Pennsylvania American Water

Paul T Diskin
Manager
Rates & Regulation

November 30, 2004

Timothy C Phillips
Senior Counsel
Office of the Tennessee Attorney General
425 Fifth Avenue North
Nashville, TN 37202-0207

RE: Interrogatories and Requests for Production of Documents by the Attorney General (Second Set) To Tennessee-American Water Company Rate Case No. 04-00288

Dear Mr. Phillips

Enclosed are 3 copies of the above Interrogatories for Tennessee American's petition to increase rates which was filed on September10, 2004. Please note that the Questions 38, 41, 42, 43, 44, 48, 49, 50,55, 60, 62 will be responded to at a later date

Sincerely,

Paul T. Diskin

Enclosures

Cc
M Miller/w enclosures
D Grimes w/enclosures
S. Dillon w/enclosures

Pennsylvania American Water

800 West Hersheypark Drive
Hershey, PA 17033
T 717 531 3253
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I www.pawc.com

RWE GROUP

Interrogatories and Requests for Production Of Documents by the Attorney General (Second Set) To Tennessee-American Water Company Rate Case No. 04-00288

39. Q WITH REGARD TO THE COMPONENTS OF DR VANDER WIEDE'S SCHEDULES D AND E, "COMPARATIVE RETURNS ," AND SCHEDULE F "AVERAGE CAPITAL STRUCTURE...":

A) PROVIDE A COPY OF THE "S&P SECURITY PRICE RECORD" REFERENCED BY DR. VANDER WEIDE IN SCHEDULE E, PAGE 52 OF HIS TESTIMONY,

B) PROVIDE THE "STANDARD AND POOR'S SECURITY PRICE PUBLICATION" REFERENCED BY DR VANDER WEIDE IN APPENDIX 3 OF HIS TESTIMONY,

C) PROVIDE A SAMPLE CALCULATION FOR THE YEAR 2003 IN SCHEDULE E FOR STOCK, DIVIDEND YIELD, STOCK RETURN, AND BOND RETURN, AND

D) PROVIDE A COPY OF THE SOURCE MATERIAL FOR SCHEDULES D, E AND F, INCLUDING VALUE LINE'S COMPANY SPECIFIC ANALYSES REFERENCED AT THE BOTTOM OF SCHEDULD F, IN AN ELECTRONIC FORMAT THAT CAN BE READ BY MICROSOFT EXCEL, OR PROVIDE A URL SITE ON THE INTERNET WHERE THE SOURCE DATA MAY BE DOWNLOADED, OR IF NEITHER OPTION IS AVAILABLE, THEN PROVIDE PAPER COPIES

RESPONSE:

A Copies of the relevant pages from the requested publication are provided.

B See response to A

C. As described in Schedule E, S&P discontinued its S&P Utilities stock index in December 2001 and no longer reports dividend yields for electric utilities (All prior years' dividend yields in the study were as reported by Standard & Poor's.) Thus, beginning in 2002, Dr. Vander Weide calculated the utility stock return and dividend yield based on the companies contained in the S&P electric company index, as listed in the *S&P Security Price Record.* The average dividend yield for these stocks is based on closing stock prices at January 31 The sample calculation for stock return is

$$\text{Stock Return (2003)} = \left[\frac{\text{Stock Price (2004) - Stock Price (2003) + Dividend (2003)}}{\text{Stock Price (2003)}}\right]$$

Using the data for the relevant periods, the calculation is.

$$27\ 58\% = \left[\frac{139\ 79 - 114\ 11}{114\ 11} + 5\ 08\%\right]$$

As described in Appendix 3, the sample calculation for the bond return is.

$$\text{Bond Return (2003)} = \left[\frac{\text{Bond Price (2004) - Bond Price (2003) + Interest (2003)}}{\text{Bond Price (2003)}}\right]$$

D where Copies of the relevant pages from the requested publication are provided.

E See response to A

F. As described in Schedule E, S&P discontinued its S&P Utilities stock index in December 2001 and no longer reports dividend yields for electric utilities (All prior years' dividend yields in the study were as reported by Standard & Poor's) Thus, beginning in 2002, Dr Vander Weide calculated the utility stock return and dividend yield based on the companies contained in the S&P electric company index, as listed in the *S&P Security Price Record* The average dividend yield for these stocks is based on closing stock prices at January 31 The sample calculation for stock return is

$$\text{Stock Return (2003)} = \left[\frac{\text{Stock Price (2004) - Stock Price (2003) + Dividend (2003)}}{\text{Stock Price (2003)}}\right]$$

Using the data for the relevant periods, the calculation is

$$27\ 58\% = \left[\frac{139\ 79 - 114\ 11}{114\ 11} + 5.08\%\right]$$

As described in Appendix 3, the sample calculation for the bond return is:

$$\text{Bond Return (2003)} = \left[\frac{\text{Bond Price (2004) - Bond Price (2003) + Interest (2003)}}{\text{Bond Price (2003)}}\right]$$

where Interest = $4 00 Using the data for the relevant periods, the calculation is:

$$20.27\% = \left[\frac{70.875 - 62\ 256 + 4}{62\ 256}\right]$$

G. See the attached work papers

Interest = $4.00. Using the data for the relevant periods, the calculation is

$$20\ 27\% = \left[\frac{70.875 - 62.256 + 4}{62.256}\right]$$

H See the attached work papers

TENNESSEE-AMERICAN WATER COMPANY
EXHIBIT__(JVW-1)
SCHEDULE D
COMPARATIVE RETURNS ON S&P 500 STOCK INDEX
AND MOODY'S A-RATED BONDS 1937 – 2003

Year	S&P 500 Stock Price	Stock Dividend Yield	Stock Return	A-rated Bond Price	Bond Return
2004	1,132 52	0 0161		$70 87	
2003	895 84	0 0180	28 22%	$62 26	20 27%
2002	1,140 21	0 0138	-20 05%	$57 44	15 35%
2001	1,335 63	0 0116	-13 47%	$56 40	8 93%
2000	1,425 59	0 0118	-5 13%	$52 60	14 82%
1999	1,248 77	0 0130	15 46%	$63 03	-10 20%
1998	963 35	0 0162	31 25%	$62 43	7 38%
1997	766 22	0 0195	27 68%	$56 62	17 32%
1996	614 42	0 0231	27 02%	$60 91	-0 48%
1995	465 25	0 0287	34 93%	$50 22	29 26%
1994	472 99	0 0269	1 05%	$60 01	-9 65%
1993	435 23	0 0288	11 56%	$53 13	20 48%
1992	416 08	0 0290	7 50%	$49 56	15 27%
1991	325 49	0 0382	31 65%	$44 84	19 44%
1990	339 97	0 0341	-0 85%	$45 60	7 11%
1989	285 41	0 0364	22 76%	$43 06	15 18%
1988	250 48	0 0366	17 61%	$40 10	17 36%
1987	264 51	0 0317	-2 13%	$48 92	-9 84%
1986	208 19	0 0390	30 95%	$39 98	32 36%
1985	171 61	0 0451	25 83%	$32 57	35 05%
1984	166 39	0 0427	7 41%	$31 49	16 12%
1983	144 27	0 0479	20 12%	$29 41	20 65%
1982	117 28	0 0595	28 96%	$24 48	36 48%
1981	132 97	0 0480	-7 00%	$29 37	-3 01%
1980	110 87	0 0541	25 34%	$34 69	-3 81%
1979	99 71	0 0533	16 52%	$43 91	-11 89%
1978	90 25	0 0532	15 80%	$49 09	-2 40%
1977	103 80	0 0399	-9 06%	$50 95	4 20%
1976	96 86	0 0380	10 96%	$43 91	25 13%
1975	72 56	0 0507	38 56%	$41 76	14 75%
1974	96 11	0 0364	-20 86%	$52 54	-12 91%
1973	118 40	0 0269	-16 14%	$58 51	-3 37%
1972	103 30	0 0296	17 58%	$56 47	10 69%
1971	93 49	0 0332	13 81%	$53 93	12 13%
1970	90 31	0 0356	7 08%	$50 46	14 81%
1969	102 00	0 0306	-8 40%	$62 43	-12 76%
1968	95 04	0 0313	10 45%	$66 97	-0 81%
1967	84 45	0 0351	16 05%	$78 69	-9 81%
1966	93 32	0 0302	-6 48%	$86 57	-4 48%
1965	86 12	0 0299	11 35%	$91 40	-0 91%
1964	76 45	0 0305	15 70%	$92 01	3 68%
1963	65 06	0 0331	20 82%	$93 56	2 61%
1962	69 07	0 0297	-2 84%	$89 60	8 89%
1961	59 72	0 0328	18 94%	$89 74	4 29%
1960	58 03	0 0327	6 18%	$84 36	11 13%
1959	55 62	0 0324	7 57%	$91 55	-3 49%
1958	41 12	0 0448	39 74%	$101 22	-5 60%
1957	45 43	0 0431	-5 18%	$100 70	4 49%
1956	44 15	0 0424	7 14%	$113 00	-7 35%

1955	35 60	0 0438	28 40%	$116 77	0 20%
1954	25 46	0 0569	45 52%	$112 79	7 07%
1953	26 18	0 0545	2 70%	$114 24	2 24%
1952	24 19	0 0582	14 05%	$113 41	4 26%
1951	21 21	0 0634	20 39%	$123 44	-4 89%
1950	16 88	0 0665	32 30%	$125 08	1 89%
1949	15 36	0 0620	16 10%	$119 82	7 72%
1948	14 83	0 0571	9 28%	$118 50	4 49%
1947	15 21	0 0449	1 99%	$126 02	-2 79%
1946	18 02	0 0356	-12 03%	$126 74	2 59%
1945	13 49	0 0460	38 18%	$119 82	9 11%
1944	11 85	0 0495	18 79%	$119 82	3 34%
1943	10 09	0 0554	22 98%	$118 50	4 49%
1942	8 93	0 0788	20 87%	$117 63	4 14%
1941	10 55	0 0638	-8 98%	$116 34	4 55%
1940	12 30	0 0458	-9 65%	$112 39	7 08%
1939	12 50	0 0349	1 89%	$105 75	10 05%
1938	11 31	0 0784	18 36%	$99 83	9 94%
1937	17 59	0 0434	-31 36%	$103 18	0 63%

Return 1937--2004	Stocks	11 67%
	Bonds	6 40%
Risk Premium		5 27%

TENNESSEE-AMERICAN WATER COMPANY
EXHIBIT__(JVW-1)
SCHEDULE E
COMPARATIVE RETURNS ON S&P UTILITIES STOCK INDEX
AND MOODY'S A-RATED BONDS 1937—2003

Year	Utility Stock Price	Stock Dividend Yield	Stock Return	A-rated Bond Price	Bond Rate of Return
2004	139 79			$70 87	
2003	114 11	0 0508	27 58%	$62 26	20 27%
2002	142 14	0 0454	-15 18%	$57 44	15 35%
2002	243 79	0 0362		$57 44	
2001	307 70	0 0287	-17 90%	$56 40	8 93%
2000	239 17	0 0413	32 78%	$52 60	14 82%
1999	253 52	0 0394	-1 72%	$63 03	-10 20%
1998	228 61	0 0457	15 47%	$62 43	7 38%
1997	201 14	0 0492	18 58%	$56 62	17 32%
1996	202 57	0 0454	3 83%	$60 91	-0 48%
1995	153 87	0 0584	37 49%	$50 22	29 26%
1994	168 70	0 0496	-3 83%	$60 01	-9 65%
1993	159 79	0 0537	10 95%	$53 13	20 48%
1992	149 70	0 0572	12 46%	$49 56	15 27%
1991	138 38	0 0607	14 25%	$44 84	19 44%
1990	146 04	0 0558	0 33%	$45 60	7 11%
1989	114 37	0 0699	34 68%	$43 06	15 18%
1988	106 13	0 0704	14 80%	$40 10	17 36%
1987	120 09	0 0588	-5 74%	$48 92	-9 84%
1986	92 06	0 0742	37 87%	$39 98	32 36%
1985	75 83	0 0860	30 00%	$32 57	35 05%
1984	68 50	0 0925	19 95%	$31 49	16 12%
1983	61 89	0 0948	20 16%	$29 41	20 65%
1982	51 81	0 1074	30 20%	$24 48	36 48%
1981	52 01	0 0978	9 40%	$29 37	-3 01%
1980	50 26	0 0953	13 01%	$34 69	-3 81%
1979	50 33	0 0893	8 79%	$43 91	-11 89%
1978	52 40	0 0791	3 96%	$49 09	-2 40%
1977	54 01	0 0714	4 16%	$50 95	4 20%
1976	46 99	0 0776	22 70%	$43 91	25 13%
1975	38 19	0 0920	32 24%	$41 76	14 75%
1974	48 60	0 0713	-14 29%	$52 54	-12 91%
1973	60 01	0 0556	-13 45%	$58 51	-3 37%
1972	60 19	0 0542	5 12%	$56 47	10 69%
1971	63 43	0 0504	-0 07%	$53 93	12 13%
1970	55 72	0 0561	19 45%	$50 46	14 81%
1969	68 65	0 0445	-14 38%	$62 43	-12 76%
1968	68 02	0 0435	5 28%	$66 97	-0 81%
1967	70 63	0 0392	0 22%	$78 69	-9 81%
1966	74 50	0 0347	-1 72%	$86 57	-4 48%
1965	75 87	0 0315	1 34%	$91 40	-0 91%
1964	67 26	0 0331	16 11%	$92 01	3 68%
1963	63 35	0 0330	9 47%	$93 56	2 61%
1962	62 69	0 0320	4 25%	$89 60	8 89%
1961	52 73	0 0358	22 47%	$89 74	4 29%
1960	44 50	0 0403	22 52%	$84 36	11 13%
1959	43 96	0 0377	5 00%	$91 55	-3 49%
1958	33 30	0 0487	36 88%	$101 22	-5 60%

1957	32 32	0 0487	7 90%	$100 70	4 49%
1956	31 55	0 0472	7 16%	$113 00	-7 35%
1955	29 89	0 0461	10 16%	$116 77	0 20%
1954	25 51	0 0520	22 37%	$112 79	7 07%
1953	24 41	0 0511	9 62%	$114 24	2 24%
1952	22 22	0 0550	15 36%	$113 41	4 26%
1951	20 01	0 0606	17 10%	$123 44	-4 89%
1950	20 20	0 0554	4 60%	$125 08	1 89%
1949	16 54	0 0570	27 83%	$119 82	7 72%
1948	16 53	0 0535	5 41%	$118 50	4 49%
1947	19 21	0 0354	-10 41%	$126 02	-2 79%
1946	21 34	0 0298	-7 00%	$126 74	2 59%
1945	13 91	0 0448	57 89%	$119 82	9 11%
1944	12 10	0 0569	20 65%	$119 82	3 34%
1943	9 22	0 0621	37 45%	$118 50	4 49%
1942	8 54	0 0940	17 36%	$117 63	4 14%
1941	13 25	0 0717	-28 38%	$116 34	4 55%
1940	16 97	0 0540	-16 52%	$112 39	7 08%
1939	16 05	0 0553	11 26%	$105 75	10 05%
1938	14 30	0 0730	19 54%	$99 83	9 94%
1937	24 34	0 0432	-36 93%	$103 18	0 63%

Return 1937--2003	Stocks	10 57%
	Bonds	6 40%
Risk Premium		4 16%

S&P Utilities Index discontinued December 2001
Return for 2002 based on S&P electric utilities
S&P Replaced Utilities stock index in December 2001 with separate indices for electric and natural gas utilities
Returns for 2002 and following based on electric utilities

TENNESSEE-AMERICAN WATER COMPANY
EXHIBIT__(JVW-1)
SCHEDULE F

AVERAGE CAPITAL STRUCTURE OF PROXY WATER COMPANY GROUP

	Company Name	Short-Term Debt	Long-Term Debt	Preferred Equity	Market Cap $ (Mil)	Total Capital	% Short-Term Debt	% Long-Term Debt	% Preferred	% Equity
1	Amer States Water	56 8	229 8	0 0	362 0	648 6	8 76%	35 43%	0 00%	55 81%
2	Aqua America	135 8	696 7	0 0	1,904 3	2,736 8	4 96%	25 46%	0 00%	69 58%
3	California Water	7 4	250 4	3 5	478 3	739 6	1 00%	33 86%	0 47%	64 67%
4	Southwest Water	2 7	73 1	0 5	198 7	275 0	0 98%	26 59%	0 18%	72 25%
5	York Water Company	9 9	29 9	0 0	128 8	168 6	5 87%	17 74%	0 00%	76 39%
6	Composite	212 6	1,279 9	4 0	3,072 0	4,568 5	4 65%	28 02%	0 09%	67 24%

Total Debt	Short Term	Long-term	Preferred	No Shares	Market Price	Market Cap $ (Mil)
75 8	2 7	73 1	0 5	14 67	13 55	198 7
39 8	9 9	29 9	0 0	6 42	20 06	128 8

AVERAGE CAPITAL STRUCTURE OF PROXY LDC GROUP

	Company Name	Short-Term Debt	Long-Term Debt	Preferred Equity	Market Cap $ (Mil)	Total Capital	% Short-term Debt	% Long-term Debt	% Preferred	% Equity
1	AGL Resources	383 4	956 1	0 0	1,850 6	3,190 1	12 02%	29 97%	0 00%	58 01%
2	Atmos Energy	127 9	863 9	0 0	1,297 5	2,289 3	5 59%	37 74%	0 00%	56 68%
3	Equitable Resources	146 3	572 0	0 0	2,923 0	3,641 3	4 02%	15 71%	0 00%	80 27%
4	KeySpan Corp	927 1	5,224 1	83 8	5,799 3	12,034 3	7 70%	43 41%	0 70%	48 19%
5	NICOR Inc	415 0	396 2	4 3	1,508 2	2,323 7	17 86%	17 05%	0 19%	64 91%
6	Northwest Nat Gas	89 8	445 9	8 3	755 6	1,299 6	6 91%	34 31%	0 64%	58 14%
7	Peoples Energy	207 9	744 3	0 0	1,537 1	2,489 3	8 35%	29 90%	0 00%	61 75%
8	Piedmont Natural Gas	557 1	460 0	0 0	1,538 8	2,555 9	21 80%	18 00%	0 00%	60 21%
9	WGL Holdings Inc	178 9	636 7	28 2	1,389 7	2,233 5	8 01%	28 51%	1 26%	62 22%
10	Composite	3,033 4	10,299 2	124 6	18,599 8	32,057 0	9 46%	32 13%	0 39%	58 02%

Data from Value Line Investment Survey for Windows
Jun-04
Data for York and Southwest from company 10ks

Interrogatories and Requests for Production Of Documents by the Attorney General (Second Set) To Tennessee-American Water Company Rate Case No. 04-00288

40 Q WITH REGARD TO DR VANDER WIEDE'S QUESTION NUMBER 55 AND ANSWER NUMBER 55 AT PAGE 27 OF HIS DIRECT TESTIMONY, PROVIDE ALL DOCUMENTS WHICH EXPLAIN THE VALUE LINE SAFETY RANKING SYSTEM AND WHICH EXPLAIN THE CRITERIA FOR ASSIGNING A SAFETY RANK TO THE COMPANIES LISTED IN DR. VANDER WEIDE'S SCHEDULES A AND B AND PROVIDE VALUE LINE'S SAFETY RANKINGS FOR THOSE COMPANIES

RESPONSE:

In its *Guide to Using the Investment Survey*, a pamphlet provided to subscribers to the *Value Line Investment Survey*, *Value Line* defines safety rank as follows.

> **Safety Rank**. A measurement of potential risk associated with individual common stocks The Safety Rank is computed by averaging two other Value Line indexes—the Price Stability Index and the Financial Strength Rating Safety Ranks range from 1 (Highest) to 5 (Lowest) Conservative investors should try to limit purchases to equities ranked 1 (Highest) or 2 (Above Average) for Safety. (p 40)

Value Line considers the Safety Rank to measure the total risk of a stock based on the stock's Price Stability relative to the other 1,700 stocks in Value Line and based on the Financial Strength Rating of the company. As *Value Line* also states at pages 2 – 3 in its guide.

> Safety Rank measures the total risk of a stock It is derived from the stock's Index of Price Stability relative to the 1,700 other stocks and from the Financial Strength Rating of the company. Safety ranks are also given on a scale from 1 (safest) to 5 (riskiest) as follows.
>
> Rank 1 (Highest): This stock is probably one of the safest, most stable, and least risky stock market investments
>
> Rank 2 (Above Average): This stock is safer and less risky than most.
>
> Rank 3 (Average) This stock is of average risk and safety.
>
> Rank 4 (Below Average): This stock is riskier and less safe than most

Rank 5 (Lowest). This stock is probably one of the riskiest and least safe

The *Value Line* Safety Ranks for the companies shown in Schedules A and B are shown below.

Company	Value Line Safety Rank
Amer States Water	3
Aqua America	3
California Water	2
Southwest Water	3
York Water Company	NA
Average	2.8

Company	Value Line Safety Rank
AGL Resources	2
Atmos Energy	3
Equitable Resources	2
KeySpan Corp	2
NICOR Inc.	2
Northwest Nat Gas	2
Peoples Energy	1
Piedmont	2
WGL Holdings Inc	1
Average	1 9

Interrogatories and Requests for Production Of Documents by the Attorney General (Second Set) To Tennessee-American Water Company Rate Case No. 04-00288

42. Q. REGARDING MR MILLER'S SCHEDULE MAM-1.

A) THE COMMON STOCK EQUITY AMOUNT OF $18.5 FOR THE ATTRITION YEAR OF JUNE 30, 2005,L RECONCILE OR EXPLAIN OR SHOW THE CALCULATIONS WHERE THE $18.5 MILLION GOAL WILL BE REACHED FROM THE $13 7 MILLION OF COMMON STOCK BOOK VALUVE SHOWIN ION TENNESSEE AMERICAN'S TRA-FORM 3.06 FOR JULY 2004;

B) FOR THE SHORT-TERM DEBT AMOUNT OF $4 7 MILLION, INDICATE IF THE SHORT-TERM DEBT IS IN THE FORM OF COMMERCIAL PAPER OR CREDIT AGREEMENTS AND IDENTIFY THE HOLDERS OF THE SHORT-TERM DEBT AND, IF THE HOLDERS ARE NOT PART OF THE RWE COMPANY (SUCH AS RWE ITSELF, RWE THAMES, OR AMERICAN WATER CAPITAL CORPORATION OR ANY OTHER SUBSIDIARY OF RWE), THE PROVIDE COPIES OF THE CREDIT AGREEMENTS BETWEEN THE HOLDERS AND TENNESSEE-AMERICAN, AND

C) PROVIDE A COPY OF ANY CREDIT RATING THAT TENNESSEE-AMERICAN MAY HAVE AND IDENTITY THE RATING AGENCY

RESPONSE:

A The $13 7 million shown on TRA-Form 3 06 represents only the book value of the common stock The common stock of $18.538 million shown on Exhibit MAM-1 is comprised of common stock plus paid-in-capital. There is no additional common stock issued during the attrition period other than those generated from retained earnings

Per Balance Sheet at 7-31-04 (and throughout the attrition year

Common Stock	$13,754,235
Paid-In-Capital	$ 4,788,768
Total per Exb MAM-1	$18,537,633

B. The short-term debt is in the form of credit agreements with American Water Capital Corp Please attached copy of the Loan Agreement

C. Tennessee American does not have an independent credit rating. American Water Capital Corp has an S&P rating of "A"

PROMISSORY NOTE
FOR SHORT-TERM LOANS

$25,000,000 00 January 1, 2004

FOR VALUE RECEIVED, Tennessee-American Water Company a Tennessee corporation (herein "Borrower") hereby promises to pay ON DEMAND to the order of American Water Capital Corp , a Delaware corporation ("Lender"), in same day funds at its offices at Voorhees, New Jersey or such other place as Lender may from time to time designate, the principal sum of Twenty-five Million dollars ($25,000,000 00), (the "Maximum Principal Sum"), or such lesser amount as shall equal the aggregate unpaid principal amount of the loans made by Lender to Borrower (other than loans evidenced by a promissory note under which the principal amount is due and payable in one or more scheduled installments more than one year after the date of its issue), together with interest thereon from the date hereof until paid in full Interest will be charged on the unpaid outstanding principal balance of this Note at a rate per annum equal to Lender's actual cost of funds to make such loan, such rate to change as Lender's actual cost of funds changes Interest on borrowings shall be due and payable on the first business day of each month, commencing with the first business day of the month after the month in which this Note is executed In the absence of manifest error, the records maintained by Lender of the amount and term, if any, of borrowings hereunder shall be deemed conclusive

Borrower may borrow, repay and reborrow hereunder in amounts which do not, in the aggregate outstanding at any time, exceed the Maximum Principal Sum

The occurrence of one or more of any of the following shall constitute an event of default hereunder

(a) Borrower shall fail to make any payment of principal and/or interest due hereunder or under any other promissory note between Lender and Borrower within five business days after the same shall become due and payable, whether at maturity or by acceleration or otherwise,

(b) Borrower shall apply for or consent to the appointment of a receiver, trustee or liquidator of itself or any of its property, admit in writing its inability to pay its debts as they mature, make a general assignment for the benefit of creditors, be adjudicated a bankrupt or insolvent or file a voluntary petition in bankruptcy or a petition or an answer seeking reorganization or an arrangement with creditors or to take advantage of any bankruptcy, reorganization, insolvency, readjustment of debt, dissolution or liquidation of law or statute, or an answer admitting the material allegations of a petition filed against it in any proceeding under any such law, or if action shall be taken by Borrower for the purposes of effecting any of the foregoing, or

(c) Any order, judgment or decree shall be entered by any court of competent jurisdiction, approving a petition seeking reorganization of Borrower or all or a substantial part of the assets of Borrower, or appointing a receiver, trustee or liquidator of Borrower or any of its property, and such order, judgment or decree shall continue unstayed and in effect for any period of sixty (60) days

Upon the occurrence of any event of default, the entire unpaid principal sum hereunder plus all interest accrued thereon plus all other sums due and payable to Lender

hereunder shall, at the option of Lender, become due and payable immediately In addition to the foregoing, upon the occurrence of any event of default, Lender may forthwith exercise singly, concurrently, successively or otherwise any and all rights and remedies available to Lender by law, equity, statute or otherwise

Borrower hereby waives presentment, demand, notice of nonpayment, protest, notice of protest or other notice of dishonor in connection with any default in the payment of, or any enforcement of the payment of, all amounts due hereunder To the extent permitted by law, Borrower waives the right to any stay of execution and the benefit of all exemption laws now or hereafter in effect

Following the occurrence of any event of default, Borrower will pay upon demand all costs and expenses (including all amounts paid to attorneys, accountants, and other advisors employed by Lender), incurred by Lender in the exercise of any of its rights, remedies or powers hereunder with respect to such event of default, and any amount thereof not paid promptly following demand therefore shall be added to the principal sum hereunder and will bear interest at the contract rate set forth herein from the date of such demand until paid in full In connection with and as part of the foregoing, in the event that this Note is placed in the hands of an attorney for the collection of any sum payable hereunder, Borrower agrees to pay reasonable attorneys' fees for the collection of the amount being claimed hereunder, as well as all costs, disbursements and allowances provided by law.

If for any reason one or more of the provisions of this Note or their application to any entity or circumstances shall be held to be invalid, illegal or unenforceable in any respect or to any extent, such provisions shall nevertheless remain valid, legal and enforceable in all such other respects and to such extent as may be permissible. In addition, any such invalidity, illegality or unenforceability shall not affect any other provisions of this Note, but this Note shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein

This Note inures to the benefit of Lender and binds Borrower and Lender's and Borrower's respective successors and assigns, and the words "Lender" and "Borrower" whenever occurring herein shall be deemed and construed to include such respective successors and assigns

This Promissory Note is one of the promissory notes referred to in the Financial Services Agreement dated as of June 15, 2000 between Borrower and Lender to which reference is made for a statement of additional rights and obligations of the parties hereto

IN WITNESS WHEREOF, Borrower has executed this Promissory Note the day and year first written above

Tennessee-American Water Company

By  Vice President Finance
Name and Title

PROMISSORY NOTE
FOR SHORT-TERM LOANS

$10,000,000 January 1, 2005

FOR VALUE RECEIVED, Tennessee American Water - American Water Company, a Delaware corporation (herein "Borrower") hereby promises to pay ON DEMAND to the order of American Water Capital Corp., a Delaware corporation ("Lender"), in same day funds at its offices at Voorhees, New Jersey or such other place as Lender may from time to time designate, the principal sum of Ten Million dollars ($10,000,000 00), (the "Maximum Principal Sum"), or such lesser amount as shall equal the aggregate unpaid principal amount of the loans made by Lender to Borrower (other than loans evidenced by a promissory note under which the principal amount is due and payable in one or more scheduled installments more than one year after the date of its issue), together with interest thereon from the date hereof until paid in full. Interest will be charged on the unpaid outstanding principal balance of this Note at a rate per annum equal to Lender's actual cost of funds to make such loan, such rate to change as Lender's actual cost of funds changes. Interest on borrowings shall be due and payable on the first business day of each month, commencing with the first business day of the month after the month in which this Note is executed. In the absence of manifest error, the records maintained by Lender of the amount and term, if any, of borrowings hereunder shall be deemed conclusive.

Borrower may borrow, repay and reborrow hereunder in amounts which do not, in the aggregate outstanding at any time, exceed the Maximum Principal Sum.

The occurrence of one or more of any of the following shall constitute an event of default hereunder:

(a) Borrower shall fail to make any payment of principal and/or interest due hereunder or under any other promissory note between Lender and Borrower within five business days after the same shall become due and payable, whether at maturity or by acceleration or otherwise;

(b) Borrower shall apply for or consent to the appointment of a receiver, trustee or liquidator of itself or any of its property, admit in writing its inability to pay its debts as they mature, make a general assignment for the benefit of creditors, be adjudicated a bankrupt or insolvent or file a voluntary petition in bankruptcy or a petition or an answer seeking reorganization or an arrangement with creditors or to take advantage of any bankruptcy, reorganization, insolvency, readjustment of debt, dissolution or liquidation of law or statute, or an answer admitting the material allegations of a petition filed against it in any proceeding under any such law, or if action shall be taken by Borrower for the purposes of effecting any of the foregoing; or

(c) Any order, judgment or decree shall be entered by any court of competent jurisdiction, approving a petition seeking reorganization of Borrower or all or a substantial part of the assets of Borrower, or appointing a receiver, trustee or liquidator of Borrower or any of its property, and such order, judgment or decree shall continue unstayed and in effect for any period of sixty (60) days.

Upon the occurrence of any event of default, the entire unpaid principal sum hereunder plus all interest accrued thereon plus all other sums due and payable to Lender

hereunder shall, at the option of Lender, become due and payable immediately. In addition to the foregoing, upon the occurrence of any event of default, Lender may forthwith exercise singly, concurrently, successively or otherwise any and all rights and remedies available to Lender by law, equity, statute or otherwise

Borrower hereby waives presentment, demand, notice of nonpayment, protest, notice of protest or other notice of dishonor in connection with any default in the payment of, or any enforcement of the payment of, all amounts due hereunder. To the extent permitted by law, Borrower waives the right to any stay of execution and the benefit of all exemption laws now or hereafter in effect.

Following the occurrence of any event of default, Borrower will pay upon demand all costs and expenses (including all amounts paid to attorneys, accountants, and other advisors employed by Lender), incurred by Lender in the exercise of any of its rights, remedies or powers hereunder with respect to such event of default, and any amount thereof not paid promptly following demand therefore shall be added to the principal sum hereunder and will bear interest at the contract rate set forth herein from the date of such demand until paid in full. In connection with and as part of the foregoing, in the event that this Note is placed in the hands of an attorney for the collection of any sum payable hereunder, Borrower agrees to pay reasonable attorneys' fees for the collection of the amount being claimed hereunder, as well as all costs, disbursements and allowances provided by law

If for any reason one or more of the provisions of this Note or their application to any entity or circumstances shall be held to be invalid, illegal or unenforceable in any respect or to any extent, such provisions shall nevertheless remain valid, legal and enforceable in all such other respects and to such extent as may be permissible. In addition, any such invalidity, illegality or unenforceability shall not affect any other provisions of this Note, but this Note shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein

This Note inures to the benefit of Lender and binds Borrower and Lender's and Borrower's respective successors and assigns, and the words "Lender" and "Borrower" whenever occurring herein shall be deemed and construed to include such respective successors and assigns.

This Promissory Note is one of the promissory notes referred to in the Financial Services Agreement dated as of June 15, 2000 between Borrower and Lender to which reference is made for a statement of additional rights and obligations of the parties hereto.

IN WITNESS WHEREOF, Borrower has executed this Promissory Note the day and year first written above.

Tennessee American Water - American Water Company

By: Michael A. Miller

Michael A. Miller, Treasurer

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

45. Q. INDICATE IF ALL OF THE PENSION EXPENSE OF $892,790 SHOWN AT PAGE 25 OF THE WORKPAPERS IS FUNDING FOR "DEFINED BENEFIT PLANS" AS SUCH PLANS ARE DEFINED IN THE IRS CODE, AND INDICATE IF ANY OF TENNESSEE AMERICAN'S REVENUE REQUIREMENTS ARE REQUIRED TO FUND PUENSIONS THROUGH "DEFINED CONTRIBUTION PLANS" AS SUCH PLANS ARE DEFINED IN THE IRS CODE.

RESPONSE:

A All of the pension expense claim of $892,790 is funding for a defined benefit plan as defined in the IRS code

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

46. Q PROVIDE A COPY OF DR. VANDER WEIDES' TESTIMONY IN "IN THE MATTER OF THE FILING DATED MAY 1, 2001 BY THE NORTH CAROLINA RATE BUREAU FOR REVISED AUTOMOBILE INSURANCE RATES – PRIVATE PASSENGER CARS AND MOTORCYCLES" AND INCLUDE THE EXHIBITS.

RB EXHIBIT 25 – JAMES VANDER WEIDE – SUMMARY OF THE DCF ANALYSIS FOR PROPERTY/CASUALTY INSURANCE COMPANIES;

RB EXHIBIT 26 – JAMES VANDER WEIDE – SUMMARY OF DCF ANALYSIS FOR PROPERTY/CASUALTY INSURANCE COMPANIES WITH SIGNIFICANT PRIVATE PASSENGER AUTOMOBILE INSURANCE BUSINESS,

RB EXHIBIT 27 - JAMES VANDER WEIDE – SUMMARY OF DCF ANALYSIS FOR THE S &P 500 COMPANIES, AND

RB EXHIBIT 28 - JAMES VANDER WEIDE – COMPARATIVE RETURNS ON S&P 500 AND MOODY'S A-RATED UTILITY BONDS 1926-2001

RESPONSE:

A Dr. Vander Weide's private passenger auto testimony filed on behalf of the North Carolina Rate Bureau is attached

Exhibit RB-24

PREFILED TESTIMONY
OF
JAMES H. VANDER WEIDE

2001 PRIVATE PASSENGER NONFLEET
AUTOMOBILE INSURANCE RATE FILING
BY THE NORTH CAROLINA RATE BUREAU

Q. WHAT IS YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS?

A. My name is James H. Vander Weide. I am Research Professor of Finance and Economics at the Fuqua School of Business of Duke University. I am also President of Financial Strategy Associates, a firm that provides strategic and financial consulting services to clients in the electric, gas, insurance, telecommunications, and water industries. My business address is 3606 Stoneybrook Drive, Durham, North Carolina.

Q. WOULD YOU PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PRIOR ACADEMIC EXPERIENCE?

A. I graduated from Cornell University in 1966 with a Bachelor's Degree in Economics. I then attended Northwestern University where I earned a Ph.D. in Finance. In January 1972, I joined the faculty of the School of Business at Duke University and was subsequently named Assistant Professor, Associate Professor, and then Professor.

Since joining the faculty I have taught courses in corporate finance, investment management, and management of financial

institutions. I have also taught a graduate seminar on the theory of public utility pricing and lectured in executive development seminars on the cost of capital, financial analysis, capital budgeting, mergers and acquisitions, cash management, short-run financial planning, and competitive strategy.

I have served as Program Director and taught in numerous executive education programs at the Fuqua School of Business, including the Duke Advanced Management Program; the Duke Executive Program in Telecommunications; Competitive Strategies in Telecommunications; the Program for CIS Manager Development; and tailored programs developed for corporations such as ABB, TRW, Norfolk Southern, LaFarge, Siemens, and GlaxoWellcome.

In addition to my teaching and executive education activities, I have written research papers on such topics as portfolio management, the cost of capital, capital budgeting, the effect of regulation on the performance of public utilities, the economics of universal service, and cash management. My articles have been published in *American Economic Review, Financial Management, International Journal of Industrial Organization, Journal of*

Finance, Journal of Financial and Quantitative Analysis, Journal of Bank Research, Journal of Accounting Research, Journal of Cash Management, Management Science, The Journal of Portfolio Management, Atlantic Economic Journal, Journal of Economics and Business, and *Computers and Operations Research.* I have written a book titled *Managing Corporate Liquidity: an Introduction to Working Capital Management,* and a chapter for *The Handbook of Modern Finance*, "Financial Management in the Short Run."

Q. HAVE YOU PREVIOUSLY PRESENTED EVIDENCE ON THE COST OF CAPITAL AND OTHER REGULATORY ISSUES?

A. Yes. I have submitted testimony and/or testified on the cost of capital and other regulatory issues before the Federal Communications Commission, the Federal Energy Regulatory Commission, the National Telecommunications and Information Administration, the U.S. Congress, the public service commissions of 39 states and the District of Columbia, the insurance commissions of five states, and the Canadian Radio-Television and Telecommunications Commission.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been asked by the North Carolina Rate Bureau to make an independent appraisal of the aggregate cost of equity capital

for the companies writing private passenger automobile insurance in North Carolina and to recommend a rate of return on equity which is fair, reasonable, and commensurate with returns on investments of comparable risk and which will allow those companies in the aggregate to attract and retain capital on reasonable terms.

Q. WHAT DO YOU MEAN BY THE PHRASE "COST OF EQUITY CAPITAL?"

A. A firm's cost of equity capital is the rate of return expectation that is required in the marketplace on equity investments of comparable risk. If an investor does not expect to earn a return on an equity investment in a firm that is at least as large as the return the investor could expect to earn on other investments of comparable risk, then the investor will not invest in that firm's shares. Thus, a firm's cost of equity capital is also the rate of return expectation that is required in the marketplace in order to induce equity investors to purchase shares in that firm.

Q. IS THE COST OF EQUITY CAPITAL THE SAME AS THE RETURN ON EQUITY?

A. No. The cost of equity capital is a market-based concept that reflects investors' future expectations, while the return on equity is an accounting concept that measures results of past

performance. The return on equity is equal to income available for common equity divided by the book value of common equity.

Q. HAVE YOU FORMED AN OPINION REGARDING THE COST OF EQUITY CAPITAL FOR THE AVERAGE COMPANY WRITING PRIVATE PASSENGER AUTOMOBILE INSURANCE IN NORTH CAROLINA?

A. Yes.

Q. WHAT IS YOUR OPINION IN THAT REGARD?

A. The cost of equity capital for such a company is in the range 12.6 percent to 14.8 percent.

Q. HAVE YOU ALSO FORMED AN OPINION REGARDING THE FAIR RETURN ON EQUITY THAT MUST BE EARNED TO SATISFY THAT COST OF EQUITY CAPITAL?

A. Yes.

Q. WHAT IS THAT OPINION?

A. The companies must earn a return on GAAP equity of 13.1 percent to 15.3 percent in order to satisfy a 12.6 percent to 14.8 percent cost of equity capital.

Q. WHAT ECONOMIC PRINCIPLES DID YOU CONSIDER IN ARRIVING AT THAT OPINION?

A. There are two primary economic principles relevant to my appraisal of the cost of equity capital. The first, relating to the demand for capital, states that a firm should continue to invest in plant and equipment only so long as the return on its investment is greater than or equal to its cost of capital. In the context of a regulated firm which has only limited opportunity to choose the timing of its investments, this principle suggests that the regulatory agency should establish revenue levels which will assure equality between the firm's return on investment and its cost of capital.

The second principle, relating to the supply of capital, states that rational investors are maximizing their total return on capital only if the returns they expect to receive on investments of comparable risk are equal. If these returns are not equal, rational investors will reduce or completely eliminate investments in those activities yielding lower expected returns for a given level of risk and will increase investments in those activities yielding higher expected returns. The second principle implies that regulated firms will be unable to obtain the capital required to expand service on reasonable terms unless they are able to provide investors returns equal to those expected on investments of comparable risk.

Q. DO THESE ECONOMIC PRINCIPLES APPLY TO THE SETTING OF INSURANCE RATES?

A. Yes. These are general economic principles that apply to investing in any business activity, including insurance.

Q. HOW DID YOU GO ABOUT DETERMINING THE COST OF EQUITY CAPITAL FOR THE AVERAGE COMPANY WRITING PRIVATE PASSENGER AUTOMOBILE INSURANCE IN NORTH CAROLINA?

A. I used two generally accepted methods to estimate the cost of equity: (i) the Discounted Cash Flow (DCF) Model, and (ii) the Risk Premium Approach.

Q. PLEASE DESCRIBE THE DCF MODEL.

A. The DCF Model suggests that investors value an asset on the basis of the future cash flows they expect to receive from owning the asset. Thus, investors value an investment in a bond because they expect to receive a sequence of semi-annual coupon payments over the life of the bond and a terminal payment equal to the bond's face value at the time the bond matures. Likewise, investors value an investment in a firm's stock because they expect to receive a sequence of dividend payments and, perhaps, expect to sell the stock at a higher price sometime in the future.

A second fundamental principle of the DCF approach is that investors value a dollar received in the future less than a dollar received today. This is because, if they had the dollar today, they could invest it in an interest earning account and increase their wealth. This principle is called the time value of money.

Applying the two fundamental DCF principles noted above to an investment in a bond suggests that investors should value their investment in the bond on the basis of the present value of the bond's future cash flows. Thus, the price of the bond should be equal to:

Equation 1

$$P_B = \frac{C}{(1+i)} + \frac{C}{(1+i)^2} + \ldots + \frac{C+F}{(1+i)^n}$$

where:

P_B = Bond price;
C = Cash value of the coupon payment (assumed for notational convenience to occur annually rather than semi-annually);
F = Face value of the bond;
i = The rate of interest the investor could earn by investing his money in an alternative bond of equal risk; and
n = The number of periods before the bond matures.

Applying these same principles to an investment in a firm's stock suggests that the price of the stock should be equal to:

Equation 2

$$P_S = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \ldots + \frac{D_n + P_n}{(1+k)^n}$$

where:

P_S = Current price of the firm's stock;

$D_1, D_2 \ldots D_n$ = Expected annual dividend per share on the firm's stock;

P_n = Price per share of stock at the time the investor expects to sell the stock; and

k = Return the investor expects to earn on alternative investments of the same risk, i.e., the investor's required rate of return.

Equation (2) is frequently called the Annual Discounted Cash Flow (DCF) Model of stock valuation.

Q. HOW DO YOU USE THE DCF MODEL TO DETERMINE THE COST OF EQUITY CAPITAL?

A. The "k" in the equation is the cost of equity capital. We make certain simplifying assumptions regarding the other factors in the equation and then mathematically solve for "k."

Q. WHAT ARE THE ASSUMPTIONS YOU MAKE?

A. Most analysts make three simplifying assumptions. First,

they assume that dividends are expected to grow at the constant rate ("g") into the indefinite future. Second, they assume that the stock price at time "n" is simply the present value of all dividends expected in periods subsequent to "n." Third, they assume that the investors' required rate of return, "k," exceeds the expected dividend growth rate, "g."

Q. DOES THE ANNUAL DCF MODEL OF STOCK VALUATION PRODUCE APPROPRIATE ESTIMATES OF A FIRM'S COST OF EQUITY CAPITAL?

A. No. The Annual DCF Model of stock valuation produces appropriate estimates of a firm's cost of equity capital only if the firm pays dividends just once a year. Since most firms pay dividends quarterly, the Annual DCF Model produces downwardly biased estimates of the cost of equity. Investors can expect to earn a higher annual effective return on an investment in a firm that pays quarterly dividends than in one which pays the same amount of dollar dividends once at the end of each year. A complete analysis of the implications of the quarterly payment of dividends on the DCF Model is provided in Exhibit RB-25. For the reasons cited there, I employed the Quarterly DCF Model throughout my calculations.

Q. PLEASE DESCRIBE THE QUARTERLY DCF MODEL YOU USED.

A. The Quarterly DCF Model I used is described by Equation 10

on page 11 in Exhibit RB-25. This equation shows that the cost of equity is: the sum of the dividend yield and the growth rate, where the dividend in the dividend yield is the equivalent dividend at the end of the year, and the growth rate is the expected growth in dividends or earnings per share.

Q. HOW DID YOU APPLY THE DCF APPROACH TO OBTAIN THE COST OF EQUITY CAPITAL FOR THE COMPANIES WRITING PRIVATE PASSENGER AUTOMOBILE INSURANCE IN NORTH CAROLINA?

A. I applied the DCF approach to three groups of companies: Value Line's group of property/casualty insurance companies, a subset of those companies that have a high percentage of revenues from private passenger automobile insurance, and the S&P 500.

Q. WHY DID YOU APPLY THE DCF APPROACH TO THE S&P 500 AS WELL AS TO VALUE LINE'S PROPERTY/CASUALTY INSURANCE COMPANIES?

A. As I noted previously, the cost of equity is defined as the rate of return investors expect to earn on investments in other companies of comparable risk. I applied the DCF approach to the S&P 500 because they are a large group of companies that, on average, are typically viewed as being comparable in risk to the property/casualty insurance industry. The use of a larger set of comparable risk companies should provide an accurate estimate of the cost of equity for the companies writing private passenger

automobile insurance in North Carolina.

Q. DID YOU INCLUDE ALL THE VALUE LINE PROPERTY/CASUALTY INSURANCE COMPANIES?

A. No. Among the Value Line property/casualty insurance companies, I deleted any firm which either pays no dividend, has recently lowered its dividend, or has fewer than three five-year earnings forecasts available from I/B/E/S (formerly known as the Institutional Brokers Estimate System). The Value Line property/casualty companies I used are shown in Exhibit RB-26.

Q. DO ANY OF VALUE LINE'S GROUP OF PROPERTY/CASUALTY INSURANCE COMPANIES SELL PRIMARILY PRIVATE PASSENGER AUTOMOBILE INSURANCE?

A. Yes. The following companies have a high percentage of revenues from private passenger automobile insurance: Allstate, Cincinnati Financial, Mercury General, Progressive, Safeco, and Selective.

Q. WHAT CRITERIA DID YOU USE TO SELECT COMPANIES IN THE S&P 500?

A. I included those firms which pay dividends and which have at least three five-year earnings forecasts available from I/B/E/S. I excluded the insurance companies in the S&P 500 because I had already calculated DCF results for the Value Line

property/casualty insurance companies. The S&P 500 companies I used are shown in Exhibit RB-28.

Q. WHY DID YOU ELIMINATE ANY COMPANY WHICH HAD RECENTLY LOWERED ITS DIVIDEND OR WHICH FAILS TO PAY DIVIDENDS?

A. I eliminated those companies because it is extremely difficult to make a reliable estimate of the future dividend growth rate for companies that have recently lowered their dividends or do not pay dividends. If a company has recently lowered its dividend, investors do not know whether the company will again lower its dividend in the future, or whether the company will attempt to increase its dividend back toward its previous level. If a company does not pay a dividend, one cannot mathematically apply the DCF approach.

Q. HOW DID YOU ESTIMATE THE GROWTH COMPONENT OF THE QUARTERLY DCF MODEL?

A. I used the average of analysts' estimates of future earnings per share (EPS) growth reported by I/B/E/S. As part of their research, financial analysts working at Wall Street firms periodically estimate EPS growth for each firm they follow. The EPS forecasts for each firm are then published. The forecasts are used by investors who are contemplating purchasing or selling shares in individual companies.

Q. WHAT IS I/B/E/S?

A. I/B/E/S is a collection of analysts' forecasts for a broad group of companies expressed in terms of a mean forecast and a standard deviation of forecast for each firm. The mean forecast is used by investors as an estimate of future firm performance.

Q. WHY DID YOU USE THE I/B/E/S GROWTH ESTIMATES?

A. The I/B/E/S growth rates (1) are widely circulated in the financial community, (2) include the projections of a large number of reputable financial analysts who develop estimates of future growth, (3) are reported on a timely basis to investors, and (4) are widely used by institutional and other investors. For these reasons, I believe these estimates represent unbiased estimates of investors' expectations of each firm's long-term growth prospects and, accordingly, are incorporated by investors into their return requirements. Consequently, in my opinion, they provide the best available estimate of investors' long-term growth expectations.

Q. WHY DID YOU RELY EXCLUSIVELY ON ANALYSTS' PROJECTIONS OF FUTURE EPS GROWTH IN ESTIMATING THE INVESTORS' EXPECTED GROWTH RATE RATHER THAN LOOKING AT PAST HISTORICAL GROWTH RATES?

A. There is considerable empirical evidence that analysts'

forecasts are more highly correlated with stock prices than are firms' historical growth rates, and, thus, that investors actually use these forecasts.

Q. HAVE YOU PERFORMED ANY STUDIES CONCERNING THE USE OF ANALYSTS' FORECASTS AS THE BEST ESTIMATE OF INVESTORS' EXPECTED GROWTH RATE, G?

A. Yes, I prepared a study in conjunction with Willard T. Carleton, Karl Eller Professor of Finance at the University of Arizona, on why analysts' forecasts provide the best estimate of investors' expectations of future long-term growth. This study is described in a paper entitled "Investor Growth Expectations and Stock Prices: the Analysts versus Historical Growth Extrapolation," published in the Spring 1988 edition of *The Journal of Portfolio Management*.

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR STUDY.

A. First, we performed a correlation analysis to identify the historically-oriented growth rates which best described a firm's stock price. Then we did a regression study comparing the historical growth rates with the consensus analysts' forecasts. In every case, the regression equations containing the average of analysts' forecasts statistically outperformed the regression equations containing the historical growth estimates. These

results are consistent with those found by Cragg and Malkiel, the early major research in this area. These results are also consistent with the hypothesis that investors use analysts' forecasts, rather than historically-oriented growth calculations, in making buy and sell decisions. They provide overwhelming evidence that the analysts' forecasts of future growth are superior to historically-oriented growth measures in predicting a firm's stock price.

Q. WHAT PRICE DID YOU USE IN YOUR DCF MODEL?

A. For the Value Line property/casualty insurance companies, I used a simple average of the monthly high and low stock prices for each firm for the three-month period, November 2000 through January 2001. These high and low stock prices were obtained from the Standard & Poor's *Stock Guide*, a source generally available to and used by investors.

Because of the number of companies in the S&P 500, I used a simple average of the monthly closing stock prices for each firm in that sample for the three-month period November 2000 through January 2001, as obtained from I/B/E/S.

Q. WHY DID YOU USE THE THREE-MONTH AVERAGE STOCK PRICE, P_0, IN APPLYING THE DCF METHOD?

A. I used a three-month average stock price in applying the DCF method because stock prices fluctuate daily, while financial analysts' forecasts for a given company are generally changed less frequently, often on a quarterly basis. Thus, to match the stock price with an earnings forecast, it is appropriate to average stock prices over a three-month period.

Q. PLEASE EXPLAIN YOUR INCLUSION OF FLOTATION COSTS.

A. All firms that have sold securities in the capital markets have incurred some level of flotation costs, including underwriters' commissions, legal fees, printing expense, etc. These costs are paid from the proceeds of the stock sale and must be recovered over the life of the equity issue. Costs vary depending upon the size of the issue, the type of registration method used and other factors, but in general these costs range between four percent and five percent of the proceeds from the issue. In addition to these costs, for large equity issues there is likely to be a decline in price associated with the sale of shares to the public. On average, the decline due to market pressure has been estimated at two percent to three percent.

These cost ranges have been developed and confirmed in a number of generally accepted studies. I believe a combined five percent allowance for flotation costs and market

pressure is a conservative estimate that can be used in applying the DCF Model in this proceeding.

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR APPLICATION OF THE DCF METHOD TO THE PROPERTY/CASUALTY INSURANCE COMPANIES AND THE S&P 500.

A. As shown in Exhibits RB-26, RB-27, and RB-28, the average DCF cost of equity capital for my group of Value Line property/casualty companies is 12.8 percent; for the insurance companies that have a significant percentage of revenues from private passenger automobile insurance, 12.6 percent; and for the S&P 500 companies, 14.8 percent.[1]

Q. WHAT CONCLUSION DO YOU REACH FROM YOUR DCF ANALYSIS ABOUT THE COST OF EQUITY CAPITAL FOR COMPANIES WRITING PRIVATE PASSENGER AUTOMOBILE INSURANCE IN NORTH CAROLINA?

A. On the basis of my DCF analysis, I would conclude that for companies writing private passenger automobile insurance in North Carolina the cost of equity is in the range 12.6 percent to 14.8 percent.

Q. YOU SAID THE SECOND METHOD YOU USED TO ESTIMATE THE COST OF EQUITY CAPITAL FOR COMPANIES WRITING PRIVATE PASSENGER AUTOMOBILE

[1] To be conservative, I also eliminated those companies in the S&P 500 sample with DCF results that exceeded the mean by one standard deviation The average DCF result for the S&P 500 including these companies is 15.4 percent

INSURANCE IN NORTH CAROLINA WAS A RISK PREMIUM APPROACH. PLEASE DESCRIBE THAT APPROACH.

A. I performed a study of the comparable returns received by bond and stock investors over the last 75 years. I estimated the returns on stock and bond portfolios, using stock price and dividend yield data on the S&P 500 stock portfolio and bond yield data on Moody's A-rated utility bonds.

My study consisted of analyzing the historically achieved returns on broadly based stock and bond portfolios going back to 1926. For stocks, I used the S&P 500 stock portfolio and for bonds I used Moody's A-rated utility bonds. The resulting annual returns on the stock and bond portfolios purchased in each year from 1926 through 2001 are shown on Exhibit RB-29. The difference between the stock return and the bond return over that period of time on an arithmetic average basis was 6.10 percentage points.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM YOUR RISK PREMIUM ANALYSES?

A. My own studies, combined with my analysis of other studies, provide strong evidence for the belief that investors today require an equity return of approximately 6.10 percentage points above the expected yield on A-rated long-term debt issues.

Interest rates on Moody's seasoned A-rated utility bonds during the three months November 2000 through January 2001 ranged from 7.80 percent to 8.11 percent. On the basis of this information and my knowledge of bond market conditions, I conclude that the long-term yield on A-rated utility bonds is approximately 7.9 percent. Adding 6.1 percentage points risk premium to the 7.9 percent expected yield on A-rated utility bonds, I obtain an expected return on equity of approximately 14.0 percent.

Q. BASED ON YOUR ANALYSES, WHAT IS YOUR OPINION AS TO THE COST OF CAPITAL FOR THE AVERAGE INSURANCE COMPANY WRITING PRIVATE PASSENGER AUTOMOBILE INSURANCE IN NORTH CAROLINA?

A. Based on my review and studies, I believe that a conservative estimate of the cost of common equity capital for the average insurance company writing private passenger automobile insurance in North Carolina is in the range 12.6 to 14.8 percent.

Q. IS THE COST OF EQUITY A FAIR RETURN ON EQUITY?

A. No. The cost of equity is a market-based concept that reflects the return investors expect on the market value of their investment. The fair return on equity is an accounting concept

that expresses the accounting rate of return the company earns on the book value of its investment. The cost of equity and the fair return on equity will be equal only when the market value of equity is equal to the book value of equity. Generally, the market value of equity is greater than the book value of equity for both the average firm and the average property/casualty insurer. When the market value of equity is greater than the book value of equity, the fair rate of return on equity must exceed the cost of equity capital for the equity investors to have a reasonable expectation of earning their required return on investment.

Q. HOW DID YOU CONVERT YOUR COST OF EQUITY CAPITAL TO A FAIR RETURN ON EQUITY?

A. I converted my cost of equity capital to the fair return on equity by comparing the rates of return on equity investors earn in the marketplace with accounting rates of return on equity earned by firms on book value. The accounting rates of return on equity are 49 basis points above the market rates of return on equity on average. Thus, to earn a rate of return on market value of 12.6 to 14.8 percent, the firm would have to earn approximately 13.1 to 15.3 percent on the book value of its equity.

Q. WHAT IS YOUR RECOMMENDATION AS TO A FAIR RATE OF RETURN ON GAAP EQUITY?

A. I recommend a fair rate of return on GAAP equity for the average insurance company writing private passenger automobile insurance in North Carolina of 13.1 to 15.3 percent. In my opinion, the private passenger automobile insurers must earn a return on book equity in the range 13.1 to 15.3 percent for investors to have a reasonable opportunity to earn 12.6 to 14.8 percent on the market value of their equity investment.

Exhibit RB-26

SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS FOR
PROPERTY/CASUALTY INSURANCE COMPANIES

Company	d_0	P_0	G	k
ACE Limited	0.130	39.413	11.43	12.9%
Allmerica Financial	0.063	64.978	12.47	12.9%
Allstate	0.170	39.163	8.67	10.6%
Chubb Corp.	0.330	81.310	11.23	13.1%
Cincinnati Financial	0.190	37.715	8.50	10.8%
Everest RE	0.060	62.862	12.65	13.1%
HCC Insurance Holdings	0.060	23.695	14.25	15.4%
Mercury General	0.265	39.047	11.33	14.3%
Old Republic	0.140	27.548	9.67	12.0%
PMI Group, Inc.	0.040	62.997	12.14	12.4%
Progressive Cp.	0.070	96.580	12.85	13.2%
Safeco Corp.	0.370	27.923	9.63	15.8%
Saint Paul Co	0.270	50.903	9.51	12.0%
Selective	0.150	21.967	7.67	10.8%
Transatlantic Holdings	0.135	98.697	10.33	10.9%
XL Capital Ltd.	0.460	79.840	12.14	14.8%
Average				12.8%
Auto Average				12.6%

Notes:
d_0 = Latest quarterly dividend per Value Line.
P_0 = Average of the monthly high and low stock prices during the three months ending January 2001 per S&P Stock Guide.
SC = Selling and flotation costs.
g = I/B/E/S forecast of future earnings growth January 2001
k = Cost of equity using the quarterly version of the DCF Model and a five percent allowance for flotation costs and market pressure (selling costs) as shown by the formula below:

$$k = \frac{d_1(1+k) + d_2(1+k)^2 + d_3(1+k)^3 + d_4}{P_0(1 - FC)} + g$$

Exhibit RB-27

SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS FOR
PROPERTY/CASUALTY INSURANCE COMPANIES
THAT HAVE A SIGNIFICANT PORTION OF REVENUES FROM PRIVATE
PASSENGER AUTOMOBILE INSURANCE

Company	d_0	P_0	G	k
Allstate	0.170	39.163	8.67	10.6%
Cincinnati Financial	0.190	37.715	8.50	10.8%
Mercury General	0.265	39.047	11.33	14.3%
Progressive Cp.	0.070	96.580	12.85	13.2%
Safeco Corp.	0.370	27.923	9.63	15.8%
Selective	0.150	21.967	7.67	10.8%
Auto Average				12.6%

Notes:
d_0 = Latest quarterly dividend per Value Line.
P_0 = Average of the monthly high and low stock prices during the three months ending January 2001 per S&P Stock Guide.
SC = Selling and flotation costs.
g = I/B/E/S forecast of future earnings growth January 2001
k = Cost of equity using the quarterly version of the DCF Model and a five percent allowance for flotation costs and market pressure (selling costs) as shown by the formula below:

$$k = \frac{d_1(1+k)^1 + d_2(1+k)^2 + d_3(1+k)^3 + d_4}{P_0(1-FC)} + g$$

Exhibit RB-28

SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS FOR
S&P 500 COMPANIES

This is not the correct table; don't know what was filed.

COMPANY	P_0	D_0	G	k
ALCOA INC	33 35	0 60	14.60%	16 8%
AMBAC INC	54.79	0.32	14.75%	15 5%
ALBERTSONS INCORPORATED	24 56	0 76	10.92%	14.6%
ABBOTT LABS	48 65	0.76	12.29%	14.1%
AUTODESK INCORPORATED	30 35	0 24	17.67%	18.7%
COORS ADOLPH COMPANY	73.19	0 74	11.13%	12.3%
ARCHER DANIELS MIDLAND CO	13 96	0 20	12 20%	13.9%
AETNA INCORPORATED	50 02	0 80	12 63%	14 5%
AMERICAN GREETINGS CORP	10 02	0 40	9 67%	14.4%
AMERICAN HOME PRODUCTS CORP	59 18	0 92	13.44%	15 3%
ALCAN ALUMINUM LIMITED	34 19	0 60	16 50%	18 7%
HONEYWELL INTERNATIONAL	48 98	0 75	14 06%	15.9%
ALLEGHENY TECHNOLOGIES	16 88	0 80	9 98%	15 6%
FORTUNE BRANDS INC	29 69	0 96	11 29%	15.1%
AIR PRODUCTS & CHEMICALS	38 11	0 76	11 19%	13 5%
ASHLAND INCORPORATED	34 60	1 10	8.50%	12.2%
AMSOUTH BANCORPORATION	15 98	0 84	9 86%	16.1%
ALLTEL CORPORATION	61 34	1 32	14 38%	17 0%
AUTOMATIC DATA PROCESSING	62 81	0 41	15 23%	16.0%
AVON PRODUCTS INCORPORATED	42 69	0 74	12 56%	14.6%
AVERY DENNISON CORPORATION	53 35	1 20	12 75%	15 4%
AMERICAN EXPRESS COMPANY	51 19	0 32	13 67%	14 4%
BOEING COMPANY	63 17	0 68	15.11%	16 4%
BAXTER INTERNATIONAL	86.79	1 16	13 26%	14 9%
BRUNSWICK CORPORATION	17 56	0 50	12 88%	16 3%
BARD C R INCORPORATED NJ	47 00	0 84	12 20%	14 3%
BLACK & DECKER MANUFACTURING	39.38	0.48	14.50%	16 0%
BECTON DICKINSON & CO	33 75	0 38	12 27%	13 6%
VERIZON COMMUNICATION	53.73	1.54	11 61%	15 0%
BROWN FORMAN CORPORATION	65.96	1.32	9 50%	11.8%
CONSTELLATION ENERGY GROUP	41.32	1.68	8 30%	13.0%
BANK NEW YORK INCORPORATED	54.71	0.72	12 70%	14 3%
BALL CORPORATION	41 83	0 60	11.13%	12 8%
BELLSOUTH CORPORATION	41 71	0 76	11.35%	13.5%
BIOMET INCORPORATED	37.61	0 11	14 93%	15.3%
BEMIS INCORPORATED	30 89	0 96	11.28%	15.0%
BRISTOL-MYERS SQUIBB CO	67 35	1 10	12 21%	14 2%
BAUSCH & LOMB INCORPORATED	42.23	1 04	14.42%	17.4%
ANHEUSER BUSCH COMPANIES INC	44 08	0 66	10 13%	11 9%
CONAGRA FOOD INC	24 58	0 90	10 50%	14 8%
COMPUTER ASSOCIATES INTL INC	26.90	0.08	15.81%	16 2%
CATERPILLAR INCORPORATED	44.10	1.36	9.71%	13 3%

COMPANY	P_0	D_0	G	k
COOPER INDUSTRIES INC	43 96	1.40	11 00%	14.8%
SYNOVUS FINANCIAL CORPORATIO	25 86	0.44	14 75%	16 8%
CIRCUIT CITY-CIRCUIT CITY	12 44	0.07	18 13%	18 8%
CITIGROUP INCORPORATED	51 98	0.56	13 91%	15.2%
CARNIVAL CORPORATION	28 54	0.42	13 88%	15 7%
COASTAL CORPORATION	81 09	0 25	13 63%	14 0%
JP MORGAN CHASE & CO	46 88	1.28	11 60%	14 8%
HCA - THE HEALTHCARE COM	40 89	0.08	14.78%	15.0%
CHEVRON CORPORATION	82.06	2.60	9 79%	13 5%
C I T GROUP INC-A	20 02	0.40	12 73%	15 1%
COLGATE PALMOLIVE COMPANY	59.35	0.63	12 75%	14 0%
CLOROX COMPANY	34.64	0 84	11 94%	14 8%
COMERICA INCORPORATED	57 75	1.76	11 42%	15 0%
COMPAQ COMPUTER CORPORATION	19 53	0 10	16 55%	17 2%
CMS ENERGY CORPORATION	29.17	1 46	9 07%	14 9%
CHARTER ONE FINANCIAL INC	27 11	0 72	12 35%	15 5%
CONOCO INCORPORATED CLASS B	27 77	0 76	9 26%	12.4%
CAMPBELL SOUP COMPANY	32 38	0.90	8 75%	12 0%
CRANE COMPANY	26 83	0 40	10.00%	11.7%
CSX CORPORATION	26 52	1 20	12 75%	18 2%
COOPER TIRE & RUBBER COMPANY	11 00	0 42	10 00%	14 5%
CENTURYTEL INC	36 04	0 19	14 08%	14 7%
CENTEX CORPORATION	37 27	0 16	12 20%	12 7%
CUMMINS ENGINE INCORPORATED	35 92	1 20	8.33%	12.2%
DOMINION RESOURCE INC VA	62 92	2 58	8.33%	13 1%
DELTA AIR LINES INC	47 02	0 10	11.50%	11.7%
DANA CORPORATION	16 46	1 24	9.11%	18 0%
DUPONT E I DE NEMOURS & CO	44.50	1 40	9 34%	13 0%
DEERE & COMPANY	43 71	0 88	9 25%	11 6%
TARGET CORPORATION	33 79	0 22	15 24%	16 0%
DISNEY WALT COMPANY	29 85	0 21	14 66%	15 5%
DOW JONES & COMPANY INC	56 31	1.00	10 75%	12 8%
DELUXE CORPORATION	22 39	1 48	5 67%	13 2%
DANAHER CORPORATION	65 90	0 08	16 56%	16 7%
DONNELLEY R R & SONS COMPANY	25 44	0 92	12 17%	16 5%
DOVER CORPORATION	40 36	0 50	14 63%	16 1%
DOW CHEMICAL COMPANY	35 25	1 16	8 60%	12 4%
OMNICOM GROUP	86.69	0.70	16 37%	17 4%
DARDEN RESTAURANTS INC	22 98	0.08	14 33%	14.7%
DTE ENERGY COMPANY	37.25	2.06	5.17%	11 4%
DEVON ENERGY CORP	57 24	0.20	15.00%	15 4%
MORGAN ST DEAN WITTER DISCOV	76 29	0.92	13.64%	15.1%
ENGELHARD CORPORATION	20 46	0 40	12 25%	14.6%
ECOLAB INC	41 34	0 52	14 33%	15 9%
EQUIFAX INC	29 83	0 37	16 67%	18 2%
PERKINELMER INC	98 46	0 56	16 50%	17 2%
EASTMAN KODAK CO	39 65	1.76	8.75%	13.9%

COMPANY	P_0	D_0	G	k
EASTMAN CHEMICAL COMPANY	46 42	1 76	8.00%	12 4%
EMERSON ELEC CO	75 59	1 53	12.42%	14 8%
EL PASO ENERGY CORPORATION	66 29	0 82	13 95%	15 4%
EATON CORP	70 88	1 76	10.50%	13.4%
FORD MOTOR CO	25 17	1.20	7 46%	13 0%
REGIONS FINANCIAL CORPORATIO	27 33	1.12	8 94%	13 7%
U.S. BANCORP	28 35	0.86	10.73%	14 3%
FIRST DATA	54.77	0 08	13 96%	14 1%
FIFTH THIRD BANCORP	57.67	0 72	14 85%	16 4%
MASSEY ENERGY COMPANY	23.48	0.16	11 00%	11.8%
FLEET BOSTON FINANCIAL CORP	38 44	1 32	11.63%	15 7%
FIRSTAR CORPORATION	22 67	0.65	14.24%	17 7%
FANNIE MAE	81 63	1 20	13.97%	15.7%
FREDDIE MAC	63 69	0.68	14.56%	15.9%
FRANKLIN RES INC	39 46	0 26	14.14%	14 9%
FIRST UNION CP	28.65	1 92	9 46%	17 4%
GANNETT INC DEL	59 44	0 88	11 41%	13 2%
HARCOURT GENERAL INC	56 88	0 84	14 33%	16 1%
GENERAL DYNAMICS CORP	72 04	1 04	10 54%	12 2%
GOLDEN WEST FINL CORP	62 25	0 25	12 20%	12 7%
GENERAL ELEC CO	48 92	0.64	14 68%	16 3%
GENERAL MILLS INC	41 38	1.10	10.80%	13 9%
ELECTRONIC DATA SYSTEMS CORP	57 90	0 60	15 80%	17 1%
GENUINE PARTS CO	23 67	1 10	8 16%	13 5%
GOODRICH B F CO	35 34	1 10	11 84%	15 5%
GILLETTE CO	33 50	0 65	11 97%	14 3%
GOODYEAR TIRE & RUBR CO	22 32	1.20	8.80%	15 1%
GRAINGER W W INC	36 90	0.68	12.31%	14 5%
HASBRO INC	11 04	0 12	12.00%	13 3%
HUNTINGTON BANCSHARES INC	15 59	0 80	8 80%	14 8%
HARLEY DAVIDSON INC	43 15	0 10	18 68%	19 0%
HOUSEHOLD INTL INC	54 19	0 76	14.37%	16 1%
HILTON HOTELS CORP	10 48	0 08	11 88%	12 8%
HEINZ H J CO	44 55	1.57	9 63%	13 8%
STARWOOD HOTELS & RESORTS WO	35 92	0.69	16.11%	18.5%
RELIANT ENERGY INC.	39 92	1.50	9 54%	13 9%
HERSHEY FOODS CORP	61 57	1 12	9 60%	11 7%
HEWLETT PACKARD CO	32 96	0 32	15.08%	16 3%
INTERNATIONAL BUSINESS MACHI	98 54	0 52	13 82%	14 5%
INTERNATIONAL FLAV & FRAG	20 29	0 60	8 00%	11 4%
ITT INDUSTRIES INC	37 48	0 60	13.86%	15 8%
ENRON CORPORATION	78 92	0 50	17.25%	18 0%
INTERPUBLIC GROUP COS INC	42 40	0 38	14.64%	15 7%
INGERSOLL RAND CO	41 85	0 68	11 71%	13 6%
ILLINOIS TOOL WKS INC	61.46	0 80	13 23%	14 8%
JOHNSON CTLS INC	57 38	1 24	14 38%	17 0%
PENNEY J C INC	10 92	0 50	8 33%	13.6%

COMPANY	P_0	D_0	G	k
JOHNSON & JOHNSON	97 02	1.28	12 85%	14.4%
KELLOGG CO	25 56	1.01	8.63%	13 2%
KB HOME	32 46	0.30	16.40%	17 5%
KIMBERLY CLARK CORP	66 82	1.08	11.33%	13 2%
COCA COLA CO	59 79	0.68	13.17%	14 5%
KNIGHT RIDDER INC	55.06	0.92	10 90%	12 9%
LONGS DRUG STORES INC	22 19	0 56	10.33%	13 3%
LEGGETT & PLATT INC	18.17	0 44	12 33%	15 2%
LEHMAN BROTHERS HOLDING	69.46	0 22	11 67%	12.0%
LIZ CLAIBORNE INC	42 75	0 45	12 55%	13 8%
LILLY ELI & CO	87.34	1 12	13 65%	15.2%
LIMITED INC	18.17	0 30	15 56%	17.6%
LUCENT TECHNOLOGIES INC	15 63	0 08	17 45%	18 1%
SOUTHWEST AIRLS CO	31 83	0 03	14 86%	15 0%
MAY DEPT STORES CO	33 50	0 93	10 68%	13 9%
MASCO CORPORATION	23 58	0 52	15 28%	18 0%
MATTEL INC	14 09	0 36	11 39%	14 4%
MBIA INC	71 11	0 82	12 50%	13 9%
MCDONALDS CORP	30 59	0 86	11 15%	14 5%
MCKESSON HBOC INC	33 03	0 24	17 79%	18 7%
MEREDITH CORP	32.19	0 32	13 00%	14 2%
MEDTRONIC INC	56.96	0 20	18 09%	18 5%
MEAD CORPORATION	30 08	0 68	9 25%	11 9%
MELLON FINANCIAL CORP	48 65	0 88	12 38%	14 5%
MERRILL LYNCH & CO INC	68 27	0 64	13 57%	14 7%
CVS CORPORATION	56.52	0 23	16 54%	17 0%
MCGRAW-HILL COMPANIES INCORP	57 31	0.94	12 75%	14 7%
MARRIOTT INTERNATIONAL INCOR	43 19	0.24	16.50%	17 2%
MILLIPORE CORPORATION	53 06	0 44	17 17%	18 2%
MINNESOTA MNG & MFG CO	113.88	2.32	11 18%	13 6%
KEYSPAN CORP	40 04	1.78	9 64%	14 9%
PHILIP MORRIS INC	42 71	2.12	12 43%	18 4%
MOLEX INC	41.40	0 10	16 75%	17 0%
MERCK & CO INC	88.17	1 36	11 83%	13.7%
USX-MARATHON GROUP	27.44	0 92	10.34%	14.3%
MAYTAG CORPORATION	31 60	0 72	13.33%	16 1%
BANK OF AMERICA CORP	46 00	2 24	10.26%	16 0%
NATIONAL CITY CORP	27 81	1.14	9 55%	14 4%
NISOURCE INC	28.29	1.16	9.40%	14 2%
NIKE INC	51 00	0 48	15 69%	16.8%
WELLS FARGO COMPANY	51.77	0 96	13 29%	15 5%
NORDSTROM INC	18 02	0 36	13 37%	15.8%
NORTHROP GRUMMAN CORPORATION	83 40	1.60	9 77%	12.0%
NORFOLK SOUTHERN CORP	14 58	0.80	11.94%	18.5%
NATIONAL SERVICE INDS INC	23 73	1 32	10 80%	17.4%
NORTHERN TR CORP	81 94	0 62	13 47%	14 4%
NUCOR CORPORATION	39 17	0.60	12 82%	14 7%

COMPANY	P_0	D_0	G	k
NEWELL RUBBERMAID INC	23 06	0 84	14.08%	18.5%
NEW YORK TIMES CO	40.46	0 46	12.64%	14 0%
QUAKER OATS CO	94 38	1.14	10 44%	11 9%
FIRSTENERGY CORP	29 94	1 50	5 71%	11 4%
OLD KENT FINL CORP	42.02	0.96	11.23%	13 9%
BANK ONE CORPORATION	37.13	0 84	9 14%	11 8%
OCCIDENTAL PETE CORP	23.21	1 00	8 73%	13 7%
PHILLIPS PETE CO	56 25	1 36	10 79%	13.6%
PITNEY BOWES INC	32 81	1 14	12 83%	17 0%
PLACER DOME INCORPORATED	9 44	0 10	15 00%	16 3%
PEPSICO INC	46 08	0 56	13.07%	14.5%
PROCTER & GAMBLE CO	72.63	1 40	11 45%	13.7%
PEOPLES ENERGY CORPORATION	41.84	2 00	6 25%	11.7%
PARKER HANNIFIN CORP	42 71	0 68	11 75%	13.6%
PULTE CORPORATION	39 17	0 16	11 60%	12.1%
PALL CORPORATION	21 55	0.68	14 75%	18.6%
PNC FINANCIAL SERVICES	71 10	1.92	10 95%	14.1%
PPG INDS INC	45 40	1.68	7 99%	12.3%
PRICE T ROWE & GROUP	40 07	0.60	14 19%	16.0%
PRAXAIR	40 77	0 62	11 66%	13.5%
RALSTON-RALSTON PURINA GROUP	27 50	0.28	10 86%	12.1%
REEBOK INTL LTD	25 16	0 30	10 88%	12 3%
ROYAL DUTCH PETROLEUM	59.40	1 17	10 31%	12 6%
RYDER SYS INC	17 73	0 60	10.25%	14 2%
TRANSOCEAN SEDCO FOREX INC	41 27	0 12	18.96%	19.3%
ROHM & HAAS CO	33 86	0 80	11.29%	14 1%
ROCKWELL INTL CORP	45 21	1 02	11.00%	13.7%
RAYTHEON CO	31.40	0.80	10.87%	13.9%
SEARS ROEBUCK & CO	35 70	0.92	9 75%	12.8%
SBC COMMUNICATIONS INCORPORA	49.56	1.02	13 46%	15.9%
SEMPRA ENERGY	22.46	1.00	7.69%	12.8%
SCHERING PLOUGH CORP	54.06	0.56	14 45%	15 7%
SHERWIN WILLIAMS CO	24.32	0 54	10 98%	13 6%
SIGMA ALDRICH CORP	39.58	0 33	11 41%	12 4%
SARA LEE CORPORATION	23.73	0 58	10 10%	13 0%
USA EDUCATION INC	62.63	0 70	14 17%	15.5%
SPRINGS INDS INC	30.34	1 32	10 00%	15.1%
SNAP-ON INCORPORATED	28 08	0 96	10.50%	14.5%
BB&T CORPORATION	35 94	0 92	11.92%	15.0%
KEYCORP	27 21	1 18	9 17%	14.2%
SOUTHTRUST CORP	39 44	1.12	11.32%	14.7%
STATE STREET CORP	120 95	0 76	13.97%	14 7%
SUNTRUST BANKS	59.54	1 48	11 15%	14 1%
SUNOCO INCORPORATED	31 15	1 00	8 21%	11 9%
SUPERVALU INCORPORATED	13.52	0 55	11 53%	16 4%
STANLEY WKS	30 73	0.92	10.14%	13 7%
SYSCO CORPORATION	27.64	0.28	13.78%	15 0%

COMPANY	P_0	D_0	G	k
TIFFANY AND COMPANY	33 54	0 16	18.28%	18.9%
TOSCO CORPORATION	32 00	0.32	12 54%	13.7%
TRIBUNE CO NEW	39 42	0.40	13.18%	14.4%
TRW INC	34 79	1.40	9 75%	14.5%
TUPPERWARE	20.00	0.88	11 50%	16.8%
TEXACO INC	60.00	1 80	9.55%	13 1%
TEXTRON INC	46 96	1 30	13 45%	16.8%
TXU CORPORATION	40 63	2.40	7 79%	14.7%
UST INCORPORATED	25.88	1.76	7.86%	15 8%
UNOCAL CORPORATION	35 94	0 80	9.57%	12.2%
SUMMIT BANCORP	38.81	1.40	9.36%	13 6%
UNION CARBIDE CORP	51.63	0 90	9 55%	11 6%
UNILEVER NV	59 21	0 83	10 28%	11 9%
UNITEDHEALTH GROUP INC	59.86	0 02	17.04%	17.1%
UNION PAC CORP	49 05	0 80	12 44%	14 4%
UNION PLANTERS CORP	36 52	2 00	8 38%	14 8%
WASTE MANAGEMENT INC	26 14	0 01	12 50%	12 5%
SPRINT CORPORATION (FON GROU	22 62	1 00	10.96%	16 2%
UNITED TECHNOLOGIES CP	76 09	0 90	13 96%	15 4%
VF CORPORATION	33 30	0 92	10 80%	14 1%
VULCAN MATERIALS CO	45 46	0.84	13.63%	15.9%
WALGREEN CO	39 58	0.14	17 13%	17.6%
WASHINGTON MUTUAL INCORPORAT	51.31	1.24	11.63%	14 5%
WACHOVIA CP NC	58 27	2 40	10 15%	15.0%
WENDYS INTL INC	25 11	0.24	13 92%	15.1%
WHIRLPOOL CORP	46 94	1 36	11.17%	14 6%
WINN DIXIE STORES INC	18.23	1.02	6 75%	13 2%
WILLIAMS COS	38 02	0.60	15 20%	17.1%
WAL MART STORES INC	53 67	0.24	14 72%	15 3%
WILLAMETTE INDS INC	47 96	0 84	12.80%	14 9%
WRIGLEY WM JR CO	89.81	1 40	11.11%	12 9%
WEYERHAEUSER CO	49 71	1.60	14 67%	18 6%
USX-US STEEL GROUP	16 19	1.00	8.14%	15 3%
EXXON MOBIL CORP	85.00	1 76	9 20%	11 6%
XEROX CORPORATION	5.50	0 20	14.14%	18 6%
TJX COMPANIES INCORPORATED	28.98	0 16	14.62%	15.3%
AVERAGE				14 8%

Notes· In applying the DCF Model to the S&P 500, I included in the DCF analysis only those companies in the S&P 500 group which pay a dividend, have a positive growth rate, and have at least three analysts' long-term growth estimates In addition, I excluded all companies in the I/B/E/S group of insurance companies. To be conservative, I also eliminated those companies with DCF results that exceeded the mean by one standard deviation. The average DCF result for all companies in the S&P 500 is 15 4 percent

Notes

d_0 = Latest quarterly dividend per Value Line.
P_0 = Average of the monthly closing stock prices November and December 2000, January 2001, per I/B/E/S
SC = Selling and flotation costs.
g = I/B/E/S forecast of future earnings growth January 2001
k = Cost of equity using the quarterly version of the DCF Model and a five percent allowance for flotation costs and market pressure (selling costs) as shown by the formula below

$$k = \left[\frac{d_0(1+g)^{\frac{1}{4}}}{P_0(1-FC)} + (1+g)^{\frac{1}{4}} \right]^4 - 1$$

THE QUARTERLY DCF MODEL

The simple DCF Model assumes that a firm pays dividends only at the end of each year. Since firms in fact pay dividends quarterly and investors appreciate the time value of money, the annual version of the DCF Model generally underestimates the value investors are willing to place on the firm's expected future dividend stream. In this appendix, we review two alternative formulations of the DCF Model that allow for the quarterly payment of dividends.

When dividends are assumed to be paid annually, the DCF Model suggests that the current price of the firm's stock is given by the expression:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \ldots + \frac{D_n + P_n}{(1+k)^n} \quad (1)$$

where

P_0 = current price per share of the firm's stock,

$D_1, D_2, \ldots, D_n$ = expected annual dividends per share on the firm's stock,

P_n = price per share of stock at the time investors expect to sell the stock, and

k = return investors expect to earn on alternative investments of the same risk, i.e., the investors' required rate of return.

Unfortunately, expression (1) is rather difficult to analyze, especially for the purpose of estimating k. Thus, most analysts make a number of simplifying assumptions. First, they assume that dividends are expected to grow at the constant rate g into the indefinite future. Second, they assume that the stock price at time n is simply the present value of all dividends expected in periods subsequent to n. Third, they assume that the investors' required rate of return, k, exceeds the expected dividend growth rate g. Under the above simplifying assumptions, a firm's stock price may be written as the following sum:

(2)

where the three dots indicate $P_0 = \frac{D_0(1+g)}{(1+k)} + \frac{D_0(1+g)^2}{(1+k)^2} + \frac{D_0(1+g)^3}{(1+k)^3} + \ldots$, that the sum continues indefinitely.

As we shall demonstrate shortly, this sum may be simplified to:

$$P_0 = \frac{D_0(1+g)}{(k-g)} \qquad 3$$

First, however, we need to review the very useful concept of a geometric progression.

Geometric Progression

Consider the sequence of numbers 3, 6, 12, 24, ., where each number after the first is obtained by multiplying the preceding number by the factor 2. Obviously, this sequence of numbers may also be expressed as the sequence 3, 3 x 2, 3 x 2^2, 3 x 2^3, . This sequence is an example of a geometric progression.

Definition: A geometric progression is a sequence in which each term after the first is obtained by multiplying some fixed number, called the common ratio, by the preceding term.

A general notation for geometric progressions is: a, the first term, r, the common ratio, and n, the number of terms. Using this notation, any geometric progression may be represented by the sequence:

$$a, ar, ar^2, ar^3, \ldots, ar^{n-1}.$$

In studying the DCF Model, we will find it useful to have an expression for the sum of n terms of a geometric progression. Call this sum S_n. Then

$$S_n = a + ar + \ldots + ar^{n-1} \quad (3)$$

However, this expression can be simplified by multiplying both sides

of equation (3) by r and then subtracting the new equation from the old. Thus,

$$rS_n = ar + ar^2 + ar^3 + \ldots + ar^n$$

and

$$S_n - rS_n = a - ar^n \quad ,$$

or

$$(1 - r)\ S_n = a\ (1 - r^n) \quad .$$

Solving for S_n, we obtain:

$$S_n = \frac{a(1-r^n)}{(1-r)} \qquad (4)$$

as a simple expression for the sum of n terms of a geometric progression. Furthermore, if $|r| < 1$, then S_n is finite, and as n approaches infinity, S_n approaches $a - (1 - r)$. Thus, for a geometric progression with an infinite number of terms and $|r| < 1$, equation (4) becomes:

Application to DCF Model

(5)
$$S = \frac{a}{1 - r}$$

Comparing equation (2) with equation (3), we see that the firm's stock price (under the DCF assumption) is the sum of an infinite geometric progression with the first term

4

$$a = \frac{D_0(1+g)}{(1+k)}$$

and common factor

$$r = \frac{(1+g)}{(1+k)}$$

6

5

Applying equation (5) for the sum of such a geometric progression, we obtain

6

$$S = a \bullet \frac{1}{(1-r)} = \frac{D_o(1+g)}{(1+k)} \bullet \frac{1}{1-\frac{1+g}{1+k}} = \frac{D_o(1+g)}{(1+k)} \bullet \frac{1+k}{k-g} = \frac{D_o(1+g)}{k-g}$$

as we suggested earlier.

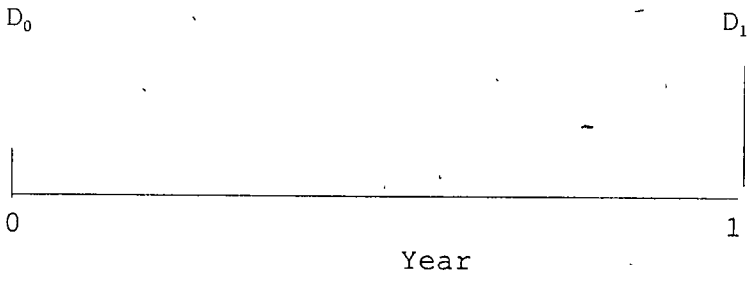
7

Quarterly DCF Model

The Annual DCF Model assumes that dividends grow at an annual rate of g% per year (see Figure 1).

Figure 1

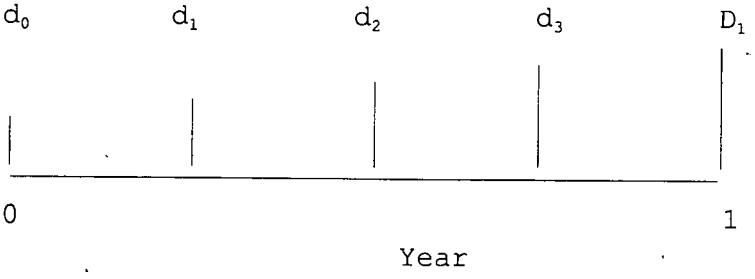
Annual DCF Model



$$D_0 = 4d_0 D_1 = D_0(1 + g)$$

Figure 2

Quarterly DCF Model (Constant Growth Version)



$d_1 = d_0(1+g)^{25}$ $\quad$ $d_2 = d_0(1+g)^{50}$

$d_3 = d_0(1+g)^{75}$ $\quad$ $d_4 = d_0(1+g)$

In the Quarterly DCF Model, it is natural to assume that quarterly dividend payments differ from the preceding quarterly dividend by the factor $(1 + g)^{.25}$, where g is expressed in terms of percent per year and the decimal .25 indicates that the growth has only occurred for one quarter of the year. (See Figure 2.) Using this assumption, along with the assumption of constant growth and $k > g$, we obtain a new expression for the firm's stock price, which takes account of the quarterly payment of dividends. This expression is:

(6)

$$P_0 = \frac{d_0(1+g)^{\frac{1}{4}}}{(1+k)^{\frac{1}{4}}} + \frac{d_0(1+g)^{\frac{2}{4}}}{(1+k)^{\frac{2}{4}}} + \frac{d_0(1+g)^{\frac{3}{4}}}{(1+k)^{\frac{3}{4}}} + \ldots$$

where d_0 is the last quarterly dividend payment, rather than the last annual dividend payment. (We use a lower case d to remind the reader that this is not the annual dividend.)

Although equation (6) looks formidable at first glance, it too

can be greatly simplified using the formula [equation (4)] for the sum of an infinite geometric progression. As the reader can easily verify, equation (6) can be simplified to:

(7)

$$P_0 = \frac{d_0(1+g)^{\frac{1}{4}}}{(1+k)^{\frac{1}{4}} - (1+g)^{\frac{1}{4}}}$$

Solving equation (7) for ***k***, we obtain a DCF formula for estimating the cost of equity under the quarterly dividend assumption:

(8)

$$k = \left[\frac{d_1 (1+g)^{\frac{1}{4}}}{P_0} + (1+g)^{\frac{1}{4}} \right]^4 - 1$$

An Alternative Quarterly DCF Model

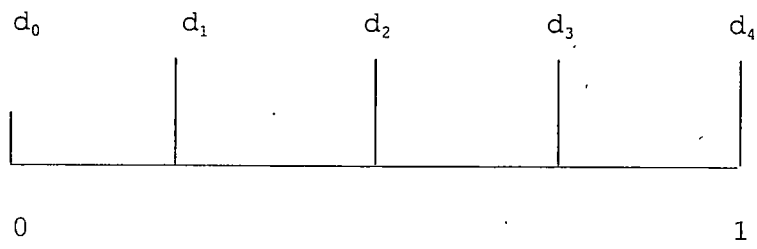
Although the constant growth Quarterly DCF Model [equation (8)] allows for the quarterly timing of dividend payments, it does require the assumption that the firm increases its dividend payments each quarter. Since this assumption is difficult for some analysts to accept, we now discuss a second Quarterly DCF Model that allows for constant quarterly dividend payments within each dividend year.

Assume then that the firm pays dividends quarterly and that each dividend payment is constant for four consecutive quarters. There are four cases to consider, with each case distinguished by varying assumptions about where we are evaluating the firm in relation to the time of its next dividend increase. (See Figure 3.)

Figure 3

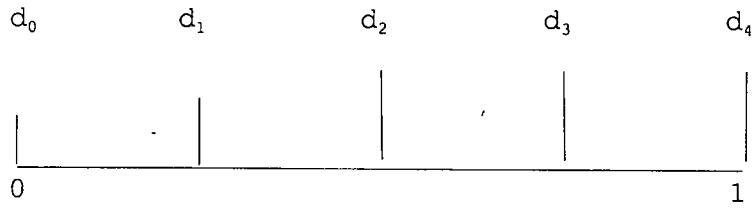
Quarterly DCF Model (Constant Dividend Version)

Case 1



$$d_1 = d_2 = d_3 = d_4 = d_0(1+g)$$

Case 2

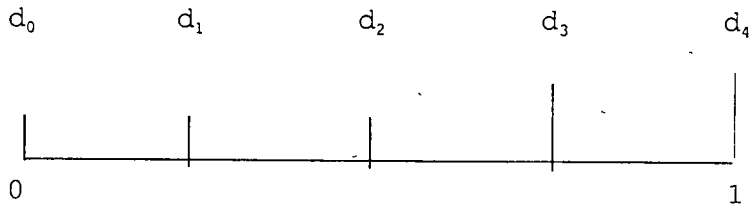


$$d_1 = d_0$$

$$d_2 = d_3 = d_4 = d_0(1+g)$$

Figure 3 (continued)

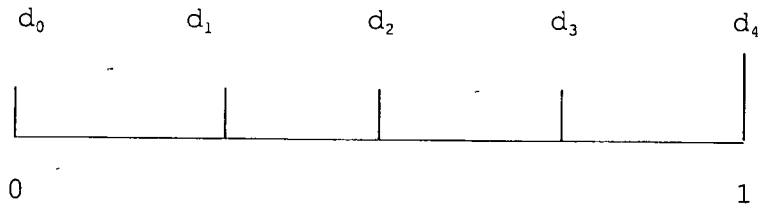
Case 3



$$d_1 = d_2 = d_0$$

$$d_3 = d_4 = d_0(1+g)$$

Case 4



$$d_1 = d_2 = d_3 = d_0$$

$$d_4 = d_0(1+g)$$

If we assume that the investor invests the quarterly dividend in an alternative investment of the same risk, then the amount accumulated by the end of the year will in all cases be given by

$$D_1^* = d_1 (1+k)^{3/4} + d_2 (1+k)^{1/2} + d_3 (1+k)^{1/4} + d_4$$

where d_1, d_2, d_3 and d_4 are the four quarterly dividends. Under these new assumptions, the firm's stock price may be expressed by an Annual DCF Model of the form (2), with the exception that

$$D_1^* = d_1 (1 + k)^{3/4} + d_2 (1 + k)^{1/2} + d_3 (1 + k)^{1/4} + d_4 \quad \textbf{(9)}$$

is used in place of $D_0(1+g)$. But, we already know that the Annual DCF Model may be reduced to

$$P_0 = \frac{D_1 (1+g)}{k-g}$$

Thus, under the assumptions of the second Quarterly DCF Model,

the firm's cost of equity is given by

$$k = \frac{D_1^*}{P_0} + g \qquad (10)$$

with D_1^* given by (9).

Although equation (10) looks like the Annual DCF Model, there are at least two very important practical differences. First, since D_1^* is always greater than $D_0(1+g)$, the estimates of the cost of equity are always larger (and more accurate) in the Quarterly Model (10) than in the Annual Model. Second, since D_1^* depends on k through equation (9), the unknown "k" appears on both sides of (10), and an iterative procedure is required to solve for k.

COMPARATIVE RETURNS ON S&P 500 STOCKS AND MOODY'S A-RATED UTILITY BONDS 1926-1999

Year	S&P 500 Stock Price	Stock Dividend Yield	Stock Return	A-rated Bond Price	Bond Return
2001	1335 63	0.0116		56.40	
2000	1425.58	0.0118	-5.13%	52 60	14.82%
1999	1248 77	0 0130	15 46%	63 03	-10 20%
1998	963 35	0 0116	31 25%	62 43	7.38%
1997	766 22	0 0195	27.68%	56 62	17.32%
1996	614 42	0 0231	27.02%	60 91	-0 48%
1995	465 25	0 0287	34 93%	50 22	29 26%
1994	472 99	0 0269	1 05%	60 01	-9 65%
1993	435 23	0 0288	11 56%	53 13	20 48%
1992	416 08	0 0290	7 50%	49.56	15 27%
1991	325 49	0 0382	31 65%	44.84	19 44%
1990	339 97	0 0341	-0 85%	45.60	7 11%
1989	285 41	0 0364	22 76%	43 06	15 18%
1988	250 48	0 0366	17.61%	40.10	17 36%
1987	264 51	0 0317	-2 13%	48.92	-9 84%
1986	208 19	0 0390	30 95%	39.98	32.36%
1985	171 61	0 0451	25 83%	32.57	35 05%
1984	166 39	0 0427	7 41%	31 49	16 12%
1983	144 27	0 0479	20 12%	29 41	20 65%
1982	117 28	0 0595	28 96%	24 48	36 48%
1981	132.97	0 0480	-7 00%	29.37	-3 01%
1980	110.87	0 0541	25.34%	34 69	-3 81%
1979	99 71	0 0533	16 52%	43.91	-11 89%
1978	90 25	0 0532	15.80%	49.09	-2 40%
1977	103.80	0 0399	-9 06%	50 95	4 20%
1976	96 86	0 0380	10.96%	43 91	25 13%
1975	72 56	0 0507	38.56%	41 76	14.75%
1974	96 11	0 0364	-20 86%	52 54	-12.91%
1973	118 40	0 0269	-16 14%	58 51	-3 37%
1972	103 30	0 0296	17 58%	56 47	10 69%
1971	93 49	0.0332	13 81%	53.93	12 13%
1970	90 31	0.0356	7 08%	50.46	14 81%
1969	102 00	0.0306	-8 40%	62.43	-12 76%
1968	95 04	0.0313	10 45%	66.97	-0 81%
1967	84 45	0.0351	16 05%	78.69	-9.81%
1966	93 32	0 0302	-6 48%	86.57	-4 48%
1965	86 12	0 0299	11 35%	91 40	-0 91%
1964	76.45	0.0305	15.70%	92 01	3 68%
1963	65 06	0 0331	20 82%	93 56	2 61%
1962	69 07	0.0297	-2 84%	89 60	8.89%
1961	59 72	0.0328	18 94%	89 74	4.29%
1960	58.03	0.0327	6 18%	84 36	11.13%

COMPARATIVE RETURNS ON S&P 500 STOCKS AND MOODY'S A-RATED UTILITY BONDS 1926-1999

1959	55 62	0.0324	7 57%	91.55	-3 49%
1958	41 12	0.0448	39 74%	101.22	-5.60%
1957	45 43	0 0431	-5 18%	100.70	4 49%
1956	44 15	0 0424	7 14%	113 00	-7 35%
1955	35 60	0 0438	28.40%	116 77	0 20%
1954	25 46	0 0569	45.52%	112 79	7 07%
1953	26 18	0.0545	2 70%	114 24	2 24%
1952	24 19	0.0582	14.05%	113 41	4 26%
1951	21.21	0.0634	20.39%	123.44	-4 89%
1950	16 88	0 0665	32 30%	125 08	1 89%
1949	15 36	0 0620	16 10%	119 82	7 72%
1948	14 83	0 0571	9 28%	118 50	4 49%
1947	15 21	0.0449	1 99%	126.02	-2.79%
1946	18 02	0 0356	-12 03%	126.74	2 59%
1945	13 49	0 0460	38 18%	119 82	9 11%
1944	11 85	0 0495	18 79%	119.82	3 34%
1943	10 09	0.0554	22 98%	118 50	4 49%
1942	8 93	0.0788	20 87%	117.63	4 14%
1941	10 55	0 0638	-8 98%	116.34	4 55%
1940	12 30	0 0458	-9 65%	112.39	7 08%
1939	12.50	0 0349	1.89%	105.75	10 05%
1938	11.31	0 0784	18.36%	99.83	9 94%
1937	17.59	0 0434	-31 36%	103.18	0 63%
1936	13 76	0 0327	31 10%	96 46	11 12%
1935	9.26	0 0424	52.84%	82 23	22 17%
1934	10 54	0 0336	-8.78%	66 78	29 13%
1933	7.09	0 0542	54.08%	79.55	-11 03%
1932	8.30	0 0822	-6.36%	70 67	18 23%
1931	15.98	0 0550	-42 56%	84 49	-11 63%
1930	21 71	0 0438	-22 01%	81 19	8 99%
1929	24.86	0 0336	-9 31%	83.95	1 48%
1928	17.53	0 0431	46 12%	86 71	1 43%
1927	13.40	0 0502	35 84%	83.28	8.92%
1926	12 65	0 0446	10.39%	80.81	8.01%

Average Return	
Common Stocks	12 38%
A-rated Utility Bonds	6.28%
RISK PREMIUM	6 10%

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

47. Q. WITH REGARD TO DR VANDER WEIDE'S ANSWER NUMBER 72 AT PAGE 35 OF HIS DIRECT TESTIMONY, LINE 8, WHERE HE DISCUSSES THE "BUY-AND-HOLD" STRATEGY, PROVIDE FOR EACH STOCK LISTED IN SCHEDULES A AND B, THE NUMBER OF DAYS OR MONTHS BETWEEN THE TIME AN INVESTOR BUYS THE STOCK AND THE TIME THE INVESTOR SELLS THE STOCK

RESPONSE:

A The statement in answer 72 is a general statement and does not refer to a specific period of time at which an investor either buys or sells stocks.

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

51. Q. PLEASE PROVIDE A RECONCILIATION OF PROJECTS MENTIONED IN QUESTIONS 7 &8 OF MR BISHOP'S TESTIMONY ON PAGES 3 & $ FOR 2004 AND 2005 TO PLANT IN SERVICE NET ADDITIONS, EXHIBIT 1 SCHEDULE 2 PAGE 3 OF 3 PART OF THE RECONCILIATION SHOULD INCLUDE A NARRATIVE EXPLAINING THE DEMONSTRATED NEED FOR THE INCLUDED PROJECTS; I.E , IF THE PROJECT WAS NECESSITATED BY INCORPORATION OF OTHER WATER SYSTEMS OR COMPANIES, IF NECESSITATED BY NEW BUSINESS OR INFRASTRUCTURE REPLACEMENT NEEDS

RESPONSE:

A The projects mentioned in Mr Bishop's testimony are included in the following accounts

Fire protection upgrades	Account 335 40
Replacing aging infrastructure	Accounts 331.xx,333 40,333 xx
Tank projects	Account 330.41 and 330.42

The narrative describing these projects has previously been supplied on CD in response to question 52 of the TRA.

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

52 Q PROVIDE A SCHEDULE OF OPERATIONS AND MAINTENANCES EXPENSES, BY NARUC ACCOUNT NUMBER, AND ACCOUNT NAME, WHICH RECONCILES TO **EVERY AMOUNT** SHOWN ON EXHIBIT NO. 2, SCHEDULE 3 FOR THE TWELVE MONTHS ENDED SEPTEMBER 30, 2004 AS PROVIDED IN RESPONSE TO QUESTION 11 OF THE FIRST SET OF INTERROGATORIES AND REQUESTS FOR PRODUCTION OF DOCUMENTS BY THE OFFICE OF THE ATTORNEY GENERAL FOR THE STATE OF TENNESSEE ("QUESTION11")

RESPONSE:

A Please refer to attached schedules

TENNESSEE AMERICAN WATER COMPANY
OPERATION & MAINTENANCE EXPENSE BREAKDOWN
CLASS COST OF SERVICE STUDY
TEST YEAR ENDED 3/31/2004

ACCOUNT NUMBER	DESCRIPTION	Line No	PER BOOKS $	Payroll Adjustment $	Purchased Water Adjustment $	Fuel and Power Adjustment	Chemicals Adjustment	Waste Disposal Adjustment	Management Fees Adjustment	Group Insurance Adjustment
	SOURCE OF SUPPLY EXPENSES AND PUMPING									
	OPERATION									
6011	SS OPERATION LABOR	8	0	0						
6011	SS OPERATION EXPENSE	21	0	0						
6101	PURCHASED WATER	9	13,076	0	0					
6011	PUMP OPER SUP & ENG ELEC	8	1,225,618	75,645						
6011	GENERAL PU LABOR	8	0	0						
6151	POWER PURCH FOR PUMP EL	10	1,589,343	0		129,721				
6161	FUEL FOR POWER PROD SS	10	36,382	0						
6201	MISC PUMPING EXPENSES-CL	21	0	0						
6501	SS & PUMP TRANSPORTATION	21	234	0						
6751	MISC PUMPING EXP ELECTRIC	21	11	0						
	MAINTENANCE									
6202	OR MN SS STRUCT & IMP MAT	25	129,238	0						
	TOTAL SOURCE OF SUPPLY & PUMPI		2,993,902	75,645	0	129,721	0	0	0	0
	WATER TREATMENT EXPENSES									
	OPERATION									
6013	WT OPERATION SUPERV & EN	8	0	0						
6013	GENERAL WT LABOR	8	0	0						
6183	GENERAL CHEMICALS	11	719,393	0			142,467			
6203	MISC WT EXPENSES-CURREN	21	6,264	0						
6353	OTHER WT OPER CONTRACT :	21	36,320	0						
6413	WT RENTS	19	3,857	0						
6503	WT OPER TRANSPORTATION	21	914	0						
6753	WASTE DISPOSAL EXP (CUR)	12	131,563	0				1,875		
6753	GENERAL WT EXPENSES	21	122,337	0						
6753	MISC WT EXPENSES-CURREN	21	166,600	0						
	MAINTENANCE		0							
6204	OR MN WT STRUCT & IMP MAT	25	257,846	0						
6354	OTHER WT MAINT CONTRACT	21	26,082	0						
6504	WT MAINT TRANSPORTATION	21	0	0						
	TOTAL WT EXPENSES		1,471,176	0	0	0	142,467	1,875	0	0
	TRANSMISSION & DISTRIBUTION EXPENSES									
	OPERATION									
6015	T&D OPERATION SUPER & EN	8	380,306	23,722						
6015	STORAGE FACILITIES LABOR	8	0	0						
6015	MISC METER LABOR	8	0	0						
6015	MAPS AND RECORDS LABOR	8	0	0						
6155	STORAGE FACILITIES EXPENS	10	235	0						

TENNESSEE AMERICAN WATER COMPANY
OPERATION & MAINTENANCE EXPENSE BREAKDOWN
CLASS COST OF SERVICE STUDY
TEST YEAR ENDED 3/31/2004

ACCOUNT NUMBER	DESCRIPTION	Line No	PER BOOKS $	Payroll Adjustment $	Purchased Water Adjustment $	Fuel and Power Adjustment	Chemicals Adjustment	Waste Disposal Adjustment	Management Fees Adjustment	Group Insurance Adjustment
6205	MISC T & D EXPENSES-CURRE	21	31,918	0						
6355	OTHER T & D OPER CONTRAC	21	69,350	0						
6415	T&D RENTS	19	373	0						
6505	TD OPER TRANSPORTATION	21	1,101	0						
6755	T&D LINES EXPENSE	21	705	0						
6755	MISC METER EXPENSES	21	4,937	0						
6755	MISC T&D EXPENSES-CURREI	21	66,118	0						
	MAINTENANCE									
6016	OR MN T&D SUPR & ENG	8	71,807	4,432						
6016	OR MN T&D MAINS LAB	8	347,460	21,445						
6016	OR MN SERVICES LAB	8	204,568	12,626						
6016	OR MN METERS LAB	8	42,657	2,633						
6016	OR MN HYDRANTS LAB	8	52,688	3,252						
6016	OR MN OTHER T&D PLANT LAI	8	0	0						
6206	OR MN T&D STRUCT & IMP-MA	25	256,599	0						
6356	OTHER T & D MAINT CONTRAC	21	0	0						
6506	TD MAINT TRANSPORTATION	21	48,674	0						
6756	MAPS AND RECORDS EXPENS	25	0	0						
6756	OR MN METERS MAT	25	0	0						
	TOTAL T&D EXPENSES		1,579,496	68,110	0	0	0	0	0	0

TENNESSEE AMERICAN WATER COMPANY
OPERATION & MAINTENANCE EXPENSE BREAKDOWN
CLASS COST OF SERVICE STUDY
TEST YEAR ENDED 3/31/2004

ACCOUNT NUMBER	DESCRIPTION	Line No	PER BOOKS $	Payroll Adjustment $	Purchased Water Adjustment $	Fuel and Power Adjustment	Chemicals Adjustment	Waste Disposal Adjustment	Management Fees Adjustment	Group Insurance Adjustment
	CUSTOMER ACCOUNTS EXPENSE									
6017	METER READING LABOR	8	137,030	8,457						
6017	CONTRACTS & ORDERS LABO	8	0	0						
6017	BILLING & ACCTNG SALARIES	8	94,661	5,842						
6047	EMPLOYEE BENEFITS CA	21	0	0						
6207	MISC CA EXPENSES-CURREN	18	24,594	0						
6327	CA CONTRACT SERVICES	21	(77,812)	0						
6357	OTHER CA CONTRACT SERVIC	21	0	0						
6427	CA RENTS	19	954	0						
6507	CA TRANSPORTATION	21	1,001	0						
6707	UNCOLLECTIBLE ACCOUNTS	18	492,669	0						
6757	METER READING EXPENSES	18	0	0						
6757	COLLECTING EXPENSES	18	31,518	0						
6757	BILLING & ACCTNG COMPUTEI	18	0	0						
6757	CUST ACCTG-BILLING/TELEPH	18	30,563	0						
6757	CUST ACCTG-BILLING/POSTAC	18	280,374	0						
6757	MISC CUST ACCTNG EXPENSE	18	125,691	0						
6757	MISC OPER CA CUST SERV	18	8,634	0						
	TOTAL CA EXPENSE		1,149,877	14,299	0	0	0	0	0	0
	ADMINISTRATIVE & GENERAL EXP(A&G)									
6018	ADM & GENERAL SALARIES	8	1,536,539	94,584						
6048	**EMPLOYEE PENSIONS & BENE**	14,15,21	2,339,677	0						19,594
6208	OR MN GENERAL AG PLANT	25	51,034	0						
6328	**CONTRACT SERVICES - AUDIT**	21	19,520	0						
6338	**CONTRACT SERVICES - LEGAI**	21	48,730	0						
6348	**CONTRACT SERVICES - MANA**	13	3,474,746	0					(411,806)	
6358	**CONTRACT SERVICES - OTHEI**	21	35,282	0						
6428	ADM & GENERAL RENTS	19	32,467	0						
6508	AG TRANSPORTATION	21	202,475	0						
6578	GENERAL LIABILITY	17	12,809	0						
6588	WORKMENS COMP PREMIUM	17	168,015	0						
6598	INSURANCE OTHER	17	254,903	0						
6608	**ADVERTISING EXP**	21	0	0						
6668	**REGULATORY COMMISSION EXPENSES**		170,463	0						
6758	EXPENSES OF EMPLOYEES	20	62,023	0						
6758	MISC OFFICE EXPENSES	20	290,757	0						
6758	INJURIES & DAMAGES EXP	21	(154)	0						
6758	RESEARCH & DEV-SERVICE C	21	0	0						
6758	OR MN A&G STRUC & IMP MAT	25	55,053	0						
6758	**MISCELLANEOUS GENERAL E**	20,21	(77,839)	0						

TENNESSEE AMERICAN WATER COMPANY
OPERATION & MAINTENANCE EXPENSE BREAKDOWN
CLASS COST OF SERVICE STUDY
TEST YEAR ENDED 3/31/2004

ACCOUNT NUMBER	DESCRIPTION	Line No	PER BOOKS $	Payroll Adjustment $	Purchased Water Adjustment $	Fuel and Power Adjustment	Chemicals Adjustment	Waste Disposal Adjustment	Management Fees Adjustment	Group Insurance Adjustment
	TOTAL A&G EXPENSES		8,676,500	94,584	0	0	0	0	(411,806)	19,594
	SUBTOTAL		15,870,951	252,638	0	129,721	142,467	1,875	(411,806)	19,594

Pensions Adjustment	Regulatory Expense Adjustment	Insurance Other Adjustment	Customer Accounting Adjustment	Rents Adjustment	General Office Adjustment	Miscellaneous Adjustment	Other Adjustment	Interest on Customer Deposits Adjustment	AFUDC Adjustment	TOTAL $
										0
										0
										13,076
										1,301,263
										0
										1,719,064
										36,382
						0				0
										234
						2				13
							99,235			228,473
										0
										0
0	0	0	0	0	0	2	99,235	0	0	3,298,505
										0
										0
										861,860
										6,264
										36,320
					0					3,857
										914
										133,438
						2,378				124,715
						3,199				169,799
							8,364			266,210
							(149)			25,933
										0
										0
										0
0	0	0	0	0	0	5,577	8,215	0	0	1,629,310
										404,028
										0
										0
										0
										235

Pensions Adjustment	Regulatory Expense Adjustment	Insurance Other Adjustment	Customer Accounting Adjustment	Rents Adjustment	General Office Adjustment	Miscellaneous Adjustment	Other Adjustment	Interest on Customer Deposits Adjustment	AFUDC Adjustment	TOTAL $
										31,918
										69,350
										373
										1,101
						179				884
						163				5,100
						3,972				70,090
										76,239
										368,905
										217,194
										45,290
										55,940
										0
							80,700			337,299
										0
										48,674
										0
							5,493			5,493
										0
										0
0	0	0	0	0	0	4,314	86,193	0	0	1,738,113

Pensions Adjustment	Regulatory Expense Adjustment	Insurance Other Adjustment	Customer Accounting Adjustment	Rents Adjustment	General Office Adjustment	Miscellaneous Adjustment	Other Adjustment	Interest on Customer Deposits Adjustment	AFUDC Adjustment	TOTAL $
										145,487
										0
										100,503
										0
										24,594
										(77,812)
										0
										954
										1,001
			8,153							500,822
			0							0
			1,434							32,952
			538							538
			0							30,563
			3,848							284,222
			(2,566)							123,125
			92,861							101,495
										0
										0
0	0	0	104,268	0	0	0	0	0	0	1,268,444
										1,631,123
715,066						359				3,074,696
										51,034
						671				20,191
						1,456				50,186
										3,062,940
						(7,290)				27,992
				636						33,103
						18,984				221,459
		27,854								40,663
										168,015
										254,903
						0				0
	(112,463)									58,000
					(28,110)	359				34,272
					0	(5,390)				285,367
						359				205
										0
							39,762			94,815
					0	(47,100)		0	(28,791)	(153,730)
										0
										0

Pensions Adjustment	Regulatory Expense Adjustment	Insurance Other Adjustment	Customer Accounting Adjustment	Rents Adjustment	General Office Adjustment	Miscellaneous Adjustment	Other Adjustment	Interest on Customer Deposits Adjustment	AFUDC Adjustment	TOTAL $
715,066	(112,463)	27,854	0	636	(28,110)	(37,592)	39,762	0	(28,791)	8,955,234
715,066	(112,463)	27,854	104,268	636	(28,110)	(27,699)	233,405	0	(28,791)	16,889,606

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
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53 Q PROVIDE ACCOUNT DESCRIPTIONS FOR OBJ ACCTS #575261, #575275, #575276, AND #534214.

RESPONSE:

A. The description of each account is as follows.
575261 – Credit line fees
575275 – Discounts available
575276 – Discounts lost
534214 – Management fees business change costs

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
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54. Q PROVIDE THE BUSINESS REASONS AND THE PAYEE FOR THE AMOUNT OF $20,997 CHARGED TO NARUC ACCOUNT #533000 FOR THE MONTH OF JANUARY 2004. INDICATE IN YOUR RESPONSE WHETHER THIS CHARGE IS A RECURRING OR NONRECURRING CHARGE FOR THE ATTRITION YEAR 2005.

RESPONSE:

A These expenses charged to NARUC account #533000 are contract legal services

Baker Donelson Bearman & Caldwell	$ 2,701 15
Chambless Bahner & Stophel PC	5,000 00
Lowenbaum Partners	122 50
Bass, Berry & Sims	548 26
Baker Donelson Bearman & Caldwell	354 20
Baker Donelson Bearman & Caldwell	1,656 70
	$10,382 81
Reversal of 2003 year end accrual	$10,613 73
	$20,996 54

These are not recurring charges for the attrition year of 2005.

Interrogatories and Requests for Production Of Documents by the Attorney General (Second Set) To Tennessee-American Water Company Rate Case No. 04-00288

56 Q. PROVIDE A DETAILED EXPLANATION OF WHY THE NORMALIZED TEST YEAR AMOUNT OF $17,125,898 PER EXHIBIT NO 2, SCHEDULE 3 AS FILED BY THE COMPANY WOULD INCREASE TO $18,316,701 PER EXHIBIT NO 2, SCHEDULE 3, AN INCREASE OF 7%, IN RESPONSE TO QUESTION 11. INCLUDE IN YOUR EXPLANATION DETAILED CALCULATIONS OF TEST YEAR ADJUSTMENTS FOUND IN THE RESPONSE TO QUESTION 11

RESPONSE:

A

There are three areas that resulted in the difference of $1,190,803 ($18,316,701-$17,125,806)

	Period ended 30-Sep-04	Period ended 31-Mar-04	Difference
Uncollectible expense	$498,956	$287,664	$211,292
Management Fees	3,474,746	2,492,981	981,765
Purchased Water	13,076	15,330	-2,254
	$3,986,778	$2,795,975	$1,190,803

The uncollectible expense would increase due to a higher revenue level The management fees were not adjusted and the amount recorded for the twelve months ended was brought forward The purchased water amount was not adjusted and the amount recorded for the twelve months ended was also brought forward.

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

57. Q PROVIDE THE NARUC ACCOUNTS CHARGED FOR ALL SEVERANCE PAYMENTS IDENTIFIED IN RESPONSE TO QUESTION 9 OF THE FIRST SET OF INTERROGATORIES AND REQUESTS FOR PRODUCTION OF DOCUMENTS BY THE TENNESSEE REGULATORY AUTHORITY ("TRA").

RESPONSE:

A The severance payments in 2003 went to NARUC balance sheet account 183 The severance payments made since June 6 of 2004 have been charged to NARUC account 6348

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

58. Q PROVIDE A YEAR END 2002, A YEAR END 2003, AND A CURRENT 2004 INCOME STATEMENT AND BALANCE SHEET FOR AMERICAN ANGLIAN ENVIRONMENTAL, AMERICAN CARBON SERVICES, AND AWCC

RESPONSE:

A No formal balance sheets or income statements are prepared for American Anglian Environmental or American Carbon Services. These two entities are a part of American Water Services, and as such, only provide specific products and services to Tennessee-American. No management fees or overheads from these entities are allocated or charged to Tennessee-American in the American Water Works Service Company bill The requested information for AWCC is attached

AMERICAN WATER CAPITAL CORP.

BALANCE SHEET

(In thousands, except share and per share amounts)

	At December 31, 2003	At December 31, 2002
ASSETS		
Investments in affiliates		
Notes	$ 1,580,360	$ 1,445,360
Current assets		
Cash	16,701	4,825
Loans to affiliates	397,461	377,980
Interest receivable from affiliates	17,052	18,078
Other	17	1,887
	431,231	402,770
Deferred debits		
Unamortized debt expense	4,117	4,615
TOTAL ASSETS	$ 2,015,708	$ 1,852,745
LIABILITIES AND STOCKHOLDER'S EQUITY		
Current liabilities		
Short-term debt	$ 413,695	$ 383,709
Interest payable	17,052	18,078
Accounts payable	483	982
	431,230	402,769
Deferred credits		
Unearned income from affiliates	4,117	4,615
Stockholder's equity		
Common stock - par value $1 per share		
Authorized - 10,000 shares		
Outstanding - 1,000 shares	1	1
Long-term debt	1,580,360	1,445,360
TOTAL LIABILITIES AND STOCKHOLDER'S EQUITY	$ 2,015,708	$ 1,852,745

AMERICAN WATER CAPITAL CORP.

STATEMENT OF INCOME

(In thousands)

	For the Twelve Months Ended December 31, 2003	December 31, 2002
Revenue		
Interest income from notes with affiliated companies	$ 79,797	$ 64,148
Interest income from net loans with affiliated companies	5,415	6,586
Other income from notes with affiliated companies	498	1,108
Other income from net loans with affiliated companies	825	2,098
	86,535	73,940
Operating expenses		
Operation and administrative	1,323	3,206
	1,323	3,206
Income before interest expense and income taxes	85,212	70,734
Interest expense	85,212	70,734
Income before income taxes	-	-
Income taxes	-	-
Net income	$ -	$ -

AMERICAN WATER CAPITAL CORP.

BALANCE SHEET

(Unaudited, in thousands, except share and per share amounts)

	At October 1, 2004	At September 26, 2003
ASSETS		
Investments in affiliates		
Notes	$ 1,703,360	$ 1,445,360
Current assets		
Cash	787	111
Loans to affiliates	359,271	477,849
Interest receivable from affiliates	57,528	54,478
Other	-	1,719
	417,586	534,157
Deferred debits		
Unamortized debt expense	3,875	4,235
TOTAL ASSETS	$ 2,124,821	$ 1,983,752
LIABILITIES AND STOCKHOLDER'S EQUITY		
Current liabilities		
Short-term debt	$ 359,242	$ 478,906
Interest payable	57,528	54,478
Accounts payable	815	772
	417,585	534,156
Deferred credits		
Unearned income from affiliates	3,875	4,235
Stockholder's equity		
Common stock - par value $1 per share		
Authorized - 10,000 shares		
Outstanding - 1,000 shares	1	1
Long-term debt	1,703,360	1,445,360
TOTAL LIABILITIES AND STOCKHOLDER'S EQUITY	$ 2,124,821	$ 1,983,752

AMERICAN WATER CAPITAL CORP.

STATEMENT OF INCOME

(Unaudited, in thousands)

	For the Nine Months Ended October 1, 2004	For the Nine Months Ended September 26, 2003
Revenue		
Interest income from notes with affiliated companies	$ 62,334	$ 52,582
Interest income from net loans with affiliated companies	3,759	4,156
Other income from notes with affiliated companies	541	93
Other income from net loans with affiliated companies	736	1,041
	67,370	57,872
Operating expenses		
Operation and administrative	1,277	1,134
	1,277	1,134
Income before interest expense and income taxes	66,093	56,738
Interest expense	66,093	56,738
Income before income taxes	-	-
Income taxes	-	-
Net income	$ -	$ -

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
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59 Q PROVIDE THE NARUC ACCOUNTS FOR EACH CHARGE IDENTIFIED IN RESONSE TO DATA REQUEST NO 13 OF THE TRA. PLEASE PROVIDE THESE CHARGES THROUGH SEPTEMBER 30, 2004.

RESPONSE:

A. Please refer to information below

MONTH	AAET	ACS	AWCC	AWWSCO
APRIL	14,638	7,854	1,226	312,435
MAY	14,444	7,854	3,648	267,705
JUNE	14,444	7,854	499	350,206
JULY	14,444	7,854	2,045	252,725
AUGUST	14,444	7,854	1,301	290,116
SEPTEMBER	14,444	7,854	6,762	658,319
NARUC	6183	6183	6758	6348

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
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61 Q PROVIDE THE TOTAL CUSTOMERS BY CLASSIFICATION FOR AMERICAN WATER FOR THE YEARS ENDED 2002, 2003, AND YEAR TO DATE 2004 BY MONTH THE CLASSIFICATION SHOULD BE SUPPLIED IN THE SAME FORMAT AS RESPONDED TO DATA REQUEST NO. 19 OF THE TRA.

RESPONSE:

A

	Residential	Commercial	Industrial	Fire Service	OPA	Resale	Total
2002	2,634,999	222,692	3,759	24,575	13,610	225	2,899,8
2003	2,651,742	222,536	3,720	27,795	14,644	220	2,920,6
2004							
January	**2,862,030**	232,508	4,740	**33,158**	15,336	234	3,148,0
February	2,863,953	232,342	4,761	**33,654**	15,318	235	3,150,2
March	**2,867,627**	232,821	4,751	35,046	15,127	**236**	3,155,6
April	2,869,302	233,279	4,759	35,544	15,516	**236**	3,158,6
May	2,894,821	236,962	4,888	35,238	16,054	**236**	3,188,1
June	**2,890,511**	**237,149**	**4,893**	35,520	16,520	**236**	3,184,8
July	2,894,120	237,262	4,878	35,509	15,979	**236**	3,187,9
August	2,898,929	237,416	4,881	35,538	16,008	**238**	3,193,0
September	2,904,304	237,170	4,887	35,076	16,009	**238**	3,197,6
October	2,906,829	236,763	4,877	35,527	15,806	**238**	3,200,0

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
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63. Q PROVIDE A DETAILED EXPLANATION OF WHY CHEMICAL COSTS INCREASED 19% FOR THE ATTRITION YEAR OVER THE TEST PERIOD ENDING MARCH 31, 2004 WHEN ACTUAL COSTS FOR THE TWELVE MONTHS ENDED JUNE 30, 2004 WERE $719,054, A 1% INCREASE OVER THE TEST PERIOD

RESPONSE:

A Please refer to response to question 62

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
To Tennessee-American Water Company
Rate Case No. 04-00288

64. Q PROVIDE THE RETURN ON INVESTMENT AMOUNTS BILLED TO TN AMERICAN BY AN AFFILIATED COMPANY BY COMPANY, BY NARUC ACCOUNT, BY MONTH, AND BY YEAR FOR THE YEARS 2002-2004 INCLUDE IN YOUR RESPONSE A DETAILED CALCULATION OF THE RETURN ON INVESTMENT AMOUNTS, PERCENT RETURN ON INVESTMENT, RETURN ON EQUITY, AND DEBT COST

RESPONSE:

A None

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
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65 Q. PROVIDE AN ACTUAL TO BUDGET OPERATING RESULTS COMPARATIVE FOR THE NINE MONTHS ENDED SEPTEMBER 30,2004 FOR TN AMERICAN. INCLUDE A DETAILED EXPLANATION FOR ANY SIGNIFICANT VARIANCES FROM BUDGET

RESPONSE:

A

Line No	Description	Per Books 9 Months Ended 9/30/2004	Plan 9 Months Ended 9/30/2004	Difference
1	Operating Revenues	$23,652,064	$26,145,572	($2,493,508)
2				
3	Operation and Maintenance Expenses	12,367,451	12,296,598	70,853
4	Depreciation and Amortization	2,915,851	2,989,859	(74,008)
5	Taxes, Other than Income	2,661,648	2,806,299	(144,651)
6	Income Taxes	1,569,422	2,458,275	(888,853)
7				
8	Total Operating Expenses	19,514,372	20,551,031	(1,036,659)
9				
10	Utility Operating Income	4,137,692	5,594,541	(1,456,849)
11				
12	Other Income			
13	AFUDC	41,545	85,841	(44,296)
14	Income from M & J and Contract Work	(58,405)	0	(58,405)
15	Interest Income	0	0	0
16	Gain/Loss on Sale of Property	0	0	0
17				
18	Total Other Income	(16,860)	85,841	(102,701)
19				
20	Other Deductions			
21	Miscellaneous Amortization	0	0	0
22	Miscellaneous Other Deductions	18,104	62,560	80,664
23				
24	Total Other Deductions	18,104	62,560	80,664
25				
26	Taxes Applicable to Other Income and Deductions			
27	General Taxes	0	0	0
28	State Income Taxes	(4,430)	0	(4,430)
29	Federal Income Taxes	(23,853)	0	(23,853)

30				
31	Total Taxes Applicable to Other Income and Deductions	(28,283)	0	(28,283)
32				
33	Income before Interest Charges	4,131,011	5,617,822	(1,486,811)
34				
35	Interest Charges			
36	Interest on Long-Term Debt	1,908,140	1,973,315	(65,175)
37	Interest on Long-Term Capital Lease	0	0	0
38	Amortization of Debt and Discount Expense	13,540	18,432	(4,892)
39	Interest on Short-Term Debt	98,201	211,747	(113,546)
40	Other Interest	2,138	0	2,138
41	Allowance for Borrowed Funds Used During Construction	(24,806)	(51,248)	26,442
42	Total Interest Charges	1,997,213	2,152,246	(155,033)
43				
44	Net Income	2,133,798	3,465,576	(1,331,778)

The two largest variances are in revenues and income taxes. The variance in revenues is due to lower water sales than projected during the 9 months ended September The variance in income taxes is due to the lower taxable income as a result of the lower revenues.

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
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66. Q PROVIDE DETAILED CALCULATIONS FOR EVERY TEST YEAR ADJUSTMENT AMOUNT SHOWN ON EXHIBIT NO 2, SCHEDULE 3 FOR THE TWELVE MONTHS ENDED SEPTEMBER 30, 2004 AS PROVIDED IN RESPONSE TO QUESTION 11.

RESPONSE:

A The detailed calculations have previously been provided that support the amount claimed in the normalized year for all of the adjustments exclusive of the three referenced in the response to question 56 The starting point is the only thing that has changed since we are using the twelve months ended September 30, 2004 rather than the twelve months ended March 31, 2004

Interrogatories and Requests for Production
Of Documents by the
Attorney General (Second Set)
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67. Q. IN DISKIN'S DIRECT TESTIMONY, PAGE 3, LINES 11-12, HE STATES THE "HISTORICAL TEST PERIOD IS THE TWELVE MONTHS ENDING MARCH 31, 2004." IN THE COMPANY WORKPAPERS, THERE ARE REFERENCES TO THE PERIODS ENDING JULY 31, 2002 AND JULY 31, 2004 PER PAGES 6-8 (PHOTOCOPIES ATTACHED HEREWITH) FOR CUSTOMER ACCOUNTING, GENERAL OFFICE EXPENSE, AND RENTS ARE THE PERIOD REFERENCES INCORRECT IN THE WORKPAPER OR ARE THE AMOUNTS INCORRECT IN THE WORKPAPERS?

RESPONSE:

A. The period references are incorrect The year ending date on pages should have been March 31, 2004