic)	Baa2	10/12/2007	New	
Outlook		**1/29/2024**		**Stable**
Outlook		4/1/2019		Stable
Outlook		1/19/2018		Negative
Outlook		8/7/2015		Stable
Outlook		4/22/2015		Positive
Outlook		5/29/2013		Stable
Outlook		8/14/2012		Positive
Outlook		10/12/2007		Stable

Subsidiaries

SUBSIDIARY	AGENCY	DEBT TYPE (RATING TYPE)	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	CREDITWATCH / OUTLOOK	CREDITWATCH / OUTLOOK DATE
American Water Capital Corp.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A	5/7/2015	6/26/2023	A-	Stable	5/7/2015
	Moody's	Long Term Rating (LT Issuer Rating Domestic)	Baa1	1/29/2024				
Elizabethtown Water Co.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	NR	8/24/2005		A+	NR	8/24/2005
	Moody's	Long Term Rating (Senior Unsecured Domestic)	WR	1/16/2004				
National Enterprises Inc.	Moody's	Long Term Rating (Subordinate Domestic)	WR	5/1/1996				
New Jersey-American Water Co. Inc.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A	5/7/2015	6/26/2023	A-	Stable	5/7/2015

S&P Capital IQ PRO

American Water Works Company, Inc. | Credit Ratings

SUBSIDIARY	AGENCY	DEBT TYPE (RATING TYPE)	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	CREDITWATCH / OUTLOOK	CREDITWATCH / OUTLOOK DATE
	Moody's	Long Term Rating (LT Issuer Rating Domestic)	A3	1/29/2024				
New York Water Service Corp.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	NR	6/16/2016		A+	NR	6/16/2016
Pennsylvania-American Water Co. Inc.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A	5/7/2015	6/26/2023	A-	Stable	5/7/2015
	Moody's	Long Term Rating (LT Issuer Rating Domestic)	A3	1/29/2024				

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S&P Capital IQ PRO

Artesian Resources Corporation | Credit Ratings

NASDAQGS: ARTN.A (MI KEY: 5000856; SPCIQ KEY: 251682)

Agency S&P Global Ratings

No data is available at this time.

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S&P Capital IQ PRO

California Water Service Group | Credit Ratings

NYSE: CWT (MI KEY: 4721056; SPCIQ KEY: 257568)

Agency All

Subsidiaries

SUBSIDIARY	AGENCY	DEBT TYPE (RATING TYPE)	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	CREDITWATCH / OUTLOOK	CREDITWATCH / OUTLOOK DATE
California Water Service Co.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A+	11/6/2002	1/3/2024	A+	Stable	4/9/2019
	Moody's	Long Term Rating (First Mortgage Bonds Domestic)	WR	1/10/2008				

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S&P Capital IQ PRO

Essential Utilities, Inc. | Credit Ratings

NYSE: WTRG (MI KEY: 4092620; SPCIQ KEY: 296276)

Agency All

A-

S&P Global Ratings

Issuer Credit Rating (Foreign Currency LT)
3/19/2024

Downgrade | CreditWatch/Outlook: Stable
3/19/2024

Baa2

Moody's

Long Term Rating (Senior Unsecured Domestic)
4/24/2019

Current Ratings

S&P GLOBAL RATINGS (S&P Entity Name:Essential Utilities Inc.)

RATING TYPE	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating							
Foreign Currency LT	A-	3/19/2024	3/19/2024	A	Downgrade | CreditWatch/Outlook	Stable	3/19/2024
Local Currency LT	A-	3/19/2024	3/19/2024	A	Downgrade | CreditWatch/Outlook	Stable	3/19/2024

MOODY'S

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
Ratings Summary				
Long Term Rating (Senior Unsecured Domestic)	Baa2	4/24/2019	New	
Outlook		4/24/2019		Stable
Ratings Detail				
Senior Unsecured (Domestic)	Baa2	4/24/2019	New	
Senior Unsec. Shelf (Domestic)	WR	4/15/2024	Withdrawn	

Ratings History

S&P GLOBAL RATINGS (S&P Entity Name:Essential Utilities Inc.)

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Foreign Currency LT					
Issuer Credit Rating	A-	3/19/2024	Downgrade | CreditWatch/Outlook	Stable	3/19/2024
Issuer Credit Rating	A	2/5/2020	CreditWatch/Outlook	Negative	7/12/2023
Issuer Credit Rating	A	2/5/2020	New Rating | CreditWatch/Outlook	Stable	2/5/2020
Local Currency LT					
Issuer Credit Rating	A-	3/19/2024	Downgrade | CreditWatch/Outlook	Stable	3/19/2024
Issuer Credit Rating	A	2/5/2020	CreditWatch/Outlook	Negative	7/12/2023

S&P Capital IQ PRO

Essential Utilities, Inc. | Credit Ratings

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating	A	2/5/2020	New Rating | CreditWatch/Outlook	Stable	2/5/2020

MOODY'S

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
Outlook		**4/24/2019**		**Stable**

Subsidiaries

SUBSIDIARY	AGENCY	DEBT TYPE (RATING TYPE)	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	CREDITWATCH / OUTLOOK	CREDITWATCH / OUTLOOK DATE
Aqua Ohio Inc.	Moody's	Long Term Rating (Subordinate Domestic)	WR	3/1/1987				
Aqua Pennsylvania Inc.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A-	3/19/2024	3/19/2024	A	Stable	3/19/2024
	Moody's	Long Term Rating (First Mortgage Bonds Domestic)	WR	7/1/1977				
Peoples TWP LLC	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	NR	12/17/1997		A-	NR	12/17/1997
	Moody's	Long Term Rating (BACKED Pref. Stock Domestic)	WR	12/15/1997				
PNG Companies LLC	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A-	3/19/2024	3/19/2024	A	Stable	3/19/2024
	Moody's	Long Term Rating (Senior Secured Domestic)	Baa1	12/16/2022				

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S&P Capital IQ PRO

Global Water Resources, Inc. | Credit Ratings

NASDAQGM: GWRS (MI KEY: 5000843; SPCIQ KEY: 44732344)

Agency S&P Global Ratings

No data is available at this time.

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Middlesex Water Co

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S&P Capital IQ PRO

Middlesex Water Company | Credit Ratings

NASDAQGS: MSEX (MI KEY: 4104374; SPCIQ KEY: 288070)

Agency S&P Global Ratings

A

S&P Global Ratings

Issuer Credit Rating (Foreign Currency LT)
8/20/2015

CreditWatch/Outlook: Stable
11/9/2022

Current Ratings

S&P GLOBAL RATINGS (S&P Entity Name:Middlesex Water Co.)

RATING TYPE	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating							
Foreign Currency LT	A	8/20/2015	10/13/2023	A	CreditWatch/Outlook	Stable	11/9/2022
Local Currency LT	A	8/20/2015	10/13/2023	A	CreditWatch/Outlook	Stable	11/9/2022

Ratings History

S&P GLOBAL RATINGS (S&P Entity Name:Middlesex Water Co.)

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Foreign Currency LT					
Issuer Credit Rating	A	8/20/2015	CreditWatch/Outlook	Stable	11/9/2022
Issuer Credit Rating	A	8/20/2015	CreditWatch/Outlook	Negative	11/3/2020
Issuer Credit Rating	A	8/20/2015	Upgrade | CreditWatch/Outlook	Stable	8/20/2015
Issuer Credit Rating	A-	6/22/2005	CreditWatch/Outlook	Positive	8/27/2014
Issuer Credit Rating	A-	6/22/2005	Downgrade | CreditWatch/Outlook	Stable	6/22/2005
Issuer Credit Rating	A	5/29/1991	CreditWatch/Outlook	Negative	5/30/2003
Issuer Credit Rating	A	5/29/1991	New Rating | CreditWatch/Outlook	Stable	5/31/1991
Local Currency LT					
Issuer Credit Rating	A	8/20/2015	CreditWatch/Outlook	Stable	11/9/2022
Issuer Credit Rating	A	8/20/2015	CreditWatch/Outlook	Negative	11/3/2020

S&P Capital IQ PRO

Middlesex Water Company | Credit Ratings

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating	A	8/20/2015	Upgrade | CreditWatch/Outlook	Stable	8/20/2015
Issuer Credit Rating	A-	6/22/2005	CreditWatch/Outlook	Positive	8/27/2014
Issuer Credit Rating	A-	6/22/2005	Downgrade | CreditWatch/Outlook	Stable	6/22/2005
Issuer Credit Rating	A	5/29/1991	CreditWatch/Outlook	Negative	5/30/2003
Issuer Credit Rating	A	5/29/1991	New Rating | CreditWatch/Outlook	Stable	5/31/1991

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S&P Capital IQ PRO

SJW Group | Credit Ratings

NYSE: SJW (MI KEY: 5000889; SPCIQ KEY: 301316)

Agency S&P Global Ratings

A-

S&P Global Ratings

Issuer Credit Rating (Foreign Currency LT)
10/16/2019

CreditWatch/Outlook: Negative
9/19/2023

Current Ratings

S&P GLOBAL RATINGS (S&P Entity Name:SJW Group)

RATING TYPE	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating							
Foreign Currency LT	A-	10/16/2019	3/28/2024	A-	CreditWatch/Outlook	Negative	9/19/2023
Local Currency LT	A-	10/16/2019	3/28/2024	A-	CreditWatch/Outlook	Negative	9/19/2023

Ratings History

S&P GLOBAL RATINGS (S&P Entity Name:SJW Group)

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Foreign Currency LT					
Issuer Credit Rating	A-	10/16/2019	CreditWatch/Outlook	Negative	9/19/2023
Issuer Credit Rating	A-	10/16/2019	New Rating | CreditWatch/Outlook	Stable	10/16/2019
Local Currency LT					
Issuer Credit Rating	A-	10/16/2019	CreditWatch/Outlook	Negative	9/19/2023
Issuer Credit Rating	A-	10/16/2019	New Rating | CreditWatch/Outlook	Stable	10/16/2019

Subsidiaries

SUBSIDIARY	AGENCY	DEBT TYPE (RATING TYPE)	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	CREDITWATCH / OUTLOOK	CREDITWATCH / OUTLOOK DATE
Connecticut Water Inc.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A-	1/25/2019	3/28/2024	A-	Negative	9/19/2023
Connecticut Water Service Inc.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A-	1/25/2019	3/28/2024	A-	Negative	9/19/2023
San Jose Water Co.	S&P Global Ratings	Issuer Credit Rating (Foreign Currency LT)	A	5/18/2010	3/28/2024	A	Stable	10/16/2019

S&P Credit Ratings and Research provided by S&P Global Ratings

'Last Review Date' indicates the date on which an Issue/Issuer Credit Rating was last formally reviewed within a twelve-month period or when a Credit Rating Action was last published. For certain dependent instruments, the 'Last Review Date' will only be updated in the event of a Credit Rating change of the linked organization.

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York Water Company (The)

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S&P Capital IQ PRO

The York Water Company | Credit Ratings

NASDAQGS: YORW (MI KEY: 5000792; SPCIQ KEY: 315370)

Agency S&P Global Ratings

A-

S&P Global Ratings

Issuer Credit Rating (Foreign Currency LT)
3/16/2004

New Rating | CreditWatch/Outlook: Stable
3/16/2004

Current Ratings

S&P GLOBAL RATINGS (S&P Entity Name:York Water Co. (The))

RATING TYPE	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating							
Foreign Currency LT	A-	3/16/2004	7/17/2023	New	New Rating | CreditWatch/Outlook	Stable	3/16/2004
Local Currency LT	A-	3/16/2004	7/17/2023	New	New Rating | CreditWatch/Outlook	Stable	3/16/2004

Ratings History

S&P GLOBAL RATINGS (S&P Entity Name:York Water Co. (The))

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Foreign Currency LT					
Issuer Credit Rating	A-	3/16/2004	New Rating | CreditWatch/Outlook	Stable	3/16/2004
Local Currency LT					
Issuer Credit Rating	A-	3/16/2004	New Rating | CreditWatch/Outlook	Stable	3/16/2004

S&P Credit Ratings and Research provided by S&P Global Ratings

'Last Review Date' indicates the date on which an Issue/Issuer Credit Rating was last formally reviewed within a twelve-month period or when a Credit Rating Action was last published. For certain dependent instruments, the 'Last Review Date' will only be updated in the event of a Credit Rating change of the linked organization.

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Dependent Variable: RP
Method: ML ARCH - Student's t distribution (BFGS / Marquardt steps)
Date: 05/04/24 Time: 08:41
Sample: 1 1180
Included observations: 1180
Convergence achieved after 31 iterations
Coefficient covariance computed using outer product of gradients
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
GARCH	3.112622	0.507513	6.133086	0.0000
Variance Equation				
C	0.000119	3.80E-05	3.141374	0.0017
RESID(-1)^2	0.128579	0.025782	4.987082	0.0000
GARCH(-1)	0.822213	0.031945	25.73832	0.0000
T-DIST. DOF	9.372130	2.173036	4.312921	0.0000

R-squared	-0.018598	Mean dependent var	0.005572
Adjusted R-squared	-0.018598	S.D. dependent var	0.053790
S.E. of regression	0.054288	Akaike info criterion	-3.350078
Sum squared resid	3.474743	Schwarz criterion	-3.328581
Log likelihood	1981.546	Hannan-Quinn criter.	-3.341973
Durbin-Watson stat	1.795155		

Dependent Variable: RP
Method: ML ARCH - Student's t distribution (BFGS / Marquardt steps)
Date: 05/04/24 Time: 08:42
Sample (adjusted): 25 1180
Included observations: 1156 after adjustments
Convergence achieved after 36 iterations
Coefficient covariance computed using outer product of gradients
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
GARCH	1.489930	0.503796	2.957407	0.0031
Variance Equation				
C	5.32E-05	2.03E-05	2.618178	0.0088
RESID(-1)^2	0.106384	0.020469	5.197453	0.0000
GARCH(-1)	0.872408	0.022273	39.16866	0.0000
T-DIST. DOF	11.16894	3.449127	3.238193	0.0012

R-squared	-0.014374	Mean dependent var	0.003137
Adjusted R-squared	-0.014374	S.D. dependent var	0.054686
S.E. of regression	0.055078	Akaike info criterion	-3.358606
Sum squared resid	3.503805	Schwarz criterion	-3.336751
Log likelihood	1946.274	Hannan-Quinn criter.	-3.350358
Durbin-Watson stat	1.782650		

Dependent Variable: RP
Method: ML ARCH - Student's t distribution (BFGS / Marquardt steps)
Date: 05/04/24 Time: 08:40
Sample (adjusted): 25 1180
Included observations: 1156 after adjustments
Convergence achieved after 33 iterations
Coefficient covariance computed using outer product of gradients
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
GARCH	2.766390	0.507500	5.451014	0.0000
Variance Equation				
C	0.000111	3.66E-05	3.023989	0.0025
RESID(-1)^2	0.130209	0.026190	4.971736	0.0000
GARCH(-1)	0.825291	0.031318	26.35193	0.0000
T-DIST. DOF	9.047433	2.089881	4.329161	0.0000

R-squared	-0.014497	Mean dependent var	0.004623
Adjusted R-squared	-0.014497	S.D. dependent var	0.054097
S.E. of regression	0.054488	Akaike info criterion	-3.344008
Sum squared resid	3.429082	Schwarz criterion	-3.322154
Log likelihood	1937.837	Hannan-Quinn criter.	-3.335760
Durbin-Watson stat	1.803801		

CRSP Deciles Size Premium

	Market Capitalization of Smallest Company (in USD millions)	Market Capitalization of Largest Company (in USD millions)	Size Premium (Return in Excess of CAPM)
Decile			
Mid Cap	2,365.425	12,323.854	0.62%
Low Cap	377.076	2,365.076	1.21%
Micro Cap	2.015	373.879	3.05%
Breakdown of CRSP Deciles 1 - 10			
1	31,549.077	2,203,381.286	-0.26%
2	12,372.885	31,316.513	0.45%
3	5,918.981	12,323.854	0.57%
4	3,770.176	5,916.017	0.58%
5	2,365.425	3,769.877	0.93%
6	1,389.851	2,365.076	1.16%
7	789.019	1,389.118	1.37%
8	377.076	782.383	1.18%
9	218.389	373.879	2.15%
10	2.015	218.227	4.83%
Breakdown of CRSP 10th Decile			
10A	123.803	218.227	3.4%
10W	175.069	218.227	2.44%
10X	123.803	174.825	4.65%
10B	2.015	123.803	7.83%
10Y	79.470	123.803	6.37%
10Z	2.015	78.783	10.99%

Source: Kroll Cost of Capital Navigator (kroll.com/costofcapitalnavigator)

PUBLIC VERSION

LIMESTONE WATER UTILITY OPERATING COMPANY, LLC
DOCKET NO. 24-00044
INFORMAL DISCOVERY REQUEST OF THE
CONSUMER ADVOCATE DIVISION

MFG 035 – CSWR Insurance 2023 & 2024

Previous Owner	Facility Name	County	Plant Type Detail	Permit/PWS #	Repair / Upgrade / Improvement Project Description	Unit Quantity	Unit Cost	Total	2024	Project Status
Candlewood Lakes	Candlewood Lakes	Hardeman	Drinking Water - Groundwater	TN0000797	Install Backup Generator with necessary Electrical Upgrades	1	$ 52,400.00	$ 52,400.00	$ 52,400.00	In Progress
Shiloh Falls	Shiloh Falls	Hardin	Non-Discharging Wastewater - Facultative Lagoon	SOP-94011	Install of New Catwalk	1	$ 52,724.00	$ 52,724.00	$ 52,724.00	Completed
Shiloh Falls	Shiloh Falls	Hardin	Non-Discharging Wastewater - Facultative Lagoon	SOP-94011	Install High Tide Remote Monitoring (Qty. 12) [11 Lift Stations, 1 WWTF]	12	$ 20,000.00	$ 240,000.00	##########	In Progress
Aqua Utilities	Aqua Utilities	Hardin	Non-Discharging Wastewater - Facultative Lagoon	SOP-92082	Install High Tide Remote Monitoring (Qty. 43) [43 Lift Stations]	43	$ 6,279.07	$ 270,000.00	##########	In Progress
Aqua Utilities	Aqua Utilities	Hardin	Non-Discharging Wastewater - Facultative Lagoon	SOP-92082	Rehabilitate Lift Stations (Qty. 43)	43	$ 12,911.63	$ 555,200.00	##########	In Progress
Cartwright Creek	Grassland	Williamson	Wastewater - Extended Aeration	TN0027278	Engineering Design for Replacement WWTF	1	$ 646,200.00	$ 646,200.00	##########	In Progress
			Drinking Water - Distribution		Replacement of fully depreciated Meters/Installation of Meters on Unmetered customers	350	$ 750.00	$ 262,500.00		
			Drinking Water - Distribution		Replacement of fully depreciated Meters/Installation of Meters on Unmetered customers	350	$ 750.00	$ 262,500.00		
			Drinking Water - Distribution		Replacement of fully depreciated Meters/Installation of Meters on Unmetered customers	350	$ 750.00	$ 262,500.00		
			Drinking Water - Distribution		Replacement of 2% of Water Mains (Linear Feet)	7900	$ 100.00	$ 790,000.00		
			Wastewater - Collection		Replacement of 2% of Sewer Main (Linear Feet)	7900	$ 120.00	$ 948,000.00		
			Wastewater - Collection		Manhole Rehabiliation/Replacement (2% of inventory)	20	$ 5,000.00	$ 100,000.00		
			Drinking Water - Distribution		Replacement of fully depreciated Meters/Installation of Meters on Unmetered customers	350	$ 750.00	$ 262,500.00		
			Drinking Water - Distribution		Replacement of 2% of Water Mains (Linear Feet)	7900	$ 100.00	$ 790,000.00		
			Wastewater - Collection		Replacement of 2% of Sewer Main (Linear Feet)	7900	$ 120.00	$ 948,000.00		
			Wastewater - Collection		Manhole Rehabiliation/Replacement (2% of inventory)	20	$ 5,000.00	$ 100,000.00		
			Drinking Water - Distribution		Replacement of fully depreciated Meters/Installation of Meters on Unmetered customers	350	$ 750.00	$ 262,500.00		
			Drinking Water - Distribution		Replacement of 2% of Water Mains (Linear Feet)	7900	$ 100.00	$ 790,000.00		
			Wastewater - Collection		Replacement of 2% of Sewer Main (Linear Feet)	7900	$ 120.00	$ 948,000.00		
			Wastewater - Collection		Manhole Rehabiliation/Replacement (2% of inventory)	20	$ 5,000.00	$ 100,000.00		
			Water - Plant		General Asset Replacement	1	$ 172,000.00	$ 172,000.00		
			Wastewater - Plant		General Asset Replacement	1	$ 200,000.00	$ 200,000.00		
TOTAL	**TOTAL**							**$ 26,563,935**		

Limestone Water UOC, LLC
Revenue K&M Adjustment

Annualized Revenue

System	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Total
Candlewood	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	4,840.00	58,080.00
DSH Comm	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	31,452.00
DSH Res	153.65	153.65	153.65	153.65	153.65	153.65	153.65	153.65	153.65	153.65	153.65	153.65	1,843.80
Aqua Utilities-Commercial	204.98	204.98	204.98	204.98	204.98	204.98	204.98	204.98	204.98	204.98	204.98	204.98	2,459.70
Aqua Utilities-Residential	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	9,480.10	113,761.24
Aqua Utilities- 5/8"	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	10,709.95	128,519.45
Aqua Utilities- 3/4"	256.22	256.22	256.22	256.22	256.22	256.22	256.22	256.22	256.22	256.22	256.22	256.22	3,074.63
Aqua Utilities- 1"	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	307.46
Aqua Utilities- 1 1/2"	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	25.62	307.46
Aqua Utilities- 2"	76.87	76.87	76.87	76.87	76.87	76.87	76.87	76.87	76.87	76.87	76.87	76.87	922.39
Aqua Utilities- unknown	486.82	486.82	486.82	486.82	486.82	486.82	486.82	486.82	486.82	486.82	486.82	486.82	5,841.79
Grassland-Residential 1-2 Bedroom	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	1,428.00	17,136.00
Grassland-Commercial 1-2 Bedroom	125.77	125.77	125.77	125.77	125.77	125.77	125.77	125.77	125.77	125.77	125.77	125.77	1,509.18
Grassland-Residential 3 Bedroom	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	12,973.50	155,682.00
Grassland-Residential 4 Bedroom	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	9,984.00	119,808.00
Grassland-Residential 5 Bedroom	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00	5,304.00
Cartwright Creek - Commercial	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	24,104.88	289,258.53
Cartwright Creek - Residential	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	24,475.75	293,709.00
Chapel Woods-Residential	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	4,205.00	50,460.00
Shiloh Falls-Residential	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	2,841.17	34,094.09
Shiloh Falls-Commercial	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	4,655.64	55,867.63
													1,369,398.35

Actuals

System	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Total
Candlewood	2,500.00	(336.17)	4,160.00	4,198.66	4,280.00	4,165.32	4,195.21	4,160.00	4,148.00	4,160.00	4,160.00	4,160.28	43,951.30
DSH Comm													
DSH Res										2,774.65	3,217.02	3,328.71	9,320.38
Aqua Utilities-Commercial													
Aqua Utilities-Residential	7,865.49	14,347.28	7,024.15	10,236.31	10,410.09	9,846.11	9,106.49	8,700.13	8,903.86	7,655.13	8,425.99	8,490.92	111,011.95
Aqua Utilities- 5/8"													
Aqua Utilities- 3/4"													
Aqua Utilities- 1"	9,462.00	17,814.43	10,200.53	13,125.56	14,604.01	13,193.41	12,126.80	10,901.52	9,902.17	9,343.31	9,813.55	9,780.14	140,267.43
Aqua Utilities- 1 1/2"													
Aqua Utilities- 2"													
Aqua Utilities- unknown													
Grassland-Residential 1-2 Bedroom													
Grassland-Commercial 1-2 Bedroom													
Grassland-Residential 3 Bedroom													
Grassland-Residential 4 Bedroom													
Grassland-Residential 5 Bedroom	26,217.74	26,183.34	26,132.14	26,159.70	26,162.85	26,171.04	26,202.44	26,251.45	26,273.83	26,226.30	26,381.31	26,306.03	314,668.17
Cartwright Creek - Commercial													
Cartwright Creek - Residential	21,229.14	22,301.27	22,535.40	22,775.22	23,104.76	23,152.29	23,584.54	23,789.97	23,906.08	23,957.56	23,963.09	23,911.54	278,210.86
Chapel Woods-Residential	4,205.00	4,205.00	4,205.00	4,175.03	4,111.47	4,091.90	4,089.00	4,089.96	4,060.00	4,060.00	4,027.13	4,089.83	49,409.32
Shiloh Falls-Residential													
Shiloh Falls-Commercial	6,020.71	7,013.52	7,395.39	7,747.05	8,404.21	6,824.54	6,479.98	6,912.82	7,167.13	6,629.10	6,185.42	7,188.55	83,968.42
													1,030,807.83

K&M Adjustment

System	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Total	
Candlewood	2,340.00	5,176.17	680.00	641.34	560.00	674.68	644.79	680.00	692.00	680.00	680.00	679.72	14,128.70	Water
DSH Comm	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00	2,621.00						
DSH Res	153.65	153.65	153.65	153.65	153.65	153.65	153.65	153.65	2,774.65	-	(442.37)	(554.06)	23,975.42	Sewer
Aqua Utilities-Commercial														
Aqua Utilities-Residential	1,819.59	(4,662.20)	2,660.93	(551.23)	(725.01)	(161.03)	578.59	984.95	781.22	2,029.95	1,259.09	1,194.16	5,208.99	Sewer
Aqua Utilities- 5/8"														
Aqua Utilities- 3/4"														
Aqua Utilities- 1"														
Aqua Utilities- 1 1/2"														
Aqua Utilities- 2"														
Aqua Utilities- unknown	2,119.10	(6,233.33)	1,380.57	(1,544.46)	(3,022.91)	(1,612.31)	(545.70)	679.58	1,678.93	2,237.79	1,767.55	1,800.96	(1,294.24)	Water

Grassland-Residential 1-2 Bedroom														
Grassland-Commercial 1-2 Bedroom														
Grassland-Residential 3 Bedroom														
Grassland-Residential 4 Bedroom														
Grassland-Residential 5 Bedroom	(1,264.48)	(1,230.08)	(1,178.88)	(1,206.44)	(1,209.59)	(1,217.78)	(1,249.18)	(1,298.19)	(1,320.57)	(1,273.04)	(1,428.05)	(1,352.77)	(15,228.99)	Sewer
Cartwright Creek - Commercial														
Cartwright Creek - Residential	27,351.49	26,279.36	26,045.23	25,805.41	25,475.87	25,428.34	24,996.09	24,790.66	24,674.55	24,623.07	24,617.54	24,669.09	304,756.67	Sewer
Chapel Woods-Residential	-	-	-	29.97	93.53	113.10	116.00	115.04	145.00	145.00	177.87	115.17	1,050.68	Sewer
Shiloh Falls-Residential														
Shiloh Falls-Commercial	1,476.10	483.29	101.42	(250.24)	(907.40)	672.27	1,016.83	583.99	329.68	867.71	1,311.39	308.26	5,993.30	Sewer

$ 325,756.07 Total Sewer Adjustment

$ 12,834.46 Total Water Adjustment

Company	Facility Name	Type	Current Customer Count	Flat Rate
Aqua Utilities	Aqua Utilities-Commercial	Wastewater	8	25.62
Aqua Utilities	Aqua Utilities-Residential	Wastewater	370	25.62
Aqua Utilities	Aqua Utilities- 5/8"	Water	418	25.62
Aqua Utilities	Aqua Utilities- 3/4"	Water	10	25.62
Aqua Utilities	Aqua Utilities- 1"	Water	1	25.62
Aqua Utilities	Aqua Utilities- 1 1/2"	Water	1	25.62
Aqua Utilities	Aqua Utilities- 2"	Water	3	25.62
Aqua Utilities	Aqua Utilities- unknown	Water	19	25.62
Cartwright Creek	Grassland-Residential 1-2 Bedroom	Wastewater	34	42.00
Cartwright Creek	Grassland-Commercial 1-2 Bedroom	Wastewater	2	62.88
Cartwright Creek	Grassland-Residential 3 Bedroom	Wastewater	279	46.50
Cartwright Creek	Grassland-Residential 4 Bedroom	Wastewater	192	52.00
Cartwright Creek	Grassland-Residential 5 Bedroom	Wastewater	8	55.25
Cartwright Creek	Commercial	Wastewater	51	472.64
Cartwright Creek	Residential	Wastewater	443	55.25
Chapel Woods	Chapel Woods-Residential	Wastewater	145	29.00
Shiloh Falls	Shiloh Falls-Residential	Wastewater	318	8.93
Shiloh Falls	Shiloh Falls-Commercial	Wastewater	9	517.29
Candlewood	Candlewood	Water	121	40.00
DSH	DSH-Commercial	Wastewater	50	52.42
DSH	DSH-Residential	Wastewater	5	30.73

RULES, REGULATIONS AND TARIFFS

FOR

LIMESTONE WATER UOC, LLC

(Candlewood Lakes)

1630 Des Peres Road, Suite 140

St. Louis, MO 63131

A. STATEMENT OF PURPOSE

The general purpose of these rules and regulations are:

1. To establish procedures for furnishing water services on uniform bases to customers within the service area boundary of the Candlewood Lakes Service Area.

2. To provide standards and procedures operation.

3. Establish rates and other charges.

B. DEFINITION OF TERMS

1. COMPANY:	The word COMPANY shall mean Limestone Water UOC.
2. ENGINEER:	The word ENGINEER shall mean the consulting engineer of the COMPANY.
3. CUSTOMER:	The word CUSTOMER shall mean any person, firm, corporation, association, or government unit furnished services by the COMPANY.
4. PROPERTY:	The word PROPERTY shall mean all facilities owned and operated by the COMPANY.
5. COMMISSION:	The word COMMISSION shall mean Tennessee Public Service Commission.
6. WATER MAIN:	The words WATER MAIN shall mean all lines and appurtenances, including valves, meters, and fittings required to transport water through and including the individual service meters.

B. DEFINITION OF TERMS CONT..

7. WATER SERVICE LINE: The words WATER SERVICE LINE shall mean those lines extending from the Customer's service meter to his place of business or residence.

8. OWNER: The word OWNER, whenever the same appears herein, means the person, firm, corporation or association having the sole interest in any premises or property which is, or is about to be supplied with services by the Company, and the word OWNERS means all so interested.

9. TENANT: The word TENANT, whenever the same appears herein means anyone occupying a premises or property under lease, oral or written, from the Owner and obtaining services from the Company with the consent of his landlord.

10. **CUSTOMER:** The word CUSTOMER as used herein shall mean the party contracting for services.

B. AUTHORIZATION OF RULES AND REGUATIONS:

The Company, which is organized and engaged in business as a public utility in the State of Tennessee under a Certificate of Convenience and necessity issued by the Tennessee Public Service Commission on Docket No. 21-00059, submits the following statement of its rules and regulations in compliance with Rule 602.2.

C. EFFECT OF RULES AND REGULATIONS:

All provisions of these rules and regulations shall be incorporated in each contract with each Customer of the Company.

D. UTILITY ITEMS ON PRIVATE PROPERTY:

The Company shall not furnish or maintain any items or appurtenances for services on the Customer's premise without execution of an agreement for an easement or encroachment. No property of the Company shall be located on the premises of Customers. The Building Sewer and water service line shall be maintained by the Customer.

E. **APPLICATIONS FOR SERVICES:**

All applications for services must be made on written forms provided by the Company. Upon acceptance thereof and payment to Company of any Commission-approved tap-on fee, such applications shall constitute a contract between the applicant as a Customer and the Company.

F. APPLICATIONS FOR SERVICES CONT.

A new application must be made upon any change in tenancy where the tenant has contracted for the services or by the new Owner upon any change in ownership where the Owner has contracted for services. Where more than one tenant is supplied through a meter, the application for the water service must be made by the Owner of the property.

When an application is made, the Company reserves the right to require a deposit in cash commensurate with the probable size of the applicant's bill for the purpose of establishing or maintaining any Customer's credit. Any such deposit so made shall be subject to such terms and conditions as may be required by order of regulation of the Tennessee Public Service Commission.

No contract for services will be entered into by the Company with any applicant until all arrears and charges due by such applicant for services to any premises then or theretofore owned or occupied by him shall have been paid.

G. RULES GOVERNING SERVICE:

When the supply of water is to be temporarily shut off, advance notice will be given by the Company when practicable to all Customers affected by the shutting off, stating the probable duration of the interruption of service.

The Company will not permit its mains or services to be connected on any premises with any service pipe or piping which is connected with any other source of supply. The Company will not permit its mains or services to be connected in any way to any piping, tank, vat or other apparatus which contains liquids, chemicals, or any other matter which may flow back into the Company's service lines or mains.

The Company undertakes to use reasonable care and diligence to provide a constant supply of water at a reasonable pressure but reserves the right at any time, without notice to shut off the water in its mains for the purpose of making repairs or extensions or for other purposes.

The Company shall not be liable for a deficiency or failure, regardless of cause, in the supply of water or in the pressure nor for any damage caused thereby or by the bursting or breaking of any main or service pipe or any attachment to the Company's property. All applicants having broilers upon their premises depending upon the pressure in the Company's pipes to keep them supplied are cautioned against danger of collapse, and all damage occasioned by any such collapse must be borne exclusively by the Customer.

The Company shall require all new Customers who desire both regular water service and fire protection to install separate service lines, one of which is to be used solely for private fire protection. The Company will not permit the use of water from separate fire protection lines except for the extinguishing of fires or fire drills.

The Company shall have the sole right to determine the size of meters, number of meters, valves, service line and connections necessary to give the service applied for.

G. RULES GOVERNING SERVICE CONT.

All applications for service connections must be made in writing on forms furnished by the Company by the person or parties desiring the same, must state the correct lot(s), block and street number of the property to be supplied, and must be signed by the Owner of the premises or his duly authorized agent.

A service line or building sewer shall not be used to supply more than a single property without the consent of the Company. The minimum earth cover of the Customer" service pipe installation shall be three (3) feet.

Service lines or building sewer shall not be installed where any portion must pass through lands, buildings or parts of buildings which are not the property of applicant, unless applicant assumes the liability therefor, in writing.

Meters will be maintained by the Company as far as ordinary wear and tear are concerned, but damage due to freezing hot water or external causes shall be paid for by the Customers (except for outside meter settings).

Rules and regulations regarding meter accuracy, meter testing and frequency of meter tests shall be as contained in the Tennessee Public Service Commission's Rules and Regulations Governing Public Utilities as from time to time revised.

No person other than a Company agent or employee shall take water from any fire hydrant except for fire fighting purposes, and no fire hydrant except for fire fighting purposes, and no fire hydrant shall be used for sprinkling streets, flushing sewers or gutters or for any other purpose except with the advance approval of the Company in writing.

Where water is to be used for steam boilers or other uses where a stoppage of water supply might cause damage, Customers are cautioned that it is impossible for the Company to guarantee a continuous supply of water and that the Customer should, therefore, arrange for adequate storage capacity.

Title to the main, service connections from the main up to and including the meter, stop cocks or values, buffalo boxes, meters and meter installations is vested in the Company, and shall not be trespassed upon or interfered with in any way.

Curb stops shall not be used by the Customer for turning on or shutting off the water supply. Control of the water supply by the Customer shall be by means of a valve located on the property where the Customer is provided with water service.

Where two or more Customers are supplied through a single service pipe, any violation of the rules and regulations of the Company by either or any of such Customers shall be considered as a violation by all, and the Company may take such action as may be taken for a single Customer committing the violation.

All employees of the Company whose duty compels them to enter the Customer's premises shall, upon request, show their credentials or other evidence of authority.

G. RULES GOVERNING SERVICE CONT.

If the Company finds that a meter seal or cover has been broken of any bypass inserted or there is evidence that the meter or meter seal or cover has been tampered with, the water will be shut off and not turned on again until the Customer has paid for the estimated quantity of water which has been used for the preceding four (4) month period and not registered plus the cost to restore the meter to proper working order and other expense incurred by the Company, plus the reconnection fee hereinabove specified.

It is specifically understood that the Company does not hold itself out to render private fire protection service.

The Company does not hold itself out to furnish public fire protection service.

Automatic lawn sprinklers or sprays or other attachments requiring large quantities of water will be permitted only when water is furnished by meter measurement. The Company reserves the right to restrict lawn sprinkling by Customers whenever in its judgment there is not an adequate supply of water available for such purposes.

A supply of water for construction or other special purposes must be applied for in writing, and the Company reserves the right to require a suitable deposit from the applicant. Water so supplied shall be discharged through a hose or pipe directly upon the material to be wet or into a barrel or other container and not upon the ground or into or through a ditch or trench, and all use of water by other than the applicant or for any purposes or upon any premises not described or stated in the application must be prevented by the applicant.

H. BILLS AND PAYMENT OF SERVICES:

Customers are liable for payment for all water used on the premises or property until notice has been received at the Company's office that the use of water is no longer desired. Customers are liable for all water shown to have passed through the meter whether by use, wastage or leakage.

A Customer's bill will not be considered past due unless it remains unpaid subsequent to the due date printed on the bill. This due date will be twenty-one (21) days after the bill is mailed.

H. BILLS AND PAYMENT OF SERVICES CONT.

Bills for metered service shall be rendered monthly unless otherwise specified in the rate schedule then in effect, and shall show the readings of the meter at the beginning and end of the period for which the bill is rendered as well as consumption for the period.

Bills for water service will be mailed or delivered to the Customer's last address as shown by the records of the Company when due, but failure to receive a bill will not relieve the Customer from the obligation to pay the same. All bills and other accounts must be paid at the office of the Company.

In case the meter cannot be read for any cause, the Company will require a payment of account equal to the estimated bill for the period involved.

In cases where for any cause the meter cannot be read for a period of two (2) billing periods, the Company will turn off the water upon (5) days written notice (8 days, if mailed) unless the Customer provides access to the meter immediately.

Where a meter has ceased to register or is registering improperly, the quantity of water for which the bill will be rendered will be determined by the average registration of the meter for the prior three (3) billing periods.

I. DISCONTINUANCE OF SERVICE:

Service under any application may be discontinued for the following reasons:

1. Non-payment of bill as herein set forth.
2. For misrepresentation in the application.
3. For adding to the Property or fixtures without notice to the Company.
4. For failure to protect the connections, service lines or fixtures in good order.
5. For molesting any service pipes or any property of the Company in any way whatsoever.
6. Vacancy of premises.
7. For violation of any rules of the Company as filed with the Commission.
8. For disconnecting or reconnecting service by any party other than a duly authorized agent of the Company without the consent of the Company.
9. For discharge of high strength or toxic effluent without pre-treatment.
10. For waste of water due to leakage.

I. DISCONTINUANCE OF SERVICE CONT.:

11. For cross-connecting the Company's supply with any other source of supply, or with any apparatus which may endanger the quality or health standard of the Company's water supply.

If a Customer whose service has been discontinued for non-payment of bills or for violation of the rules and regulations of the Company desires a reconnection, such reconnection will only be made after the Customer:

(a) has made a deposit to insure future payment of bills (in cases only where no deposit was originally made or where such deposit has been applied to payment of the Customer's delinquent account);

(b) has paid all unpaid bills and other charges;

(c) had paid a reconnection fee;

(d) and has corrected any condition found objectionable under rules and regulations of the company.

J. SECURITY DEPOSITS:

Each new Customer, before connection or reconnection of the service, may be required to make a refundable deposit to secure payment of Customer. Interest of six percent (6%) will be paid on any such refundable deposit. Deposits shall be refunded when service is terminated, unless the deposit is used to satisfy last bill requirements.

K. ENGINEERING, MATERIALS, AND CONSTRUCTION STANDARDS:

All sewerage systems added to the Company system shall meet the Company Requirements.

A prospective Customer shall submit one (1) copy of a preliminary plan of any proposed service system to the Engineer.

Upon approval of the preliminary plans, a prospective Customer shall submit three (3) copies of a final set of plans to the Engineer.

The final plans shall contain a note that all construction is to conform to the technical specifications of the company.

A set of final plans with the approval stamp of the Engineer shall be present at the site of the construction at all times during construction.

One set of "As-Built" plans shall be submitted to the Engineer and one to the Company upon completion.

The Company shall be given 24 hours notice of construction in order to provide adequate inspection.

SCHEDULE OF RATES & CHARGES

Monthly Water Service:	
Flat Charge	$40
Service Connection Charges:	$500.00
Miscellaneous Charges:	
Late Fee	$5.00
Reconnect Fee	$35.00
Disconnect Fee	$35.00

Limestone Water UOC

Wastewater Service Tariff

TRA #1
Rate Schedules

SCHEDULE OF RATES & CHARGES
GRASSLAND SERVICE TERRITORY

Residential Monthly Wastewater Service:

1-2 Bedroom	$42.00
2 Bedroom	$42.00
3 Bedroom	$46.50
4 Bedroom	$52.00
5 Bedroom	$55.25

Commercial Monthly Wastewater Service:

Rate per 1,000 Gallons per Month (Actual or Estimated Flow)	$8.75
Minimum Monthly Charge	37.00

Miscellaneous Charges:

Monthly Capital Recovery Surcharge	$7.50
Returned Check Charge	$25.00
Disconnection Charge	$10.00
Reconnection Charge	$15.00
Late Payment Penalty	5.00%

All customers are also required to provide a refundable security deposit equal to twice the estimated monthly bill prior to obtaining service.

Property Owner/Builder/Developer Fees:

Residential Tap Fee	$10,000.00
Commercial Tap Fee per Gallon per Day Peak Usage	$14.29*
Construction Inspection Fee	$250.00
Construction Reinspection Fee	$50.00

A property owner, builder or developer may apply to the Company for a Service Connection to an existing wastewater treatment facility owned and operated by the Company. If acceptable to the Company, the applicant shall sign the Contracts for Service and pay the Company the required Tap Fees and other applicable fees pursuant to this Tariff.

**- Commercial Tap Fees are computed by multiplying the peak daily usage (estimated or known) * $14.29 or $10,000.00, whichever is greater.*

SCHEDULE OF RATES & CHARGES
ARRINGTON RETREAT SERVICE TERRITORY

Residential Monthly Wastewater Service:

All Residential Customers	$55.25

Commercial Monthly Wastewater Service:

Rate per 1,000 Gallons per Month (Actual or Estimated Flow)	$8.75
Minimum Monthly Charge	37.00

Miscellaneous Charges:

Monthly Capital Recovery Surcharge	$7.50
Returned Check Charge	$25.00
Disconnection Charge	$10.00
Reconnection Charge	$15.00
Late Payment Penalty	5.00%

All customers are also required to provide a refundable security deposit equal to twice the estimated monthly bill prior to obtaining service.

Property Owner/Builder/Developer Fees:

Residential Tap Fee	$10,000.00
Commercial Tap Fee per Gallon per Day Peak Usage	$14.29*
Construction Inspection Fee	$250.00
Construction Reinspection Fee	$50.00

A property owner, builder or developer may apply to the Company for a Service Connection to an existing wastewater treatment facility owned and operated by the Company. If acceptable to the Company, the applicant shall sign the Contracts for Service and pay the Company the required Tap Fees and other applicable fees pursuant to this Tariff.

**- Commercial Tap Fees are computed by multiplying the peak daily usage (estimated or known) * $14.29 or $10,000.00, whichever is greater.*

SCHEDULE OF RATES & CHARGES
HIDEAWAY SERVICE TERRITORY

Residential Monthly Wastewater Service:

All Residential Customers	$55.25

Commercial Monthly Wastewater Service:

Rate per 1,000 Gallons per Month (Actual or Estimated Flow)	$8.75
Minimum Monthly Charge	37.00

Miscellaneous Charges:

Monthly Capital Recovery Surcharge	$7.50
Returned Check Charge	$25.00
Disconnection Charge	$10.00
Reconnection Charge	$15.00
Late Payment Penalty	5.00%

All customers are also required to provide a refundable security deposit equal to twice the estimated monthly bill prior to obtaining service.

Property Owner/Builder/Developer Fees:

Residential Tap Fee	$10,000.00
Commercial Tap Fee per Gallon per Day Peak Usage	$14.29*
Construction Inspection Fee	$250.00
Construction Reinspection Fee	$50.00

A property owner, builder or developer may apply to the Company for a Service Connection to an existing wastewater treatment facility owned and operated by the Company. If acceptable to the Company, the applicant shall sign the Contracts for Service and pay the Company the required Tap Fees and other applicable fees pursuant to this Tariff.

**- Commercial Tap Fees are computed by multiplying the peak daily usage (estimated or known) * $14.29, or $10,000.00 whichever is greater.*

SCHEDULE OF RATES & CHARGES
HARDEMAN SPRINGS SERVICE TERRITORY

Residential Monthly Wastewater Service:

All Residential Customers	$55.25

Commercial Monthly Wastewater Service:

Rate per 1,000 Gallons per Month (Actual or Estimated Flow)	$8.75
Minimum Monthly Charge	37.00

Miscellaneous Charges:

Monthly Capital Recovery Surcharge	$7.50
Returned Check Charge	$25.00
Disconnection Charge	$10.00
Reconnection Charge	$15.00
Late Payment Penalty	5.00%

All customers are also required to provide a refundable security deposit equal to twice the estimated monthly bill prior to obtaining service.

Property Owner/Builder/Developer Fees:

Residential Tap Fee	$10,000.00
Commercial Tap Fee per Gallon per Day Peak Usage	$14.29*
Construction Inspection Fee	$250.00
Construction Reinspection Fee	$50.00

A property owner, builder or developer may apply to the Company for a Service Connection to an existing wastewater treatment facility owned and operated by the Company. If acceptable to the Company, the applicant shall sign the Contracts for Service and pay the Company the required Tap Fees and other applicable fees pursuant to this Tariff.

**- Commercial Tap Fees are computed by multiplying the peak daily usage (estimated or known) * $14.29 or $10,000.00, whichever is greater.*

Limestone Water Utility
Operating Company, LLC
1630 Des Peres Rd. Suite 140
St. Louis, MO 63131

Schedule of Rates and Charges
Chapel Woods Service Territory

Residential Monthly Wastewater Service:

All Residential Customers:	$29 per month

* Indicates new rate or text
\+ Indicates change

DATE OF ISSUE _____ DATE EFFECTIVE _____
Month Day Year Month Day Year

ISSUED BY Josiah Cox President
name of officer title address

Limestone Water UOC

Wastewater Service Tariff

TRA #2
Rules and Regulations

RULES AND REGULATIONS

Statement of Purpose

The general purposes of these rules and regulations are to establish procedures for furnishing sewerage and sewage treatment services on a uniform basis to customers within the service area boundary of Cartwright Creek, LLC.

Definition of Terms

1. Company - The word Company shall mean the Cartwright Creek, LLC.
2. Engineer - The word Engineer shall mean the consulting engineer of Cartwright Creek, LLC.
3. Customer - The word Customer shall mean any person, firm, corporation, association or government unit furnished sewerage services by the Company.
4. Property-The word Property shall mean all facilities owned and operated by the Company.
5. Commission - The word Commission shall mean the Tennessee Regulatory Authority.
6. Sewer – Piping, both gravity and pressure type, not on the customer's property, that collect and transport wastewater, including valves, manholes, access boxes, valve vaults, cleanouts, and other devices on the sewer.
7. Collection lines – See Sewer.
8. Lateral Sewer – The words Lateral Sewer shall mean the piping extending from the Collection lines to the Customer's property line (for customers with gravity only sewer connections) or to the Service Box (for customers with grinder pumps).
9. Service Box – For Customers with grinder pumps, a below ground valve assembly installed at each individual customer's property that connects to the Company's lateral sewer and where the customer's Service line is connected.
10. Service line – For customers with gravity sewer connections, the piping on the Customer's property extending from the Lateral Sewer to the customer's place of business or residence. For customer's with grinder pumps, the piping on the customer's property that connects the Grinder Pump to the Service Box, including the cleanout and connection to the pump.
11. Grinder Pump – The individual grinder pump installed at each residential or non-residential service location that receives and pumps sewage from the customer to the Company's sewer. This includes the pump, the pump sump, electrical control panel, and interconnecting wiring.
12. Residential Service - The words Residential Service shall mean the provision of wastewater service to a customer whose primary use is for the customer's personal dwelling.
13. Commercial Service – The words Commercial Service shall mean the provision of wastewater service to a customer whose primary use is for other than the customer's personal dwelling.

Authorization of Rules and Regulations

Cartwright Creek, LLC, a corporation organized and engaged in business as a public utility in the State of Tennessee under a transferred Certificate of Convenience and Necessity approved by the Tennessee Regulatory Authority on November 8, 2004, under Docket No. 04-00358, submits the following statement of its rules and regulations.

Effect of Rules and Regulations

All provisions of these rules and regulations shall be incorporated in each contract with each sewerage Customer of the Company.

Utility Items on Private Property

1. For Customers with gravity connections, the Customer shall own and maintain all piping within the residence or commercial building and exterior piping and Service Line.
2. For Customers with grinder pumps, the Customer shall own and maintain all piping within the residence or commercial building and external piping connecting to the grinder pump. The Company shall maintain the grinder pump and service line and the Customer shall be responsible for the cost of repair and maintenance of the grinder pump and service line. The Customer shall be responsible for furnishing and maintaining electrical power to the grinder pump.

Discontinuance of Service

Service under any application may be discontinued for the following reasons:

1. Non-payment of bill as hereinafter set forth.
2. For misrepresentation in the application.
3. For modifying or repairing any Property of the Company.
4. For failure to protect the connections, service lines or fixtures in good order.
5. For damaging any service pipes or any property of the Company in any way whatsoever.
6. Vacancy of premises.
7. For disconnecting or re-connecting service by any party other than a duly authorized agent of the Company without the consent of the Company.

Non-payment Penalties

A penalty of five (5%) percent of the monthly charge will be due after the 15th day of each month for which a bill has been rendered. After twenty (20) days non-payment after the first day of the month in which the bill is payable, the Company may shut-off the customer's service; provided, however, the Company will give the customer an additional fifteen (15) days' notice before discontinuation. A fee of Ten and No/100 ($10.00) Dollars will be charged for disconnection and a Fifteen and No/100 ($15.00) Dollars fee will be charged for re-connection of service, plus the actual cost of remedying any damage to the shut-off valve or other facilities. No service shall be turned on again if discontinued for non-payment (or any other valid reason) until all charges have been paid, including disconnection and re-connection fees.

Change in Ownership, Tenancy of Service

A new application and agreement must be made and approved by the Company on any change in ownership of property, or in tenancy, or in the service as described in the application. In the event of failure of a new owner or tenant to make such application, the Company shall have the right to discontinue service until such new application is made and approved.

Security Deposits

Each new Customer, before connection or re-connection, of the service may be required to make a refundable deposit to secure payment of sewerage bills in an amount double the monthly bill for that particular type of customer.

Engineering Materials and Construction Standards

To be provided upon written request.

Special Pretreatment Sewage Requirements

For all sewerage connections, in addition to the customary tap fees, the Company reserves the right to require any non-residential user to provide special treatment for any high strength effluent before discharge into its sewerage system. The Company may, upon the basis of recognized engineering standards and treatment costs, increase the tap fees or flat rate charges to cover the cost of treatment of high strength effluent or industrial waste, and may impose recognized engineering standards as to the maximum size of solids and constituents in such waste discharged into its sewerage system.

Additionally, if excessive volumes or high strength of sewage are received, the Company may require the Customer to monitor flow volume in order to adjust the monthly sewer service rate.

Damages

The Company shall in no event be responsible for maintaining any service line owned by the Customer, nor for damages created by sewage escaping therefrom, nor for defects in lines or fixtures on the property of the Customer. The Customer shall at all times comply with all regulations of the Tennessee Regulatory Authority, and of the Company, relating to the service lines and shall make all changes in his line required on account of grade or otherwise.

All leaks in any pipe or fixture on the premises of the Customer shall be immediately repaired. If the Customer fails to repair any such leak, the service may be discontinued until repairs are made.

Inspection

All pipes, valves and fixtures shall be subject to inspection at all reasonable hours by the Company or its duly authorized agent.

In Event of Emergency

The Company shall not be liable to the Customer for interruption of service, or for damages or inconveniences as a result of any interruption, stoppage, etc., which was beyond the reasonable control of the Company.

Extension Plan

The Company may furnish sewer services to additional property owners. The sewer service charges and tap fees identified in the Company's Tariff do not include costs for constructing new sewers. Any collector and/or lateral sewers required to service such properties shall be constructed at the cost of those parties desiring same, and these sewers shall become the property of the Company, to be credited to the account for contributions in aid of construction.

Contracts for Service

Each Customer before installation of service shall be required to execute on the appropriate forms furnished by the Company:

1. A sewer service contract.
2. The application and contract for sewer tap services (when applicable).

Customer Billing Forms

All customer billings shall be on a standard form whether residential, commercial or industrial.

Public Contact

Billing:
Cartwright Creek, LLC
Bruce Meyer
1551 Thompson's Station Road West
Thompson's Station, TN 37179
615-261-8615

Plant Operations:
Cartwright Creek, LLC
Bruce Meyer
1551 Thompson's Station Road West
Thompson's Station, TN 37179
615-261-8600

Tennessee Regulatory Authority Regulations

The utility in its operation shall conform with all the applicable rules and regulations promulgated from time to time by the Tennessee Regulatory Authority.

Returned Checks

Any Customer whose personal check is returned by the bank shall pay the Company an additional fee of $25.00, which will be clearly indicated on the bill.

Payment Plans

The Company offers each customer the opportunity to resolve any past due balances to avoid "Non-payment Penalties". Customer may pay a past due bill, including returned check fees and other charges, disconnection and reconnection charges in a payment plan over a three to six-month billing cycle. Customers that desire to take advantage of this plan should submit their written request to the Company's business office.

If service has been disconnected, service will be reconnected within 2 days of receiving the first payment. The Company will offer one such payment plan within a full calendar year.

In the event that a customer on a payment plan fails to pay a monthly installment as per the terms of the plan and is more than fifteen (15) business days late on any payment, then the customer's service is subject to disconnection and all past due charges in addition to disconnect/reconnect fees would become due and payable prior to having service restored.

Alternative Address Notification

Customers can provide an alternative address for notification for potential disconnection that will also receive the required notices of disconnection. Customers shall submit alternative notification requests to the Company in writing.

Limestone Water UOC
1630 Des Peres Road
Des Peres MO 63131

SEWER SERVICE CONTRACT

_____Number of Bedrooms _____Square Feet

Responsible Party for paying the bill:

Customer Name _____

Address of Service _____

_____
CITY STATE ZIP

Mailing Address (if different) _____

_____
CITY STATE ZIP

Phone: Home # _____ Work # _____

Email address: _____
(Cartwright Creek does not sell or provide customer contact information to third parties.)

Contact Person (if different from Customer) _____

I hereby make application to Cartwright Creek, LLC for connection with the mains of the sewer system and agree to pay for access, tap and service fees according to prevailing rates as identified in the Company's Tariff.

The Customer understands that the Company will provide a monthly bill to the Customer for sewerage services furnished. A penalty provision of five (5%) percent of the monthly charge applies to all bills after the 15th day of each month for which a bill has been rendered and will give the Company the right to collect such penalty. The failure to pay said bill the 20th day of the month following said bill will give the Company the immediate right to discontinue the furnishing of service, or to enforce a lien against the applicant's property. The Customer understands and acknowledges that failure to pay the monthly service or other charges when due may result in a lien against his property. If the Customer elects to terminate service, such termination shall be done by written notice to the Company 30 days prior to the requested termination date.

I understand that all service is subject to the rules and regulations of Cartwright Creek, LLC tariff, which may be amended from time to time and that these rules and regulations are part of this agreement.

Date _____ Signed _____

Contract approved and issued:

Date _____ By _____

Office Use Only:

Account # _____

TITLE PAGE

REGULATION AND SCHEDULE OF CHARGES GOVERNING THE PROVISION OF WASTEWATER UTILITY SERVICE TO RESIDENCES AND BUSINESSES WITHIN THE STA TE OF TENNESSEE

This tariff contains the descriptions, regulation and rates applicable to the furnishing of wastewater utility service provided by Limestone Water Utility Operating Company, LLC within the State of Tennessee. This tariff is on file with the Tennessee Regulatory Authority. Copies may be inspected during normal business hours at the Company's principal place of business at ***1630 Des Peres Rd., Suite 140, Des Peres, MO 63131***

Know what's **below**.
Call before you dig.

CHECK SHEET

Sheets of this tariff are effective as of the date shown at the bottom of the respective sheet(s). Original and revised sheets as named below comprise all changes from the original tariff and are currently in effect as the date on the bottom of this sheet.

SECTION	SHEET	REVISION
1	1	Original
1	2	1st Revised
1	3	Original
1	4	Original
1	5	Original
1	6	Original
2	1	Original
2	2	1st Revised
2	3	Original
2	4	Original
3	1	Original
3	2	1st Revised
4	1	Original
4	2	1st Revised
4	3	Original

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SYMBOLS

The following symbols are used for the purposes indicated below:

C	Changed regulations or rate structure
D	Discontinued material
I	An increased rate
M	A move in the location of text
N	A new rate or regulation
R	A reduced rate
S	Reissued material
T	Change in text but no change in rate or regulation

TARIFF FORMAT

A. Sheet numbering - Sheet numbers appear in the upper right corner of the sheet. Sheets are numbered sequentially. However, new sheets are occasionally added to the tariff. When new sheet is added between sheets already in effect, a decimal is added. For example, a new sheet added between sheets 12 and 13 would be 12.1.

B. Sheet Revision Numbers - Revision numbers also appear in the upper right corner of each sheet. These numbers are used to determine the most current sheet version on file with the TRA. For example, the 4th revised Sheet 12 cancels the 3rd revised Sheet 12. Because of various suspension periods, deferrals, etc., that the TRA follows in its tariff approval process, the most current sheet number on file with the TRA is not always the sheet in effect. Consult the Check Sheet for the sheet currently in effect.

C. Paragraph Numbering Sequence - There are nine levels of paragraph coding. Each level of coding is subservient to the next higher level:

2.
2.1
2.1.1
2.1.1.A
2.1.1.A.1
2.1.1.A.1.(a)
2.1.1.A.1.(a).1
2.1.1.A.1.(a).1.(i)
2.1.1.A.1.(a).1.(i).(1)

D. Check Sheets - When a tariff filing is made with the TRA, an updated Check Sheet accompanies the tariff filing. The Check Sheet lists all the sheets contained in the tariff, with a cross-reference to the current revision number. When new sheets are added, the Check Sheet is changed to reflect the revision. All revisions made in a given filing are designated by an asterisk (*). There will be now other symbols used on this sheet if these are the only changed made to it (i.e., the format, etc. remain the same, just revised revision levels on some sheets.) The tariff user should refer to the latest Check Sheet to find out if a particular sheet is the most current on file with the TRA.

DEFINITIONS

Certain terms used generally throughout this tariff for the Utility Service of this Company are defined below:

1. Company - Limestone Water Utility operating Company, LLC
2. Engineer - the consulting engineer of Limestone Water Utility Operating Company, LLC
3. Customer - any person, firm, corporation, association or government unit furnished sewage by the Company.
4. Residential Property - property that is an established residence for a single family that is intended solely for the family's use.
5. Commercial Property - property that is used for commercial, overnight rental or institutional purposes.
6. Facilities - all equipment owned and operated by the Company.
7. TRA - The Tennessee Regulatory Authority.
8. Septic Pump Tank - the tank located near a customer's building which accepts waste and contains a pump vault.
9. Septic Gravity Tank - the septic tank located near a customer's building which accepts waste and contains an effluent filter.
10. Service Line - the line from the Septic Pump/Septic Gravity Tank to a Collector Line.
11. Collector Line - the line from the Service Line to the Main Line.
12. Main Line - the line from the Collector Line to the treatment facility.
13. Building Outfall Line - the customer owned line that caries waste from the building to the Septic Pump Tanks/Septic Gravity Tank.
14. Pumping Station - a tank that contains pumps and receives effluent from Septic Gravity Tanks and/or Collector Lines.
15. Premises - shall mean customer's private property,
16. Service Connection - the point at which the service line to the wastewater system components at the customer's building is connected to the main wastewater collection system.

SECTION 2
RULES AND REGUALTIONS

Governing the sewage collection and treatment systems of Limestone Water Utility Operating Company, LLC & Associates (Limestone)

Statement of Purpose

The general purpose of these rules and regulations is:

1. To establish procedures for furnishing sewage collection and treatment services on a uniform basis to customers within the Company's service area.
2. To provide standards and procedures for:
3. Acceptable sewage characteristics
4. Protection of the integrity of the water tight system
5. Engineering design standards
6. Construction standards and inspection requirements
7. Quality of materials

Authorization of Rules and Regulations

Limestone Water Utility Operating Company, LLC is a corporation organized and engaged in business as a public utility in the State of Tennessee. The Company is regulated Under a Certificate of Convenience and Necessity issued the Tennessee Public Service Commission (PSC) July 1, 2011, under Docket No. 11-00020 and subsequent certificates issued by the PSC and the TRA.

Effect of Rules and Regulations

All provisions of these rules and regulations shall be incorporated in each contract with each sewage system customer of the Company

Utility Facilitie on Private Property

The Company shall maintain all septic pump and septic gravity tanks, control systems and service lines required to provide sewer services on the Customer's premises. The Customer must execute an agreement that acknowledges the Company to have a perpetual easement in, over, under, and upon the specified land of Customer as shown on the property plat, with the right to operate and repair all components of the sewer system on the Customer's property, including but not limited to the septic tank and septic pump tank systems. The Customer must grant the Company permission to enter upon Customer's property for any reason connected with the provision or removal of sewer service or collection therefore. The Customer must agree to allow the Company to install an approved cut off valve between the house and water supply and grant the Company exclusive rights to use such valve to cut off water in order to safely stop wastewater flow. The Customer's Building and Pluming outfall line shall be maintained by the Customer.

Discontinuance of Service

Service Under any application may be dis-continued for the following reason:

1. Non-payment of bill as hereinafter set forth below
2. For misrepresentation of application
3. For adding to the property without notice of the Company
4. For tampering any service pipe, tank, control system, filter or any other facilities of the Company in any way whatsoever.
5. For violation of any rules of the Company.
6. For disconnecting or reconnecting service by any party, other than a duly authorized agent of the Company without the consent of the Company.

Non-Payment Penalties

The Customer agrees to promptly pay for service at the then current schedule or rates and fees and agrees to abide by and be subject to the Company's billing and cutoff procedures. Should the Customer not pay in accordance with the Company's rules, the Customer agrees to pay all reasonably incurred cost of collection of delinquent fees including attorney fees.

The non-payment penalty will be $25 per billing cycle. If payment is not received within fifteen days after the due date, a 2nd notice will be sent to the customer. If payment is not received within 30 days, service will be turned off from the customer's property as per the Sewer Service Contract Agreement (Attachment 14) executed by the customer with no additional notice being sent. No service shall be reconnected if disconnected for non-payment (or any other valid reason) until all charges have been paid, including disconnection and reconnection fees. The disconnection fee is $40. The reconnection fee is $50 plus all back payments.

Returned Checks

A check returned by the bank will incur a fee of $25.

Changes in Ownership, Tenancy of Service

A new application and contract must be made and approved by the Company on any change in ownership of property, or tenancy, or in the service as described in the application. In the event of a failure of a new owner or tenant to make such application, the Company shall have the right to discontinue service until such new application is made an approved.

Sewer System Access Fee

The owner of each property parcel, which is provided a service connection when the sewer system is built, will be required to pay a sewer access fee of $120.00 per year. This fee will be payable each July 1st. As each Customer attaches to the Service Connection and signs up for service, they will pay a pro-rated access fee for that year and thereafter the fee will not be charged.

Engineering, Material and Construction Standards

General: This specification covers the type of sewer system required for various design conditions of sewers constructed by developers.

1. The requirements called for are a minimum in all cases. Bedding conditions, material specifications, sealing requirements and installation methods are the responsibility of the design engineer and must be approved by the Company Engineer.
2. Design and construction of sewer lines shall meet the requirements of the State of Tennessee Department of Environment. Any conflicts between company and state requirements shall be resolved so that the more restrictive shall govern.
3. All sewage collection system components are to be watertight. This includes Building Outfall lines, all tanks, Collector Lines, Sewer Lines and Main Lines.
4. Collector Lines and Main Lines are to be tested to 100 pounds per square inch of water pressure. Risers and lids are to be watertight.
5. Septic Pump and Septic Gravity Tanks are to be installed near the customer's building to be served. The tanks are to be set in a level condition and tested for water tightness before backfilling.
6. STEP septic tanks must meet the specifications outlined in this document. Size of STEP tanks must be approved by Limestone and will be based on the number of bedrooms in the home and the intended use of the home.
7. All pipe is to be PVC. Classes and sizes will be per Engineer's design and in all cases Schedule 40 will be the minimum allowable.
8. Only wastewater drains are to be connected to the sewer system. No water sources such as roof drains, sump pumps, condensate lines and swimming pools shall be connected to the sewer system.

Special Pretreatment Sewage Requirements

For all sewage connections the Company reserves the right to require any non-residential user to provide special pre-treatment for any high strength effluent before discharge into its sewage system. The Company may, upon the basis of recognized engineering standards and treatment costs, increase the rate charged to cover the cost of treatment of high strength effluent or industrial waste, and may impose recognized engineering standards as to the maximum size of solids and constituents in such waste discharged into its sewage system.

Additionally, if excessive volumes of sewage are received, the Company may require the Customer to monitor flow volume and increase surge holding capacity at the Customer's expense. All customers will be required to follow the Owners User Manual for an effluent collection system supplied to them by the Company (Attachment 1). These requirements prohibit the dumping of any toxic chemicals that kill tank bacteria and disposal of an excessive amount of grease, among other things. All requirements (and notification of repair costs associated with the system abuse) are established in the Customer's Sewer Subscription Contract with the Company.

Damages

The Company shall in no event be responsible for maintaining any Building Outfall Line owned by the Customer, nor for damages created by sewage escaping there from, nor for defects in Customer's building lines or fixtures. The customer shall at all times comply with all regulations of the TRA and of the Company.

All leaks in any building pipe or fixture on the premises of the Customer shall be immediately repaired by the Customer. On failure to repair any such leak, the service may be discontinued until repairs are made. Any customer found introducing prohibited substances into the waste water system is liable to pay the full cost of cleanup and the repair of any damage caused.

Inspection

All pipes, valves and fixtures shall be at all reasonable hours, be subject to inspection by the Company or it's duly agent.

In Event of Emergency

The Company shall not be liable to the Customer for interruption in service, or for damages or inconvenience as a result of any interruption, stoppage, etc. which was beyond the reasonable control of the Company. In case of emergency, call 865-622-2452.

Service Area

The Company will provide service within its current service area. Additions to the service area must be approved by the TRA.

Extension Plan

The Company may furnish sewer service to property owners whose lands abut the Main Line of existing sewer systems. The sewer service charges listed in the sewer billing monthly rates do not include costs for constructing extensions to the sewer system. Any sewer system facilities required to service such abutting properties shall be constructed at the cost of those parties desiring same, and these facilities shall become the property of the Company to be credited to the account for Contributions in Aid of Construction. In addition, treatment system facility costs will be paid by the Customer desiring to connect onto the system. Sewer service to new areas within a service territory will be made available where it is technically feasible and the developer or property owner is willing the bear the expense of designing and building the sewer system.

Contributions in Aid of Construction

Sewer system facilities furnished by developers and property owners to the Company will be recognized as Contributions in Aid of Construction in the amount of the actual cost of construction. Capital contributions from developers will be treated in like manner.

Contracts for Service

Each Customer before installation of service shall be required to execute on the appropriate forms furnished by the Company, a Sewer Subscription Contract.

Customer Billing Forms

Customer billings will be sent monthly or annually to Customers for payment of a flat fee.

Individual Septic Tank and Pump Tank Requirements

Only the configurations listed on the Individual Septic Tank and Pump Tank requirements list may be used. This list may be added to or taken from as needed.

Public Contact

Josiah Cox
1630 Des Peres R.d., Suite 140, Des Peres, MO 63131
314-736-4672

Tennessee Regulatory Authority Regulations

The Company, in its operation, shall conform to all the applicable rules and regulations promulgated from time to time by the Tennessee Regulatory Authority. The TRA can be reached by phone at 1-800-342-8359 or 615-741-2904.

SEWER SERVICE CONTRACT

DATE: _____

PRINTED NAME: _____

ADDRESS OF PROPERTY: _____

MAILING ADDRESS: _____

TELEPHONE NUMBER: _____

EMAIL ADDRESS: _____

I hereby make application to Limestone Water Utility Company, LLC (Limestone) for sewer service at the address of property stated above. In consideration of the undertaking on the part of Limestone to furnish sewer service, I understand, covenant and agree as follows:

1. I understand that the components of a sewer system have been installed on the property referred to above, which is owned or occupied by me, and which is to be connected with a wastewater disposal system owned and/or maintained by Limestone. I warrant that any connection to and/or subsequent use to this system by the components on my property shall be in accordance with the Rules, Regulations and Plans of Limestone. Regarding my usage of the system components on my property, which are owned by me, I covenant to follow the guidelines set forth in the Owners User Manual. Should I violate these Rules and/or abuse or damage my components, I understand that I must bear the expense to repair or replace the same in accordance with the Plans of Limestone.
2. I acknowledge Limestone, its successors and assigns, have a perpetual easement in, over, under and upon the above specified land as shown on the property plat, with the right to operate and repair all components of the sewer system on my property, including but not limited to the septic tank and septic pump tank systems. I further grant Limestone permission to enter upon my property for any reason connected with the provision or removal of sewer service or collection therefore.
3. For all other plumbing and structures on the property, including the outfall line to the septic tank, I agree that I am responsible for all operation and repair thereof.
4. I agree to promptly pay for service at the then current schedule or rates and fees and agree to abide by and be subject to Limestone's billing and cutoff procedures. Should I not pay in accordance with Limestone's rules, I agree to pay all reasonably incurred cost of collection of delinquent fees including attorney fees.
5. I accept the current Rules and Regulations and the Rates and Fees Schedule and agree to abide by any amendments to such Schedules as approved by the Tennessee Regulatory Authority.
6. I agree that this Agreement shall remain in effect for as long as I own, reside upon or rent the above-described property. When such circumstances no longer exist, I agree to provide notice to Limestone at least thirty (30) days in advance of my vacating the property.
7. I agree to allow Limestone to install an approved cut off valve between the house and water supply and grant Limestone exclusive rights to use such valve to cut off water in order to safely stop wastewater flow.

SUBSCRIBERS SIGNATURE: _____

SECTION 3

RESIDENTIAL SEWER SERVICE TERRITORIES

Service Territory	County	TRA Docket #	Rate Class
Lakeside Estates on Norris Lake	Campbell	11-00020	Rate Class 1

RESIDENTIAL RATE SHEET/EXPLANATION

The monthly sewer charge per customer is **$ 43.37**

FEES:	TOTAL:
Non-Payment	5%
STEP System Installation	$6,000
Tap Fee	3,750/lot
Disconnection	$ 40.00
Reconnection	$ 50.00
Returned Check	$ 25.00
Access Fee	$120/yr

*Escrow amount is included in total $10.24
** Tap fee is for homes with 3 bedrooms or less

Explanation

FFR.D:	**Rate Class I: Standard Base RSF/Fixed Film Reactor Treatment Rate**	$ 30.73
E1:	RSF Escrow Rate	$ 10.24
B1:	Standard bonding charge of	$ 2.40
	Total	**$ 43.37**

Estimate Tap Fees

Tap Fees for each new unit will be derived based on the number of Bedrooms as listed in the table below:

Daily Flowrate	Number of Bedrooms	Estimated Tap Fee
300	3	$ 3,750
400	4	$ 5,000
500	5	$ 6,250
600	6	$ 7,500
700	7	$ 8,750
800	8	$ 10,000
900	9	$ 11,250
1000	10	$ 12,500

STEP System Installation:

- For a 3 bedroom unit/300 gallons per day, STEP systems will be installed for

SECTION 4

COMMERCIAL SEWER SERVICE TERRITORIES

Service Territory	County	TRA Docket #
Lakeside Estates on Norris Lake	Campbell	11-00020

COMMERCIAL RATE SHEET Overnight Rental Units

The monthly sewer charge per customer is based on the monthly average daily flow monitored from the unit being served. A minimum of $68.37 per month will be charged for up to the first 300 gallons per day of average daily flow.(I) For each additional 100 gallons per day of average daily flow, up to a total of 1,000 gallons per day, an additional charge of $15.00 per month per 100 gallons will be levied. For average daily flows over 1,000 gallons per day, an additional monthly charge of $156.79 per 1,000 gallons of average daily flow will apply.

COMMERCIAL W/O FOOD	**FLOWRATE BETWEEN (GPD)**		**TOTAL ** (8/1/13)**	**ESCROW*****
Tier 1	0	300	$ 68.37	$ 15.95
Tier 2.1	301	400	$ 83.37	$ 19.49
Tier 2.2	401	500	$ 98.37	$ 23.02
Tier 2.3	501	600	$ 113.37	$ 26.56
Tier 2.4	601	700	$ 128.37	$ 30.10
Tier 2.5	701	800	$ 143.37	$ 33.63
Tier 2.6	801	900	$ 158.37	$ 37.17
Tier 2.7	901	1000	$ 173.37	$ 40.71
Tier 3.1	1001	2000	$ 331.32	$ 77.95
Tier 3.2	2001	3000	$ 489.27	$ 115.19
Tier 3.3	3001	4000	$ 647.22	$ 152.43
Each additional tier			$ 159.79	$ 37.24

Each customer will be billed the minimum monthly charge unless Limestone determines that the customer's measured usage exceeds an average of 300 gallons per day over a thirty day period. Unless otherwise stated in this tariff, measured usage will be based on a customer's actual or estimated usage, averaged over a thirty-day period.

Actual usage may be measured in any of the following ways:

- Effluent flow meter.
- STEP pump. Usage will be measured by multiplying the period of elapsed pumping time shown on the pump times the capacity of the pump.
- In the absence of an effluent flow meter or a STEP pump, usage will be assumed to be equal to the customer's usage of potable water as shown on the customer's potable water meter.

If a customer is charged in excess of the minimum monthly fee, Limestone will measure the customer's actual usage at least once every ninety days using one of the methods described above and display on the customer's statement the usage and measurement method used. In any month in which Limestone does not measure the company's actual usage, the customer's monthly bill will be based on the customer's estimated monthly usage. No less than once every ninety days Limestone will bill (or credit) the customer for any differences between an estimated bill and actual measured usage.

If a customer's usage exceeds the average daily design flow for three consecutive months, the customer may be required to pay any capital costs associated with increasing the capacity of that portion of the system designed and dedicated to serve the customer. For purposes of this section,

cost to the customer. The notice will also state that if the customer believes that his usage does not meet the criteria described above or that the charge to the customer is unjust and unreasonable, the customer may file a written complaint with the Tennessee Regulatory Authority, located at 460 James Robertson Parkway, Nashville, TN, 37243. Unless the TRA orders otherwise, the filing of a complaint will not delay the proposed construction work but may initiate a proceeding in which the TRA will determine whether, under the terms of this tariff, the customer is responsible for the cost of the construction work.

** Bonding amount of $2.40 included
*** Escrow amount is included

STEP System Installation:

- For a 3 bedroom unit/300 gallons per day, STEP systems will be installed for $6,000. If larger STEP systems are required, they will be quoted on an individual basis. The installation of the STEP systems includes a 15% markup by the utility.

Estimate Tap Fees:

Daily Flowrate	Number of Bedrooms	Estimate Tap Fee
300	3	$3,750.00
400	4	$5,000.00
500	5	$6,250.00
600	6	$7,500.00
700	7	$8,750.00
800	8	$10,000.00
900	9	$11,250.00
1000	10	$12,500.00

Limestone Water UOC.
1630 Des Peres Road
Suite 140
St. Louis, MO 63131

TRA Tariff No. 1
1st Revised Page 1
Cancels Original Page 1

Issue Date: February 22, 2023
By: Josiah Cox, President

Effective Date: May 20, 2007

TARIFF OF

LIMESTONE WATER UOC (SHILOH FALLS)

CONSISTING OF

SCHEDULE OF RATES, TERMS AND CONDITIONS

FOR

SANITARY SEWER SERVICE

APPLYING TO

SHILOH FALLS UTILITIES SERVICE AREA.
COUNCE, TENNESSEE

NO MODIFICATION OF THESE SCHEDULES SHALL BE MADE EXCEPT FOR THE PURPOSE OF CANCELING OR SUPERSEDING PREVIOUSLY ISSUED SCHEDULES

ISSUED: February 22. 2023 Effective: May 20, 2007
By: Josiah Cox, President

CHECK SHEET

The pages of this tariff are effective as of the date shown at the top of the respective pages. Original and revised pages as shown named below comprise all changes from the original tariff and are currently effective as of the date shown on the top of this page.

Title Page	1st Revised
-i-	Original
-ii-	Original
2	1st Revised
3	1st Revised
4	1st Revised
5	1st Revised
6	2nd Revised
7	1st Revised
8	2nd Revised

ISSUED: February 22, 2023 Effective: May 20, 2007
By: Josiah Cox, President

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ISSUED: February 22, 2023 Effective: May 20, 2007
By: Josiah Cox, President

TITLE PAGE

EXPLANATION OF SYMBOLS

When changes are made in any tariff page, a revised page will be issued canceling the tariff page affected; such changes will be identified through the use of the following symbols:

(C)	To signify changed regulation
(D)	To signify discontinued rate, regulation or text
(I)	To signify increase
(M)	To signify a move from one page to another with no change to text, regulation or Tariff
(N)	To signify new rate, regulation or text
(R)	To signify reduction
(S)	To signify matter already appearing in another part of the tariff and repeated for clarification
(T)	To signify a change in text but no change in rate or regulation
(V)	To signify vintaged tariff

RULES AND RIGULATIONS

Governing the Sewerage and Sewage Treatment System

of LIMESTONE WATER UOC (SHILOH FALLS).

STATEMENT OF PURPOSE

The general purposes of these rules and regulations are:

1. To establish procedures for furnishing sewerage and sewage treatment services on a uniform basis to customers within the service area boundary of the Shiloh Falls service area.

2. To provide standards and procedures for:

   a. Acceptable sewage characteristics

   b. Excessive sewage volume

   c. Engineering design standards

   d. Construction and inspection requirements

   e. Quality of materials

DEFINITION OF TERMS

1. Corporation – shall mean LIMESTONE WATER UOC.

2. Engineer – shall mean the consulting engineer of LIMESTONE WATER UOC.

3. Customer – shall mean any person, firm, corporation, association or government unit furnished sewerage by the Corporation.

4. Property – shall mean all facilities owned and operated by the Corporation.

5. Authority – shall mean the Tennessee Regulatory Authority.

6. Sewer Main – shall mean a sewer pipeline that is under pressure, receives sewage from other branches, runs adjacent to roadways and terminates at the sewage treatment plant, or a major lift station.

7. Trunk Sewer – shall mean a sewer that runs parallel to a natural drainage channel and receives sewage from any tributary branches and terminates at the sewage treatment plant or major lift station.

8. Collector Sewer – shall mean those sewer lines running within the service area and conveying the sewage, to the trunk sewer on the main by pressure or gravity. (T) (T)

9. Lateral Sewer – shall mean those sewers extending from the Collector Sewer to the property line of the Customer.

10. Building Sewer – shall mean that sewer piping, gravity, or pressures extending from the Customer's property line to his place of business or residence.

AUTHORIZATION OF RULES AND REGULATIONS

Shiloh Falls was a corporation organized and engaged in business as a public utility in the State of Tennessee under a Certificate of Convenience and Necessity issued by the Tennessee Regulatory Authority on or about May 20, 1996 under Docket No. 95-03948, submits the following statement of its rules and regulations.

EFFECT OF RULES AND REGULATIONS

All provisions of these rules and regulations shall be incorporated in each contract with each sewerage Customer of LIMESTONE WATER UOC.

UTILITY ITEMS ON PRIVATE PROPERTY

The Corporation shall not furnish or maintain any items or appurtenances for sewer service on the customer's premises without execution of an agreement for an easement or encroachment. No property of the Corporation shall be located on the premises of the customers except sewer shut-off valves maintained by the Corporation. All grinder pumps and tanks for grinder pumps shall be located on the customer's property and maintained by the customer. (T)

DISCONTINUANCE OF SERVICE

Service under any application may be discontinued for the following reasons:

1. Non-payment of bill as hereinafter set forth.
2. For misrepresentation in the application.
3. For adding to the Property or fixtures without notice to the Corporation.
4. For failure to protect the connections, service lines or fixtures in good order.
5. For molesting any service pipes or any property of the Corporation in any way whatsoever.
6. Vacancy of premises.
7. For violation of any rules of the Corporation.
8. For disconnecting or re-connecting service by any party other than a duly authorized agent and/or approved service provider of the Corporation without the consent of the Corporation.

NON-PAYMENT PENALTIES

All customers located within the service area are provided water by the First Utility District of Hardin County, Tennessee. All customers agree that their water services may be terminated at the request of the Corporation due to the non-payment of sewer charges, said termination of water service being the approved and agreed method to enforce the collection of sewer charges. No service shall be turned on again if discontinued for non-payment (or any valid reason) until all outstanding charges have been paid. (T) (T)

CHANGE OF OWNERSHIP, TENANCY, OR SERVICE

A new application and agreement must be made and approved by the Corporation on any change in ownership of property, or in tenancy, or in the service as described in the application. In the event of failure of a new owner or tenant to make such application, the Corporation shall have the right to discontinue service until such new application is made and approved.

ISSUED: February 22, 2023 Effective: May 20, 2007 (T)
By: Josiah Cox, President (T)

RETURN CHECK CHARGES

For any and all returned checks submitted by the customer to the utility, the customer shall be responsible to reimburse the utility for actual bank charges incurred by the utility for the non-payment of said funds plus a $20.00 return check fee to cover administrative charges of the utility. (T)

GRINDER PUMPS

All customers must have an approved grinder pump and collection system which meets the specifications as established by the Engineer. The customer shall have the sole responsibility to maintain the grinder pump.

SPECIAL PRETREATMENT SEWAGE REQUIREMENTS

For the sewerage connections, in addition to the customary tap fees, the Corporation reserves the right to require any non-residential user to provide special treatment for any high strength effluent before discharge into its sewerage system. The Corporation may, upon the basis of recognized engineering standards and treatment cost, increase the tap fees or flat rate charges to cover the cost of treatment of high strength effluent or industrial waste with the approval of the Authority, and may impose recognized engineering standards as to the maximum size of solids and constituents in such waste discharge into its sewerage system.

DAMAGES

The Corporation shall in no event be responsible for maintaining any service line owned by the Customer, for damages created by sewage escaping therefrom, or for defects in lines or fixtures on the property of the Customer. The Customer shall at all times comply with all regulations of the Tennessee Regulatory Authority, and the Corporation, relating to the service lines and shall make all changes in his lines required on account of grade or otherwise. All leaks in any pipe or fixture on the premises of the Customer shall be immediately repaired. On failure to repair any such leak, service shall be discontinued until repairs are made. (T)

IN EVENT OF EMERGENCY

The Corporation shall not be liable to the Customer for interruption in service or for damages or inconvenience as a result of any interruption, stoppage, etc., which was beyond the reasonable control of the Corporation.

EXTENSION PLAN

The Corporation will furnish sewer services to all property owners whose lands abut the trunk or main sewer. The sewer service charges and tap fees included in Appendix I do not include costs for constructing trunk sewers and lift stations. Any collector and/or lateral sewers required to service such abutting properties shall be constructed at the cost of the party desiring it, and these sewers shall become the property of the Corporation to be credited to the account for contribution in aid of construction. If the said desiring party does not wish to construct his own collector and lateral sewers, the Corporation may construct them and charge the developer the total project costs for the same. The desiring party shall obtain at its expense the easements required by the Corporation for any collector and/or lateral sewers. Plans for any extensions shall be reviewed and approved by the Engineer prior to construction. (T)

CONTRIBUTIONS IN AID OF CONSTRUCTION & ADVANCES IN AID OF CONSTRUCTION

If any contribution and/or advance remitted to the utility in aid of construction is treated as taxable revenues by the IRS whether in the form of property or cash, the contributing party shall absorb and/or pay the utility the actual amount of tax liability incurred due to said contribution or advance. The contribution or advance will be equal to the "original cost" if in the form of property or face value if in the form of cash. (T)

CONTRACTS FOR SERVICE

Each customer before installation of service shall be required to execute on the appropriate form furnished by the Corporation or its designated representative: (T)

1. An application and contract for service.

CUSTOMER BILLING FORMS

All customer billings shall be on a standard form whether residential, commercial or industrial.

PUBLIC CONTACT

Josiah Cox (T)
LIMESTONE WATER
UOC. 450 Church Street (T)
P. O. Box 1027 (T)
Savannah, Tennessee 38372 (T)

TENNESSEE REGULATORY AUTHORITY

The utility in its operation shall conform with all the applicable rules and regulations promulgated from time to time by the Tennessee Regulatory Authority.

MONTHLY SEWER SERVICE BILLING

Residential, Condominium, House or Apartment:

Charge per 1,000 gallons (actual or assumed flow)	$ 3.71
Minimum monthly charge	$ 8.90

Non-Residential:

Charge per 1,000 gallons (actual or assumed flow)	$ 3.71
Minimum monthly charge	$ 8.90

SEWER CONNECTION FEES

Residential and Commercial	$ 850.00

GENERAL FEES

Returned Check Charges	$ 20.00

RULES, REGULATIONS AND TARIFFS

FOR

AQUA UTILITIES COMPANY

706 MAIN STREET

SAVANNAH, TN 38372

PHONE 731-925-6547

A. STATEMENT OF PURPOSE

The general purpose of these rules and regulations are:

1. To establish procedures for furnishing water, sewerage, and sewer treatment services on uniform bases to customers within the service area boundary of Aqua Utilities Company.

2. To provide standards and procedures operation.

3. Establish rates and other charges.

B. DEFINITION OF TERMS

1. COMPANY: The word COMPANY shall mean the Aqua Utilities Company.

2. ENGINEER: The word ENGINEER shall mean the consulting engineer of the Aqua Utilities.

3. CUSTOMER: The word CUSTOMER shall mean any person, firm, corporation, association, or government unit furnished services by the COMPANY.

4. PROPERTY: The word PROPERTY shall mean all facilities owned and operated by the COMPANY.

5. COMMISSION: The word COMMISSION shall mean Tennessee Public Service Commission.

6. TRUNK SEWER: The words TRUNK SEWER shall mean a sewer that runs parallel to a natural drainage channel and receives sewage from many tributary branches and terminates at the sewage treatment plant or major lift station.

7. COLLECTOR SEWER: The words COLLECTOR SEWER shall mean those sewers running within the development and conveying the sewage to the trunk sewer.

8. LATERAL SEWER: The words LATERAL SEWER shall mean those sewers extending from the Collector Sewer to the property line of the Customer.

9. BUILDING SEWER: The words BUILDING SEWER shall mean that sewer extending from the Customer's property line to his place of business or residence.

10. WATER MAIN: The words WATER MAIN shall mean all lines and appurtenances, including valves, meters, and fittings required to transport water through and including the individual service meters.

B. DEFINITION OF TERMS CONT.

11. WATER SERVICE LINE: The words WATER SERVICE LINE shall mean those lines extending from the Customer's service meter to his place of business or residence.

12. OWNER: The word OWNER, whenever the same appears herein, means the person, firm, corporation or association having the sole interest in any premises or property which is, or is about to be supplied with services by the Company, and the word OWNERS means all so interested.

13. TENANT: The word TENANT, whenever the same appears herein means anyone occupying a premises or property under lease, oral or written, from the Owner and obtaining services from the Company with the consent of his landlord.

14. CUSTOMER: The word CUSTOMER as used herein shall mean the party contracting for services.

B. AUTHORIZATION OF RULES AND REGUATIONS:

The Company, which is organized and engaged in business as a public utility in the State of Tennessee under a Certificate of Convenience and necessity issued by the Tennessee Public Service Commission on _____ under Docket No. 90-04334, submits the following statement of its rules and regulations in compliance with Rule 602.2.

C. EFFECT OF RULES AND REGULATIONS:

All provisions of these rules and regulations shall be incorporated in each contract with each Customer of the Company.

D. UTILITY ITEMS ON PRIVATE PROPERTY:

The Company shall not furnish or maintain any items or appurtenances for services on the Customer's premise without execution of an agreement for an easement or encroachment. No property of the Company shall be located on the premises of Customers. The Building Sewer and water service line shall be maintained by the Customer.

E. APPLICATIONS FOR SERVICES:

All applications for services must be made on written forms provided by the Company. Upon acceptance thereof and payment to Company of any Commission-approved tap-on fee, such applications shall constitute a contract between the applicant as a Customer and the Company.

F. APPLICATIONS FOR SERVICES CONT.

A new application must be made upon any change in tenancy where the tenant has contracted for the services or by the new Owner upon any change in ownership where the Owner has contracted for services. Where more than one tenant is supplied through a meter, the application for the water service must be made by the Owner of the property.

When an application is made, the Company reserves the right to require a deposit in cash commensurate with the probable size of the applicant's bill for the purpose of establishing or maintaining any Customer's credit. Any such deposit so made shall be subject to such terms and conditions as may be required by order of regulation of the Tennessee Public Service Commission.

No contract for services will be entered into by the Company with any applicant until all arrears and charges due by such applicant for services to any premises then or theretofore owned or occupied by him shall have been paid.

G. RULES GOVERNING SERVICE:

When the supply of water is to be temporarily shut off, advance notice will be given by the Company when practicable to all Customers affected by the shutting off, stating the probable duration of the interruption of service.

The Company will not permit its mains or services to be connected on any premises with any service pipe or piping which is connected with any other source of supply. The Company will not permit its mains or services to be connected in any way to any piping, tank, vat or other apparatus which contains liquids, chemicals, or any other matter which may flow back into the Company's service lines or mains.

The Company undertakes to use reasonable care and diligence to provide a constant supply of water at a reasonable pressure but reserves the right at any time, without notice to shut off the water in its mains for the purpose of making repairs or extensions or for other purposes.

The Company shall not be liable for a deficiency or failure, regardless of cause, in the supply of water or in the pressure nor for any damage caused thereby or by the bursting or breaking of any main or service pipe or any attachment to the Company's property. All applicants having broilers upon their premises depending upon the pressure in the Company's pipes to keep them supplied are cautioned against danger of collapse, and all damage occasioned by any such collapse must be borne exclusively by the Customer.

The Company shall require all new Customers who desire both regular water service and fire protection to install separate service lines, one of which is to be used solely for private fire protection. The Company will not permit the use of water from separate fire protection lines except for the extinguishing of fires or fire drills.

The Company shall have the sole right to determine the size of meters, number of meters, valves, service line and connections necessary to give the service applied for.

G. RULES GOVERNING SERVICE CONT.

All applications for service connections must be made in writing on forms furnished by the Company by the person or parties desiring the same, must state the correct lot(s), block and street number of the property to be supplied, and must be signed by the Owner of the premises or his duly authorized agent.

A service line or building sewer shall not be used to supply more than a single property without the consent of the Company. The minimum earth cover of the Customer" service pipe installation shall be three (3) feet.

Service lines or building sewer shall not be installed where any portion must pass through lands, buildings or parts of buildings which are not the property of applicant, unless applicant assumes the liability therefor, in writing.

Meters will be maintained by the Company as far as ordinary wear and tear are concerned, but damage due to freezing hot water or external causes shall be paid for by the Customers (except for outside meter settings).

Rules and regulations regarding meter accuracy, meter testing and frequency of meter tests shall be as contained in the Tennessee Public Service Commission's Rules and Regulations Governing Public Utilities as from time to time revised.

No person other than a Company agent or employee shall take water from any fire hydrant except for fire fighting purposes, and no fire hydrant except for fire fighting purposes, and no fire hydrant shall be used for sprinkling streets, flushing sewers or gutters or for any other purpose except with the advance approval of the Company in writing.

Where water is to be used for steam boilers or other uses where a stoppage of water supply might cause damage, Customers are cautioned that it is impossible for the Company to guarantee a continuous supply of water and that the Customer should, therefore, arrange for adequate storage capacity.

Title to the main, service connections from the main up to and including the meter, stop cocks or values, buffalo boxes, meters and meter installations is vested in the Company, and shall not be trespassed upon or interfered with in any way.

Curb stops shall not be used by the Customer for turning on or shutting off the water supply. Control of the water supply by the Customer shall be by means of a valve located on the property where the Customer is provided with water service.

Where two or more Customers are supplied through a single service pipe, any violation of the rules and regulations of the Company by either or any of such Customers shall be considered as a violation by all, and the Company may take such action as may be taken for a single Customer committing the violation.

All employees of the Company whose duty compels them to enter the Customer's premises shall, upon request, show their credentials or other evidence of authority.

G. RULES GOVERNING SERVICE CONT.

If the Company finds that a meter seal or cover has been broken of any bypass inserted or there is evidence that the meter or meter seal or cover has been tampered with, the water will be shut off and not turned on again until the Customer has paid for the estimated quantity of water which has been used for the preceding four (4) month period and not registered plus the cost to restore the meter to proper working order and other expense incurred by the Company, plus the reconnection fee hereinabove specified.

It is specifically understood that the Company does not hold itself out to render private fire protection service.

The Company does not hold itself out to furnish public fire protection service.

Automatic lawn sprinklers or sprays or other attachments requiring large quantities of water will be permitted only when water is furnished by meter measurement. The Company reserves the right to restrict lawn sprinkling by Customers whenever in its judgment there is not an adequate supply of water available for such purposes.

A supply of water for construction or other special purposes must be applied for in writing, and the Company reserves the right to require a suitable deposit from the applicant. Water so supplied shall be discharged through a hose or pipe directly upon the material to be wet or into a barrel or other container and not upon the ground or into or through a ditch or trench, and all use of water by other than the applicant or for any purposes or upon any premises not described or stated in the application must be prevented by the applicant.

For all sewerage connections, in addition to the customary tap fees, the Company reserves the right to require any non-residential user to provide special treatment for any high strength or toxic effluent before discharge into its sewerage system. The Company may, upon the basis of recognized engineering standards and treatment cost, increase the tap fees of flat rate charges to cover the cost of treatment of high strength effluent or industrial waste, and may impose recognized engineering standards as to the maximum size of solids and constituents in such waste discharged into its sewerage system. Generally, only domestic sewage or its equivalent if allowed in the system without pre-treatment. All State and Environmental Protection Agency pre-treatment requirements must be followed.

Additionally, if excessive volumes of sewage are received, the Company may require the Customer to monitor flow volume in order to compute additional taps required.

H. BILLS AND PAYMENT OF SERVICES:

Customers are liable for payment for all water used on the premises or property until notice has been received at the Company's office that the use of water is no longer desired. Customers are liable for all water shown to have passed through the meter whether by use, wastage or leakage.

A Customer's bill will not be considered past due unless it remains unpaid subsequent to the due date printed on the bill. This due date will be twenty-one (21) days after the bill is mailed.

H. BILLS AND PAYMENT OF SERVICES CONT.

Bills for metered service shall be rendered monthly unless otherwise specified in the rate schedule then in effect, and shall show the readings of the meter at the beginning and end of the period for which the bill is rendered as well as consumption for the period.

Bills for water service will be mailed or delivered to the Customer's last address as shown by the records of the Company when due, but failure to receive a bill will not relieve the Customer from the obligation to pay the same. All bills and other accounts must be paid at the office of the Company.

In case the meter cannot be read for any cause, the Company will require a payment of account equal to the estimated bill for the period involved.

In cases where for any cause the meter cannot be read for a period of two (2) billing periods, the Company will turn off the water upon (5) days written notice (8 days, if mailed) unless the Customer provides access to the meter immediately.

Where a meter has ceased to register or is registering improperly, the quantity of water for which the bill will be rendered will be determined by the average registration of the meter for the prior three (3) billing periods.

I. DISCONTINUANCE OF SERVICE:

Service under any application may be discontinued for the following reasons:

1. Non-payment of bill as herein set forth.
2. For misrepresentation in the application.
3. For adding to the Property or fixtures without notice to the Company.
4. For failure to protect the connections, service lines or fixtures in good order.
5. For molesting any service pipes or any property of the Company in any way whatsoever.
6. Vacancy of premises.
7. For violation of any rules of the Company as filed with the Commission.
8. For disconnecting or reconnecting service by any party other than a duly authorized agent of the Company without the consent of the Company.
9. For discharge of high strength or toxic effluent without pre-treatment.
10. For waste of water due to leakage.

I. DISCONTINUANCE OF SERVICE CONT.:

11. For cross-connecting the Company's supply with any other source of supply, or with any apparatus which may endanger the quality or health standard of the Company's water supply.

If a Customer whose service has been discontinued for non-payment of bills or for violation of the rules and regulations of the Company desires a reconnection, such reconnection will only be made after the Customer:

(a) has made a deposit to insure future payment of bills (in cases only where no deposit was originally made or where such deposit has been applied to payment of the Customer's delinquent account);

(b) has paid all unpaid bills and other charges;

(c) had paid a reconnection fee;

(d) and has corrected any condition found objectionable under rules and regulations of the company.

J. SECURITY DEPOSITS:

Each new Customer, before connection or reconnection of the service, may be required to make a refundable deposit to secure payment of Customer. Interest of six percent (6%) will be paid on any such refundable deposit. Deposits shall be refunded when service is terminated, unless the deposit is used to satisfy last bill requirements.

K. ENGINEERING, MATERIALS, AND CONSTRUCTION STANDARDS:

All sewerage systems added to the Company system shall meet the Company Requirements.

A prospective Customer shall submit one (1) copy of a preliminary plan of any proposed service system to the Engineer.

Upon approval of the preliminary plans, a prospective Customer shall submit three (3) copies of a final set of plans to the Engineer.

The final plans shall contain a note that all construction is to conform to the technical specifications of the company.

A set of final plans with the approval stamp of the Engineer shall be present at the site of the construction at all times during construction.

One set of "As-Built" plans shall be submitted to the Engineer and one to the Company upon completion.

The Company shall be given 24 hours notice of construction in order to provide adequate inspection.

SCHEDULE OF RATES & CHARGES

Monthly Water Service:	
First 1,000 gallons per month	$19.65 **(I)**
Monthly usage in excess of 1,000 gallons applied pro rata	$3.05 per 1,000 gallons **(I)**
Monthly Wastewater Service:	
First 1,000 gallons per month	$19.65 **(I)**
Monthly usage in excess of 1,000 gallons applied pro rata	$3.05 per 1,000 gallons **(I)**
Service Connection Charges:	
Water	$1,425.00 **(I)**
Wastewater	$1,425.00 **(I)**
Reconnects due to Seasonal Disconnects:	
Water	$120.00 **(I)**
Wastewater	$120.00 **(I)**
Reconnects due to Non-Payment of Bill:	
Water	$15.00
Wastewater	$15.00
Miscellaneous Charges:	
Returned Check Charge	$20.00
Forfeited Discount Rate	5.00%

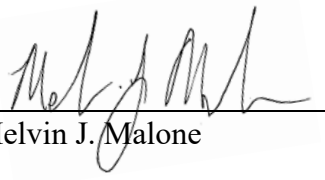
CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served via U.S. Mail or electronic mail upon:

Shilina B. Brown, Esq.
Assistant Attorney General
Office of the Tennessee Attorney General
Consumer Advocate Division
P.O. Box 20207
Nashville, TN 37202-0207
Shilina.Brown@ag.tn.gov

Victoria B. Glover, Esq.
Assistant Attorney General
Office of the Tennessee Attorney General
Consumer Advocate Division
P.O. Box 20207
Nashville, TN 37202-0207
Victoria.Glover@ag.tn.gov

This the 27th day of August 2024.



Melvin J. Malone