APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

PAULINE M. AHERN, CRRA
VICE PRESIDENT

AUS CONSULTANTS – UTILITY SERVICES

PROFESSIONAL QUALIFICATIONS
OF
PAULINE M. AHERN, CRRA
VICE PRESIDENT
AUS CONSULTANTS – UTILITY SERVICES

PROFESSIONAL EXPERIENCE

1996-Present

As a Vice President, I offer testimony as an expert witness on the subjects of fair rate of return and cost of capital before state public utility commissions. I provide assistance and support to clients throughout the entire ratemaking litigation process.

1994-1996

As an Assistant Vice President, I prepared fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. These supporting exhibits include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital. The exhibits also support the determination of a recommended return on common equity through the use of various market models, such as, but not limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility. I also assisted in the preparation of responses to any interrogatories received regarding such testimonies filed on behalf of client utilities. Following the filing of fair rate of return testimonies, I assisted in the evaluation of opposition testimony in order to prepare interrogatory questions, areas of cross-examination, and rebuttal testimony. I also evaluated and assisted in the preparation of briefs and exceptions following the hearing process. I have submitted testimony before state public utility commissions regarding appropriate capital structure ratios and fixed capital cost rates.

1990-1994

As a Senior Financial Analyst, I supervised two analysts in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assisted in the preparation of interrogatory responses.

I evaluated the final orders and decisions of various commissions to determine whether further actions are warranted and to gain insight which may assist in the preparation of future rate of return studies.

I assisted in the preparation of an article authored by Frank J. Hanley and A. Gerald Harris entitled "Does Diversification Increase the Cost of Equity Capital?" published in the July 15, 1991 issue of Public Utilities Fortnightly.

I co-authored an article with Frank J. Hanley entitled "Comparable Earnings: New Life for an Old Precept" which was published in the American Gas Association's Financial Quarterly Review, Summer 1994.

I was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by the National Society of Rate of Return Analysts (now the Society of Utility and Regulatory Financial Analysts (SURFA)). This designation is based upon education, experience and the successful completion of a comprehensive examination.

As Administrator of Financial Analysis for AUS Utility Reports, which reports financial data for over 200 utility companies and has approximately 1,000 subscribers, I oversee the preparation of this monthly publication, as well as the annual publication, Financial Statistics - Public Utilities.

1988-1990

As a Financial Analyst, I assisted in the preparation of fair rate of return studies including capital structure determination, development of senior capital cost rates, as well as the determination of an appropriate rate of return on equity. I also assisted in the preparation of interrogatory responses, interrogatory questions of the opposition, areas of cross-examination and rebuttal testimony. I also assisted in the preparation of the annual publication C. A. Turner Utility Reports - Financial Statistics - Public Utilities.

1973-1975

As a research assistant in the Research Department of the Regional Economics Division of the Federal Reserve Bank of Boston, I was involved in the development and maintenance of econometric models to simulate regional economic conditions in New England in order to study the effects of, among other things, the energy crisis of the early 1970's and property tax revaluations on the economy of New England. I was also involved in the statistical analysis and preparation of articles for the New England Economic Review. Also, I acted as assistant editor for New England Business Indicators.

1972

As a research assistant in the Office of the Assistant Secretary for International Affairs, U.S. Treasury Department, Washington, D.C., I developed and maintained econometric models which simulated the economy of the United States in order to study the results of various alternate foreign trade policies so that national trade policy could be formulated and recommended.

I am also a member of the Society of Utility and Regulatory Financial Analysts (formerly the National Society of Rate of Return Analysts).

Clients Served

I have offered expert testimony before the following commissions:

Arkansas
California
Delaware
Florida
Hawaii
Idaho
Illinois
Indiana
Kentucky
Maine
Maryland
Michigan
Missouri
Nevada
New Jersey
New York
North Carolina
Ohio
Pennsylvania
South Carolina
Virginia
Washington

I have sponsored testimony on the rate of return and capital structure effects of merger and acquisition issues for:

California-American Water Company

New Jersey-American Water Company

I have sponsored testimony on fair rate of return and related issues for:

Aqua Illinois, Inc.
Aqua New Jersey, Inc.
Aqua Virginia, Inc.
Audubon Water Company
Carolina Pines Utilities, Inc.
Carolina Water Service, Inc.
Consumers Illinois Water Company
Consumers Maine Water Company
Consumers New Jersey Water Company
City of DuBois, Pennsylvania
Elizabethtown Water Company
Emporium Water Company
GTE Hawaiian Telephone Inc.
Greenridge Utilities, Inc.
Borough of Hanover, Pennsylvania
Long Neck Water Company
Middlesex Water Company
Missouri-American Water Company
Mt. Holly Water Company
Nero Utility Services, Inc.
New Jersey-American Water Company
Ohio-American Water Company
Penn Estates
Pinelands Waste Water Company
Pittsburgh Thermal
Spring Creek Utilities, Inc.
Sussex Shores Water Company
Tega Cay Water Service, Inc.
Thames Water Americas
Tidewater Utilities, Inc.
Transylvania Utilities, Inc.
Twin Lakes Utilities, Inc.
United Utility Companies
United Water Arkansas, Inc.
United Water Delaware, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Rochelle, Inc.
United Water New York, Inc.
United Water Pennsylvania, Inc.
United Water Virginia, Inc.
United Water West Lafayette, Inc.
Utilities, Inc. of Florida
Utilities Services of South Carolina
Valley Energy, Inc.
Water Service Corp. of Kentucky
Wellsboro Electric Company
Western Utilities, Inc.

I have sponsored testimony on capital structure and senior capital cost rates for the following clients:

Alpena Power Company
Arkansas-Western Gas Company
Associated Natural Gas Company
PG Energy Inc.
United Water Delaware, Inc.
Washington Natural Gas Company

I have assisted in the preparation of rate of return studies on behalf of the following clients:

Algonquin Gas Transmission Company
Arkansas-Louisiana Gas Company
Arkansas Western Gas Company
Artesian Water Company
Associated Natural Gas Company
Atlantic City Electric Company
Bridgeport-Hydraulic Company
Cambridge Electric Light Company
Carolina Power & Light Company
Citizens Gas and Coke Utility
City of Vernon, CA
Columbia Gas/Gulf Transmission Cos.
Commonwealth Electric Company
Commonwealth Telephone Company
Conestoga Telephone & Telegraph Co.
Connecticut Natural Gas Corporation
Consolidated Gas Transmission Company
Consumers Power Company
CWS Systems, Inc.
Delmarva Power & Light Company
East Honolulu Community Services, Inc.
Equitable Gas Company
Equitrans, Inc.
Florida Power & Light Company
Gary Hobart Water Company
Gasco, Inc.
GTE Arkansas, Inc.
GTE California, Inc.
GTE Florida, Inc.
GTE Hawaiian Telephone
GTE North, Inc.
GTE Northwest, Inc.
GTE Southwest, Inc.
Great Lakes Gas Transmission L.P.
Hawaiian Electric Company
Hawaiian Electric Light Company
IES Utilities Inc.
Illinois Power Company
Interstate Power Company
Iowa Electric Light and Power Company
Iowa Southern Utilities Company
Kentucky-West Virginia Gas Company
Lockhart Power Company
Middlesex Water Company
Milwaukee Metropolitan Sewer District
Mountaineer Gas Company

Rate of Return Study Clients, Continued

National Fuel Gas Distribution Corp.
National Fuel Gas Supply Corp.
Newco Waste Systems of NJ, Inc.
New Jersey Natural Gas Company
New Jersey-American Water Company
New York-American Water Company
North Carolina Natural Gas Corp.
Northumbrian Water Company
Ohio-American Water Company
Oklahoma Natural Gas Company
Orange and Rockland Utilities
Paiute Pipeline Company
PECO Energy Company
Penn-York Energy Corporation
Pennsylvania-American Water Co.
PG Energy Inc.
Philadelphia Electric Company
South Carolina Pipeline Company
Southwest Gas Corporation
Stamford Water Company
Tesoro Alaska Petroleum Company
United Telephone of New Jersey
United Utility Companies
United Water Arkansas, Inc.
United Water Delaware, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Jersey, Inc.
United Water New York, Inc.
United Water Pennsylvania, Inc.
United Water Virginia, Inc.
United Water West Lafayette, Inc.
Vista-United Telecommunications Corp.
Washington Natural Gas Company
Washington Water Power Corporation
Waste Management of New Jersey – Transfer Station A
Wellsboro Electric Company
Western Reserve Telephone Company
Western Utilities, Inc.

EDUCATION:

1973 – Clark University – B.A. – Honors in Economics
1991 – Rutgers University – M.B.A. – High Honors

PROFESSIONAL AFFILIATIONS:

American Finance Association
Society of Utility and Regulatory Financial Analysts
President – 2006-2008
Secretary/Treasurer – 2004-2006
Energy Association of Pennsylvania
National Association of Water Companies – Member of the Finance Committee

United Utility Companies, Inc.
Docket No. _____

BEFORE THE

PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

EXHIBIT

TO ACCOMPANY THE

PREPARED DIRECT TESTIMONY

OF

PAULINE M. AHERN, CRRA
VICE PRESIDENT
AUS CONSULTANTS – UTILITY SERVICES

ON BEHALF OF

UNITED UTILITY COMPANIES, INC.

CONCERNING

FAIR RATE OF RETURN

JULY 2006

United Utility Companies, Inc.
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to the Financial Supporting Exhibits
of Pauline M. Ahern

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United Utility Companies, Inc.
Summary of Cost of Capital and Fair Rate of Return
Based on the Actual Consolidated Capital Structure of Utilities, Inc. at September 30, 2005

Type of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate	
Total Debt	59.10 %	6.42% (1)	3.79%	3.79%
Common Equity	40.90	11.60% - 12.15% (2)	4.74%	4.97%
Total	100.00 %		8.53% -	8.76%

(1) From Exhibit B, Page 5 of the Application of United Utility Companies, Inc. for adjustment of rates and charges for the provision of water and sewer service and modification of rate schedules.

(2) Based upon informed judgment from the entire study, the principal results of which are summarized on page 2 of this Schedule.

United Utility Companies, Inc.
Brief Summary of Common Equity Cost Rate

No.	Principal Methods	Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Four Value Line (Standard Edition) Water Companies
1.	Discounted Cash Flow Model (DCF) (1)	9.9 %	10.2 %
2.	Risk Premium Model (RPM) (2)	11.2	11.3
3.	Capital Asset Pricing Model (CAPM) (3)	10.7	10.9
4.	Comparable Earnings Model (CEM) (4)	13.9	14.1
5.	Indicated Range of Common Equity Cost Rate before Adjustment for Business Risk	10.95 %	11.50 %
6.	Business Risk Adjustment (5)	0.45	0.45
7.	Indicated Range of Common Equity Cost Rate after Adjustment for Business Risk	11.40 %	11.95 %
8.	Financial Risk Adjustment (6)	0.20	0.20
9.	Recommended Range of Common Equity Cost Rate after Adjustment for Business and Financial Risk	11.60 % --	12.15 %

Notes:
(1) From Schedule 6 of this Exhibit.
(2) From page 1 of Schedule 10 of this Exhibit.
(3) From page 1 Schedule 11 of this Exhibit.
(4) From page 2 and 4 of Schedule 12. of this Exhibit.
(5) Business risk adjustment to reflect United Utility Companies, Inc.'s greater business risk due to its small size vis-à-vis each proxy group as detailed in Ms. Ahern's accompanying direct testimony.
(6) Financial risk adjustment to reflect United Utility Companies, Inc.'s greater fiancial risk vis-a-vis each proxy group as detailed in Ms. Ahern's accompanying direct testimony.

United Utility Companies, Inc.
Derivation of Investment Risk Adjustment Based upon
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		1			2			3	4		5
		Total Capitalization (incl. Short-Term Debt) for the Year 2005			Market Capitalization on July 6, 2006 (1)			Applicable Decile of the NYSE/AMEX/ NASDAQ	Applicable Size Premium		Spread from Applicable Size Premium (2)
		(millions)		(times larger)	(millions)		(times larger)				
1.	United Utility Companies, Inc.	$ (0.286)	(3)								
A.	Based upon the Proxy Group of Six AUS Utility Reports Water Companies				$ 2.214			10 (4)	6.36%	(5)	
B.	Based upon the Proxy Group of Four Value Line (Standard Edition) Water Companies				$ 2.089			10 (4)	6.36%	(5)	
2.	Proxy Group of Six AUS Utility Reports Water Companies	$ 581.470	(6)	(2,033.1) x	$ 758.631		342.7 x	8 (7)	2.33%	(8)	4.03%
3.	Proxy Group of Four Value Line (Standard Edition) Water Companies	$ 815.059	(9)	(2,849.9)	$ 1,083.916		518.9	7 (10)	1.67%	(11)	4.69%

Decile	Number of Companies	Recent Total Market Capitalization (millions)	Recent Average Market Capitalization (millions)
1 - Largest	169	$8,869,801.117	$52,484.030
2	182	2,025,323.685	11,128.152
3	195	1,074,448.763	5,509.994
4	206	656,297.080	3,185.908
5	207	452,329.097	2,185.165
6	238	389,595.517	1,636.956
7	299	319,642.175	1,069.037
8	352	287,783.718	817.567
9	693	268,738.291	387.790
10 - Smallest	1746	216,334.858	123.903

See page 4 for notes.

United Utility Companies, Inc.
Derivation of Investment Risk Adjustment Based upon
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE

Notes:

(1) From page 5 of this Schedule.

(2) Line No. 1 – Line No. 2 and Line No. 1 – Line No. 3 of Columns 3 and 4, respectively. For example, the 4.03% in Column 5, Line No. 2 is derived as follows 4.03% = 6.36% - 2.33%.

(3) Company-provided

(4) With an estimated market capitalization of $2.214 million (based upon the proxy group of six AUS Utility Reports water companies) and $2.089 (based upon the proxy group of four Value Line (Standard Edition) water companies), United Utility Companies, Inc. falls in the 10th decile of the NYSE/AMEX/NASDAQ which has an average market capitalization of $123.903 as shown in the table on the bottom half of page 3 of this Schedule.

(5) Size premium applicable to the 10th decile of the NYSE/AMEX/NASDAQ as shown on page 15 of this Schedule.

(6) From page 1 of Schedule PMA-3.

(7) With an estimated market capitalization of $758.631 million, the proxy group of six AUS Utility Reports water companies falls in the 8th decile of the NYSE/AMEX/NASDAQ which has an average market capitalization of $6817.567 million as shown in the table on the bottom half of page 3 of this Schedule.

(8) Size premium applicable to the 8th decile of the NYSE/AMEX/NASDAQ as shown on page 15 of this Schedule.

(9) From page 1 of Schedule PMA-4.

(10) With an estimated market capitalization of $1,083.916 million, the proxy group of four Value Line (Standard Edition) water companies falls in the 7th decile of the NYSE/AMEX/NASDAQ which has an average market capitalization of $1,069.037 million as shown in the table on the bottom half of page 3 of this Schedule.

(11) Size premium applicable to the 7th decile of the NYSE/AMEX/NASDAQ as shown on page 15 of this Schedule.

Source of Information: Ibbotson Associates, Stocks, Bonds, Bills and Inflation – Valuation Edition – 2006 Yearbook, Chicago, IL, 2006

United Utility Companies, Inc.
Market Capitalization of United Utility Companies, Inc.
the Proxy Group of Six AUS Utility Reports Water Companies and the
the Proxy Group of Four Value Line (Standard (Edition) Water Companies

Company	1 Common Stock Shares Outstanding at March 31, 2006 (millions)	2 Book Value per Share at March 31, 2006 (1)	3 Total Common Equity at March 31, 2006 (millions)	4 Closing Stock Market Price on July 6, 2006	5 Market-to-Book Ratio at July 6, 2006 (2)	6 Market Capitalization on July 6, 2006 (3) (millions)
United Utility Companies, Inc.	NA (4)	NA	$ 0.862 (4)	NA		
Based upon the Proxy Group of Six AUS Utility Reports Water Companies					256.8 % (5)	$ 2.214 (6)
Based upon the Proxy Group of Four Value Line (Standard Edition) Water Companies					242.3 % (7)	$ 2.089 (8)
Proxy Group of Six AUS Utility Reports Water Companies						
American States Water Co.	16.826	$ 15.873	$ 267.071	$ 34.550	217.7 %	$ 581.338
Aqua America, Inc.	129.506	6.364	824.194	22.000	345.7	2,849.132
Artesian Resources Corp.	4.018	14.453	58.074	28.200	195.1	113.308
California Water Service Group	18.390	15.756	289.749	33.720	214.0	620.111
Middlesex Water Company	11.603	8.599	99.779	17.260	200.7	200.268
York Water Company	6.944	7.346	51.011	27.020	367.8	187.627
Average	31.215	$ 11.399	$ 264.980	$ 27.125	256.8 %	$ 758.631
Proxy Group of Four Value Line (Standard Edition) Water Companies						
American States Water Co.	16.826	$ 15.873	$ 267.071	$ 34.550	217.7 %	$ 581.338
Aqua America, Inc.	129.506	6.364	824.194	22.000	345.7	2,849.132
California Water Service Group	18.390	15.756	289.749	33.720	214.0	620.111
Southwest Water Company	22.572	6.580	148.531	12.630	191.9	285.084
	46.824	$ 11.143	$ 382.386	$ 25.725	242.3 %	$ 1,083.916

NA = Not Available

Notes:
(1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 5 * Column 3.
(4) Since United Utility Companies, Inc. has negative common equity, the total common equity is estimated based upon allocating United Utility Companies, Inc.'s rate base at September 30, 2005 of $2,106,498 by the Company's proposed common equity ratio of 40.9%. $0.862 million = $2,106,498 * 40.9%.
(5) The market-to-book ratio of United Utility Companies, Inc. at July 6, 2006 is assumed to be equal to the average market-to-book ratio at July 6, 2006 of the proxy group of six AUS Utility Reports water companies.
(6) United Utility Companies, Inc.'s common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at July 6, 2006 of the proxy group of six AUS Utility Reports water companies, 256.8%, and United Utility Companies, Inc.'s market capitalization at July 6, 2006 would therefore have been $2.214 million. ($2.214 = $0.862 * 256.8%).
(7) The market-to-book ratio of United Utility Companies, Inc. at July 6, 2006 is assumed to be equal to the average market-to-book ratio at July 6, 2006 of the proxy group of four Value Line (Standard Edition) water companies.
(8) United Utility Companies, Inc.'s common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at July 6, 2006 of the proxy group of four Value Line (Standard Edition) water companies, 242.3%, and United Utility Companies, Inc.'s market capitalization at July 6, 2006 would therefore have been $2.089 million. ($2.089 = $0.862 * 242.3%).

Source of Information: Standard & Poor's Compustat Services, Inc. Research Insight PCPlus Data Base
Application of United Utility Companies, Inc. for adjustment of rates and charges and modifictions to certain terms and conditions for the provision of water and sewer service.
finance.yahoo.com

Stocks, Bonds, Bills, and Inflation

SBBI

Valuation Edition
2006 Yearbook

ibbotson

Chapter 7

Firm Size and Return

The Firm Size Phenomenon

One of the most remarkable discoveries of modern finance is that of a relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among smaller companies, which have higher returns on average than larger ones. Many studies have looked at the effect of firm size on return.[1] In this chapter, the returns across the entire range of firm size are examined.

Construction of the Decile Portfolios

The portfolios used in this chapter are those created by the Center for Research in Security Prices (CRSP) at the University of Chicago's Graduate School of Business. CRSP has refined the methodology of creating size-based portfolios and has applied this methodology to the entire universe of NYSE/AMEX/NASDAQ-listed securities going back to 1926.

The New York Stock Exchange universe excludes closed-end mutual funds, preferred stocks, real estate investment trusts, foreign stocks, American Depository Receipts, unit investment trusts, and Americus Trusts. All companies on the NYSE are ranked by the combined market capitalization of their eligible equity securities. The companies are then split into 10 equally populated groups, or deciles. Eligible companies traded on the American Stock Exchange (AMEX) and the Nasdaq National Market (NASDAQ) are then assigned to the appropriate deciles according to their capitalization in relation to the NYSE breakpoints. The portfolios are rebalanced, using closing prices for the last trading day of March, June, September, and December. Securities added during the quarter are assigned to the appropriate portfolio when two consecutive month-end prices are available. If the final NYSE price of a security that becomes delisted is a month-end price, then that month's return is included in the quarterly return of the security's portfolio. When a month-end NYSE price is missing, the month-end value of the security is derived from merger terms, quotations on regional exchanges, and other sources. If a month-end value still is not determined, the last available daily price is used.

Base security returns are monthly holding period returns. All distributions are added to the month-end prices, and appropriate price adjustments are made to account for stock splits and dividends. The return on a portfolio for one month is calculated as the weighted average of the returns for its individual stocks. Annual portfolio returns are calculated by compounding the monthly portfolio returns.

Size of the Deciles

Table 7-1 reveals that the top three deciles of the NYSE/AMEX/NASDAQ account for most of the total market value of its stocks. Nearly two-thirds of the market value is represented by the first decile, which currently consists of 169 stocks, while the smallest decile accounts for just over

1 Rolf W. Banz was the first to document this phenomenon. See Banz, Rolf W. "The Relationship Between Returns and Market Value of Common Stocks," *Journal of Financial Economics*, Vol. 9, 1981, pp. 3–18.

one percent of the market value. The data in the second column of Table 7-1 are averages across all 80 years. Of course, the proportion of market value represented by the various deciles varies from year to year.

Columns three and four give recent figures on the number of companies and their market capitalization, presenting a snapshot of the structure of the deciles near the end of 2005.

Table 7-1

Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Size and Composition
1926 through September 30, 2005

Decile	Historical Average Percentage of Total Capitalization	Recent Number of Companies	Recent Decile Market Capitalization (in thousands)	Recent Percentage of Total Capitalization
1-largest	63.29%	169	$8,869,801,117	60.92%
2	13.97%	182	2,025,323,685	13.91%
3	7.57%	195	1,074,448,763	7.38%
4	4.74%	206	656,297,080	4.51%
5	3.24%	207	452,329,097	3.11%
6	2.37%	238	389,595,517	2.68%
7	1.73%	299	319,642,175	2.20%
8	1.28%	352	287,783,718	1.98%
9	0.99%	693	268,738,291	1.85%
10-Smallest	0.81%	1,746	216,334,858	1.49%
Mid-Cap 3-5	15.55%	608	2,183,074,940	14.99%
Low-Cap 6-8	5.39%	889	997,021,410	6.85%
Micro-Cap 9-10	1.80%	2,439	485,073,149	3.33%

Source: © 200603 CRSP® Center for Research in Security Prices. Graduate School of Business, The University of Chicago. Used with permission. All rights reserved. www.crsp.uchicago.edu.

Historical average percentage of total capitalization shows the average, over the last 80 years, of the decile market values as a percentage of the total NYSE/AMEX/NASDAQ calculated each month. Number of companies in deciles, recent market capitalization of deciles, and recent percentage of total capitalization are as of September 30, 2005.

Table 7-2 gives the current breakpoints that define the composition of the NYSE/AMEX/NASDAQ size deciles. The largest company and its market capitalization are presented for each decile. Table 7-3 shows the historical breakpoints for each of the three size groupings presented throughout this chapter. Mid-cap stocks are defined here as the aggregate of deciles 3–5. Based on the most recent data (Table 7-2), companies within this mid-cap range have market capitalizations at or below $7,187,244,000 but greater than $1,728,888,000. Low-cap stocks include deciles 6–8 and currently include all companies in the NYSE/AMEX/NASDAQ with market capitalizations at or below $1,728,888,000 but greater than $586,393,000. Micro-cap stocks include deciles 9–10 and include companies with market capitalizations at or below $586,393,000. The market capitalization of the smallest company included in the micro-capitalization group is currently $1,079,000.

Table 7-2

Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, Largest Company and Its Market Capitalization by Decile
September 30, 2005

Decile	Market Capitalization of Largest Company (In thousands)	Company Name
1-Largest	$367,495,144	General Electric Co.
2	16,016,450	Entergy Corp.
3	7,187,244	Chesapeake Energy Corp.
4	3,961,425	Ball Corp.
5	2,519,280	Celenese Corp.
6	1,728,888	AGCO Corp.
7	1,280,966	ESCO Technologies Inc.
8	872,103	West Pharmaceutical Services Inc.
9	586,393	General Cable Corp.
10-Smallest	264,981	4Kids Entertainment Inc.

Source: Center for Research in Security Prices, University of Chicago.

Presentation of the Decile Data

Summary statistics of annual returns of the 10 deciles over 1926–2005 are presented in Table 7-4. Note from this exhibit that both the average return and the total risk, or standard deviation of annual returns, tend to increase as one moves from the largest decile to the smallest. Furthermore, the serial correlations of returns are near zero for all but the smallest two deciles. Serial correlations and their significance will be discussed in detail later in this chapter.

Graph 7-1 depicts the growth of one dollar invested in each of three NYSE/AMEX/NASDAQ groups broken down into mid-cap, low-cap, and micro-cap stocks. The index value of the entire NYSE/AMEX/NASDAQ is also included. All returns presented are value-weighted based on the market capitalizations of the deciles contained in each subgroup. The sheer magnitude of the size effect in some years is noteworthy. While the largest stocks actually declined 9 percent in 1977, the smallest stocks rose more than 20 percent. A more extreme case occurred in the depression-recovery year of 1933, when the difference between the first and tenth decile returns was far more substantial, with the largest stocks rising 46 percent, and the smallest stocks rising 224 percent. This divergence in the performance of small and large company stocks is a common occurrence.

Table 7-3

Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Largest and Smallest Company by Size Group

from 1926 to1965

	Capitalization of Largest Company (in thousands)			Capitalization of Smallest Company (in thousands)		
Date (Sept 30)	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10
1926	$61,490	$14,040	$4,305	$14,100	$4,325	$43
1927	$65,281	$14,746	$4,450	$15,311	$4,496	$72
1928	$81,998	$18,975	$5,074	$19,050	$5,119	$135
1929	$107,085	$24,328	$5,875	$24,480	$5,915	$126
1930	$67,808	$13,050	$3,219	$13,068	$3,264	$30
1931	$42,607	$8,142	$1,905	$8,222	$1,927	$15
1932	$12,431	$2,170	$473	$2,196	$477	$19
1933	$40,298	$7,210	$1,830	$7,280	$1,875	$100
1934	$38,129	$6,669	$1,669	$6,734	$1,673	$68
1935	$37,631	$6,519	$1,350	$6,549	$1,383	$38
1936	$46,920	$11,505	$2,660	$11,526	$2,668	$98
1937	$51,750	$13,601	$3,500	$13,635	$3,539	$68
1938	$36,102	$8,325	$2,125	$8,372	$2,145	$60
1939	$35,784	$7,367	$1,697	$7,389	$1,800	$75
1940	$31,050	$7,990	$1,861	$8,007	$1,872	$51
1941	$31,744	$8,316	$2,086	$8,336	$2,087	$72
1942	$26,135	$6,870	$1,779	$6,875	$1,788	$82
1943	$43,218	$11,475	$3,847	$11,480	$3,903	$395
1944	$46,621	$13,066	$4,800	$13,068	$4,812	$309
1945	$55,268	$17,325	$6,413	$17,575	$6,428	$225
1946	$79,158	$24,192	$10,013	$24,199	$10,051	$829
1947	$57,830	$17,735	$6,373	$17,872	$6,380	$747
1948	$67,238	$19,575	$7,313	$19,651	$7,329	$784
1949	$55,506	$14,549	$5,037	$14,577	$5,108	$379
1950	$65,881	$18,675	$6,176	$18,750	$6,201	$303
1951	$82,517	$22,750	$7,567	$22,860	$7,598	$668
1952	$97,936	$25,452	$8,428	$25,532	$8,480	$480
1953	$98,595	$25,374	$8,156	$25,395	$8,168	$459
1954	$125,834	$29,645	$8,484	$29,707	$8,488	$463
1955	$170,829	$41,445	$12,353	$41,681	$12,366	$553
1956	$183,434	$46,805	$13,481	$46,886	$13,524	$1,122
1957	$192,861	$47,658	$13,844	$48,509	$13,848	$925
1958	$195,083	$46,774	$13,789	$46,871	$13,816	$550
1959	$253,644	$64,221	$19,500	$64,372	$19,548	$1,804
1960	$246,202	$61,485	$19,344	$61,529	$19,385	$831
1961	$296,261	$79,058	$23,562	$79,422	$23,613	$2,455
1962	$250,433	$58,866	$18,952	$59,143	$18,968	$1,018
1963	$308,438	$71,846	$23,819	$71,971	$23,822	$296
1964	$344,033	$79,343	$25,594	$79,508	$25,595	$223
1965	$363,759	$84,479	$28,365	$84,600	$28,375	$250

Source: Center for Research in Security Prices, University of Chicago.

Table 7-3 (continued)

Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Largest and Smallest Company by Size Group

from 1966 to 2005

	Capitalization of Largest Company (in thousands)			Capitalization of Smallest Company (in thousands)		
Date (Sept 30)	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10	Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10
1966	$399,455	$99,578	$34,884	$99,935	$34,966	$381
1967	$459,170	$117,985	$42,267	$118,329	$42,313	$381
1968	$528,326	$149,261	$60,351	$150,128	$60,397	$592
1969	$517,452	$144,770	$54,273	$145,684	$54,280	$2,119
1970	$380,246	$94,025	$29,910	$94,047	$29,916	$822
1971	$542,517	$145,340	$45,571	$145,673	$45,589	$865
1972	$545,211	$139,647	$46,728	$139,710	$46,757	$1,031
1973	$424,584	$94,809	$29,601	$95,378	$29,606	$561
1974	$344,013	$75,272	$22,475	$75,853	$22,481	$444
1975	$465,763	$96,954	$28,140	$97,266	$28,144	$540
1976	$551,071	$116,184	$31,987	$116,212	$32,002	$564
1977	$573,084	$135,804	$39,192	$137,323	$39,254	$513
1978	$572,967	$159,778	$46,621	$160,524	$46,629	$830
1979	$661,336	$174,480	$49,088	$174,517	$49,172	$948
1980	$754,562	$194,012	$48,671	$194,241	$48,953	$549
1981	$954,665	$259,028	$71,276	$261,059	$71,289	$1,446
1982	$762,028	$205,590	$54,675	$206,536	$54,883	$1,060
1983	$1,200,680	$352,698	$103,443	$352,944	$103,530	$2,025
1984	$1,068,972	$314,650	$90,419	$315,214	$90,659	$2,093
1985	$1,432,342	$367,413	$93,810	$368,249	$94,000	$760
1986	$1,857,621	$444,827	$109,956	$445,648	$109,975	$706
1987	$2,059,143	$467,430	$112,035	$468,948	$112,125	$1,277
1988	$1,957,926	$420,257	$94,268	$421,340	$94,302	$696
1989	$2,147,608	$480,975	$100,285	$483,623	$100,384	$96
1990	$2,164,185	$472,003	$93,627	$474,065	$93,750	$132
1991	$2,129,863	$457,958	$87,586	$458,853	$87,733	$278
1992	$2,428,671	$500,346	$103,352	$501,050	$103,500	$510
1993	$2,711,068	$608,520	$137,945	$608,825	$137,987	$602
1994	$2,497,073	$601,552	$149,435	$602,552	$149,532	$598
1995	$2,793,761	$653,178	$158,011	$654,019	$158,063	$89
1996	$3,150,685	$763,377	$195,188	$763,812	$195,326	$1,043
1997	$3,511,132	$818,299	$230,472	$821,028	$230,554	$480
1998	$4,216,707	$934,264	$253,329	$936,727	$253,336	$1,671
1999	$4,251,741	$875,309	$218,336	$875,582	$218,368	$1,502
2000	$4,143,902	$840,000	$192,598	$840,730	$192,721	$1,462
2001	$5,252,063	$1,114,792	$269,275	$1,115,200	$270,391	$443
2002	$5,012,705	$1,143,845	$314,042	$1,144,452	$314,174	$501
2003	$4,794,027	$1,166,799	$330,608	$1,167,040	$330,797	$332
2004	$6,241,953	$1,607,854	$505,437	$1,607,931	$506,410	$1,393
2005	$7,187,244	$1,728,888	$586,393	$1,729,364	$587,243	$1,079

Source: Center for Research in Security Prices, University of Chicago.

Table 7-4

Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, Summary Statistics of Annual Returns 1926–2005

Decile	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Correlation
1-Largest	9.5	11.3	19.17	0.09
2	10.9	13.2	21.86	0.03
3	11.3	13.8	23.66	–0.02
4	11.3	14.3	25.94	–0.02
5	11.6	14.9	26.78	–0.02
6	11.8	15.3	27.84	0.04
7	11.6	15.6	29.99	0.01
8	11.8	16.6	33.47	0.04
9	12.0	17.5	36.55	0.05
10-Smallest	14.0	21.6	45.44	0.15
Mid-Cap, 3-5	11.4	14.2	24.74	–0.02
Low-Cap, 6-8	11.7	15.7	29.52	0.03
Micro-Cap, 9-10	12.7	18.8	39.16	0.08
NYSE/AMEX/NASDAQ Total Value-Weighted Index	10.1	12.0	20.21	0.03

Source: Center for Research in Security Prices, University of Chicago.

Aspects of the Firm Size Effect

The firm size phenomenon is remarkable in several ways. First, the greater risk of small stocks does not, in the context of the capital asset pricing model (CAPM), fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small company stocks have had returns in excess of those implied by their betas.

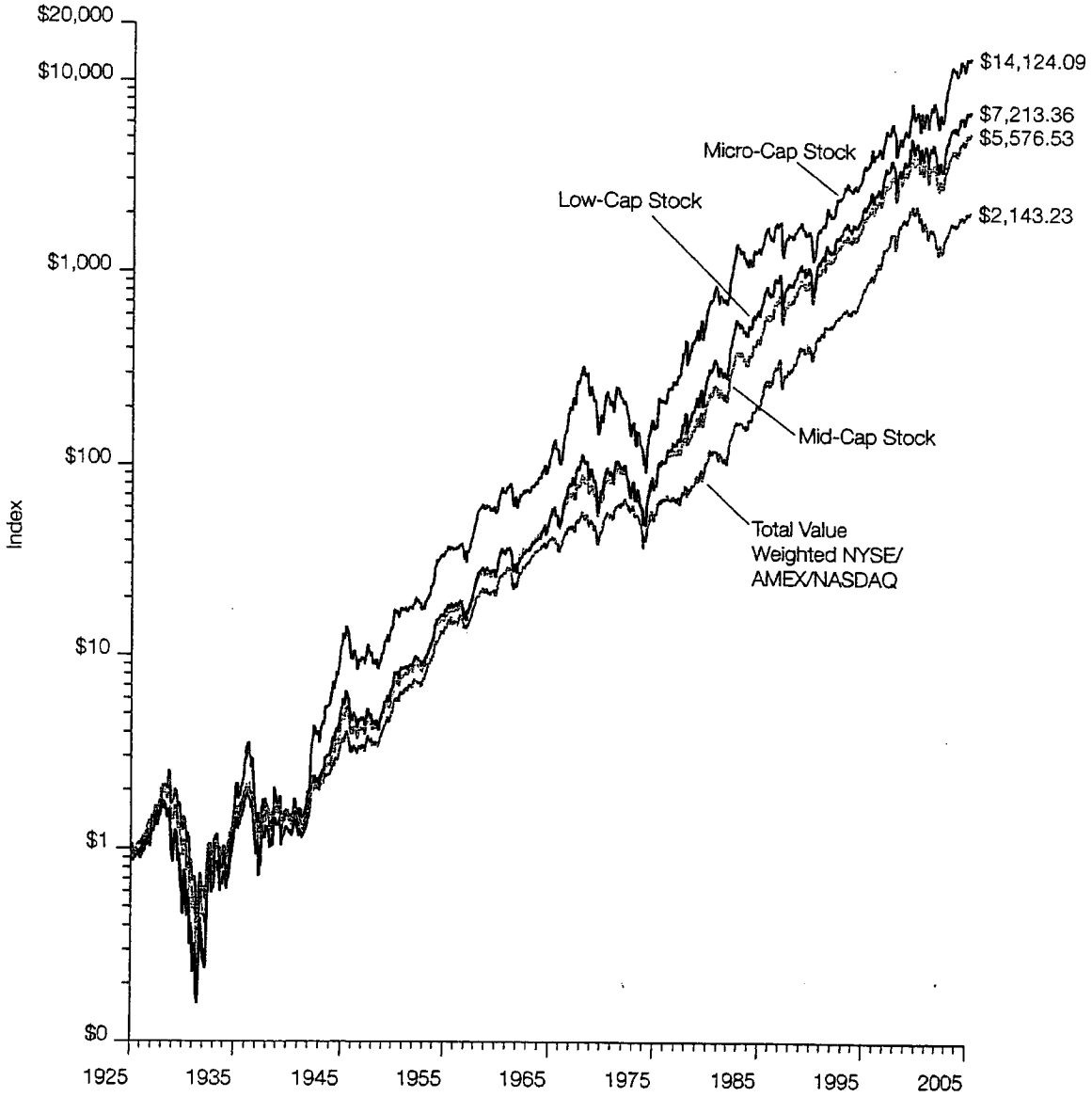
Second, the calendar annual return differences between small and large companies are serially correlated. This suggests that past annual returns may be of some value in predicting future annual returns. Such serial correlation, or autocorrelation, is practically unknown in the market for large stocks and in most other equity markets but is evident in the size premia.

Third, the firm size effect is seasonal. For example, small company stocks outperformed large company stocks in the month of January in a large majority of the years. Such predictability is surprising and suspicious in light of modern capital market theory. These three aspects of the firm size effect—long-term returns in excess of systematic risk, serial correlation, and seasonality—will be analyzed thoroughly in the following sections.

Graph 7-1

Size-Decile Portfolios of the NYSE/AMEX/NASDAQ: Wealth Indices of Investments in Mid-, Low-, Micro- and Total Capitalization Stocks
1925–2005

Year-end 1925 = $1.00



Source: Center for Research in Security Prices, University of Chicago.

Long-Term Returns in Excess of Systematic Risk

The capital asset pricing model (CAPM) does not fully account for the higher returns of small company stocks. Table 7-5 shows the returns in excess of systematic risk over the past 80 years for each decile of the NYSE/AMEX/NASDAQ. Recall that the CAPM is expressed as follows:

$$k_s = r_f + (\beta_s \times ERP)$$

Table 7-5 uses the CAPM to estimate the return in excess of the riskless rate and compares this estimate to historical performance. According to the CAPM, the expected return on a security should consist of the riskless rate plus an additional return to compensate for the systematic risk of the security. The return in excess of the riskless rate is estimated in the context of the CAPM by multiplying the equity risk premium by β (beta). The equity risk premium is the return that compensates investors for taking on risk equal to the risk of the market as a whole (systematic risk).[2] Beta measures the extent to which a security or portfolio is exposed to systematic risk.[3] The beta of each decile indicates the degree to which the decile's return moves with that of the overall market.

A beta greater than one indicates that the security or portfolio has greater systematic risk than the market; according to the CAPM equation, investors are compensated for taking on this additional risk. Yet, Table 7-5 illustrates that the smaller deciles have had returns that are not fully explained by their higher betas. This return in excess of that predicted by CAPM increases as one moves from the largest companies in decile 1 to the smallest in decile 10. The excess return is especially pronounced for micro-cap stocks (deciles 9–10). This size-related phenomenon has prompted a revision to the CAPM, which includes a size premium. Chapter 4 presents this modified CAPM theory and its application in more detail.

This phenomenon can also be viewed graphically, as depicted in the Graph 7-2. The security market line is based on the pure CAPM without adjustment for the size premium. Based on the risk (or beta) of a security, the expected return lies on the security market line. However, the actual historic returns for the smaller deciles of the NYSE/AMEX/NASDAQ lie above the line, indicating that these deciles have had returns in excess of that which is appropriate for their systematic risk.

2 The equity risk premium is estimated by the 80-year arithmetic mean return on large company stocks, 12.30 percent, less the 80-year arithmetic mean income-return component of 20-year government bonds as the historical riskless rate, in this case 5.22 percent. (It is appropriate, however, to match the maturity, or duration, of the riskless asset with the investment horizon.) See Chapter 5 for more detail on equity risk premium estimation.

3 Historical betas were calculated using a simple regression of the monthly portfolio (decile) total returns in excess of the 30-day U.S. Treasury bill total returns versus the S&P 500 total returns in excess of the 30-day U.S. Treasury bill, January 1926–December 2005. See Chapter 6 for more detail on beta estimation.

Table 7-5

Long-Term Returns in Excess of CAPM Estimation for Decile Portfolios of the NYSE/AMEX/NASDAQ
1926–2005

Decile	Beta*	Arithmetic Mean Return	Realized Return in Excess of Riskless Rate**	Estimated Return in Excess of Riskless Rate†	Size Premium (Return in Excess of CAPM)
1-Largest	0.91	11.29%	6.07%	6.45%	–0.37%
2	1.04	13.22%	8.00%	7.33%	0.67%
3	1.10	13.84%	8.62%	7.77%	0.85%
4	1.13	14.31%	9.09%	7.98%	1.10%
5	1.16	14.91%	9.69%	8.20%	1.49%
6	1.18	15.33%	10.11%	8.38%	1.73%
7	1.23	15.62%	10.40%	8.73%	1.67%
8	1.28	16.60%	11.38%	9.05%	2.33%
9	1.34	17.48%	12.26%	9.50%	2.76%
10-Smallest	1.41	21.59%	16.37%	10.01%	6.36%
Mid-Cap, 3-5	1.12	14.15%	8.94%	7.91%	1.02%
Low-Cap, 6-8	1.22	15.66%	10.44%	8.63%	1.81%
Micro-Cap, 9-10	1.36	18.77%	13.55%	9.61%	3.95

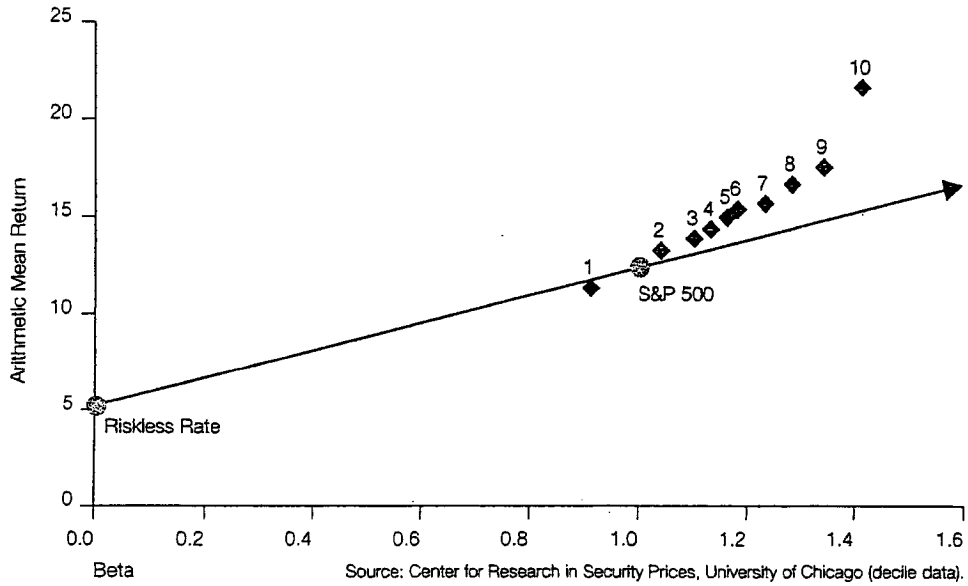
*Betas are estimated from monthly portfolio total returns in excess of the 30-day U.S. Treasury bill total return versus the S&P 500 total returns in excess of the 30-day U.S. Treasury bill, January 1926–December 2005.

**Historical riskless rate is measured by the 80-year arithmetic mean income return component of 20-year government bonds (5.22 percent).

†Calculated in the context of the CAPM by multiplying the equity risk premium by beta. The equity risk premium is estimated by the arithmetic mean total return of the S&P 500 (12.30 percent) minus the arithmetic mean income return component of 20-year government bonds (5.22 percent) from 1926–2005.

Graph 7-2

Security Market Line versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
1926–2005



Source: Center for Research in Security Prices, University of Chicago (decile data).

Further Analysis of the 10th Decile

The size premia presented thus far do a great deal to explain the return due solely to size in publicly traded companies. However, by splitting the 10th decile into two size groupings we can get a closer look at the smallest companies. This magnification of the smallest companies will demonstrate whether the company size to size premia relationship continues to hold true.

As previously discussed, the method for determining the size groupings for size premia analysis was to take the stocks traded on the NYSE and break them up into 10 deciles, after which stocks traded on the AMEX and NASDAQ were allocated into the same size groupings. This same methodology was used to split the 10th decile into two parts: 10a and 10b, with 10b being the smaller of the two. This is equivalent to breaking the stocks down into 20 size groupings, with portfolios 19 and 20 representing 10a and 10b.

Table 7-7 shows that the pattern continues; as companies get smaller their size premium increases. There is a noticeable increase in size premium from 10a to 10b, which can also be demonstrated visually in Graph 7-3. This can be useful in valuing companies that are extremely small. Table 7-6 presents the size, composition, and breakpoints of deciles 10a and 10b. First, the recent number of companies and total decile market capitalization are presented. Then the largest company and its market capitalization are presented.

Breaking the smallest decile down lowers the significance of the results compared to results for the 10th decile taken as a whole, however. The same holds true for comparing the 10th decile with the Micro-Cap aggregation of the 9th and 10th deciles. The more stocks included in a sample the more significance can be placed on the results. While this is not as much of a factor with the recent years of data, these size premia are constructed with data back to 1926. By breaking the 10th decile down into smaller components we have cut the number of stocks included in each grouping. The change over time of the number of stocks included in the 10th decile for the NYSE/AMEX/NASDAQ is presented in Table 7-8. With fewer stocks included in the analysis early on, there is a strong possibility that just a few stocks can dominate the returns for those early years.

While the number of companies included in the 10th decile for the early years of our analysis is low, it is not too low to still draw meaningful results even when broken down into subdivisions 10a and 10b. All things considered, size premia developed for deciles 10a and 10b are significant and can be used in cost of capital analysis. These size premia should greatly enhance the development of cost of capital analysis for very small companies.

Table 7-6

Size-Decile Portfolios 10a and 10b of the NYSE/AMEX/NASDAQ, Largest Company and Its Market Capitalization
September 30, 2005

Decile	Recent Number of Companies	Recent Decile Market Capitalization (in thousands)	Market Capitalization of Largest Company (in thousands)	Company Name
10a	483	$108,194,821	$264,981	4Kids Entertaint Inc.
10b	1,279	$102,157,012	$169,195	Quaker Chemical Corp.

Note: These numbers may not aggregate to equal decile 10 figures.
Source: Center for Research in Security Prices, University of Chicago.

Table 7-7

Long-Term Returns in Excess of CAPM Estimation for Decile Portfolios of the NYSE/AMEX/NASDAQ, with 10th Decile Split
1926–2005

	Beta*	Arithmetic Mean Return	Realized Return in Excess of Riskless Rate**	Estimated Return in Excess of Riskless Rate†	Size Premium (Return in Excess of CAPM)
1-Largest	0.91	11.29%	6.07%	6.45%	–0.37%
2	1.04	13.22%	8.00%	7.33%	0.67%
3	1.10	13.84%	8.62%	7.77%	0.85%
4	1.13	14.31%	9.09%	7.98%	1.10%
5	1.16	14.91%	9.69%	8.20%	1.49%
6	1.18	15.33%	10.11%	8.38%	1.73%
7	1.23	15.62%	10.40%	8.73%	1.67%
8	1.28	16.60%	11.38%	9.05%	2.33%
9	1.34	17.48%	12.26%	9.50%	2.76%
10a	1.43	19.71%	14.49%	10.10%	4.39%
10b-Smallest	1.39	24.87%	19.65%	9.82%	9.83%
Mid-Cap, 3-5	1.12	14.15%	8.94%	7.91%	1.02%
Low-Cap, 6-8	1.22	15.66%	10.44%	8.63%	1.81%
Micro-Cap, 9-10	1.36	18.77%	13.55%	9.61%	3.95%

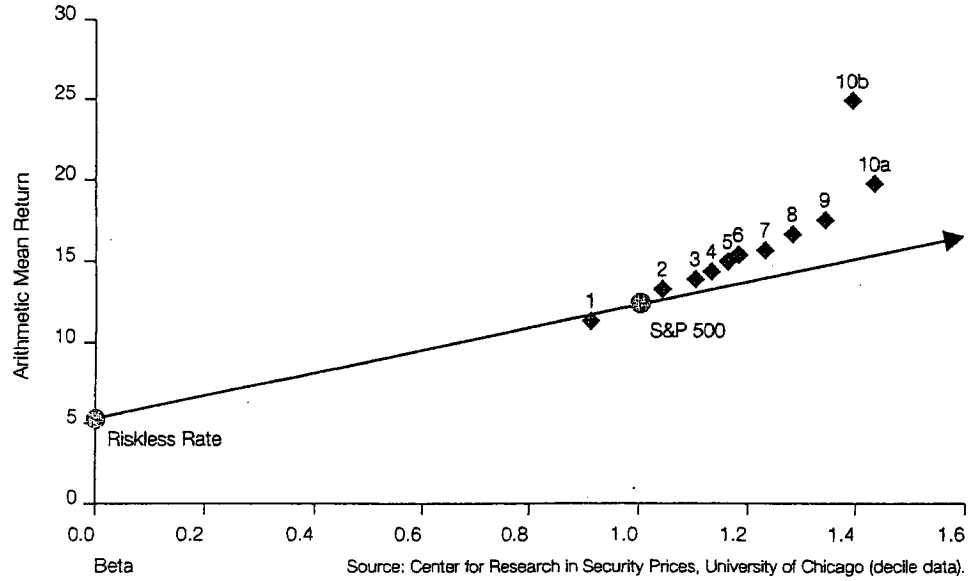
*Betas are estimated from monthly portfolio total returns in excess of the 30-day U.S. Treasury bill total return versus the S&P 500 total returns in excess of the 30-day U.S. Treasury bill, January 1926–December 2005 .

**Historical riskless rate is measured by the 80-year arithmetic mean income return component of 20-year government bonds (5.22 percent).

†Calculated in the context of the CAPM by multiplying the equity risk premium by beta. The equity risk premium is estimated by the arithmetic mean total return of the S&P 500 (12.30 percent) minus the arithmetic mean income return component of 20-year government bonds (5.22 percent) from 1926–2005.

Graph 7-3

Security Market Line versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, with 10th Decile Split
1926-2005



Source: Center for Research in Security Prices, University of Chicago (decile data).

Table 7-8

Historical Number of Companies for NYSE/AMEX/NASDAQ Decile 10

Sept.	Number of Companies
1926	52*
1930	72
1940	78
1950	100
1960	109
1970	865
1980	685
1990	1,814
2000	1,927
2005	1,746

*The fewest number of companies was 49 in March, 1926

Source: Center for Research in Security Prices, University of Chicago.

Alternative Methods of Calculating the Size Premia

The size premia estimation method presented above makes several assumptions with respect to the market benchmark and the measurement of beta. The impact of these assumptions can best be examined by looking at some alternatives. In this section we will examine the impact on the size premia of using a different market benchmark for estimating the equity risk premia and beta. We will also examine the effect on the size premia study of using sum beta or an annual beta.[4]

Changing the Market Benchmark

In the original size premia study, the S&P 500 is used as the market benchmark in the calculation of the realized historical equity risk premium and of each size group's beta. The NYSE total value-weighted index is a common alternative market benchmark used to calculate beta. Table 7-9 uses this market benchmark in the calculation of beta. In order to isolate the size effect, we require an equity risk premium based on a large company stock benchmark. The NYSE deciles 1–2 large company index offers a mutually exclusive set of portfolios for the analysis of the smaller company groups: mid-cap deciles 3–5, low-cap deciles 6–8, and micro-cap deciles 9–10. The size premia analyses using these benchmarks are summarized in Table 7-9 and depicted graphically in Graph 7-4.

For the entire period analyzed, 1926–2005, the betas obtained using the NYSE total value-weighted index are higher than those obtained using the S&P 500. Since smaller companies had higher betas using the NYSE benchmark, one would expect the size premia to shrink. However, as was illustrated in Chapter 5, the equity risk premium calculated using the NYSE deciles 1–2 benchmark results in a value of 6.33, as opposed to 7.08 when using the S&P 500. The effect of the higher betas and lower equity risk premium cancel each other out, and the resulting size premia in Table 7-9 are slightly higher than those resulting from the original study.

4 Sum beta is the method of beta estimation described in Chapter 6 that was developed to better account for the lagged reaction of small stocks to market movements. The sum beta methodology was developed for the same reason that the size premia were developed; small company betas were too small to account for all of their excess returns.

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Utilities

The utilities rating methodology encompasses two basic components: business risk analysis and financial analysis. Evaluation of industry characteristics, the utility's position within that industry, its regulation, and its management provides the context for assessing a firm's financial condition.

Historical analysis is a tool for identifying strengths and weaknesses, and provides a starting point for evaluating financial condition. Business position assessment is the qualitative measure of a utility's fundamental creditworthiness. It focuses on the forces that will shape the utilities' future.

Utilities credit analysis factors

Business risk	Financial risk
• Markets and service area economy	• Earnings protection
• Competitive position	• Capital structure
• Operations	• Cash flow adequacy
• Regulation	• Financial flexibility/capital attraction
• Management	
• Fuel, power, and water supply	
• Asset concentration	

The credit analysis of utilities is quickly evolving, as utilities are treated less as regulated monopolies and more as entities faced with a host of challengers in a competitive environment. Marketplace dynamics are supplanting the power of regulation, making it critically important to reduce costs and/or market new services in order to thwart competitors' inroads.

Markets and service area economy

Assessing service territory begins with the economic and demographic evaluation of the area in which the utility has its franchise. Strength of long-term demand for the product is examined from a macroeconomic perspective. This enables Standard & Poor's to evaluate the affordability of rates and the staying power of demand.

Standard & Poor's tries to discern any secular consumption trends and, more importantly, the reasons for them. Specific items examined include the size and growth rate of the market, strength of the franchise, historical and projected sales growth, income levels and trends in population, employment, and per capita income. A utility with a healthy economy and customer base—as illustrated by diverse employment opportunities, average or above-average wealth and income statistics, and low unemployment—will have a greater capacity to support its operations.

For electric and gas utilities, distribution by customer class is scrutinized to assess the depth and diversity of the utility's customer mix. For example, heavy industrial concentration is viewed cautiously, since a utility may have significant exposure to cyclical volatility. Alternatively, a large residential component yields a stable and more predictable revenue stream. The largest utility customers are identified to determine their importance to the bottom line and assess the risk of their loss and potential adverse effect on the utility's financial position. Credit concerns arise when individual customers represent more than 5% of revenues. The company or industry may play a significant role in the overall economic base of the service area. Moreover, large customers may turn to cogeneration or alternative power supplies to meet their energy needs, potentially leading to reduced cash flow for the utility (even in cases where a large customer pays discounted rates and is not a profitable account for the utility). Customer concentration is less significant for water and telecommunication utilities.

Competitive position

As competitive pressures have intensified in the utilities industry, Standard & Poor's analysis has deepened to include a more thorough review of competitive position.

Electric utility competition

For electric utilities, competitive factors examined include: percentage of firm wholesale revenues that are most vulnerable to competition; industrial load concentration; exposure of key customers to alternative suppliers; commercial concentrations; rates for various customer classes; rate design and flexibility; production costs, both marginal and fixed; the regional capacity situation; and transmission constraints. A regional focus is evident, but high costs and rates relative to national averages are also of significant concern because of the potential for electricity substitutes over time.

Mounting competition in the electric utility industry derives from excess generating capacity, lower barriers to entering the electric generating business, and marginal costs that are below embedded costs. Standard & Poor's has already witnessed declining prices in wholesale markets, as *de facto* retail competition is already being seen in several parts of the country. Standard & Poor's believes that over the coming years more and more customers will want and demand lower prices. Initial concerns focus on the largest industrial loads, but other customer classes will be increasingly vulnerable. Competition will not necessar-

ily be driven by legislation. Other pressures will arise from global competition and improving technologies, whether it be the declining cost of incremental generation or advances in transmission capacity or substitute energy sources like the fuel cell. It is impossible to say precisely when wide-open retail competition will occur; this will be evolutionary. However, significantly greater competition in retail markets is inevitable.

Gas utility competition

Similarly, gas utilities are analyzed with regard to their competitive standing in the three major areas of demand: residential, commercial, and industrial. Although regulated as holders of monopoly power, natural gas utilities have for some time been actively competing for energy market share with fuel oil, electricity, coal, solar, wood, etc. The long-term staying power of market demand for natural gas cannot be taken for granted. In fact, as the electric utility industry restructures and reduces costs, electric power will become more cost competitive and threaten certain gas markets. In addition, independent gas marketers have made greater inroads behind the city gate and are competing for large gas users. Moreover, the recent trend by state regulators to unbundle utility services is creating opportunities for outsiders to market niche products. Distributors still have the upper hand, but those who do not reduce and control costs, and thus rates, could find competition even more difficult.

Natural gas pipelines are judged to carry a somewhat higher business risk than distribution companies because they face competition in every one of their markets. To the extent a pipeline serves utilities versus industrial end users, its stability is greater. Over the next five years, pipeline competition will heat up since many service contracts with customers are expiring. Most distributor or end-use customers are looking to reduce pipeline costs and are working to improve their load factor to do so. Thus, pipelines will likely find it difficult to recontract all capacity in coming years. Being the pipeline of choice is a function of attractive transportation rates, diversity and quality of services provided, and capacity available in each particular market. In all cases though, periodic discounting of rates to retain customers will occur and put pressure on profitability.

Water utility competition

As the last true utility monopoly, water utilities face very little competition and there is currently no challenge to the continuation of franchise areas. The only exceptions have been cases where investor-owned water companies have been subject to condemnation and municipalization because of poor service or political motivations. In that regard, Standard & Poor's pays close attention to costs and rates in relation to neighboring utilities and national averages. (In contrast, the privatization of public water facilities has begun, albeit at a slower pace than anticipated. This is occurring mostly in the form of operating contracts and public/private partnerships, and not in asset transfers. This trend should continue as cities look for ways to balance their tight budgets.) Also, water utilities are not fully immune to the forces of competition; in a few instances wholesale customers can access more than one supplier.

Telephone competition

The Telecommunications Act of 1996 accelerates the continuing challenge to the local exchange companies' (LECs) century-old monopoly in the local loop. Competitive access providers (CAPs), both facilities-based and resellers, are aggressively pursuing customers, generally targeting metropolitan areas, and promising lower rates and better service.

Most long-distance calls are still originated and terminated on the local telephone company network. To complete such a call, the long-distance provider (including AT&T, MCI, Sprint and a host of smaller interexchange carriers or "IXCs") must pay the local telephone company a steep "access" fee to compensate the local phone company for the use of its local network. CAPs, in contrast, build or lease facilities that directly connect customers to their long-distance carrier, bypassing the local telephone company and avoiding access fees, and thereby can offer lower long-distance rates. But the LECs are not standing still; they are combating the loss of business to CAPs by lowering access fees, thereby reducing the economic incentive for a high usage long-distance customer to use a CAP. LECs are attempting to make up for the loss of revenues from lower access fees by increasing basic local service rates (or at least not lowering them), since basic service is far less subject to competition. LECs are improving operating efficiency and marketing high margin, value-added new services. Additionally, in the wake of the Telecommunications Act, LECs will capture at least some of the inter-LATA long-distance market. As a result of these initiatives, LECs continue to rebuild themselves—from the traditional utility monopoly to leaner, more marketing oriented organizations.

While LECs, and indeed all segments of the telecommunications sector, face increasing competition, there are favorable industry factors that tend to offset heightened business risk and auger for overall ratings stability for most LECs. Importantly, telecommunications is a declining-cost business. With increased deployment of fiber optics, the cost of transport has fallen dramatically and digital switching hardware and software have yielded more capable, trouble-free and cost-efficient networks. As a result, the cost of network maintenance has dropped sharply, as illustrated by the ratio of employees per 10,000 access lines, an oft cited measurement of efficiency. Ratios as low as 25 employees per 10,000 lines are being seen, down from the typical 40 or more employees per 10,000 ratio of only a few years ago.

In addition, networks are far more capable. They are increasingly digitally switched and able to accommodate high-speed communications. The infrastructure needed to accommodate switched broadband services will be built into telephone networks over the next few years. These advanced networks will enable telephone companies to look to a greater variety of high-margin, value-added serv-

ices. In addition to those current services such as call waiting or caller ID, the delivery of hundreds of broadcast and interactive video channels will be possible. While these services offer the potential of new revenue streams, they will simultaneously present a formidable challenge. LECs will be entering the new (to them) arena of multimedia entertainment and will have to develop expertise in marketing and entertainment programming acumen; such skills stand in sharp contrast to LECs' traditional strengths in engineering and customer service.

Operations

Standard & Poor's focuses on the nature of operations from the perspective of cost, reliability, and quality of service. Here, emphasis is placed on those areas that require management attention in terms of time or money and which, if unresolved, may lead to political, regulatory, or competitive problems.

Operations of electric utilities

For electrics, the status of utility plant investment is reviewed with regard to generating plant availability and utilization, and also for compliance with existing and contemplated environmental and other regulatory standards. The record of plant outages, equivalent availability, load factors, heat rates, and capacity factors are examined. Also important is efficiency, as defined by total megawatt hour per employee and customers per employee. Transmission interconnections are evaluated in terms of the number of utilities to which the utility in question has access, the cost structures and available generating capacity of these other utilities, and the price paid for wholesale power.

Because of mounting competition and the substantial escalation in decommissioning estimates, significant weight is given to the operation of nuclear facilities. Nuclear plants are becoming more vulnerable to high production costs that make their rates uneconomic. Significant asset concentration may expose the utility to poor performance, unscheduled outages or premature shutdowns, and large deferrals or regulatory assets that may need to be written off for the utility to remain competitive. Also, nuclear facilities tend to represent significant portions of their operators' generating capability and assets. The loss of a productive nuclear unit from both power supply and rate base can interrupt the revenue stream and create substantial additional costs for repairs and improvements and replacement power. The ability to keep these stations running smoothly and economically directly influences the ability to meet electric demand, the stability of revenues and costs, and, by extension, the ability to maintain adequate creditworthiness. Thus, economic operation, safe operation, and long-term operation are examined in depth. Specifically, emphasis is placed on operation and maintenance costs, busbar costs, fuel costs, refueling outages, forced outages, plant statistics, NRC evaluations, the potential need for repairs, operating licenses, decommissioning estimates and amounts held in external trusts, spent fuel storage capacity, and management's nuclear experience. In essence, favorable nuclear operations offer significant opportunities but, if a nuclear unit runs poorly or not at all, the attendant risks can be great.

Operations of gas utilities

For gas pipeline and distribution companies, the degree of plant utilization, the physical condition of the mains and lines, adequacy of storage to meet seasonal needs, "lost and unaccounted for" gas levels, and per-unit nongas operating and construction costs are important factors. Efficiency statistics such as load factor, operating costs per customer, and operating income per employee are also evaluated in comparison to other utilities and the industry as a whole.

Operations of water utilities

As a group, water utilities are continually upgrading their physical plant to satisfy regulations and to develop additional supply. Over the next decade, water systems will increasingly face the task of maintaining compliance, as drinking water regulations change and infrastructure ages. Given that the Safe Drinking Water Act was authorized in 1974, the first generation of treatment plants built to conform with these rules are almost 20 years old. Additionally, because the focus during this period was on satisfying environmental standards, deferred maintenance of distribution systems has been common, especially in older urban areas. The increasing cost of supplying treated water argues against the high level of unaccounted for water witnessed in the industry. Consequently, Standard & Poor's anticipates capital plans for rebuilding distribution lines and major renewal and replacement efforts aimed at treatment plants.

Operations of telephone companies

For telephone companies, cost-of-service analysis focuses on plant capability and measures of efficiency and quality of service. Plant capability is ascertained by looking at such parameters as percentage of digitally switched lines; fiber optic deployment, in particular in those portions of the plant key to network survival; and the degree of broadband capacity fiber and coaxial deployment and broadband switching capacity. Efficiency measures include operating margins, the ratio of employees per 10,000 access lines, and the extent of network and operations consolidation. Quality of service encompasses examination of quantitative measures, such as trouble reports and repeat service calls, as well as an assessment of qualitative factors, that may include service quality goals mandated by regulators.

Regulation

Regulatory rate-setting actions are reviewed on a case-by-case basis with regard to the potential effect on creditworthiness. Regulators' authorizing high rates of return is of little value unless the returns are earnable. Furthermore, allowing high returns based on noncash items does not benefit bondholders. Also, to be viewed positively, regulatory treatment should allow consistent performance from

period to period, given the importance of financial stability as a rating consideration.

The utility group meets frequently with commission and staff members, both at Standard & Poor's offices and at commission headquarters, demonstrating the importance Standard & Poor's places on the regulatory arena for credit quality evaluation. Input from these meetings and from review of rate orders and their impact weigh heavily in Standard & Poor's analysis.

Standard & Poor's does not "rate" regulatory commissions. State commissions typically regulate a number of diverse industries, and regulatory approaches to different types of companies often differ within a single regulatory jurisdiction. This makes it all but impossible to develop inclusive "ratings" for regulators.

Standard & Poor's evaluation of regulation also encompasses the administrative, judicial, and legislative processes involved in state and federal regulation. These can affect rate-setting activities and other aspects of the business, such as competitive entry, environmental and safety rules, facility siting, and securities sales.

As the utility industry faces an increasingly deregulated environment, alternatives to traditional rate-making are becoming more critical to the ability of utilities to effectively compete, maintain earnings power, and sustain creditor protection. Thus, Standard & Poor's focuses on whether regulators, both state and federal, will help or hinder utilities as they are exposed to greater competition. There is much that regulators can do, from allocating costs to more captive customers to allowing pricing flexibility—and sometimes just stepping out of the way.

Under traditional rate-making, rates and earnings are tied to the amount of invested capital and the cost of capital. This can sometimes reward companies more for justifying costs than for containing them. Moreover, most current regulatory policies do not permit utilities to be flexible when responding to competitive pressures of a deregulated market. Lack of flexible tariffs for electric utilities may lure large customers to wheel cheaper power from other sources.

In general, a regulatory jurisdiction is viewed favorably if it permits earning a return based on the ability to sustain rates at competitive levels. In addition to performance-based rewards or penalties, flexible plans could include market-based rates, price caps, index-based prices, and rates premised on the value of customer service. Such rates more closely mirror the competitive environment that utilities are confronting.

Electric industry regulation

The ability to enter into long-term arrangements at negotiated rates without having to seek regulatory approval for each contract is also important in the electric industry. (While contracting at reduced rates constrains financial performance, it lessens the potential adverse impact in the event of retail wheeling. Since revenue losses associated with this strategy are not likely to be recovered from ratepayers, utilities must control costs well enough to remain competitive if they are to sustain current levels of bondholder protection.)

Natural gas industry regulation

In the gas industry, too, several state commission policies weigh heavily in the evaluation of regulatory support. Examples include stabilization mechanisms to adjust revenues for changes in weather or the economy, rate and service unbundling decisions, revenue and cost allocation between sales and transportation customers, flexible industrial rates, and the general supportiveness of construction costs and gas purchases.

Water industry regulation

In all water utility activities, federal and state environmental regulations continue to play a critical role. The legislative timetable to effect the 1986 amendments to the Safe Drinking Water Act of 1974 was quite aggressive. But environmental standards-setting has actually slowed over the past couple of years due largely to increasing sentiment that the stringent, costly standards have not been justified on the basis of public health. A moratorium on the promulgation of significant new environmental rules is anticipated.

Telecommunications industry regulation

Despite the advances in telecommunications deregulation, analysis of regulation of telephone operators will continue to be a key rating determinant for the foreseeable future. The method of regulation may be either classic rate-based rate of return or some form of price cap mechanism. The most important factor is to assess whether the regulatory framework—no matter which type—provides sufficient financial incentive to encourage the rated company to maintain its quality of service and to upgrade its plant to accommodate new services while facing increasing competition from wireless operators and cable television companies.

Where regulators do still set tariffs based on an authorized return, Standard & Poor's strives to explore with regulators their view of the rate-of-return components that can materially impact reported versus regulatory earnings. Specifically these include the allowable base upon which the authorized return can be earned, allowable expenses, and the authorized return. Since regulatory oversight runs the gamut from strict, adversarial relationships with the regulated operating companies to highly supportive postures, Standard & Poor's probes beyond the apparent regulatory environment to ascertain the actual impact of regulation on the rated company.

Management

Evaluating the management of a utility is of paramount importance to the analytical process since management's abilities and decisions affect all areas of a company's operations. While regulation, the economy, and other outside factors can influence results, it is ultimately the quality of management that determines the success of a company.

With emerging competition, utility management will be more closely scrutinized by Standard & Poor's and will become an increasingly critical component of the credit evaluation. Management strategies can be the key determinant in differentiating utilities and in establishing where companies lie on the business position spectrum. It is imperative that managements be adaptable, aggressive, and proactive if their utilities are to be viable in the future; this is especially important for utilities that are currently uncompetitive.

The assessment of management is accomplished through meetings, conversations, and reviews of company plans. It is based on such factors as tenure, industry experience, grasp of industry issues, knowledge of customers and their needs, knowledge of competitors, accounting and financing practices, and commitment to credit quality. Management's ability and willingness to develop workable strategies to address their systems' needs, to deal with the competitive pressures of free market, to execute reasonable and effective long-term plans, and to be proactive in leading their utilities into the future are assessed. Management quality is also indicated by thoughtful balancing of public and private priorities, a record of credibility, and effective communication with the public, regulatory bodies, and the financial community. Boards of directors will receive ever more attention with respect to their role in setting appropriate management incentives.

With competition the watchword, Standard & Poor's also focuses on management's efforts to enhance financial condition. Management can bolster bondholder protection by taking any number of discretionary actions, such as selling common equity, lowering the common dividend payout, and paying down debt. Also important for the electric industry will be creativity in entering into strategic alliances and working partnerships that improve efficiency, such as central dispatching for a number of utilities or locking up at-risk customers through long-term contracts or expanded flexible pricing agreements. Proactive management teams will also seek alternatives to traditional rate-base, rate-of-return rate-making, move to adopt higher depreciation rates for generating facilities, segment customers by individual market preferences, and attempt to create superior service organizations.

In general, management's ability to respond to mounting competition and changes in the utility industry in a swift and appropriate manner will be necessary to maintain credit health.

Fuel, power, and water supply

Assessment of present and prospective fuel and power supply is critical to every electric utility analysis, while gauging the long-term natural gas supply position for gas pipeline and distribution companies and the water resources of a water utility is equally important. There is no similar analytical category for telephone utilities.

Electric utilities

For electric utilities emphasis is placed on generating reserve margins, fuel mix, fuel contract terms, demand-side management techniques, and purchased power arrangements. The adequacy of generating margins is examined nationally, regionally, and for each individual company. However, the reserve margin picture is muddied by the imprecise nature of peak-load growth forecasting, and also supply uncertainty relating to such things as Canadian capacity availability and potential plant shutdowns due to age, new NRC rules, acid rain remedies, fuel shortages, problems associated with nontraditional technologies, and so forth. Even apparently ample reserves may not be what they seem. Moreover, the quality of capacity is just as important as the size of reserves. Companies' reserve requirements differ, depending upon individual operating characteristics.

Fuel diversity provides flexibility in a changing environment. Supply disruptions and price hikes can raise rates and ignite political and regulatory pressures that ultimately lead to erosion in financial performance. Thus, the ability to alter generating sources and take advantage of lower cost fuels is viewed favorably.

Dependence on any single fuel means exposure to that fuel's problems: electric utilities that rely on oil or gas face the potential for shortages and rapid price increases; utilities that own nuclear generating facilities face escalating costs for decommissioning; and coal-fired capacity entails environmental problems stemming from concerns over acid rain and the "greenhouse effect."

Buying power from neighboring utilities, qualifying facility projects, or independent power producers may be the best choice for a utility that faces increasing electricity demand. There has been a growing reliance on purchased power arrangements as an alternative to new plant construction. This can be an important advantage, since the purchasing utility avoids potential construction cost overruns as well as risking substantial capital. Also, utilities can avoid the financial risks typical of a multiyear construction program that are caused by regulatory lag and prudence reviews. Furthermore, purchased power may enhance supply flexibility, fuel resource diversity, and maximize load factors. Utilities that plan to meet demand projections with a portfolio of supply-side options also may be better able to adapt to future growth uncertainties. Notwithstanding the benefits of purchasing, such a strategy has risks associated with it. By entering into a firm long-term purchased power contract that contains a fixed-cost component, utilities can incur substantial market, operating, regulatory, and financial risks. Moreover, regulatory treatment of purchased power removes any upside potential that might help offset the risks. Utilities are not compensated through incentive rate-making; rather, purchased power is recovered dollar-for-dollar as an operating expense.

To analyze the financial impact of purchased power, Standard & Poor's first calculates the net present value of future annual capacity payments (discounted at 10%). This represents a potential debt equivalent—the off-balance-sheet obligation that a utility incurs when it enters into a long-term purchased power contract. However, Standard

& Poor's adds to the utility's balance sheet only a portion of this amount, recognizing that such a contractual arrangement is not entirely the equivalent of debt. What percentage is added is a function of Standard & Poor's qualitative analysis of the specific contract and the extent to which market, operating, and regulatory risks are borne by the utility (the risk factor). For unconditional, take-or-pay contracts, the risk factor range is from 40%-80%, with the average hovering around 60%. A lower risk factor is typically assigned for system purchases from coal-fired utilities and a higher risk factor is usually designated for unit-specific nuclear purchases. The range for take-and-pay performance obligations is between 10%-50%.

Gas utilities

For gas distribution utilities, long-term supply adequacy obviously is critical, but the supply role has become even more important in credit analysis since the Federal Energy Regulatory Commission's Order 636 eliminated the interstate pipeline merchant business. This thrust gas supply responsibilities squarely on local gas distributors. Standard & Poor's has always believed distributor management has the expertise and wherewithal to perform the job well, but the risks are significant since gas costs are such a large percentage of total utility costs. In that regard, it is important for utilities to get preapprovals of supply plans by state regulators or at least keep the staff and commissioners well informed. To minimize risks, a well-run program would diversify gas sources among different producers or marketers, different gas basins in the U.S. and Canada, and different pipeline routes. Also, purchase contracts should be firm, with minimal take-or-pay provisions, and have prices tied to an industry index. A modest percentage of fixed-price gas is not unreasonable. Contracts, whether of gas purchases or pipeline capacity, should be intermediate term. Staggering contract expirations (preferably annually) provides an opportunity to be an active market player. A modest degree of reliance on spot purchases provides flexibility, as does the use of market-based storage. Gas storage and on-property gas resources such as liquefied natural gas or propane air are effective peak-day and peak-season supply management tools.

Since pipeline companies no longer buy and sell natural gas and are just common carriers, connections with varied reserve basins and many wells within those basins are of great importance. Diversity of sources helps offset the risks arising from the natural production declines eventually experienced by all reserve basins and individual wells. Moreover, such diversity can enhance a pipeline's attractiveness as a transporter of natural gas to distributors and end users seeking to buy the most economical gas available for their needs.

Water utilities

Nearly all water systems throughout the U.S. have ample long-term water supplies. Yet to gain comfort, Standard & Poor's assesses the production capability of treatment plants and the ability to pump water from underground aquifers in relation to the usage demands from consumers. Having adequate treated water storage facilities has become important in recent years and has helped many systems meet demands during peak summer periods. Of interest is whether the resources are owned by the utility or purchased from other utilities or local authorities. Owning properties with water rights provides more supply security. This is especially so in states like California where water allocations are being reduced, particularly since recent droughts and environmental issues have created alarm. Since the primary cost for water companies is treatment, it makes little difference whether raw water is owned or bought. In fact, compliance with federal and state water regulations is very high, and the overall cost to deliver treated water to consumers remains relatively affordable.

Asset concentration in the electric utility industry

In the electric industry, Standard & Poor's follows the operations of major generating facilities to assess if they are well managed or troubled. Significant dependence on one generating facility or a large financial investment in a single asset suggests high risk. The size or magnitude of a particular asset relative to total generation, net plant in service, and common equity is evaluated. Where substantial asset concentration exists, the financial profile of a company may experience wide swings depending on the asset's performance. Heavy asset concentration is most prevalent among utilities with costly nuclear units.

Earnings protection

In this category, pretax cash income coverage of all interest charges is the primary ratio. For this calculation, allowance for funds used during construction (AFUDC) is removed from income and interest expense. AFUDC and other such noncash items do not provide any protection for bondholders. To identify total interest expense, the analyst reclassifies certain operating expenses. The interest component of various off-balance-sheet obligations, such as leases and some purchased-power contracts, is included in interest expense. This provides the most direct indication of a utility's ability to service its debt burden.

While considerable emphasis in assessing credit protection is placed on coverage ratios, this measure does not provide the entire earnings protection picture. Also important are a company's earned returns on both equity and capital, measures that highlight a firm's earnings performance. Consideration is given to the interaction of embedded costs, financial leverage, and pretax return on capital.

Capital structure

Analyzing debt leverage goes beyond the balance sheet and covers quasi-debt items and elements of hidden financial leverage. Noncapitalized leases (including sale/leaseback obligations), debt guarantees, receivables financing, and purchased-power contracts are all considered debt equivalents and are reflected as debt in calculating capital

structure ratios. By making debt level adjustments, the analyst can compare the degree of leverage used by each utility company.

Furthermore, assets are examined to identify undervalued or overvalued items. Assets of questionable value are discounted to more accurately evaluate asset protection.

Some firms use short-term debt as a permanent piece of their capital structure. Short-term debt also is considered part of permanent capital when it is used as a bridge to permanent financing. Seasonal, self-liquidating debt is excluded from the permanent debt amount, but this situation is rare—with the exception of certain gas utilities. Given the long life of almost all utility assets, short-term debt may expose these companies to interest-rate volatility, remarketing risk, bank line backup risk, and regulatory exposure that cannot be readily offset. The lower cost of shorter-term obligations (assuming a positively sloped yield curve) is a positive factor that partially mitigates the risk of interest-rate variability. As a rule of thumb, a level of short-term debt that exceeds 10% of total capital is cause for concern.

Similarly, if floating-rate debt and preferred stock constitute over one-third of total debt plus preferred stock, this level is viewed as unusually high and may be cause for concern. It might also indicate that management is aggressive in its financial policies.

A layer of preferred stock in the capital structure is usually viewed as equity—since dividends are discretionary and the subordinated claim on assets provides a cushion for providers of debt capital. A preferred component of up to 10% is typically viewed as a permanent wedge in the capital structure of utilities. However, as rate-of-return regulation is phased out, preferred stock may be viewed by utilities—as many industrial firms would—as a temporary option for companies that are not current taxpayers that do not benefit from the tax deductibility of interest. Even now, floating-rate preferred and money market perpetual preferred are problematic; a rise in the rate due to deteriorating credit quality tends to induce a company to take out such preferred stock with debt. Structures that convey tax deductibility to preferred stock have become very popular and do generally afford such financings with equity treatment.

Cash flow adequacy

Cash flow adequacy relates to a company's ability to generate funds internally relative to its needs. It is a basic component of credit analysis because it takes cash to pay expenses, fund capital spending, pay dividends, and make interest and principal payments. Since both common and preferred dividend payments are important to maintain capital market access, Standard & Poor's looks at cash flow measures both before and after dividends are paid.

To determine cash flow adequacy, several quantitative relationships are examined. Emphasis is placed on cash flow relative to debt, debt service requirements, and capital spending. Cash flow adequacy is evaluated with respect to a firm's ability to meet all fixed charges, including capacity payments under purchased-power contracts. Despite the conditional nature of some contracts, the purchaser is obligated to pay a minimum capacity charge. The ratio used is funds from operations plus interest and capacity payments divided by interest plus capacity payments.

Financial flexibility/capital attraction

Financing flexibility incorporates a utility's financing needs, plans, and alternatives, as well as its flexibility to accomplish its financing program under stress without damaging creditworthiness. External funding capability complements internal cash flow. Especially since utilities are so capital intensive, a firm's ability to tap capital markets on an ongoing basis must be considered. Debt capacity reflects all the earlier elements: earnings protection, debt leverage, and cash flow adequacy. Market access at reasonable rates is restricted if a reasonable capital structure is not maintained and the company's financial prospects dim. The analyst also reviews indenture restrictions and the impact of additional debt on covenant tests.

Standard & Poor's assesses a company's capacity and willingness to issue common equity. This is affected by various factors, including the market-to-book ratio, dividend policy, and any regulatory restrictions regarding the composition of the capital structure.

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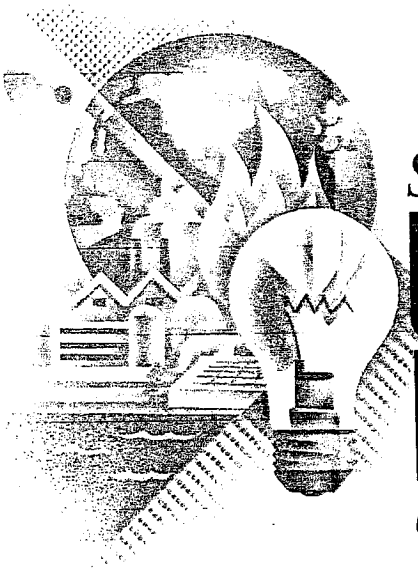

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STANDARD
&POOR'S

New Business Profile Scores Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised

Standard & Poor's Ratings Services has assigned new business profile scores to U.S. utility and power companies to better reflect the relative business risk among companies in the sector. Standard & Poor's also has revised its published risk-adjusted financial guidelines. The new business scores and financial guidelines do not represent a change to Standard & Poor's ratings criteria or methodology, and no ratings changes are anticipated from the new business profile scores or revised financial guidelines.

New Business Profile Scores and Revised Financial Guidelines

Standard & Poor's has always monitored changes in the industry and altered its business risk assessments accordingly. This is the first time since the 10-point business profile scale for U.S. investor-owned utilities was implemented that a comprehensive assessment of the benefits and the application of the methodology has been made. The principal purpose was to determine if the methodology continues to provide meaningful differentiation of business risk. The review indicated that while business profile scoring continues to provide analytical benefits, the complete range of the 10-point scale was not being utilized to the fullest extent.

Standard & Poor's has also revised the key financial guidelines that it uses as an integral part of evaluating the credit quality of U.S. utility and power companies. These guidelines were last updated in June 1999. The financial guidelines for three principal ratios (funds from operations (FFO) interest coverage, FFO to total debt, and total debt to total capital) have been broadened so as to be more flexible. Pretax interest cov-

Chart 1

Distribution of Business Profile Scores

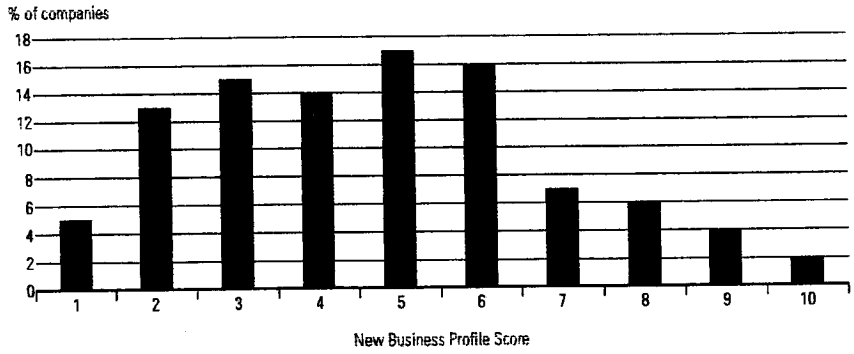
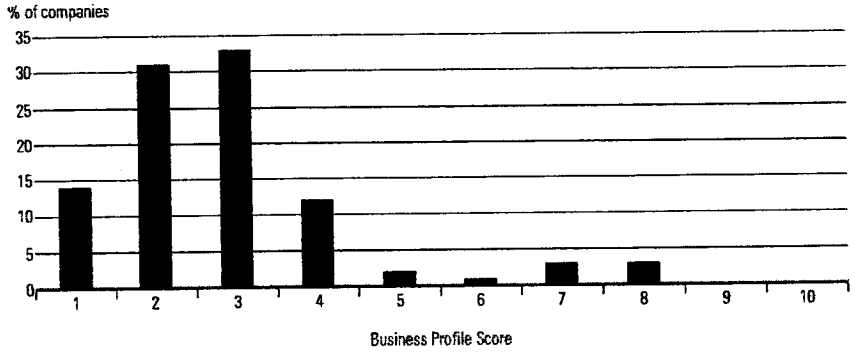


Chart 2

Transmission and Distribution—Water, Gas, and Electric



erage as a key credit ratio was eliminated.

Finally, Standard & Poor's has segmented the utility and power industry into sub-sectors based on the dominant corporate strategy that a company is pursuing. Standard & Poor's has published a new U.S. utility and power company ranking list that reflects these sub-sectors.

There are numerous benefits to the reassessment. Fuller utilization of the entire 10-point scale provides a superior relative ranking of qualitative business risk. A revision of the financial guidelines supports the goal of not causing rating changes from the recalibration of the business profiles. Classification of companies by sub-sectors will ensure greater comparability and consistency in ratings. The use of industry segmentation will also allow more in-depth statistical analysis of ratings distributions and rating changes.

The reassessment does not represent a change to Standard & Poor's criteria or methodology for determining ratings for utility and power companies. Each business profile score should be considered as the assignment of a new score; these scores do not represent improvement or deterioration in our assessment of an individual company's business risk relative to the previously assigned score. The financial guidelines continue to be risk-adjusted based on historical utility and industrial medians. Segmentation into industry sub-sectors does not imply that specific company characteristics will not weigh heavily into the assignment of a company's business profile score.

Results

Previously, 83% of U.S. utility and power business profile scores fell between '3' and '6', which clearly does not reflect the risk differentiation that exists in the utility and power industry today. Since the 10-point scale was introduced, the industry has transformed into a much less homogenous industry, where the divergence of business risk—particularly regarding management, strategy, and degree of competitive market exposure—has created a much wider spectrum of risk profiles. Yet over the same period, business profile scores actually converged more tightly around a median score of '4'. The new business pro-

Chart 3

Transmission Only—Electric, Gas, and Other

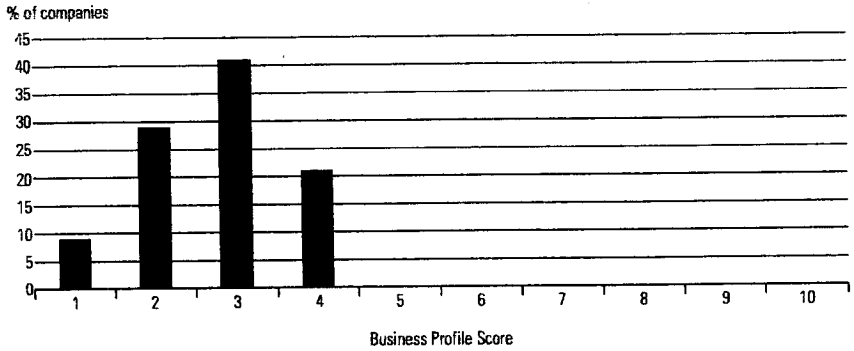
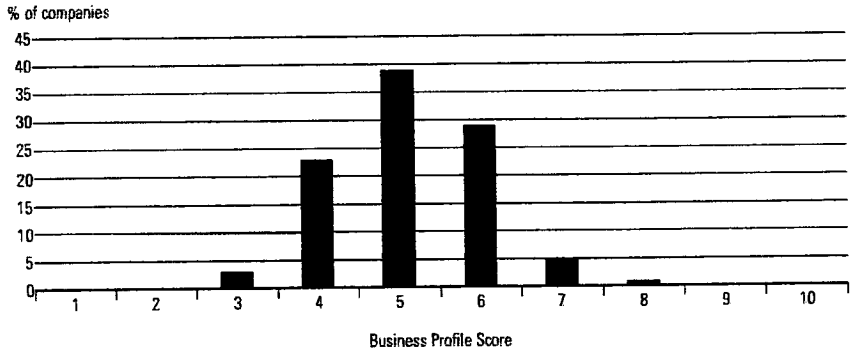


Chart 4

Integrated Electric, Gas, and Combination Utilities



file scores, as of June 2, are shown in Chart 1. The overall median business profile score is now '5'.

Table 1 contains the revised financial guidelines. It is important to emphasize that these metrics are only guidelines associated with expectations for various rating levels. Although credit ratio analysis is an important part of the ratings process, these three statistics are by no means the only critical financial measures that Standard & Poor's uses in its analytical process. We also analyze a wide array of financial ratios that do not have published guidelines for each rating category.

Again, ratings analysis is not driven solely by these financial ratios, nor has it ever been. In fact, the new financial guidelines that Standard & Poor's is incorporating for the specified rating categories reinforce the analytical framework whereby other factors can outweigh the achievement of otherwise acceptable financial ratios. These factors include:

- Effectiveness of liability and liquidity management;
- Analysis of internal funding sources;
- Return on invested capital;
- The execution record of stated business strategies;
- Accuracy of projected performance versus actual results, as well as the trend;
- Assessment of management's financial policies and attitude toward credit; and
- Corporate governance practices.

Charts 2 through 6 show business profile scores broken out by industry sub-sector. The five industry sub-sectors are:

- Transmission and distribution—Water, gas, and electric;
- Transmission only—Electric, gas, and other;
- Integrated electric, gas, and combination utilities;
- Diversified energy and diversified nonenergy; and
- Energy merchant/power developer/trading and marketing companies.

The average business profile scores for transmission and distribution companies and transmission-only companies are lower on the scale than the previous averages, while the average business profile scores for integrated utilities, diversified energy, and energy merchants and developers are higher.

Chart 5

Diversified Energy and Diversified Non-Energy

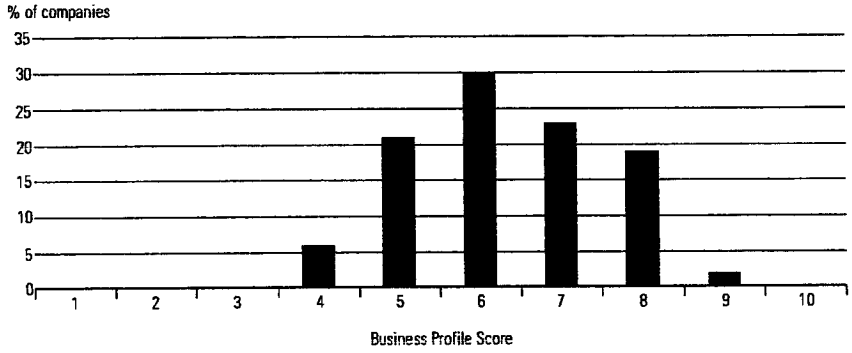
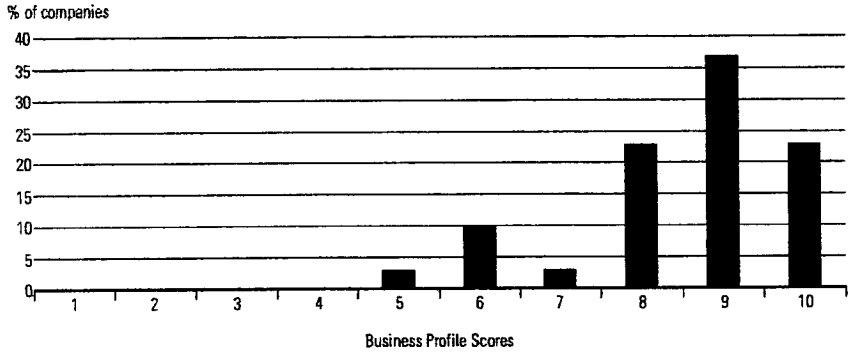


Chart 6

Energy Merchant/Developers/Trading and Marketing



See pages 16 to 19 for the company ranking list of business profile scores segmented by industry sub-sector and ranked in order of credit rating, outlook, business profile score, and relative strength.

Business Profile Score Methodology

Standard & Poor's methodology of determining corporate utility business risk is anchored in the assessment of certain specific characteristics that define the sector. We assign business profile scores to each of the rated companies in the utility and power sector on a 10-point scale, where '1' represents the lowest risk and '10' the highest risk. Business profile scores are assigned to all rated utility and power companies, whether they are holding companies, subsidiaries, or stand-alone corporations. For operating subsidiaries and stand-alone companies, the score is a bottom-up assessment. Scores for families of companies are a composite of the operating subsidiaries' scores. The actual credit rating of a company is analyzed, in part, by comparing the business profile score with the risk-adjusted financial guidelines.

For most companies, business profile scores are assessed using five categories; specifically, regulation, markets, operations, competitiveness, and management. The emphasis placed on each category may be influenced by the

Table 1

Revised Financial Guidelines

Funds from operations/interest coverage (x)

Business Profile	AA		A		BBB		BB	
1	3	2.5	2.5	1.5	1.5	1		
2	4	3	3	2	2	1		
3	4.5	3.5	3.5	2.5	2.5	1.5	1.5	1
4	5	4.2	4.2	3.5	3.5	2.5	2.5	1.5
5	5.5	4.5	4.5	3.8	3.8	2.8	2.8	1.8
6	6	5.2	5.2	4.2	4.2	3	3	2
7	8	6.5	6.5	4.5	4.5	3.2	3.2	2.2
8	10	7.5	7.5	5.5	5.5	3.5	3.5	2.5
9			10	7	7	4	4	2.8
10			11	8	8	5	5	3

Funds from operation/total debt (%)

Business Profile	AA		A		BBB		BB	
1	20	15	15	10	10	5		
2	25	20	20	12	12	8		
3	30	25	25	15	15	10	10	5
4	35	28	28	20	20	12	12	8
5	40	30	30	22	22	15	15	10
6	45	35	35	28	28	18	18	12
7	55	45	45	30	30	20	20	15
8	70	55	55	40	40	25	25	15
9			65	45	45	30	30	20
10			70	55	55	40	40	25

Total debt/total capital (%)

Business Profile	AA		A		BBB		BB	
1	48	55	55	60	60	70		
2	45	52	52	58	58	68		
3	42	50	50	55	55	65	65	70
4	38	45	45	52	52	62	62	68
5	35	42	42	50	50	60	60	65
6	32	40	40	48	48	58	58	62
7	30	38	38	45	45	55	55	60
8	25	35	35	42	42	52	52	58
9			32	40	40	50	50	55
10			25	35	35	48	48	52

dominant strategy of the company or other factors. For example, for a regulated transmission and distribution company, regulation may account for 30% to 40% of the business profile score because regulation can be the single-most important credit driver for this type of company. Conversely, competition, which may not exist for a transmission and distribution company, would provide a much lower proportion (e.g., 5% to 15%) of the business profile score.

For certain types of companies, such as power generators, power developers, oil and gas exploration and production companies, or nonenergy-related holdings, where these five components may not be appropriate, Standard & Poor's will use other, more appropriate methodologies. Some of these companies are assigned business profile scores that are useful only for relative ranking purposes.

As noted above, the business profile score for a parent or holding company is a composite of the business profile scores of its individual subsidiary companies. Again, Standard & Poor's does not apply rigid guidelines for determining the proportion or weighting that each subsidiary represents in the overall business profile score. Instead, it is determined based on a number of factors. Standard & Poor's will analyze each subsidiary's contribution to FFO, forecast capital expenditures, liquidity requirements, and other parameters, including the extent to which one subsidiary has higher growth. The weighting is determined case-by-case. ■

Ronald M. Barone
New York (1) 212-438-7662
Richard W. Cortright, Jr.
New York (1) 212-438-7665
Suzanne G. Smith
New York (1) 212-438-2106
John W. Whitlock
New York (1) 212-438-7678
Andrew Watt
New York (1) 212-438-7868
Arthur F. Simonson
New York (1) 212-438-2094

PROXY GROUP OF SIX AUS UTILITY REPORTS WATER COMPANIES
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2001 - 2005, INCLUSIVE

	2005	2004	2003	2002	2001	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$551.470	$514.211	$457.786	$396.089	$363.439	
SHORT-TERM DEBT	$30.000	$25.357	$32.067	$35.125	$30.666	
TOTAL CAPITAL EMPLOYED	$581.470	$539.568	$489.853	$431.215	$394.104	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	6.14 %	6.12 %	6.24 %	6.49 %	6.98 %	
PREFERRED STOCK	5.33	4.89	3.98	5.73	5.31	
						5 YEAR AVERAGE
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	53.18 %	52.56 %	52.88 %	53.16 %	53.25 %	53.01 %
PREFERRED STOCK	0.40	0.43	0.51	0.57	0.77	0.53
COMMON EQUITY	46.42	47.01	46.61	46.27	45.98	46.46
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	54.98 %	54.57 %	56.32 %	56.29 %	56.72 %	55.77 %
PREFERRED STOCK	0.39	0.41	0.48	0.52	0.70	0.50
COMMON EQUITY	44.63	45.02	43.20	43.19	42.58	43.73
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	4.00 %	4.31 %	3.85 %	4.90 %	4.92 %	4.40 %
MARKET / AVERAGE BOOK RATIO	261.32	231.71	232.50	221.41	215.22	232.43
DIVIDEND YIELD	2.85	3.20	3.28	3.63	3.81	3.35
DIVIDEND PAYOUT RATIO	70.74	74.58	87.80	74.83	79.40	77.47
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	10.10 %	9.80 %	8.97 %	10.58 %	10.35 %	9.96 %
FUNDS FROM OPERATIONS / INTEREST COVERAGE (3)	3.74 X	3.89 X	3.37 X	3.37 X	3.26 X	3.52 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	16.37 %	17.18 %	14.00 %	14.53 %	14.64 %	15.34 %
TOTAL DEBT / TOTAL CAPITAL	54.98 %	54.57 %	56.32 %	56.29 %	56.72 %	55.78 %

See Page 2 for notes.

Proxy Group of Six AUS Utility Reports Water Companies
Capitalization and Financial Statistics
2001-2005, Inclusive

Notes:

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

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

(3) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges divided by interest charges.

(4) Funds from operations (as defined in Note 3) as a percentage of total debt.

Selection Criteria:

The basis of selection was to include those water companies: 1) which are included in the Water Company Group of C. A. Turner Public Utility Reports (July 2006); 2) which have Value Line (Standard Edition) five-year EPS growth rate projections or Thomson FN / First Call consensus five-year EPS growth rate projections; and 3) which have more than 70% of their 2005 operating revenues derived from water operations.

The following six water companies met the above criteria:

American States Water Co.
Aqua America, Inc.
Artesian Resources, Inc.
California Water Service Group
Middlesex Water Company
York Water Co.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database
Company Annual Forms 10K

Capital Structure Based upon Total Capital for
the Proxy Group of Six AUS Utility Reports Water Companies
for the Years 2001 through 2005

	2005	2004	2003	2002	2001	5 YEAR AVERAGE
American States Water Co.						
Long-Term Debt	48.03 %	43.66 %	46.21 %	49.61 %	52.63 %	48.03 %
Short-Term Debt	4.82	8.55	11.22	7.10	4.27	7.19
Preferred Stock	0.00	0.00	0.00	0.00	0.40	0.08
Common Equity	47.15	47.79	42.57	43.29	42.70	44.70
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Aqua America, Inc.						
Long-Term Debt	48.68 %	50.03 %	49.35 %	50.36 %	47.67 %	49.22 %
Short-Term Debt	7.47	5.10	6.47	9.39	9.83	7.65
Preferred Stock	0.08	0.07	0.06	0.06	0.17	0.09
Common Equity	43.77	44.80	44.12	40.19	42.33	43.04
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Artesian Resources Corp.						
Long-Term Debt	60.30 %	55.85 %	54.79 %	53.82 %	49.44 %	54.84 %
Short-Term Debt	2.08	7.38	9.39	3.24	16.68	7.75
Preferred Stock	0.00	0.00	0.07	0.17	0.56	0.16
Common Equity	37.62	36.77	35.75	42.77	33.32	37.25
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	48.07 %	48.66 %	51.77 %	51.25 %	48.36 %	49.62 %
Short-Term Debt	0.00	0.00	1.22	7.42	5.11	2.75
Preferred Stock	0.61	0.61	0.66	0.71	0.81	0.68
Common Equity	51.32	50.73	46.35	40.62	45.72	46.95
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Middlesex Water Company						
Long-Term Debt	54.74 %	51.36 %	50.57 %	47.29 %	49.70 %	50.73 %
Short-Term Debt	1.68	4.86	6.42	9.47	7.43	5.97
Preferred Stock	1.67	1.79	2.09	2.18	2.28	2.00
Common Equity	41.91	41.99	40.92	41.06	40.59	41.29
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
York Water Company						
Long-Term Debt	47.34 %	51.94 %	41.40 %	45.00 %	46.35 %	46.41 %
Short-Term Debt	6.65	0.00	9.07	3.77	2.83	4.46
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	46.01	48.06	49.53	51.23	50.82	49.13
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Six AUS Water Companies						
Long-Term Debt	51.19 %	50.25 %	49.02 %	49.56 %	49.02 %	49.81 %
Short-Term Debt	3.79	4.32	7.30	6.73	7.70	5.97
Preferred Stock	0.39	0.41	0.48	0.52	0.70	0.50
Common Equity	44.63	45.02	43.21	43.19	42.58	43.73
Total Capital	100.00 %	100.00 %	100.01 %	100.00 %	100.00 %	100.00 %

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Data Base
Company Annual Forms 10K (Sinking Fund Requirements)

PROXY GROUP OF FOUR VALUE LINE (STANDARD EDITION) WATER COMPANIES
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2001 - 2005, INCLUSIVE

	2005	2004	2003	2002	2001	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$773.683	$719.252	$628.903	$541.882	$496.630	
SHORT-TERM DEBT	$41.376	$32.529	$39.728	$46.623	$37.917	
TOTAL CAPITAL EMPLOYED	$815.059	$751.781	$668.632	$588.505	$534.547	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	6.39 %	6.28 %	6.36 %	6.39 %	7.09 %	
PREFERRED STOCK	4.27	3.38	2.63	3.73	4.34	
CAPITAL STRUCTURE RATIOS						5 YEAR AVERAGE
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	49.45 %	49.42 %	51.43 %	55.35 %	53.70 %	51.87 %
PREFERRED STOCK	0.22	0.24	0.40	0.39	0.47	0.34
COMMON EQUITY	50.33	50.34	48.17	44.26	45.83	47.79
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	50.93 %	51.13 %	53.69 %	58.05 %	55.96 %	53.95 %
PREFERRED STOCK	0.22	0.25	0.39	0.38	0.45	0.34
COMMON EQUITY	48.85	48.62	45.92	41.57	43.59	45.71
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	3.88 %	3.88 %	4.12 %	4.96 %	4.81 %	4.33 %
MARKET / AVERAGE BOOK RATIO	248.19	222.69	220.49	223.08	227.57	228.40
DIVIDEND YIELD	2.42	2.79	2.91	3.10	3.11	2.87
DIVIDEND PAYOUT RATIO	61.18	71.81	74.09	61.40	66.93	67.08
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	9.19 %	8.38 %	9.19 %	10.91 %	10.83 %	9.70 %
FUNDS FROM OPERATIONS / INTEREST COVERAGE (3)	4.16 X	4.40 X	3.81 X	3.67 X	3.61 X	3.93 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	19.61 %	20.38 %	17.79 %	15.81 %	16.85 %	18.09 %
TOTAL DEBT / TOTAL CAPITAL	50.93 %	51.13 %	53.69 %	58.05 %	55.96 %	53.95 %

See Page 2 for notes.

Proxy Group of Four Value Line (Standard Edition) Water Companies
Capitalization and Financial Statistics
2001-2005, Inclusive

Notes:

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

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

(3) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges divided by interest charges.

(4) Funds from operations (as defined in Note 3) as a percentage of total debt.

Selection Criteria:

The basis of selection was to include those water companies: 1) which are included in the Value Line (Standard Edition).

The following four water companies met the above criteria:

American States Water Co.
Aqua America, Inc.
California Water Service Group
Southwest Water Company

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database
Company Annual Forms 10K

Capital Structure Based upon Total Capital for
the Proxy Group of Four Value Line (Standard Edition) Water Companies
for the Years 2001 through 2005

	2005	2004	2003	2002	2001	5 YEAR AVERAGE
American States Water Co.						
Long-Term Debt	48.03 %	43.66 %	46.21 %	49.61 %	52.63 %	48.03 %
Short-Term Debt	4.82	8.55	11.22	7.10	4.27	7.19
Preferred Stock	0.00	0.00	0.00	0.00	0.40	0.08
Common Equity	47.15	47.79	42.57	43.29	42.70	44.70
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Aqua America, Inc.						
Long-Term Debt	48.68 %	50.03 %	49.35 %	50.36 %	47.67 %	49.22 %
Short-Term Debt	7.47	5.10	6.47	9.39	9.83	7.65
Preferred Stock	0.08	0.07	0.06	0.06	0.17	0.09
Common Equity	43.77	44.80	44.12	40.19	42.33	43.04
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	48.07 %	48.66 %	51.77 %	51.25 %	48.36 %	49.62 %
Short-Term Debt	0.00	0.00	1.22	7.42	5.11	2.75
Preferred Stock	0.61	0.61	0.66	0.71	0.81	0.68
Common Equity	51.32	50.73	46.35	40.62	45.72	46.95
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Southwest Water Company						
Long-Term Debt	46.67 %	48.53 %	48.50 %	57.07 %	55.97 %	51.35 %
Short-Term Debt	0.00	0.00	0.00	0.00	0.00	0.00
Preferred Stock	0.17	0.28	0.85	0.74	0.41	0.49
Common Equity	53.16	51.19	50.65	42.19	43.62	48.16
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Four Value Line (Std. Ed.) Water Companies						
Long-Term Debt	47.86 %	47.72 %	48.96 %	52.07 %	51.16 %	49.55 %
Short-Term Debt	3.07	3.41	4.73	5.98	4.80	4.40
Preferred Stock	0.22	0.25	0.39	0.38	0.45	0.34
Common Equity	48.85	48.62	45.92	41.57	43.59	45.71
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Data Base
Company Annual Forms 10K (Sinking Fund Requirements)

United Utility Companies, Inc.
Hypothetical Example of the Inadequacy of
A DCF Return Rate Related to Book Value
When Market Value is Greater / Less than Book Value

Line No.		1 Market Value	2 Book Value with Market to Book Ratio of 180%	3 Book Value with Market to Book Ratio of 80%
1.	Per Share	$ 24.00	$ 13.33	$ 30.00
2.	DCF Cost Rate (1)	10.00%	10.00%	10.00%
3.	Return in Dollars	$ 2.400	$ 1.333	$ 3.000
4.	Dividends (2)	$ 0.840	$ 0.840	$ 0.840
5.	Growth in Dollars	$ 1.560	$ 0.493	$ 2.160
6.	Return on Market Value	10.00%	5.55% (3)	12.50% (4)
7.	Rate of Growth on Market Value	6.50% (5)	2.05% (6)	9.00% (7)

Notes:
(1) Comprised of 3.5% dividend yield and 6.5% growth.
(2) $24.00 * 3.5% yield = $0.840.
(3) $1.333 / $24.00 market value = 5.55%.
(4) $3.000 / $24.00 market value = 12.50%.
(5) Expected rate of growth per market based DCF model.
(6) Actual rate of growth when DCF cost rate is applied to book value ($1.333 possible earnings - $0.840 dividends = $0.493 for growth / $24.00 market value = 2.05%).
(7) Actual rate of growth when DCF cost rate is applied to book value ($3.000 possible earnings - $0.840 dividends = $2.160 for growth / $24.00 market value = 9.00%).

United Utility Companies, Inc.
Indicated Common Equity Cost Rate Through Use of the
Single Stage Discounted Cash Flow Model for
the Proxy Group of Six AUS Utility Reports Water Companies and the
Proxy Group of Four Value Line (Standard Edition) Water Companies

Based upon Historical and Projected Growth in DPS, EPS, and BR+SV

	1	2	3	4	5
	Average Dividend Yield (1)	Dividend Growth Component (2)	Adjusted Dividend Yield (3)	Growth Rate (4)	Indicated Common Equity Cost Rate (5)
Proxy Group of Six AUS Utility Reports Water Companies					
American States Water Co.	2.5 %	0.1 %	2.6 %	4.4 %	7.0 %
Aqua America, Inc.	1.9	0.1	2.0	8.7	10.7
Artesian Resources Corp.	3.8	0.1	3.9	6.9	10.8
California Water Services Group	3.1	0.1	3.2	3.8	7.0
Middlesex Water Company	3.7	0.0	3.7	2.5	6.2
York Water Company	2.7	0.1	2.8	6.3	9.1
Average	3.0 %	0.1 %	3.0 %	5.4 %	10.2 % (6)
Proxy Group of Four Value Line (Standard Edition) Water Companies					
American States Water Co.	2.5 %	0.1 %	2.6 %	4.4 %	7.0 %
Aqua America, Inc.	1.9	0.1	2.0	8.7	10.7
California Water Services Group	3.1	0.1	3.2	3.8	7.0
Southwest Water Company	2.4	0.1	2.5	9.4	11.9
Average	2.5 %	0.1 %	2.6 %	6.6 %	11.3 % (6)

Based upon Projected Growth in EPS

	1	2	3	4	5
	Average Dividend Yield (1)	Dividend Growth Component (2)	Adjusted Dividend Yield (3)	Growth Rate (4)	Indicated Common Equity Cost Rate (5)
Proxy Group of Six AUS Utility Reports Water Companies					
American States Water Co.	2.5 %	0.1 %	2.6 %	6.3 %	8.9 %
Aqua America, Inc.	1.9	0.1	2.0	10.3	12.3
Artesian Resources Corp.	3.8	0.2	4.0	11.5	15.5
California Water Services Group	3.1	0.1	3.2	5.8	9.0
Middlesex Water Company	3.7	0.1	3.8	3.5	7.3
York Water Company	2.7	0.1	2.8	7.8	10.6
Average	3.0 %	0.1 %	3.1 %	7.5 %	9.5 % (6)
Proxy Group of Four Value Line (Standard Edition) Water Companies					
American States Water Co.	2.5 %	0.1 %	2.6 %	6.3 %	8.9 %
Aqua America, Inc.	1.9	0.1	2.0	10.3	12.3
California Water Services Group	3.1	0.1	3.2	5.8	9.0
Southwest Water Company	2.4	0.1	2.5	11.7	14.2
Average	2.5 %	0.1 %	2.6 %	8.5 %	9.0 % (6) (7)

Conclusion	
Proxy Group of Six AUS Utility Reports Water Companies	9.9 %
Proxy Group of Four Value Line (Standard Edition) Water Companies	10.2 %

Notes:

(1) From Schedule PMA-7 of this Exhibit.

(2) This reflects a growth rate component equal to one-half the conclusion of growth rate (from page 1 of Schedule PMA-9 of this Exhibit) x Column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for American States Water Co., 2.5% x (1/2 x 4.4%) = 0.1%.

(3) Column 1 + Column 2.

(4) From page 1 Schedule PMA-9 of this Exhibit.

(5) Column 3 + Column 4.

(6) Includes only those indicated common equity cost rates which are greater than 8.8%, i.e., 200 basis points above the prospective yield on A rated Moody's public utility bonds of 6.8% (from page 1 of Schedule PMA-10 of this Exhibit).

(7) Excludes Southwest Water Company's DCF results of 14.2% and Aqua America, Inc.'s results of 12.3% because in Ms. Ahern's opinion it is unlikely that a water company would be authorized a return rate on common equity of 12.0% or greater in the immediate future.

Exhibit No. ___
Schedule PMA-7

United Utility Companies, Inc;
Derivation of Dividend Yield for Use in the
Discounted Cash Flow Model

	Dividend Yield		
	Spot (7/06/2006) (1)	Average of Last 3 Months (2)	Average Dividend Yield (3)
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	2.5 %	2.4 %	2.5 %
Aqua America, Inc.	1.9	1.8	1.9
Artesian Resources Corp.	4.6	3.0	3.8
California Water Services Group	3.2	3.0	3.1
Middlesex Water Company	3.6	3.7	3.7
York Water Company	2.8	2.6	2.7
Average	3.1 %	2.8 %	3.0 %
Proxy Group of Four Value Line (Standard Edition) Water Companies			
American States Water Co.	2.5 %	2.4 %	2.5 %
Aqua America, Inc.	1.9	1.8	1.9
California Water Services Group	3.2	3.0	3.1
Southwest Water Company	3.2	1.6	2.4
Average	2.7 %	2.2 %	2.5 %

Notes: (1) The spot dividend yield is the current annualized dividend per share divided by the spot market price on 7/06/06.

(2) The average 3-month dividend yield was computed by relating the indicated annualized dividend rate and market price on the last trading day of each of the three months ended June 30, 2006.

(3) Equal weight has been given to the 3-month average and spot dividend yield. This provides recognition of current conditions, but does not place undue emphasis thereon.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus
Research Insight Database
finance.yahoo.com

Exhibit No. ___
Schedule PMA-8

United Utility Companies, Inc.
Current Institutional Holdings (1) and Individual Holdings (2) for
the Proxy Group of Six AUS Utility Reports Water Companies,
the Proxy Group of Four Value Line (Standard Edition) Water Companies

	1	2
	July 2006 Percentage of Institutional Holdings (1)	July 2006 Percentage of Individual Holdings (2)
Proxy Group of Six AUS Utility Reports Water Companies		
American States Water Co.	44.3 %	55.7 %
Aqua America	31.8	68.2
Artesian Resources Corp.	8.7	NA
California Water Service Group	31.9	68.1
Middlesex Water Company	15.9	84.1
York Water Company	7.4	92.6
Average	23.3 %	76.7 %
Proxy Group of Four Value Line Water Companies		
American States Water Co.	44.3 %	55.7 %
Aqua America	31.8	68.2
California Water Service Group	25.9	68.1
Southwest Water Company	42.0	58.0
Average	36.0 %	64.0 %

Notes: (1) (1 - column 1).

Source of Information: today.reuters.com, updated July 1, 2006

United Utility Companies, Inc.
Historical and Projected Growth

	1	2	3	4	5	6		7	8	9	10	11	12	13
	Value Line Historical Five Year Growth Rate (1)		Five Year Historical BR + SV (2)	Value Line Projected 2003-05 to 2009-'11 Growth Rate (1)		ThomsonFN / First Call Mean Consensus Projected Five Year Growth Rate		Average Projected Five Year Growth Rate in EPS (3)	Projected Five Year BR + SV (4)	Range of Growth Rates			Average of all Growth Rates	Average of Midpoint and Average of all Growth Rates (9)
	DPS	EPS		DPS	EPS	EPS	No. of Est.			Low	High	Midpoint		
Proxy Group of Six AUS Utility Reports Water Companies														
American States Water Co.	1.0 %	(1.0) %	4.4 %	1.0 %	8.0 %	4.5 %	[2]	6.3 %	6.2 %	1.0 % (8)	8.0 % (8	4.5 %	4.2 % (8)	4.4 %
Aqua America, Inc.	6.5	8.5	7.6	10.0	11.0	9.6	[5]	10.3	6.6	6.5	11.0	8.8	8.5	8.7
Artesian Resources Corp.	3.7 (5)	4.1 (5)	5.5	NA	NA	11.5	[2]	11.5	NA	3.7	11.5	7.6	6.2	6.9
California Water Services Group	1.0	(4.0)	3.7	1.0	4.5	7.0	[3]	5.8	4.5	1.0 (8)	7.0 (8)	4.0	3.6 (8)	3.8
Middlesex Water Company	2.0	1.0	2.4	NA	NA	3.5	[1]	3.5	NA	1.0 (8)	3.5 (8)	2.3	2.6 (8)	2.5
York Water Company	(9.5)	6.9 (5)	4.4	NA	NA	7.8	[2]	7.8	NA	4.4	7.8	6.1	6.4	6.3
Average	2.8 %	5.1 % (8)	4.7 %	4.0 %	7.8 %	7.3 %		7.5 %	5.8 %	2.9 %	8.1 %	5.6 %	5.3 %	5.4 %
Proxy Group of Four Value Line (Standard Edition) Water Companies														
American States Water Co.	1.0 %	(1.0) %	4.4 %	1.0 %	8.0 %	4.5 %	[2]	6.3 %	6.2 %	1.0 % (8)	8.0 % (8	4.5 %	4.2 % (8)	4.4 %
Aqua America, Inc.	6.5	8.5	7.6	10.0	11.0	9.6	[5]	10.3	6.6	6.5	11.0	8.8	8.5	8.7
California Water Services Group	1.0	(4.0)	3.7	1.0	4.5	7.0	[3]	5.8	4.5	1.0 (8)	7.0 (8)	4.0	3.6 (8)	3.8
Southwest Water Company	10.0	1.5	11.5	8.0	18.0	5.3	[3]	11.7	7.8	1.5	18.0	9.8	8.9	9.4
Average	4.6 %	5.0 % (8)	6.8 %	5.0 %	10.4 %	6.6 %		8.5 %	6.3 %	2.5 %	11.0 %	6.8 %	6.3 %	6.6 %

Notes:
(1) As shown on pages 8 through 13 of this Schedule. Historical growth rates are five-year compound growth rates.
(2) From page 2 of this Schedule.
(3) Average of Columns 5 and 6.
(4) From page 6 of this Schedule.
(5) Calculated using the same methodology as Value Line Investment Survey, i.e., three-year base periods ending 2005.
(6) Average of Columns 1, 2, 3, 4, 5, 6, and 8.
(7) From Column 7.
(8) Excludes negatives.
(9) Average of Column 11 and Column 12.

Source of information: Value Line Investment Survey, April 28, 2006
ThomsonFN First Call Earnings, ec.thomsonfn.com, updated July 1, 2006

United Utility Companies, Inc;
Calculation of Historical BR + SV

	1	2	3	4	5
	BR (1)	S Factor (2)	V Factor (3)	SV (4)	BR + SV (5)
Proxy Group of Six AUS Utility Reports Water Companies					
American States Water Co.	3.4 %	2.2 %	43.9 %	1.0 %	4.4 %
Aqua America, Inc.	5.5	3.1	68.0	2.1	7.6
Artesian Resources Corp.	2.6	6.3	45.3	2.9	5.5
California Water Services Group	1.6	4.1	51.1	2.1	3.7
Middlesex Water Company	0.8	2.8	58.3	1.6	2.4
York Water Company	2.5	2.9	63.8	1.9	4.4
Average	2.7 %	3.6 %	55.1 %	1.9 %	4.7 %
Proxy Group of Four Value Line (Standard Edition) Water Companies					
American States Water Co.	3.4 %	2.2 %	43.9 %	1.0 %	4.4 %
Aqua America, Inc.	5.5	3.1	68.0	2.1	7.6
California Water Services Group	1.6	4.1	51.1	2.1	3.7
Southwest Water Company	5.5	11.1	53.9	6.0	11.5
Average	4.0 %	5.1 %	54.2 %	2.8 %	6.8 %

Notes:
(1) From column 6, page 3 of this Schedule.
(2) From column 12, page 4 of this Schedule.
(3) From column 7, page 5 of this Schedule.
(4) Column 2 * column 3.
(5) Column 1 + column 4.

United Utility Companies, Inc.
Historical Internal Growth Rate (1), i.e., BR, for
the Proxy Group of Six AUS Utility Reports Water Companies and the
Proxy Group of Four Value Line (Standard Edition) Water Companies
for the Years 2001 -2005

	1	2	3	4	5	6
	2005	2004	2003	2002	2001	Five-Year Average 2000-2004 Internal Growth Rate, i.e., BR
Proxy Group of Six AUS Utility Reports Water Companies						
American States Water Co.						
Common Equity Return Rate	10.38 %	7.99 %	5.59 %	9.83 %	10.37 %	
Retention Ratio	43.59	25.17	(12.98)	35.04	35.65	
Internal Growth Rate (1)	4.52	2.01	(0.73)	3.44	3.70	3.4 % (2)
Aqua America, Inc.						
Common Equity Return Rate	11.69 %	11.39 %	12.30 %	13.92 %	13.34 %	
Retention Ratio	43.90	42.75	43.61	45.22	42.95	
Internal Growth Rate (1)	5.13	4.87	5.36	6.29	5.73	5.5
Artesian Resources Corp.						
Common Equity Return Rate	8.93 %	8.18 %	7.41 %	9.67 %	9.80 %	
Retention Ratio	31.08	25.80	19.24	34.96	31.35	
Internal Growth Rate (1)	2.78	2.11	1.43	3.38	3.07	2.6
California Water Services Group						
Common Equity Return Rate	9.31 %	9.72 %	8.68 %	9.56 %	7.49 %	
Retention Ratio	25.81	22.97	8.79	10.13	(14.22)	
Internal Growth Rate (1)	2.40	2.23	0.76	0.97	(1.07)	1.6 (2)
Middlesex Water Company						
Common Equity Return Rate	8.45 %	9.37 %	8.17 %	10.10 %	9.37 %	
Retention Ratio	6.49	9.95	(6.51)	13.33	5.88	
Internal Growth Rate (1)	0.55	0.93	(0.53)	1.35	0.55	0.8 (2)
York Water Company						
Common Equity Return Rate	11.85 %	12.17 %	11.66 %	10.37 %	11.73 %	
Retention Ratio	24.70	25.86	21.04	12.32	21.97	
Internal Growth Rate (1)	2.93	3.15	2.45	1.28	2.58	2.5
Average						2.7 %
Proxy Group of Four Value Line (Standard Edition) Water						
American States Water Co.						
Common Equity Return Rate	10.38 %	7.99 %	5.59 %	9.83 %	10.37 %	
Retention Ratio	43.59	25.17	(12.98)	35.04	35.65	
Internal Growth Rate (1)	4.52	2.01	(0.73)	3.44	3.70	3.4 % (2)
Aqua America, Inc.						
Common Equity Return Rate	11.69 %	11.39 %	12.30 %	13.92 %	13.34 %	
Retention Ratio	43.90	42.75	43.61	45.22	42.95	
Internal Growth Rate (1)	5.13	4.87	5.36	6.29	5.73	5.5
California Water Services Group						
Common Equity Return Rate	9.31 %	9.72 %	8.68 %	9.56 %	7.49 %	
Retention Ratio	25.81	22.97	8.79	10.13	(14.22)	
Internal Growth Rate (1)	2.40	2.23	0.76	0.97	(1.07)	1.6 (2)
Southwest Water Company						
Common Equity Return Rate	5.38 %	4.40 %	10.20 %	10.32 %	12.12 %	
Retention Ratio	42.00	21.88	64.23	64.02	67.92	
Internal Growth Rate (1)	2.26	0.96	6.55	6.61	8.23	5.5
Average						4.0 %

Notes: (1) The internal growth rate is calculated by multiplying the common equity return rate by the retention ratio (100% minus the dividend payout ratio). All data are on a consolidated basis.

(2) Excludes negatives.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database

United Utility Companies, Inc.
Calculation of Five Year Average Growth in Common Shares Outstanding (1), i.e., S Factor

	1	2	3	4	5	6	7	8	9	10	11	12
	2000 Common Shares Outstanding (1)	00-01 Growth	2001 Common Shares Outstanding (1)	01-02 Growth	2002 Common Shares Outstanding (1)	02-03 Growth	2003 Common Shares Outstanding (1)	03-04 Growth	2004 Common Shares Outstanding (1)	04-05 Growth	2005 Common Shares Outstanding (1)	Five Year Average Common Share Growth
Proxy Group of Six AUS Utility Reports Water Companies												
American States Water Co.	15.120	0.0 %	15.120	0.4 %	15.181	0.2 %	15.212	10.1 %	16.752	0.3 %	16.798	2.2 %
Aqua America, Inc.	111.825	1.9	113.977	(0.7)	113.195	9.1	123.452	3.0	127.180	1.4	128.969	3.1 (2)
Artesian Resources Corp.	3.020	1.3	3.060	26.2	3.863	1.0	3.901	1.4	3.956	1.5	4.014	6.3
California Water Services Group	15.146	0.2	15.182	0.0	15.182	11.5	16.932	8.5	18.367	0.1	18.390	4.1
Middlesex Water Company	10.098	0.7	10.168	1.8	10.356	2.0	10.567	7.5	11.359	2.0	11.584	2.8
York Water Company	6.010	5.0	6.308	0.9	6.365	0.8	6.419	7.3	6.887	0.7	6.933	2.9
Average												3.6 %
Proxy Group of Four Value Line (Standard Edition) Water Companies												
American States Water Co.	15.120	0.0 %	15.120	0.4 %	15.181	0.2 %	15.212	10.1 %	16.752	0.3 %	16.798	2.2 %
Aqua America, Inc.	111.825	1.9	113.977	(0.7)	113.195	9.1	123.452	3.0	127.180	1.4	128.969	3.1 (2)
California Water Services Group	15.146	0.2	15.182	0.0	15.182	11.5	16.932	8.5	18.367	0.1	18.390	4.1
Southwest Water Company	13.172	2.5	13.499	(3.6)	13.012	18.4	15.403	25.9	19.395	8.9	21.129	11.1 (2)
Average												5.1 %

Notes: (1) Year-end shares outstanding.
(2) Excludes negatives.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database

United Utility Companies, Inc.
Calculation of the Premium/Discount of a
Company's Stock Price Relative to its Book Value, i.e., V Factor

	1	2	3	4	5	6	7
	2001 Market to Book Ratio (1)	2002 Market to Book Ratio (1)	2003 Market to Book Ratio (1)	2004 Market to Book Ratio (1)	2005 Market to Book Ratio (1)	Five Year Average Market to Book Ratio	V Factor (2)
Proxy Group of Six AUS Utility Reports Water Companies							
American States Water Co.	174.8 %	180.6 %	180.3 %	164.3 %	191.5 %	178.3 %	43.9 %
Aqua America, Inc.	303.5	289.8	295.6	291.4	383.8	312.8	68.0
Artesian Resources Corp.	163.8	162.1	184.5	192.8	211.1	182.9	45.3
California Water Services Group	197.4	181.6	199.8	212.6	231.6	204.6	51.1
Middlesex Water Company	236.9	232.9	247.9	241.7	238.9	239.7	58.3
York Water Company	214.9	281.5	286.9	287.4	311.0	276.3	63.8
Average						232.4 %	55.1 %
Proxy Group of Four Value Line (Standard Edition) Water Companies							
American States Water Co.	174.8 %	180.6 %	180.3 %	164.3 %	191.5 %	178.3 %	43.9 %
Aqua America, Inc.	303.5	289.8	295.6	291.4	383.8	312.8	68.0
California Water Services Group	197.4	181.6	199.8	212.6	231.6	204.6	51.1
Southwest Water Company	234.6	240.3	206.2	222.5	181.5	217.0	53.9
Average						228.2 %	54.2 %

Notes: (1) Market to Book Ratio = average of yearly high-low market price divided by the average of beginning and ending year's balance of book common equity per share.
(2) (1 - (100 / column 6)).

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database

United Utility Companies, Inc.
Calculation of Projected BR + SV

	1	2	3	4	5	6	7	8	9	10	11
	Common Shares Outstanding (1) (000,000)			Projected 2009 - 2011 (1)							
	Actual 2005	Projected 2009-2011	S Factor (2)	High Stock Price	Low Stock Price	Book Value	Average Stock Price (3)	V Factor (4)	SV (5)	BR (6)	BR + SV (7)
Proxy Group of Six AUS Utility Reports Water Companies											
American States Water Co.	16.80	20.50	4.1 %	40.00	30.00	20.00	$35.00	42.9 %	1.8 %	4.4 %	6.2 %
Aqua America, Inc.	128.97	134.00	0.8	35.00	20.00	9.05	27.50	67.1	0.5	6.1	6.6
Artesian Resources Corp.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
California Water Services Group	18.39	22.00	3.6	40.00	30.00	20.45	35.00	41.6	1.5	3.0	4.5
Middlesex Water Company	11.58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
York Water Company	6.93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average			2.8 %					50.5 %	1.3 %	4.5 %	5.8 %
Proxy Group of Four Value Line (Standard Edition) Water											
American States Water Co.	16.80	20.50	4.1 %	$40.00	$30.00	$20.00	$35.00	42.9 %	1.8 %	4.4 %	6.2 %
Aqua America, Inc.	128.97	134.00	0.8	35.00	20.00	9.05	27.50	67.1	0.5	6.1	6.6
California Water Services Group	18.39	22.00	3.6	40.00	30.00	20.45	35.00	41.6	1.5	3.0	4.5
Southwest Water Company	22.33	24.00	1.5	25.00	16.00	8.75	20.50	57.3	0.9	6.9	7.8
Average			2.5 %					52.2 %	1.2 %	5.1 %	6.3 %

NA = Not Available

Notes:
(1) From pages 8 through 13 of this Schedule.
(2) The S Factor is the six or five year compound growth rate between the 2005 and 2010 (mid-point of 2009-2011 projection) common shares outstanding.
(3) The Average Stock Price is the average of column 4 and column 5.
(4) (1 - (column 6 / column 7))
(5) Column 3 * column 8.
(6) From page 9, column 14 of this Schedule.
(7) Column 9 + column 10.

Source of Information: Value Line Investment Survey, April 28, 2006

United Utility Companies, Inc.
Projected Internal Growth Rate

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	2005			2009-2011					2009-2011					
	Common Equity (%) (1)	Total Capital ($ mill) (1)	Common Equity ($ mill) (2)	Common Equity (%) (1)	Total Capital ($ mill) (1)	Common Equity ($ mill) (3)	Annual Common Equity Growth Rate (4)	ROE Adjustment Factor (5)	Return on Common Equity (1)	Return on Average Common Equity (6)	EPS (1)	DPS (1)	Retention Ratio (7)	Projected Internal Growth (8)
Proxy Group of Six AUS Utility Reports Water Companies														
American States Water Co.	49.60 %	$532.50	$264.12	48.00 %	$850.00	$408.00	9.09 %	1.04 %	9.00 %	9.36 %	$1.80	$0.96	46.7 %	4.4 %
Aqua America, Inc.	48.00	1,690.40	811.39	49.00	2,475.00	1,212.75	8.37	1.04	13.00	13.52	1.20	0.66	45.0	6.1
Artesian Resources Corp.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
California Water Services Group	51.40	571.60	293.80	50.00	900.00	450.00	8.90	1.04	9.00	9.36	1.80	1.22	32.2	3.0
Middlesex Water Company	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
York Water Company	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average														4.5 %
Proxy Group of Four Value Line (Standard Edition) Water Companies														
American States Water Co.	49.60 %	$532.50	$264.12	48.00 %	$850.00	$408.00	9.09 %	1.04 %	9.00 %	9.36 %	$1.80	$0.96	46.7 %	4.4 %
Aqua America, Inc.	48.00	1,690.40	811.39	49.00	2,475.00	1,212.75	8.37	1.04	13.00	13.52	1.20	0.66	45.0	6.1
California Water Services Group	51.40	571.60	293.80	50.00	900.00	450.00	8.90	1.04	9.00	9.36	1.80	1.22	32.2	3.0
Southwest Water Company	55.10	262.90	144.86	56.00	375.00	210.00	7.71	1.04	9.50	9.88	0.95	0.29	69.5	6.9
Average														5.1 %

NA = Not Available

Notes:
(1) From pages 8 through 13 of this Schedule.
(2) Column 1 * column 2.
(3) Column 4 * column 5.
(4) Five year compound growth rate in common equity from 2005 to 2009-2011 or ((((column 6 / column 3) ^ (1/5)) - 1)).
(5) 2 * ((1 + column 7) / (2 + column 7)) .
(6) Column 8 * column 9.
(7) 1 - (column 12 / column 11).
(8) Column 10 * column 13.

Source of information: Value Line Investment Survey, April 28, 2006

AMER. STATES WATER NYSE-AWR

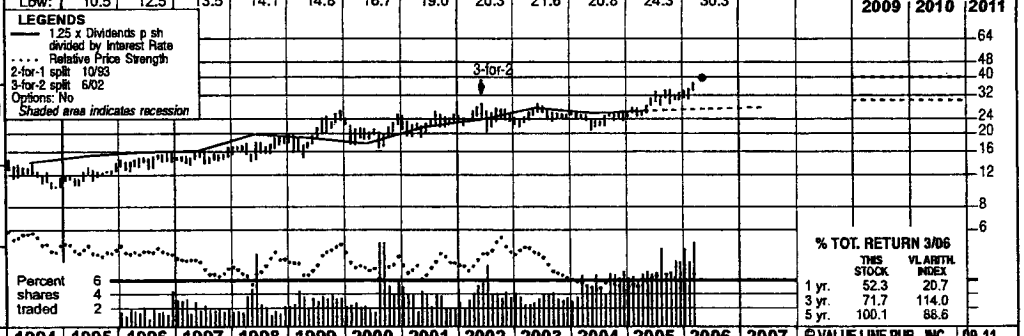
RECENT PRICE 39.70 | P/E RATIO 27.2 (Trailing: 33.1 Median: 16.0) | RELATIVE P/E RATIO 1.42 | DIV'D YLD 2.3% | VALUE LINE

TIMELINESS 3 Raised 3/24/06
SAFETY 3 New 2/4/00
TECHNICAL 3 Lowered 11/18/05
BETA .70 (1.00 = Market)

High:	14.0	16.1	17.1	19.5	26.5	25.3	26.4	29.0	29.0	26.8	34.6	39.8	
Low:	10.5	12.5	13.5	14.1	14.8	16.7	19.0	20.3	21.6	20.8	24.3	30.3	

Target Price Range 2009 | 2010 | 2011

LEGENDS
— 1.25 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 10/93
3-for-2 split 5/02
Options: No
Shaded area indicates recession



2009-11 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	40	(Nil)	3%
Low	30	(-25%)	-4%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	1	0	0	0	0	0	0

Institutional Decisions

	2Q2005	3Q2005	4Q2005
to Buy	42	54	48
to Sell	41	33	41
Hld's(000)	6199	6302	6273

% TOT. RETURN 3/06

	THIS STOCK	VL ARITH. INDEX
1 yr.	52.3	20.7
3 yr.	71.7	114.0
5 yr.	100.1	88.6

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	© VALUE LINE PUB., INC.	09-11
9.58	9.15	10.10	9.27	10.43	11.03	11.37	11.44	11.02	12.91	12.17	13.06	13.78	13.98	13.61	14.06	*14.85*	*15.35*	Revenues per sh	*17.50*
1.49	1.78	1.81	1.67	1.68	1.75	1.75	1.85	2.04	2.26	2.20	2.53	2.54	2.08	2.23	2.22	*2.85*	*2.90*	"Cash Flow" per sh	*3.45*
.94	1.19	1.15	1.11	.95	1.03	1.13	1.04	1.08	1.19	1.28	1.35	1.34	.78	1.05	1.33	*1.45*	*1.55*	Earnings per sh A	*1.80*
.72	.73	.77	.79	.80	.81	.82	.83	.84	.85	.86	.87	.87	.88	.89	.90	*.91*	*.91*	Div'd Decl'd per sh B■	*.96*
2.53	2.77	2.31	1.90	2.43	2.19	2.40	2.58	3.11	4.30	3.03	3.18	2.68	3.76	5.03	4.24	*4.00*	*4.10*	Cap'l Spending per sh	*4.50*
7.54	8.39	8.85	9.95	10.07	10.29	11.01	11.24	11.48	11.82	12.74	13.22	14.05	13.97	15.01	15.72	*17.15*	*17.80*	Book Value per sh	*20.00*
9.43	9.91	9.96	11.71	11.77	11.77	13.33	13.44	13.44	13.44	15.12	15.12	15.18	15.21	16.75	16.80	*17.50*	*18.25*	Common Shs Outst'g C	*20.50*
10.2	8.8	10.6	13.4	12.8	11.6	12.6	14.5	15.5	17.1	15.9	16.7	18.3	31.9	23.2	21.7	*Bold figures are*		Avg Ann'l P/E Ratio	*19.5*
.76	.56	.64	.79	.84	.78	.79	.84	.81	.97	1.03	.86	1.00	1.82	1.23	1.14	*Value Line*		Relative P/E Ratio	*1.25*
7.5%	7.0%	6.3%	5.3%	6.6%	6.7%	5.8%	5.5%	5.0%	4.2%	4.2%	3.9%	3.6%	3.5%	3.6%	3.1%	*estimates*		Avg Ann'l Div'd Yield	*2.7%*
						151.5	153.8	148.1	173.4	184.0	197.5	209.2	212.7	228.0	236.2	*260*	*280*	Revenues ($mill)	*350*
						13.5	14.1	14.6	16.1	18.0	20.4	20.3	11.9	16.5	22.5	*26.0*	*29.0*	Net Profit ($mill)	*37.0*
						43.3%	41.1%	40.9%	46.0%	45.7%	43.0%	38.9%	43.5%	37.4%	45.1%	*43.0%*	*42.0%*	Income Tax Rate	*42.0%*
						--	--	--	--	--	--	--	--	--	--	*Nil*	*Nil*	AFUDC % to Net Profit	*Nil*
						41.9%	43.0%	43.6%	51.0%	47.5%	54.9%	52.0%	52.0%	47.7%	50.4%	*50.5%*	*51.0%*	Long-Term Debt Ratio	*52.0%*
						57.3%	56.3%	55.7%	48.4%	51.9%	44.7%	48.0%	48.0%	52.3%	49.6%	*49.5%*	*49.0%*	Common Equity Ratio	*48.0%*
						256.0	268.4	277.1	328.2	371.1	447.6	444.4	442.3	480.4	532.5	*600*	*665*	Total Capital ($mill)	*850*
						357.8	383.6	414.8	449.6	509.1	539.8	563.3	602.3	664.2	713.2	*785*	*835*	Net Plant ($mill)	*1000*
						6.9%	6.9%	7.0%	6.6%	6.4%	6.1%	6.5%	4.6%	5.2%	5.8%	*6.0%*	*6.0%*	Return on Total Cap'l	*6.0%*
						9.0%	9.2%	9.4%	10.0%	9.2%	10.1%	9.5%	5.6%	6.6%	8.5%	*8.5%*	*9.0%*	Return on Shr. Equity	*9.0%*
						9.0%	9.2%	9.4%	10.1%	9.3%	10.1%	9.5%	5.6%	6.6%	8.5%	*8.5%*	*9.0%*	Return on Com Equity	*9.0%*
						2.4%	1.8%	2.1%	2.9%	3.0%	3.6%	3.3%	NMF	1.0%	2.8%	*3.5%*	*4.0%*	Retained to Com Eq	*4.5%*
						73%	80%	78%	72%	68%	65%	65%	113%	84%	67%	*62%*	*57%*	All Div'ds to Net Prof	*52%*

CAPITAL STRUCTURE as of 12/31/05
Total Debt $296.0 mill. Due in 5 Yrs $3.2 mill.
LT Debt $268.4 mill. LT Interest $18.0 mill.
(Total interest coverage: 2.2x)

Leases, Uncapitalized: None
Pension Assets-12/05 $56.6 mill.
Oblig. $83.2 mill.
Pfd Stock None. **Pfd Div'd** None.

Common Stock 16,797,952 shs.

MARKET CAP: $675 million (Small Cap)

CURRENT POSITION ($MILL.)	2003	2004	12/31/05
Cash Assets	12.8	4.3	13.0
Receivables	11.8	14.3	13.3
Inventory (Avg Cst)	1.4	1.5	1.4
Other	32.4	32.9	41.2
Current Assets	58.4	53.0	68.9
Accts Payable	18.8	18.2	19.7
Debt Due	56.8	45.9	27.6
Other	20.3	22.2	30.3
Current Liab.	95.90	86.3	77.6
Fix. Chg. Cov.	237%	246%	325%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '03-'05 to '09-'11
Revenues	3.5%	3.0%	*3.5%*
"Cash Flow"	3.0%	2.0%	*6.0%*
Earnings	--	-1.0%	*8.0%*
Dividends	1.0%	1.0%0	*1.0%*
Book Value	4.0%	4.5%	*5.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2003	46.7	51.8	63.7	50.5	212.7
2004	46.7	59.3	69.0	53.0	228.0
2005	49.8	60.5	68.1	57.8	236.2
2006	*55.0*	*67.0*	*76.0*	*62.0*	*260*
2007	*60.0*	*72.0*	*81.0*	*67.0*	*280*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2003	.20	.19	.51	d.12	.78
2004	.08	.30	.52	.15	1.05
2005	.22	.34	.47	.30	1.33
2006	*.24*	*.37*	*.55*	*.29*	*1.45*
2007	*.27*	*.39*	*.57*	*.32*	*1.55*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2002	.217	.217	.217	.221	.87
2003	.221	.221	.221	.221	.88
2004	.221	.221	.221	.225	.89
2005	.225	.225	.225	.225	.90
2006	.225				

BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Golden State Water Company, it supplies water to 75 communities in 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to approximately 23,000 customers in the city of Big Bear Lake and in areas of San Bernardino County. Acquired Chaparral City Water of Arizona (10/00); 11,400 customers. Has roughly 515 employees. Off. & dir. own 3.1% of common stock (4/06 Proxy). Chairman: Lloyd Ross. President & CEO: Floyd Wicks. Incorporated: CA. Add.: 630 East Foothill Boulevard, San Dimas, CA 91773. Tel.: 909-394-3600. Web: www.aswater.com.

American States Water ought to post solid earnings growth this year . . . Although we think that better weather conditions will play a big role, the real growth driver should continue to be an improving regulatory environment. Indeed, the California Public Utilities Commission (CPUC), which is in charge of supervising local utilities, has undergone a significant facelift in recent months. What many thought to be antagonists of utilities was replaced with more business-friendly members. The changes paint a favorable backdrop for AWR going forward and ought to help it post earnings of $1.45 this year. The CPUC recently approved rate increases for Region II and Region I customer service areas of AWR's GSWC unit effective January 1, 2006. The rate hikes add more than $5.6 million in annual revenues.

. . . and next. Meanwhile, AWR has filed a new general rate case for Region II, requesting $14.9 million increase in revenues based on a 11.2% ROE, effective January, 2007. Although a favorable decision is not a given, we think that the recent rulings augur well for AWR. Thus, we are introducing a 2007 share-net estimate of $1.55, representing 7% growth.

Nevertheless, we look for bottom-line growth to become negligible in 2008. Despite a better regulatory environment, AWR must continue to contend with ballooning infrastructure costs. It will likely be forced to tap equity and debt markets to make the changes, due to its strapped cash position. We remain concerned that such financing activity will dilute earnings and could potentially even keep AWR from making acquisitions.

Most investors will want to avoid these shares. They are untimely for the coming six to 12 months and hold limited 3- to 5-year appreciation potential at their current quote. AWR shares have appreciated roughly 20% since our January review. Meanwhile, there are more attractive income vehicles elsewhere. That said, investors should note that AWR continues to make headway in its attempt to increase its business with the military. Further contract wins could provide another much-needed avenue of revenue growth and even prove our projections modest.

Andre J. Costanza *April 28, 2006*

(A) Primary earnings. Excludes nonrecurring gains: '91, 73¢; '92, 13¢; '04, 14¢; '05, 25¢. Quarterly earnings may not sum due to change in share count. Next earnings report due early May.
(B) Dividends historically paid in early March, June, September, December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for splits.

Company's Financial Strength	B+
Stock's Price Stability	80
Price Growth Persistence	80
Earnings Predictability	60

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AQUA AMERICA NYSE-WTR

RECENT PRICE 25.63 | P/E RATIO 34.6 (Trailing: 36.1 Median: 23.0) | RELATIVE P/E RATIO 1.80 | DIV'D YLD 1.7% | VALUE LINE

TIMELINESS 4 Lowered 3/17/06
SAFETY 3 Lowered 8/1/03
TECHNICAL 3 Raised 4/28/06
BETA .80 (1.00 = Market)

High:	4.1	5.7	8.5	11.5	11.5	12.0	14.8	15.0	16.8	18.5	29.2	29.8
Low:	3.3	3.9	4.4	7.2	7.6	6.3	9.4	9.6	11.8	14.2	17.5	25.3

2009-11 PROJECTIONS

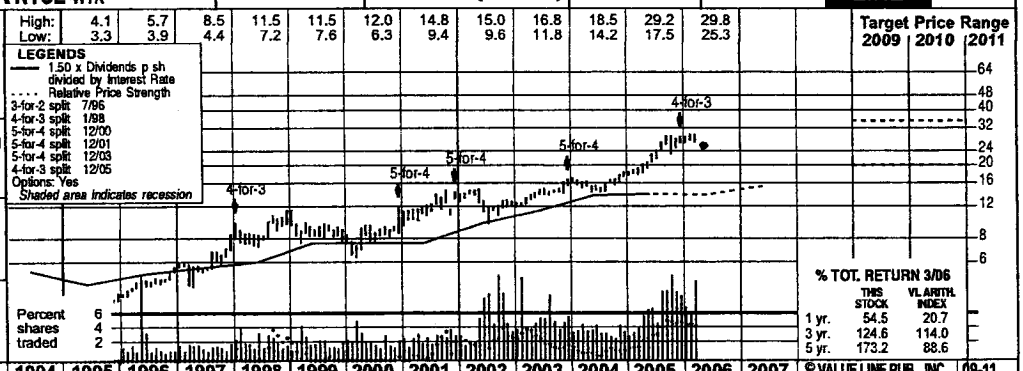
	Price	Gain	Ann'l Total Return
High	35	(+35%)	10%
Low	20	(-20%)	-4%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	1	2	3	2	1	2	2
to Sell	0	0	0	3	3	2	1	2	1

Institutional Decisions

	2Q2005	3Q2005	4Q2005
to Buy	116	124	112
to Sell	64	73	123
Hld's(000)	36632	37964	37756



Target Price Range 2009 | 2010 | 2011

% TOT. RETURN 3/06

	THIS STOCK	VL ARITH. INDEX
1 yr.	54.5	20.7
3 yr.	124.6	114.0
5 yr.	173.2	88.6

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	© VALUE LINE PUB., INC.	09-11
2.02	2.14	1.82	1.70	1.82	1.84	1.86	2.02	2.09	2.41	2.46	2.70	2.85	2.97	3.48	3.85	*4.05*	*4.40*	Revenues per sh	*5.80*
.43	.45	.39	.42	.42	.47	.50	.56	.61	.72	.76	.86	.94	.96	1.09	1.21	*1.30*	*1.45*	"Cash Flow" per sh	*1.85*
.24	.25	.24	.24	.26	.29	.30	.34	.40	.42	.47	.51	.54	.57	.64	.71	*.77*	*.86*	Earnings per sh A	*1.20*
.19	.19	.20	.21	.21	.22	.23	.24	.26	.27	.28	.30	.32	.35	.37	.40	*.44*	*.49*	Div'd Decl'd per sh B■	*.66*
.76	.54	.60	.47	.46	.52	.48	.58	.82	.90	1.16	1.09	1.20	1.32	1.54	1.84	*1.90*	*2.15*	Cap'l Spending per sh	*2.60*
2.10	2.07	2.09	2.29	2.41	2.46	2.69	2.84	3.21	3.42	3.85	4.15	4.36	5.34	5.89	6.30	*6.75*	*7.20*	Book Value per sh	*9.05*
40.64	41.42	51.20	59.40	59.77	63.74	65.75	67.47	72.20	106.80	111.82	113.97	113.19	123.45	127.18	128.97	*130.00*	*131.00*	Common Shs Outst'g C	*134.00*
10.2	10.8	12.5	14.4	13.5	12.0	15.6	17.8	22.5	21.2	18.2	23.6	23.6	24.5	25.1	31.8	*Bold figures are*		Avg Ann'l P/E Ratio	*23.0*
.76	.69	.76	.85	.89	.80	.98	1.03	1.17	1.21	1.18	1.21	1.29	1.40	1.33	1.70	*Value Line*		Relative P/E Ratio	*1.55*
7.7%	7.2%	6.8%	5.9%	6.0%	6.2%	4.9%	3.9%	2.9%	3.0%	3.3%	2.5%	2.5%	2.5%	2.3%	1.8%	*estimates*		Avg Ann'l Div'd Yield	*2.4%*
						122.5	136.2	151.0	257.3	275.5	307.3	322.0	367.2	442.0	496.8	*525*	*575*	Revenues ($mill)	*775*
						19.8	23.2	28.8	45.0	50.7	58.5	62.7	67.3	80.0	91.2	*100*	*115*	Net Profit ($mill)	*160*
						41.4%	40.6%	40.5%	38.4%	38.9%	39.3%	38.5%	39.3%	39.4%	38.4%	*39.0%*	*39.0%*	Income Tax Rate	*39.0%*
						--	--	--	--	--	--	--	--	2.9%	2.6%	*2.5%*	*2.5%*	AFUDC % to Net Profit	*2.0%*
						54.1%	54.4%	52.7%	52.9%	52.0%	52.2%	54.2%	51.4%	50.0%	52.0%	*51.0%*	*51.0%*	Long-Term Debt Ratio	*51.0%*
						44.0%	44.8%	46.6%	46.7%	47.8%	47.7%	45.8%	48.6%	50.0%	48.0%	*49.0%*	*49.0%*	Common Equity Ratio	*49.0%*
						401.7	427.2	496.6	782.7	901.1	990.4	1076.2	1355.7	1497.3	1690.4	*1785*	*1925*	Total Capital ($mill)	*2475*
						502.9	534.5	609.8	1135.4	1251.4	1368.1	1490.8	1824.3	2069.8	2280.0	*2450*	*2635*	Net Plant ($mill)	*3280*
						6.8%	7.4%	7.6%	7.6%	7.4%	7.8%	7.6%	6.4%	6.7%	6.9%	*7.0%*	*7.5%*	Return on Total Cap'l	*8.0%*
						10.7%	11.9%	12.3%	12.2%	11.7%	12.3%	12.7%	10.2%	10.7%	11.2%	*11.5%*	*12.0%*	Return on Shr. Equity	*13.0%*
						11.2%	12.0%	12.4%	12.3%	11.7%	12.4%	12.7%	10.2%	10.7%	11.2%	*11.5%*	*12.0%*	Return on Com Equity	*13.0%*
						2.8%	3.6%	4.5%	4.3%	4.7%	5.1%	5.2%	4.2%	4.6%	4.9%	*5.0%*	*5.5%*	Retained to Com Eq	*6.0%*
						75%	70%	64%	65%	60%	59%	59%	59%	57%	56%	*57%*	*56%*	All Div'ds to Net Prof	*55%*

CAPITAL STRUCTURE as of 12/31/05
Total Debt $1041.5 mill. Due in 5 Yrs $280.0 mill.
LT Debt $878.4 mill. LT Interest $50.0 mill.
(Total interest coverage: 3.8x) (48% of Cap'l)

Pension Assets $117.7 mill. Oblig. $179.7 mill.

Pfd Stock None

Common Stock 129,205,090 shares as of 2/17/06

MARKET CAP: $3.3 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2003	2004	12/31/05
Cash Assets	39.2	13.1	11.9
Receivables	62.3	64.5	62.7
Inventory (AvgCst)	5.8	6.9	7.8
Other	5.1	5.6	7.6
Current Assets	112.4	90.1	90.0
Accts Payable	32.3	23.5	55.5
Debt Due	135.8	135.3	163.1
Other	63.9	58.6	44.7
Current Liab.	232.0	217.4	263.3
Fix. Chg. Cov.	344%	364%	377%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '03-'05 to '09-'11
Revenues	7.0%	8.0%	*9.0%*
"Cash Flow"	9.5%	9.5%	*9.0%*
Earnings	9.0%	8.5%	*11.0%*
Dividends	6.0%	6.5%	*10.0%*
Book Value	9.5%	11.0%	*8.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2003	80.5	83.4	102.1	101.2	367.2
2004	99.8	106.5	120.3	115.4	442.0
2005	114.0	123.1	136.8	122.9	496.8
2006	*120*	*130*	*140*	*135*	*525*
2007	*130*	*140*	*155*	*150*	*575*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2003	.11	.14	.18	.14	.57
2004	.13	.14	.20	.17	.64
2005	.15	.17	.22	.17	.71
2006	*.15*	*.17*	*.25*	*.20*	*.77*
2007	*.17*	*.19*	*.29*	*.21*	*.86*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2002	.08	.08	.08	.084	.32
2003	.084	.084	.084	.09	.34
2004	.09	.09	.09	.098	.37
2005	.098	.098	.098	.108	.40
2006	.108				

BUSINESS: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately 2.5 million residents in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana, and five other states. Divested three of four non-water businesses in '91; telemarketing group in '93; and others. Acquired AquaSource, 7/03; Consumers Water, 4/99; and others. Water supply revenues '05: residential, 59%; commercial, 15%; industrial & other, 26%. Officers and directors own 1.2% of the common stock (4/06 Proxy). Chairman & Chief Executive Officer: Nicholas DeBenedictis. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Telephone: 610-525-1400. Internet: www.aquaamerica.com.

Aqua America's stock is trading near its all-time high valuation multiple. Shares of the company rose 50% in 2005, a rather unusual gain for a utilities stock, especially water utility. These stocks are historically known for their slow yet steady performance, but they have been real high flyers over the past year. Aqua is poised for healthy share-net advances this year and next, but its current stock quotation may already include these advances. We outline the company's growth prospects below to see if WTR's current valuation is sustainable.

Earnings growth in 2006 will probably be back-end loaded. Aqua has a large volume of rate cases that have recently been filed, and several more are coming. In total, the company is awaiting judgment on over $65 million of rate hikes. The figure consists of rate filings in Pennsylvania ($38.8 million), Indiana ($5.5 million), New Jersey ($4.1 million), Florida ($4.0 million), and several other states. The majority of these rate increases will likely come in the second half of 2006, so we estimate flat share-earnings comparisons during the first half of the year.

A ravenous appetite for acquisitions should fuel profit growth in the coming years. Aqua is the largest investor-owned water utility in the United States. Using its good financial position, the company is able to purchase numerous smaller businesses in the fragmented water services industry. Management recently indicated that Aqua's acquisition pipeline is robust, and it is seeing a greater number of municipalities being offered for sale. Municipalities are good acquisition targets since they are often run less efficiently than most of Aqua's other operations. This means, although cash outflows will probably be high during the early years, as the company brings the new water systems up to par, future synergistic savings should make up for the initial losses.

We do not recommend these untimely shares to investors, given their current quotation. Projected earnings growth for the coming 3- to 5-years does not seem high enough to warrant the stock's lofty valuation. Moreover, the equity's current yield is out of line with historical norms.

Praneeth Satish *April 28, 2006*

(A) Primary shares outstanding through '96; diluted thereafter. Excl. nonrec. gains (losses): '90, (38¢); '91, (34¢); '92, (38¢); '99, (11¢); '00, 2¢; '01, 2¢; '02, 5¢; '03, 4¢. Excl. gain from disc. operations: '96, 2¢. Next earnings report due early May. (B) Dividends historically paid in early March, June, Sept. & Dec. ■ Div'd. reinvestment plan available (5% discount). (C) In millions, adjusted for stock splits.

Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	100

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CALIFORNIA WATER NYSE-CWT

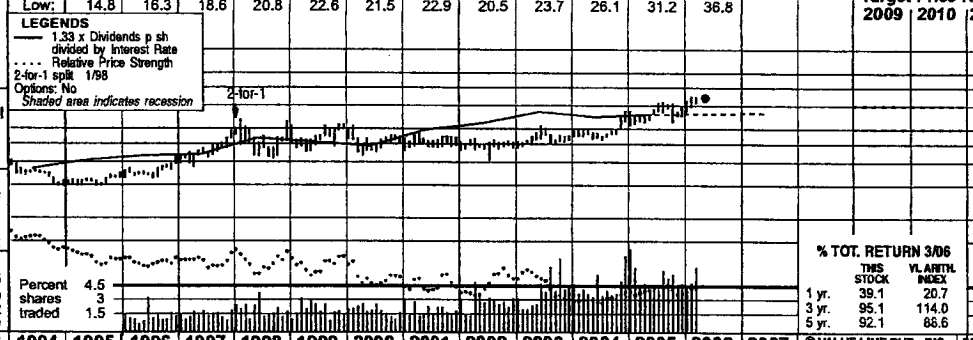
RECENT PRICE 44.60 | P/E RATIO 26.4 (Trailing: 30.3 Median: 19.0) | RELATIVE P/E RATIO 1.38 | DIV'D YLD 2.6% | VALUE LINE

TIMELINESS 4 Raised 11/4/05
SAFETY 2 Lowered 8/11/95
TECHNICAL 3 Raised 4/14/06
BETA .75 (1.00 = Market)

High:	17.6	21.9	29.6	33.8	32.0	31.4	28.6	26.9	31.4	37.9	42.1	45.7
Low:	14.8	16.3	18.6	20.8	22.6	21.5	22.9	20.5	23.7	26.1	31.2	36.8

Target Price Range 2009 | 2010 | 2011

LEGENDS
— 1.33 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 1/98
Options: No
Shaded area indicates recession



2009-11 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	40	(-10%)	Nil
Low	30	(-35%)	-6%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	1	0	0	0	0	0	0
Options	0	0	5	2	0	0	0	0	1
to Sell	1	0	5	2	0	0	0	0	2

Institutional Decisions

	2Q2005	3Q2005	4Q2005
to Buy	48	38	39
to Sell	24	39	32
Hld's(000)	4744	4897	4959

% TOT. RETURN 3/06

	THIS STOCK	VL ARITH. INDEX
1 yr.	39.1	20.7
3 yr.	95.1	114.0
5 yr.	92.1	86.6

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	© VALUE LINE PUB., INC.	09-11
10.93	11.18	12.29	13.34	12.59	13.17	14.48	15.48	14.76	15.96	16.16	16.26	17.33	16.37	17.18	17.44	*17.30*	*18.70*	Revenues per sh	*21.60*
1.97	1.98	1.92	2.25	2.02	2.07	2.50	2.92	2.60	2.75	2.52	2.20	2.65	2.51	2.83	3.04	*3.00*	*3.40*	"Cash Flow" per sh	*3.60*
1.25	1.21	1.09	1.35	1.22	1.17	1.51	1.83	1.45	1.53	1.31	.94	1.25	1.21	1.46	1.47	*1.70*	*1.75*	Earnings per sh A	*1.80*
.87	.90	.93	.96	.99	1.02	1.04	1.06	1.07	1.09	1.10	1.12	1.12	1.12	1.13	1.14	*1.15*	*1.16*	Div'd Decl'd per sh B ■	*1.22*
2.36	3.03	3.09	2.53	2.26	2.17	2.83	2.61	2.74	3.44	2.45	4.09	5.82	4.39	3.73	5.14	*5.00*	*4.50*	Cap'l Spending per sh	*4.00*
10.04	10.35	10.51	10.90	11.56	11.72	12.22	13.00	13.38	13.43	12.90	12.95	13.12	14.44	15.66	15.98	*16.70*	*17.50*	Book Value per sh C	*20.45*
11.38	11.38	11.38	11.38	12.49	12.54	12.62	12.62	12.62	12.94	15.15	15.18	15.18	16.93	18.37	18.39	*19.00*	*19.50*	Common Shs Outst'g D	*22.00*
10.4	11.2	14.1	13.6	14.1	13.7	11.9	12.6	17.8	17.8	19.6	27.1	19.8	22.1	20.1	24.9	*Bold figures are*		Avg Ann'l P/E Ratio	*19.0*
.77	.72	.86	.80	.92	.92	.75	.73	.93	1.01	1.27	1.39	1.08	1.26	1.06	1.30	*Value Line*		Relative P/E Ratio	*1.25*
6.7%	6.6%	6.1%	5.2%	5.8%	6.4%	5.8%	4.6%	4.2%	4.0%	4.3%	4.4%	4.5%	4.2%	3.9%	3.1%	*estimates*		Avg Ann'l Div'd Yield	*3.5%*

CAPITAL STRUCTURE as of 12/31/05
Total Debt $275.2 mill. Due in 5 Yrs $5.3 mill.
LT Debt $274.1 mill. LT Interest $19.0 mill.

(LT interest earned: 2.4x; total int. cov.: 2.4x)

Pension Assets-12/05 $70.2 mill.
Oblig. $103.2 mill.
Pfd Stock $3.5 mill. Pfd Div'd $.15 mill.
139,000 shares, 4.4% cumulative ($25 par).

Common Stock 18,405,386 shs.
as of 3/6/06
MARKET CAP: $750 million (Small Cap)

1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007		09-11
182.8	195.3	186.3	206.4	244.8	246.8	263.2	277.1	315.6	320.7	*345*	*365*	Revenues ($mill)	*475*
19.1	23.3	18.4	19.9	20.0	14.4	19.1	19.4	26.0	27.2	*33.0*	*35.0*	Net Profit ($mill)	*40.0*
38.9%	37.4%	36.4%	37.9%	42.3%	39.4%	39.7%	39.9%	39.6%	42.4%	*41.0%*	*40.5%*	Income Tax Rate	*40.0%*
--	--	--	--	--	--	--	10.3%	--	--	*Nil*	*Nil*	AFUDC % to Net Profit	*Nil*
47.4%	45.4%	44.2%	46.9%	48.9%	50.3%	55.3%	50.2%	48.6%	48.0%	*48.5%*	*49.0%*	Long-Term Debt Ratio	*49.5%*
51.4%	53.5%	54.7%	52.0%	50.2%	48.8%	44.0%	49.1%	50.8%	51.4%	*51.0%*	*50.5%*	Common Equity Ratio	*50.0%*
299.9	306.7	308.6	333.8	388.8	402.7	453.1	498.4	565.9	571.6	*625*	*675*	Total Capital ($mill)	*900*
443.6	460.4	478.3	515.4	582.0	624.3	697.0	759.5	800.3	856.7	*925*	*950*	Net Plant ($mill)	*1125*
8.3%	9.4%	7.8%	7.8%	6.8%	5.3%	5.9%	5.6%	6.1%	6.4%	*6.0%*	*6.5%*	Return on Total Cap'l	*5.5%*
12.1%	13.9%	10.7%	11.2%	10.0%	7.2%	9.4%	7.8%	8.9%	9.1%	*8.5%*	*10.5%*	Return on Shr. Equity	*9.0%*
12.3%	14.1%	10.8%	11.4%	10.1%	7.2%	9.5%	7.9%	9.0%	9.3%	*9.0%*	*10.5%*	Return on Com Equity	*9.0%*
3.8%	6.0%	2.8%	3.5%	1.8%	NMF	1.0%	.7%	2.1%	2.1%	*3.5%*	*4.0%*	Retained to Com Eq	*3.0%*
69%	58%	74%	70%	82%	119%	90%	91%	77%	77%	*78%*	*63%*	All Div'ds to Net Prof	*67%*

CURRENT POSITION ($MILL.)	2003	2004	12/31/05
Cash Assets	2.9	18.8	9.5
Other	40.6	51.6	42.7
Current Assets	43.5	70.4	52.2
Accts Payable	23.8	19.8	36.1
Debt Due	7.3	--	1.1
Other	32.5	36.4	39.6
Current Liab.	63.6	57.2	76.8
Fix. Chg. Cov.	218%	309%	361%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '03-'05 to '09-'11
Revenues	3.0%	2.0%	*3.5%*
"Cash Flow"	2.5%	-0.5%	*4.5%*
Earnings	0.5%	-4.0%	*4.5%*
Dividends	1.5%	1.0%	*1.0%*
Book Value	2.5%	1.5%	*5.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2003	51.3	68.0	88.2	69.6	277.1
2004	60.2	88.9	97.1	69.4	315.6
2005	60.3	81.5	101.1	77.8	320.7
2006	*65.0*	*95.0*	*105*	*80.0*	*345*
2007	*70.0*	*100*	*110*	*85.0*	*365*

Cal-endar	EARNINGS PER SHARE A E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2003	d.05	.30	.53	.41	1.21
2004	.08	.59	.59	.20	1.46
2005	.03	.41	.71	.32	1.47
2006	*.10*	*.55*	*.72*	*.33*	*1.70*
2007	*.11*	*.57*	*.73*	*.34*	*1.75*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2002	.28	.28	.28	.28	1.12
2003	.281	.281	.281	.281	1.12
2004	.283	.283	.283	.283	1.13
2005	.285	.285	.285	.285	1.14
2006	.2875				

BUSINESS: California Water Service Group provides regulated and nonregulated water service to over 2 million people (456,700 customers) in 75 communities in California, Washington, and New Mexico. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired National Utility Company (5/04); Rio Grande Corp. (11/00). Revenue breakdown, '05: residential, 69%; business, 18%; public authorities, 5%; industrial, 4%; other, 4%. '05 reported deprec. rate: 3.6%. Has about 840 employees. Chairman: Robert W. Foy. President & CEO: Peter C. Nelson. Inc.: Delaware. Address: 1720 North First Street, San Jose, California 95112-4598. Telephone: 408-367-8200. Internet: www.calwater.com.

California Water Service Group should bounce back handsomely this year. Extremely wet weather stymied earnings growth in 2005. However, we expect more-normalized conditions going forward. Moreover, the company should continue to benefit from recent changes at the California Public Utilities Commission (CPUC). Indeed, the CPUC, which is in charge of overseeing local utilities, has undergone sweeping personnel changes in recent months. The new constituents appear to be more business-friendly than the previous board members, handing down more timely and favorable rate case decisions of late. The company has a number of rate case filings still pending. Its general rate case for eight districts, representing roughly a quarter of its customer base is the most prominent. The case, which was filed in August, is requesting $11 million in 2006 and $6 million in 2007. The recent developments paint a favorable picture for CWT. In all, we expect CWT to post profits of $1.70 a share this year.

We expect earnings growth to slow considerably in 2007, though. The costs of maintaining well and pipeline infrastructures continue to increase at a rapid pace and will likely remain high for the foreseeable future, given the growing demands of the EPA on drinking water purification standards. However, CWT does not currently have the means to meet these expenses and will ultimately have to look to equity and debt markets in order to do so. As a result, we look for bottom-line growth to moderate to 3% next year and flatten out after that.

CWT shares will probably not appeal to most. The stock is ranked 4 (Below Average) for Timeliness and does not stand out for 3- to 5- year appreciation potential either, based on the capital constraints that we envision out to 2009-2011. Meanwhile, its dividend yield is not as appealing as it once was given the stock's recent price appreciation and the alternative income vehicles that are currently on the market.

That said, this issue may pique the interest of more-conservative investors looking to add a steady stream of income to their portfolios. CWT is ranked 2 (Above Average) for Safety.

Andre J. Costanza *April 28, 2006*

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (7¢); '01, 4¢; 02, 8¢. Next earnings report due late July.
(B) Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.
(C) Incl. deferred charges. In '05: $63.9 mill., $3.47/sh.
(D) In millions, adjusted for split.
(E) May not total due to change in shares.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	65

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MIDDLESEX WATER NDQ-MSEX

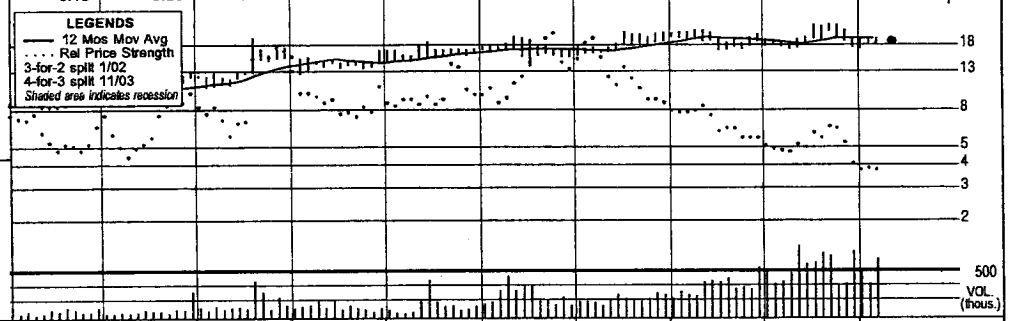
RECENT PRICE	TRAILING P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	
18.90	26.6	1.28	3.6%	VALUE LINE

RANKS

PERFORMANCE	3	Average
Technical	3	Average
SAFETY	3	Average
BETA .75		(1.00 = Market)

Financial Strength	B+
Price Stability	85
Price Growth Persistence	75
Earnings Predictability	70

	11.25	12.88	19.75	16.97	18.73	20.04	21.23	21.81	23.47	19.72 High
	8.19	9.63	10.50	12.50	14.69	13.73	15.77	16.65	17.07	17.03 Low



© VALUE LINE PUBLISHING, INC.	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006/2007
SALES PER SH	4.72	4.39	5.35	5.39	5.87	5.98	6.12	6.25	6.44	
"CASH FLOW" PER SH	1.02	1.02	1.19	.99	1.18	1.20	1.15	1.28	1.33	
EARNINGS PER SH	.67	.71	.76	.51	.66	.73	.61	.73	.71	.74 A,B/.77 C
DIV'DS DECL'D PER SH	.57	.58	.60	.61	.62	.63	.65	.66	.67	
CAP'L SPENDING PER SH	1.20	2.68	2.33	1.32	1.25	1.59	1.87	2.63	2.18	
BOOK VALUE PER SH	6.00	6.80	6.95	6.98	7.11	7.39	7.60	8.38	8.60	
COMMON SHS OUTST'G (MILL)	8.54	9.82	10.00	10.11	10.17	10.36	10.48	11.36	11.58	
AVG ANN'L P/E RATIO	13.4	15.2	17.6	28.7	24.6	23.5	30.0	26.4	27.4	*25.5/24.5*
RELATIVE P/E RATIO	.77	.79	1.00	1.87	1.26	1.28	1.71	1.39	1.46	
AVG ANN'L DIV'D YIELD	6.3%	5.4%	4.4%	4.2%	3.8%	3.7%	3.5%	3.4%	3.5%	
SALES ($MILL)	40.3	43.1	53.5	54.5	59.6	61.9	64.1	71.0	74.6	
OPERATING MARGIN	37.2%	37.0%	33.9%	32.2%	47.2%	47.1%	44.0%	44.4%	44.4%	
DEPRECIATION ($MILL)	3.1	3.8	4.3	4.9	5.3	5.0	5.6	6.4	7.2	
NET PROFIT ($MILL)	5.9	6.5	7.9	5.3	7.0	7.8	6.6	8.4	8.5	
INCOME TAX RATE	34.9%	31.5%	28.8%	33.1%	34.8%	33.3%	32.8%	31.1%	27.6%	
NET PROFIT MARGIN	14.5%	15.1%	14.7%	9.7%	11.7%	12.5%	10.3%	11.9%	11.4%	
WORKING CAP'L ($MILL)	d2.9	14.6	6.8	d2.7	d.9	d9.3	d13.3	d11.8	d4.5	
LONG-TERM DEBT ($MILL)	52.9	78.0	82.3	81.1	88.1	87.5	97.4	115.3	128.2	
SHR. EQUITY ($MILL)	56.2	71.7	74.6	74.7	76.4	80.6	83.7	99.2	103.6	
RETURN ON TOTAL CAP'L	6.8%	5.7%	6.4%	4.9%	5.6%	6.0%	5.0%	5.1%	5.0%	
RETURN ON SHR. EQUITY	10.4%	9.1%	10.6%	7.1%	9.1%	9.6%	7.9%	8.5%	8.2%	
RETAINED TO COM EQ	1.7%	1.8%	2.5%	NMF	.5%	1.3%	NMF	.9%	.5%	
ALL DIV'DS TO NET PROF	85%	81%	78%	121%	94%	87%	106%	90%	94%	

Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios.

[A]No. of analysts changing earn. est. in last 15 days: 0 up, 0 down, consensus 5-year earnings growth 3.5% per year. [B]Based upon one analyst's estimate. [C]Based upon one analyst's estimate.

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Sales	4.5%	3.0%
"Cash Flow"	3.5%	3.5%
Earnings	1.0%	-2.5%
Dividends	2.0%	1.5%
Book Value	3.5%	2.5%

Fiscal Year	QUARTERLY SALES ($mill.) 1Q	2Q	3Q	4Q	Full Year
12/31/03	15.0	16.0	17.6	15.5	64.1
12/31/04	15.9	17.8	19.8	17.5	71.0
12/31/05	16.7	18.4	20.8	18.7	74.6
12/31/06					

Fiscal Year	EARNINGS PER SHARE 1Q	2Q	3Q	4Q	Full Year
12/31/02	.12	.18	.24	.19	.73
12/31/03	.11	.17	.22	.11	.61
12/31/04	.09	.16	.29	.19	.73
12/31/05	.12	.16	.26	.17	.71
12/31/06	.12	.17	.27		

Cal-endar	QUARTERLY DIVIDENDS PAID 1Q	2Q	3Q	4Q	Full Year
2003	.161	.161	.161	.165	.65
2004	.165	.165	.165	.168	.66
2005	.168	.168	.168	.17	.67
2006	.17				

INSTITUTIONAL DECISIONS

	2Q'05	3Q'05	4Q'05
to Buy	19	20	11
to Sell	16	15	21
Hld's(000)	1771	1938	1707

ASSETS ($mill.)	2003	2004	12/31/05
Cash Assets	3.0	4.0	3.0
Receivables	5.7	8.9	11.8
Inventory (Avg cost)	1.4	1.2	1.3
Other	4.3	.9	.9
Current Assets	14.4	16.0	17.0
Property, Plant & Equip, at cost	278.4	308.4	343.0
Accum Depreciation	47.5	52.0	55.0
Net Property	230.9	256.4	288.0
Other.	17.9	26.7	19.4
Total Assets	263.2	299.1	324.4
LIABILITIES ($mill.)			
Accts Payable	4.8	6.0	6.0
Debt Due	13.6	12.1	5.9
Other	9.3	9.7	9.6
Current Liab	27.7	27.8	21.5

LONG-TERM DEBT AND EQUITY as of 12/31/05

Total Debt $134.1 mill. **Due in 5 Yrs.** $16.0 mill.
LT Debt $128.2 mill.
Including Cap. Leases None (55% of Cap'l)
Leases, Uncapitalized Annual rentals None

Pension Liability $6.7 mill. in '05 vs. $5.5 mill. in '04

Pfd Stock $4.0 mill. **Pfd Div'd Paid** $.2 mill. (2% of Cap'l)

Common Stock 11,584,499 shares (43% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: Middlesex Water Company, through its subsidiaries, engages in the ownership and operation of regulated water utility systems in central and southern New Jersey, and in Delaware, as well as a regulated wastewater utility in southern New Jersey. Its New Jersey water utility system (the Middlesex System) provides water services to retail customers in central New Jersey. The Middlesex System also provides water service under contract to municipalities in central New Jersey. The company operates the water supply system and wastewater system for the city of Perth Amboy in New Jersey in partnership with its subsidiary, Utility Service Affiliates (Perth Amboy), Inc. Its other New Jersey subsidiaries provide water and wastewater services to residents in Southampton Township. In January, the company named Dennis W. Doll president and CEO. Has 220 employees. Chairman: J. Richard Tompkins. Inc.: NJ. Address: 1500 Ronson Road, P.O. Box 1500, Iselin, NJ 08830. Tel.: (732) 634-1500. Internet: http://www.middlesexwater.com.

A.Z.

April 28, 2006

TOTAL SHAREHOLDER RETURN
Dividends plus appreciation as of 3/31/2006

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
10.24%	-14.14%	8.06%	26.24%	49.04%

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YORK WATER CO NDQ-YORW

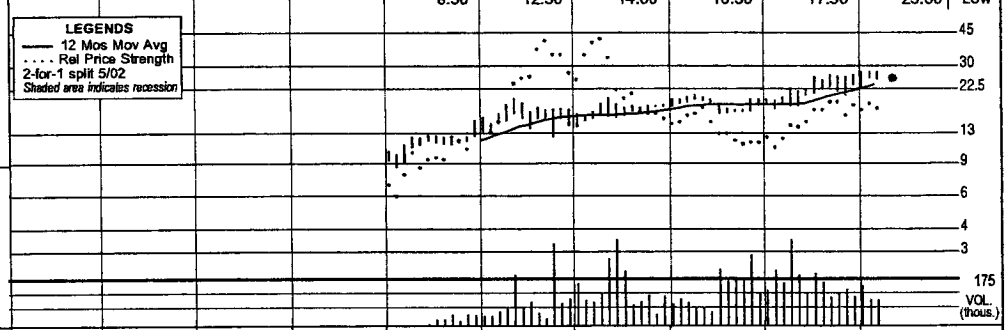
RECENT PRICE	TRAILING P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	
25.80	30.7	1.48	2.6%	VALUE LINE

RANKS

PERFORMANCE 3 Average
Technical 3 Average
SAFETY 3 Average
BETA .50 (1.00 = Market)

Financial Strength B+
Price Stability 60
Price Growth Persistence NMF
Earnings Predictability NMF

	1997	1998	1999	2000	2001	2002	2003	2004	2005
High					15.33	20.17	20.23	21.04	26.81	28.00
Low					8.50	12.30	14.00	16.50	17.50	23.00



© VALUE LINE PUBLISHING, INC.	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006/2007
REVENUES PER SH	--	--	--	--	3.08	3.07	3.25	3.27	3.87	
"CASH FLOW" PER SH	--	--	--	--	.88	.86	.97	.98	1.18	
EARNINGS PER SH	--	--	--	--	.65	.60	.70	.73	.84	.94 A,B/NA
DIV'D DECL'D PER SH	--	--	--	--	.51	.53	.55	.59	.64	
CAP'L SPENDING PER SH	--	--	--	--	1.12	.99	1.61	3.76	2.53	
BOOK VALUE PER SH	--	--	--	--	5.69	5.85	6.08	6.98	7.27	
COMMON SHS OUTST'G (MILL)	--	--	--	--	6.31	6.36	6.42	6.89	6.93	
AVG ANN'L P/E RATIO	--	--	--	--	17.9	26.9	24.5	25.7	26.3	27.4/NA
RELATIVE P/E RATIO	--	--	--	--	.92	1.47	1.40	1.36	1.40	
AVG ANN'L DIV'D YIELD	--	--	--	--	4.3%	3.3%	3.2%	3.1%	2.9%	
REVENUES ($MILL)	--	--	--	18.5	19.4	19.6	20.9	22.5	26.8	*Bold figures*
NET PROFIT ($MILL)	--	--	--	3.8	4.0	3.8	4.4	4.8	5.8	*are consensus*
INCOME TAX RATE	--	--	--	35.7%	35.8%	34.9%	34.8%	36.7%	36.7%	*earnings*
AFUDC % TO NET PROFIT	--	--	--	--	2.2%	3.7%	--	--	--	*estimates*
LONG-TERM DEBT RATIO	--	--	--	50.2%	47.7%	46.7%	43.4%	42.5%	44.1%	*and, using the*
COMMON EQUITY RATIO	--	--	--	49.8%	52.3%	53.3%	56.6%	57.5%	55.9%	*recent prices,*
TOTAL CAPITAL ($MILL)	--	--	--	65.2	68.6	69.9	69.0	83.6	90.3	*P/E ratios.*
NET PLANT ($MILL)	--	--	--	97.0	102.3	106.7	116.5	140.0	155.3	
RETURN ON TOTAL CAP'L	--	--	--	7.9%	7.9%	7.4%	8.5%	7.6%	8.4%	
RETURN ON SHR. EQUITY	--	--	--	11.6%	11.2%	10.2%	11.4%	10.0%	11.6%	
RETURN ON COM EQUITY	--	--	--	11.6%	11.2%	10.2%	11.4%	10.0%	11.6%	
RETAINED TO COM EQ	--	--	--	2.5%	2.5%	1.3%	2.6%	2.1%	3.0%	
ALL DIV'DS TO NET PROF	--	--	--	78%	78%	88%	77%	79%	74%	

A No. of analysts changing earn. est. in last 15 days: 0 up, 0 down, consensus 5-year earnings growth 7.0% per year. B Based upon one analyst's estimate.

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Revenues	--	18.5%
"Cash Flow"	--	20.5%
Earnings	--	15.0%
Dividends	-9.5%	7.5%
Book Value	--	4.0%

Fiscal Year	QUARTERLY SALES ($mill.) 1Q	2Q	3Q	4Q	Full Year
12/31/03	4.8	5.0	5.8	5.3	20.9
12/31/04	5.3	5.5	5.6	6.1	22.5
12/31/05	6.2	6.7	7.2	6.7	26.8
12/31/06					

Fiscal Year	EARNINGS PER SHARE 1Q	2Q	3Q	4Q	Full Year
12/31/02	.14	.15	.18	.13	.60
12/31/03	.12	.16	.24	.18	.70
12/31/04	.18	.16	.18	.21	.73
12/31/05	.18	.21	.25	.20	.84
12/31/06	*.21*	*.24*	*.25*		

Cal-endar	QUARTERLY DIVIDENDS PAID 1Q	2Q	3Q	4Q	Full Year
2003	.135	.135	.135	.135	.54
2004	.145	.145	.145	.145	.58
2005	.156	.156	.156	.156	.62
2006	.168	.168			

INSTITUTIONAL DECISIONS

	2Q'05	3Q'05	4Q'05
to Buy	5	8	10
to Sell	4	4	3
Hld's(000)	445	476	517

ASSETS ($mill.)	2003	2004	12/31/05
Cash Assets	.0	.2	.0
Receivables	3.2	3.7	3.8
Inventory	.6	.7	.8
Other	.3	.4	.5
Current Assets	4.1	5.0	5.1
Property, Plant & Equip, at cost	139.1	164.3	182.4
Accum Depreciation	22.6	24.3	27.1
Net Property	116.5	140.0	155.3
Other	6.9	11.1	11.9
Total Assets	127.5	156.1	172.3
LIABILITIES ($mill.)			
Accts Payable	1.7	1.8	2.6
Debt Due	9.9	16.3	19.3
Other	2.4	3.1	2.8
Current Liab	14.0	21.2	24.7

LONG-TERM DEBT AND EQUITY as of 12/31/05

Total Debt $59.2 mill. Due in 5 Yrs. $26.5 mill.
LT Debt $39.8 mill.
Including Cap. Leases $7.0 mill. (44% of Cap'l)
Leases, Uncapitalized Annual rentals None

Pension Liability $3.9 mill. in '05 vs. $3.0 mill. in '04

Pfd Stock None Pfd Div'd Paid None

Common Stock 6,933,330 shares (56% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: York Water Company engages in the impounding, purification, and distribution of water in York County, Pennsylvania. As of December 31, 2005, the company had two reservoirs, Lake Williams and Lake Redman, which together held approximately 2.23 billion gallons of water. It supplies water for residential, commercial, industrial, and other customers. As of the above date, the company served approximately 55,731 customers in 34 municipalities in York County. Has 97 employees. Chairman: William Morris. Inc.: PA. Address: 130 East Market Street, York, PA 17405. Tel.: (717) 845-3601. Internet: http://www.yorkwater.com.

A.Z.

April 28, 2006

TOTAL SHAREHOLDER RETURN

Dividends plus appreciation as of 3/31/2006

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
2.50%	3.25%	41.89%	70.06%	154.30%

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SOUTHWEST WATER NDQ-SWWC

RECENT PRICE 16.00 | P/E RATIO 40.0 (Trailing: 47.1 Median: 19.0) | RELATIVE P/E RATIO 2.08 | DIV'D YLD 1.3% | VALUE LINE

TIMELINESS 4 Lowered 3/24/06
SAFETY 3 New 10/28/05
TECHNICAL 3 Lowered 2/24/06
BETA .70 (1.00 = Market)

High:	2.1	3.7	5.0	5.6	9.2	8.3	10.2	12.4	11.2	14.3	15.2	19.1
Low:	1.5	2.0	2.6	3.5	3.6	5.1	6.9	7.6	8.1	10.3	9.0	14.0

2009-11 PROJECTIONS

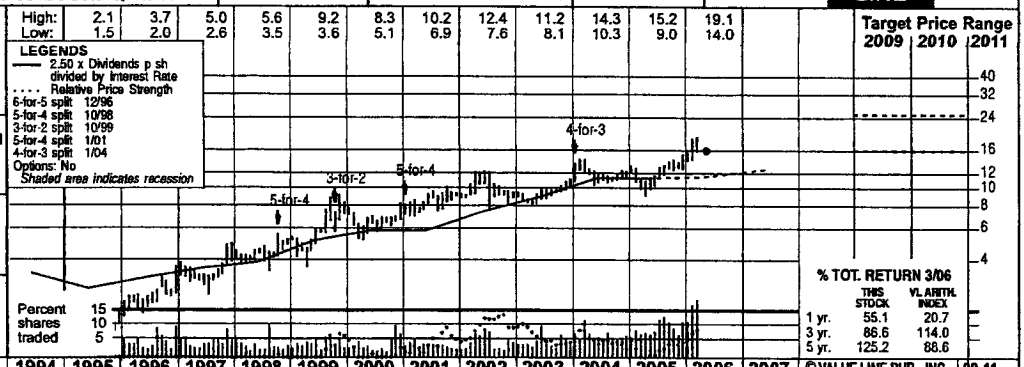
	Price	Gain	Ann'l Total Return
High	25	(+55%)	13%
Low	16	(Nil)	2%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	3	1	1	1	0	0	0
to Sell	0	0	1	2	1	1	1	1	1

Institutional Decisions

	2Q2005	3Q2005	4Q2005
to Buy	28	39	31
to Sell	16	15	39
Hld's(000)	5044	5706	6376



Target Price Range 2009 | 2010 | 2011

% TOT. RETURN 3/06

	THIS STOCK	VL ARITH. INDEX
1 yr.	55.1	20.7
3 yr.	86.6	114.0
5 yr.	125.2	88.6

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	© VALUE LINE PUB., INC.	09-11
3.58	3.34	3.77	4.03	4.20	4.84	5.31	5.61	5.63	6.16	7.49	8.15	9.12	10.70	9.23	9.10	*9.35*	*10.00*	Revenues per sh	*13.35*
.46	.28	.44	.38	.38	.44	.46	.53	.59	.65	.76	.87	.86	.91	.67	.78	*.85*	*1.00*	"Cash Flow" per sh	*1.45*
.22	.02	.19	.08	.09	.12	.15	.21	.25	.31	.38	.42	.39	.44	.23	.34	*.42*	*.51*	Earnings per sh A	*.95*
.18	.18	.18	.14	.08	.08	.09	.09	.10	.11	.13	.14	.15	.16	.18	.20	*.22*	*.24*	Div'd Decl'd per sh B	*.29*
.50	.39	.42	.60	.72	.84	.95	.74	.79	.53	.55	1.06	1.78	1.14	1.26	1.66	*1.50*	*1.50*	Cap'l Spending per sh	*1.90*
2.57	2.41	2.42	2.31	2.31	2.45	2.40	2.52	2.70	3.05	3.44	3.84	4.27	4.90	6.17	6.49	*6.70*	*6.95*	Book Value per sh D	*8.75*
11.48	11.60	11.80	11.97	12.13	11.74	12.45	12.65	12.83	13.12	13.99	14.17	14.35	16.17	20.36	22.33	*23.00*	*23.00*	Common Shs Outst'g C	*24.00*
14.2	NMF	14.5	35.8	22.3	14.6	16.5	16.9	17.2	19.6	17.0	19.8	24.8	21.2	NMF	35.5	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
1.05	NMF	.88	2.11	1.46	.98	1.03	.97	.89	1.12	1.11	1.01	1.35	1.21	NMF	1.90	*Value Line*		Relative P/E Ratio	*1.40*
5.7%	5.5%	6.6%	4.7%	4.2%	4.7%	3.4%	2.7%	2.3%	1.8%	2.0%	1.7%	1.5%	1.7%	1.5%	1.6%	*estimates*		Avg Ann'l Div'd Yield	*1.5%*

CAPITAL STRUCTURE as of 12/31/05
Total Debt $127.1 mill. Due in 5 Yrs $45.0 mill.
LT Debt $117.6 mill. LT Interest $7.0 mill.
(Total interest coverage: 2.4x) (45% of Cap'l)

Leases, Uncapitalized: Annual rentals $6.7 mill.
Pension Liability None

Pfd Stock $461,000 Pfd Div'd $24,000

Common Stock 22,325,961 shs.
as of 3/8/06
MARKET CAP: $350 million (Small Cap)

2000	2001	2002	2003	2004	2005	2006	2007		09-11
66.2	71.0	72.2	80.9	104.7	115.5	130.8	173.0	188.0	203.2	*215*	*230*	Revenues ($mill)	*320*
1.9	2.6	3.4	4.2	5.4	6.2	6.0	7.2	4.5	7.3	*9.0*	*11.0*	Net Profit ($mill)	*20.0*
41.8%	41.6%	39.5%	39.0%	37.0%	36.0%	34.9%	35.9%	36.1%	36.0%	*36.0%*	*36.0%*	Income Tax Rate	*36.0%*
--	--	--	--	--	14.4%	3.2%	--	11.0%	9.5%	*10.0%*	*10.0%*	AFUDC % to Net Profit	*8.5%*
50.2%	47.9%	48.7%	45.2%	48.8%	51.4%	56.7%	47.9%	47.9%	44.7%	*44.5%*	*47.5%*	Long-Term Debt Ratio	*44.0%*
48.9%	51.3%	50.5%	54.1%	50.7%	48.2%	42.9%	51.8%	52.0%	55.1%	*55.5%*	*52.5%*	Common Equity Ratio	*56.0%*
61.1	62.2	68.5	73.9	95.0	113.0	142.8	152.8	242.0	262.9	*280*	*305*	Total Capital ($mill)	*375*
91.4	102.1	109.2	113.7	157.8	171.1	203.9	219.5	302.6	344.8	*395*	*455*	Net Plant ($mill)	*695*
5.5%	6.8%	7.1%	7.6%	7.6%	7.6%	5.8%	6.2%	3.1%	4.1%	*4.5%*	*5.0%*	Return on Total Cap'l	*6.5%*
6.3%	8.0%	9.5%	10.3%	11.1%	11.4%	9.7%	9.0%	3.6%	5.0%	*6.0%*	*7.0%*	Return on Shr. Equity	*9.5%*
6.3%	8.1%	9.6%	10.4%	11.1%	11.4%	9.7%	9.1%	3.6%	5.0%	*6.0%*	*7.0%*	Return on Com Equity	*9.5%*
2.9%	4.5%	6.0%	7.0%	7.8%	7.8%	6.3%	5.8%	.8%	2.1%	*2.5%*	*3.0%*	Retained to Com Eq	*6.0%*
55%	45%	38%	33%	31%	32%	36%	36%	78%	58%	*56%*	*55%*	All Div'ds to Net Prof	*35%*

CURRENT POSITION ($MILL.)	2003	2004	12/31/05
Cash Assets	5.4	1.9	3.0
Receivables	19.8	23.9	26.5
Inventory (Avg Cst)	--	1.9	--
Other	10.2	17.6	18.2
Current Assets	35.4	45.3	47.7
Accts Payable	11.4	12.3	10.0
Debt Due	2.7	3.4	9.5
Other	17.3	20.0	21.1
Current Liab.	31.4	35.7	40.6

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '03-'05 to '09-'11
Revenues	8.5%	8.5%	*5.5%*
"Cash Flow"	7.0%	3.5%	*10.5%*
Earnings	13.5%	1.5%	*18.0%*
Dividends	6.0%	10.0%	*8.0%*
Book Value	9.5%	14.0%	*7.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2003	36.1	41.5	51.4	44.0	173.0
2004	39.8	45.7	55.0	47.5	188.0
2005	45.2	51.3	54.7	52.0	203.2
2006	*50.0*	*55.0*	*60.0*	*50.0*	*215*
2007	*54.0*	*60.0*	*63.0*	*53.0*	*230*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2003	d.01	.13	.21	.11	.44
2004	--	.13	.12	d.02	.23
2005	d.01	.15	.14	.06	.34
2006	*.02*	*.16*	*.16*	*.08*	*.42*
2007	*.04*	*.18*	*.19*	*.10*	*.51*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2002	.038	.038	.038	.038	.15
2003	.042	.042	.042	.046	.17
2004	.046	.046	.046	.050	.19
2005	.048	.048	.048	.052	.20
2006	.052	.052			

BUSINESS: Southwest Water Company provides a broad range of services including water production, treatment and distribution; wastewater collection and treatment; utility billing and collection; utility infrastructure construction management; and public works services. It operates out of two groups, Utility (39% of 2005 revenues) and Services (61%). Utility owns and manages rate-regulated public water utilities in California, New Mexico, Oklahoma, and Texas. Services does mostly maintenance work on a contract basis. Off. & dir. own 8.2% of com. shs.; T. Rowe Price, 5.8% (4/06 proxy). Chrmn & CEO: Anton C. Garnier. Inc.: DE. Addr.: One Wilshire Building, 624 S. Gramd Avemie. Ste. 2900, Los Angeles, CA 90017. Tel.: 213-929-1800. Internet: www.southwestwater.com.

Southwest Water Company is getting improvements from both of its operating segments. The Utility Group has been benefiting from favorable weather and customer growth in New Mexico and Texas. Moreover, the Services Group rebounded, swinging from a slight loss in 2004 to a $3.6 million profit in 2005. Consequently, we look for healthy 24% and 21% share-net gains in 2006 and 2007.

The Utility Group will likely generate 40% of Southwest's revenues and about two-thirds of its earnings in 2006. Changes on the regulatory front in California and a recent acquisition should fuel profit growth here in the years to come. California Governor Schwarzenegger nominated two candidates to fill vacant spots on the California Public Utilities Commission (CPUC) early last year. These nominees bring with them a more utilities-friendly approach towards regulatory matters than their predecessors. As a result, we expect Southwest will have an easier time winning new rate cases in the region. The first of such rate decisions, under the new CPUC, has already been filed. The company is seeking an 11% return on equity, as compared to its current allowed return on equity of 9.8%. The outcome of this decision will power earnings in 2006 and beyond. Meanwhile, the purchase of Monarch Utilities in mid-2004 is helping to increase customer growth in New Mexico and Texas. Continued top-line expansion should come from recently filed rate increases in Texas that will likely take effect within the next few months.

The Services Group is benefiting from a recent acquisition. Services rise to the black can be attributed to new contracts, increased project work, and the acquisition of an Alabama wastewater system. Margins in the Services Group have been, and will likely remain, thin in the coming years, but the wastewater addition will probably help improve the situation. The Alabama system isn't regulated by a state agency, and hence allows for some rate flexibility in the future.

These untimely shares have limited long-term appeal. Current valuations seem high, causing our projections to indicate an uninspiring total return over the coming 3 to 5 years.

Praneeth Satish *April 28, 2006*

(A) Diluted earnings. Excludes nonrecurring gains (losses): '00, (3¢); '01, (5¢); '02, 1¢; '05, (23¢). Next earnings report due early May.
(B) Dividends historically paid in late January, April, July, and October.
(C) In millions, adjusted for splits.
(D) Includes intangibles. In 2005: $35.9 million, $1.61/share.

Company's Financial Strength	B
Stock's Price Stability	80
Price Growth Persistence	90
Earnings Predictability	60

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United Utility Companies, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Six AUS Utility Reports Water	Proxy Group of Four Value Line (Standard Edition) Water Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	6.3 %	6.3 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	0.5 (2)	0.5 (2)
3.	Adjusted Prospective Yield on A Rated Public Utility Bonds	6.8 %	6.8 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.0 (3)	0.0 (3)
5.	Adjusted Prospective Bond Yield	6.8	6.8
6.	Equity Risk Premium (4)	4.4	4.5
7.	Risk Premium Derived Common Equity Cost Rate	11.2 %	11.3 %

Notes:
(1) Derived in Note (3) on page 6 of this Schedule.
(2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of 0.46%, rounded to 0.5% from page 4 of this Schedule.
(3) No adjustment necessary as the average Moody's bond rating of the proxy group is A2.
(4) From page 5 of this Schedule.

United Utility Companies, Inc.
Comparison of Bond Ratings and Business Profile for
the Proxy Group of Six AUS Utility Reports Water Companies and
the Proxy Group of Four Value Line (Standard Edition) Water Companies

	June 2006 Moody's Bond Rating		June 2006 Standard & Poor's Bond Rating				Standard & Poor's Business Position / Profile (2)
	Bond Rating	Numerical Weighting (1)	Bond Rating	Numerical Weighting (1)	Credit Rating	Numerical Weighting (1)	
Proxy Group of Six AUS Utility Reports Water Companies							
American States Water Co. (3)	A2	6	A-	7	A-	7	3.0
Aqua America, Inc. (4)	NR	- -	AA-	4	A+	5	2.0
Artesian Resources Corp.	NR	- -	NR	- -	NR	- -	- -
California Water Service Group (5)	A2	6	NR	- -	A+	5	3.0
Middlesex Water Company	NR	- -	A	6	A-	7	3.0
York Water Company	NR	- -	A	6	A-	7	2.0
Average	A2	6.0	A	5.8	A	6.2	2.6
Proxy Group of Four Value Line (Standard Edition) Water							
American States Water Co. (3)	A2	6	A-	7	A-	7	3.0
Aqua America, Inc. (4)	NR	- -	AA-	4	A+	5	2.0
California Water Service Group (5)	A2	6	NR	- -	A+	5	3.0
Southwest Water Company	NR	- -	NR	- -	NR	- -	- -
Average	A2	6.0	A+ / A	5.5	A	5.7	2.7

Notes:
(1) From page 3 of this Schedule.
(2) From Standard & Poor's U.S. Utilities and Power Ranking List, June 30, 2006
(3) Ratings and business profile are those of Golden State Water Company
(4) Ratings and business profile are those of Aqua Pennsylvania, Inc.
(5) Ratings and business profile are those of California Water Service Company.

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

United Utility Companies, Inc.
Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings

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

Moody's
Comparison of Interest Rate Trends
for the Three Months Ending May 2006 (1)

Years	Corporate Bonds	Public Utility Bonds			Spread - Corporate v. Public Utility Bonds			Spread - Public Utility Bonds	
	Aaa Rated	Aa Rated	A Rated	Baa Rated	Aa (Pub. Util.) over Aaa (Corp.)	A (Pub. Util.) over Aaa (Corp.)	Baa (Pub. Util.) over Aaa (Corp.)	A over Aa	Baa over A
March-06	5.52 %	5.71 %	5.98 %	6.26 %					
April-06	5.84	6.02	6.29	6.54					
May-06	5.95	6.16	6.42	6.59					
Average of Last 3 Months	5.77 %	5.96 %	6.23 %	6.46 %	0.19 %	0.46 %	0.69 %	0.27 %	0.23 %

Notes: (1) All yields are distributed yields.

Source of Information: Mergent Bond Record, June 2006, Vol. 73, No. 6

United Utility Companies, Inc.
Judgment of Equity Risk Premium for
the Proxy Group of Six AUS Utility Reports Water Companies and
the Proxy Group of Four Value Line (Standard Edition) Water Companies

Line No.		Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Four Value Line (Standard Edition) Water Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	4.3 %	4.6 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	4.4	4.4
3.	Average equity risk premium	4.4 %	4.5 %

Notes: (1) From page 6 of this Schedule.
(2) From page 8 of this Schedule.

United Utility Companies, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
the Proxy Group of Six AUS Utility Reports Water Companies and
the Proxy Group of Four Value Line (Standard Edition) Water Companies

Line No.		Proxy Group of Six AUS Utility Reports Water	Proxy Group of Four Value Line (Standard Edition) Water Companies
1.	Arithmetic mean total return rate on the Standard & Poor's 500 Composite Index - 1926-2005 (1)	12.3 %	12.3 %
2.	Arithmetic mean yield on Aaa and Aa Corporate Bonds 1926-2005 (2)	(6.1)	(6.1)
3.	Historical Equity Risk Premium	6.2 %	6.2 %
4.	Forecasted 3-5 year Total Annual Market Return (3)	12.5 %	12.5 %
5.	Prospective Yield an Aaa Rated Corporate Bonds (4)	(6.3)	(6.3)
6.	Forecasted Equity Risk Premium	6.2 %	6.2 %
7.	Average of Historical and Forecasted Equity Risk Premium (5)	6.2 %	6.2 %
8.	Adjusted Value Line Beta (6)	0.70	0.74
9.	Beta Adjusted Equity Risk Premium	4.3 %	4.6 %

Notes:

(1) From Stocks, Bonds, Bills and Inflation - 2006 Yearbook Valuation Edition, Ibbotson Associates, Inc., Chicago, IL, 2006.

(2) From Moody's Industrial Manual and Mergent Bond Record Monthly Update.

(3) From page 3 of Schedule PMA-11.

(4) Average forecast based upon six quarterly estimates of Aaa rated corporate bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated July 1, 2006 (see page 7 of this Schedule). The estimates are detailed below.

Third Quarter 2006	6.2 %
Fourth Quarter 2006	6.3
First Quarter 2007	6.3
Second Quarter 2007	6.3
Third Quarter 2007	6.3
Fourth Quarter 2007	6.2
Average	6.3 %

(5) Average of the Historical Equity Risk Premium of 6.2% from Line No. 3 and the Forecasted Equity Risk Premium of 6.2% from Line No. 6 ((6.2% + 6.2%) / 2 = 6.2%).

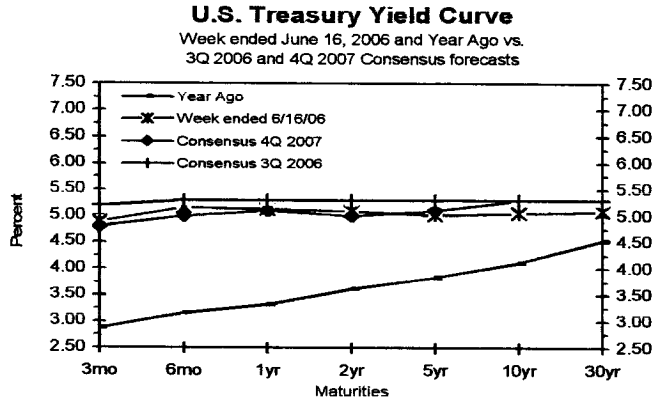
(5) From page 9 of this Schedule.

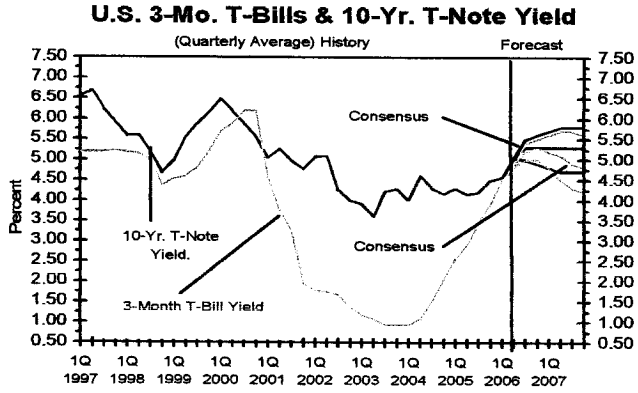
Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

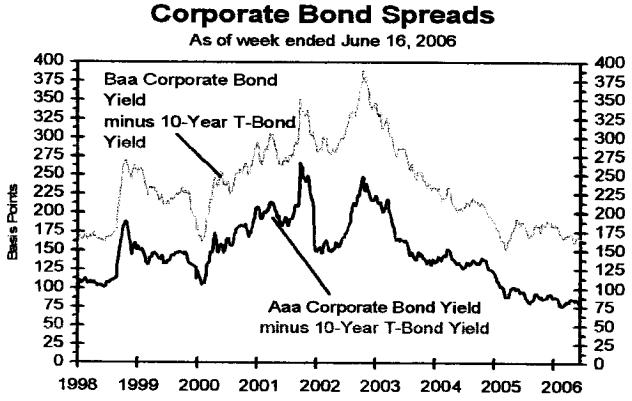
Interest Rates	History: Average For Week Ending June 16	June 9	June 2	May 26	Average For Month May	Apr.	Mar.	Latest Q* 2Q 2006	Consensus Forecasts-Quarterly Avg. 3Q 2006	4Q 2006	1Q 2007	2Q 2007	3Q 2007	4Q 2007
Federal Funds Rate	5.00	4.99	5.01	4.98	4.94	4.79	4.59	*4.91*	5.3	5.4	5.4	5.2	5.1	4.9
Prime Rate	8.00	8.00	8.00	8.00	7.93	7.75	7.53	*7.89*	8.3	8.4	8.4	8.2	8.1	8.0
LIBOR, 3-mo.	5.34	5.28	5.25	5.21	5.18	5.07	4.92	*5.18*	5.5	5.6	5.5	5.4	5.2	5.1
Commercial Paper, 1-mo.	5.10	5.02	4.99	4.98	4.95	4.80	4.61	*4.93*	5.4	5.5	5.4	5.3	5.1	5.0
Treasury bill, 3-mo.	4.89	4.86	4.84	4.83	4.84	4.72	4.63	*4.81*	5.2	5.3	5.2	5.1	4.9	4.8
Treasury bill, 6-mo.	5.16	5.06	5.05	5.01	5.01	4.90	4.79	*5.00*	5.3	5.4	5.4	5.2	5.1	5.0
Treasury bill, 1 yr.	5.13	5.04	5.03	4.99	5.00	4.90	4.77	*4.99*	5.3	5.4	5.4	5.3	5.2	5.1
Treasury note, 2 yr.	5.09	5.00	5.00	4.96	4.97	4.89	4.73	*4.96*	5.3	5.3	5.3	5.2	5.1	5.0
Treasury note, 5 yr.	5.02	4.95	4.99	4.95	5.00	4.90	4.72	*4.96*	5.3	5.3	5.3	5.2	5.2	5.1
Treasury note, 10 yr.	5.05	5.01	5.08	5.05	5.11	4.99	4.72	*5.05*	5.3	5.3	5.3	5.3	5.3	5.3
Treasury note, 30 yr.	5.09	5.07	5.18	5.15	5.20	5.06	4.73	*5.12*	5.3	5.4	5.4	5.4	5.4	5.3
Corporate Aaa bond	5.83	5.81	5.91	5.90	5.95	5.84	5.53	*5.88*	6.2	6.3	6.3	6.3	6.3	6.2
Corporate Baa bond	6.71	6.67	6.75	6.72	6.75	6.68	6.41	*6.71*	7.1	7.2	7.2	7.2	7.2	7.1
State & Local bonds	4.58	4.48	4.57	4.52	4.59	4.58	4.44	*4.57*	4.9	5.0	5.0	5.0	5.0	5.0
Home mortgage rate	6.63	6.62	6.67	6.62	6.60	6.51	6.32	*6.58*	6.8	6.9	6.9	6.9	6.8	6.8

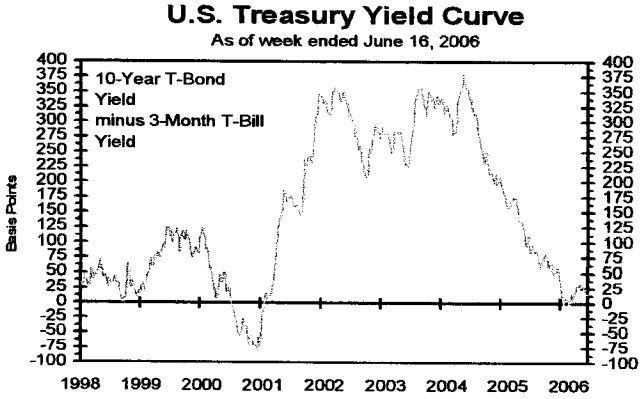
Key Assumptions	History: 3Q 2004	4Q 2004	1Q 2005	2Q 2005	3Q 2005	4Q 2005	1Q 2006	2Q* 2006	Consensus Forecasts-Quarterly Avg. 3Q 2006	4Q 2006	1Q 2007	2Q 2007	3Q 2007	4Q 2007
Major Currency Index	86.5	81.9	81.3	83.5	84.7	85.8	84.9	*82.1*	81.9	81.1	80.6	79.9	79.6	79.5
Real GDP	4.0	3.3	3.8	3.3	4.1	1.7	5.3	*2.9*	2.9	2.9	2.8	2.9	3.0	3.1
GDP Price Index	1.5	2.7	3.1	2.6	3.3	3.5	3.3	*3.0*	2.4	2.4	2.5	2.3	2.2	2.2
Consumer Price Index	2.1	3.6	2.3	3.8	5.5	3.3	2.2	*4.4*	2.7	2.5	2.5	2.4	2.4	2.3

[1]Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Definitions reported here are same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the U.S. Federal Reserve Board's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and4.64 GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS). ***Interest rate data for 2Q 2006 based on historical data through the week ended May 16th. .Data for 2Q 2006 Major Currency Index also is based on data through week ended May 16th. Figures for 2Q 2006 Real GDP, GDP Chained Price Index and Consumer Price Index are consensus forecasts based on a special question survey this month of the panel members.***









United Utility Companies, Inc.
Derivation of Mean Equity Risk Premium Based on a Study
Using Holding Period Returns of Public Utilities

Line No.		Over A Rated Public Utility Bonds AUS Consultants - Utility Services Study (1)
		1
Time Period		1928-2005
1.	Arithmetic Mean Holding Period Returns (2): Standard & Poor's Public Utility Index	11.0 %
2.	Arithmetic Mean Yield on: A Rated Public Utility Bonds	(6.6)
3.	Equity Risk Premium	4.4 %

Notes: (1) S&P Public Utility Index and Moody's Public Utility Bond Average Annual Yields 1928-2005, (US Consultants - Utility Services, 2006).

(2) Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.

United Utility Companies, Inc.
Value Line Adjusted Betas for
the Proxy Group of Six AUS Utility Reports Water Companies and
the Proxy Group of Four Value Line (Standard Edition) Water Companies

	Value Line Adjusted Beta
Proxy Group of Six AUS Utility Reports Water Companies	
American States Water Co.	0.70
Aqua America, Inc.	0.80
Artesian Resources, Corp.	NA
California Water Service Group	0.75
Middlesex Water Company	0.75
York Water Company	0.50
Average	0.70
Proxy Group of Four Value Line (Standard Edition) Water Companies	
American States Water Co.	0.70
Aqua America, Inc.	0.80
California Water Service Group	0.75
Southwest Water Company	0.70
Average	0.74

NA = Not Available

Source of Information: Value Line Investment Survey, April 28, 2006
Standard Edition and Small and Mid-Cap Edition

United Utility Companies, Inc.
of the Capital Asset Pricing Model for
the Proxy Group of Six AUS Utility Reports Water Companies and the
Proxy Group of Four Value Line (Standard Edition) Water Companies

Line No.		Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Four Value Line (Standard Edition) Water Companies
1.	Traditional Capital Asset Pricing Model (1)	10.4 %	10.7 %
2.	Empirical Capital Asset Pricing Model (1)	10.9 %	11.1 %
3.	Conclusion	10.7 %	10.9 %

Notes: (1) From page 2 of this Schedule.

United Utility Companies, Inc.
Indicated Common Equity Cost Rate Through Use
of the Capital Asset Pricing Model

	1	2	3
	Value Line Adjusted Beta	Company-Specific Risk Premium Based on Market Premium of 7.1% (1)	CAPM Result Including Risk-Free Rate of 5.4% (2)
		Traditional Capital Asset Pricing Model (3)	
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	0.70	5.0 %	10.4 %
Aqua America, Inc.	0.80	5.7	11.1
Artesian Resources Corp.	NA	NA	NA
California Water Service Group	0.75	5.3	10.7
Middlesex Water Company	0.75	5.3	10.7
York Water Company	0.50	3.6	9.0
Average	0.70	5.0 %	10.4 % (4)
Proxy Group of Four Value Line (Standard Edition) Water Companies			
American States Water Co.	0.70	5.0 %	10.4 %
Aqua America, Inc.	0.80	5.7	11.1
California Water Service Group	0.75	5.3	10.7
Southwest Water Company	0.70	5.0	10.4
Average	0.74	5.3 %	10.7 % (4)
		Empirical Capital Asset Pricing Model (5)	
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	0.70	5.5 %	10.9 %
Aqua America, Inc.	0.80	6.0	11.4
Artesian Resources Corp.	NA	NA	NA
California Water Service Group	0.75	5.8	11.2
Middlesex Water Company	0.75	5.8	11.2
York Water Company	0.50	4.4	9.8
Average	0.70	5.5 %	10.9 % (4)
Proxy Group of Four Value Line (Standard Edition) Water Companies			
American States Water Co.	0.70	5.5 %	10.9 %
Aqua America, Inc.	0.80	6.0	11.4
California Water Service Group	0.75	5.8	11.2
Southwest Water Company	0.70	5.5	10.9
	0.74	5.7 %	11.1 % (4)

See page 3 for notes.

United Utility Companies, Inc.
Development of the Market-Required Rate of Return on Common Equity Using
the Capital Asset Pricing Model for
the Proxy Group of Six AUS Utility Reports Water Companies and the
Proxy Group of Four Value Line (Standard Edition) Water Companies
Adjusted to Reflect a Forecasted Risk-Free Rate and Market Return

Notes:

(1) From the three previous month-end (Apr. '06 – Jun. '06), as well as a recently available (Jul. 7, 2006), Value Line Summary & Index, a forecasted 3-5 year total annual market return of 12.5% can be derived by averaging the 3-month and spot forecasted total 3-5 year total appreciation, converting it into an annual market appreciation and adding the Value Line average forecasted annual dividend yield.

The 3-5 year average total market appreciation of 51% produces a four-year average annual return of 10.85% ($(1.51^{.25}) - 1$). When the average annual forecasted dividend yield of 1.65% is added, a total average market return of 12.50% (1.65% + 10.85%).

The 3-month and spot forecasted total market return of 12.5% minus the risk-free rate of 5.4% (developed in Note 2) is 7.1% (12.5% - 5.4%). The Ibbotson Associates calculated market premium of 7.1% for the period 1926-2005 results from a total market return of 12.3% less the average income return on long-term U.S. Government Securities of 5.2% (12.3% - 5.2% = 7.1%). This is then averaged with the 7.1% Value Line market premium resulting in a 7.1% market premium. The 7.1% market premium is then multiplied by the beta in column 1 of page 2 of this Schedule.

(2) Average forecast based upon six quarterly estimates of 30-year Treasury Note yields per the consensus of nearly 50 economists reported in the Blue Chip Financial Forecasts dated July 1, 2006 (see page 7 of Schedule PMA-10.) The estimates are detailed below:

	30-Year Treasury Note Yield
Third Quarter 2006	5.3%
Fourth Quarter 2006	5.4
First Quarter 2007	5.4
Second Quarter 2007	5.4
Third Quarter 2007	5.4
Fourth Quarter 2007	5.3
Average	5.4%

(3) The traditional Capital Asset Pricing Model (CAPM) is applied using the following formula:

$R_S = R_F + \beta (R_M - R_F)$

Where R_S = Return rate of common stock
R_F = Risk Free Rate
β = Value Line Adjusted Beta
R_M = Return on the market as a whole

(4) Includes only those indicated common equity cost rates which are above 8.8%, i.e., 200 basis points above the prospective yield of 6.8% on A rated Moody's public utility bonds (page 1 of Schedule PMA-10.)

(5) The empirical CAPM is applied using the following formula:

$R_S = R_F + .25 (R_M - R_F) + .75 \beta (R_M - R_F)$

Where R_S = Return rate of common stock
R_F = Risk-Free Rate
β = Value Line Adjusted Beta
R_M = Return on the market as a whole

Source of Information: Value Line Summary & Index
Blue Chip Financial Forecasts, July 1, 2006
Value Line Investment Survey, April 28, 2006, Standard Edition and Small and Mid-Cap Edition
Stocks, Bonds, Bills and Inflation – Valuation Edition 2006 Yearbook,
Ibbotson Associates, Inc., Chicago, IL

United Utility Companies, Inc
Comparable Earnings Analysis
for a Proxy Group of Ninety-Nine Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of Ninety-Nine Non-Utility Companies Comparable to the Proxy Group of Six AUS Utility Reports Water Companies (1)	Adj. Beta	Unadj. Beta	Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth or Partners' Capital 2001	2002	2003	2004	2005	5-year Average (2) Percent	5-year Average (2) Student's T-Statistic	5-Year Projected (3) Percent	5-Year Projected (3) Student's T-Statistic
21st Century Ins. Group	0.90	0.82	3.4218	0.1014	3.7 %	7.4 %	8.5 %	9.8 %	10.8 %	8.0 %	(0.89)	9.5 %	(1.16)
ABM Industries Inc.	0.85	0.70	3.4004	0.1008	12.5	12.1	8.2	9.5	9.6	10.4	(0.70)	14.5	(0.28)
Abbott Labs.	0.85	0.73	3.0815	0.0913	32.5	30.4	26.6	24.6	27.1	28.2	0.76	22.5	1.12
Aflac Inc.	0.90	0.79	2.9601	0.0877	12.7	12.9	14.8	15.7	16.3	14.5	(0.36)	17.0	0.16
Allergan Inc.	0.85	0.75	3.3913	0.1005	27.1	24.5	42.4	33.2	28.9	31.2	1.01	16.0	(0.02)
Alliant Techsystems	0.75	0.62	3.7204	0.1103	15.5	27.0	28.8	22.4	24.5	23.6	0.39	13.0	(0.54)
Allied Capital Corp.	0.85	0.73	3.2345	0.0959	14.8	14.7	10.0	12.6	33.3	17.1	(0.15)	21.5	0.95
Altria Group	0.80	0.68	3.2823	0.0973	43.6	48.3	36.7	30.7	29.9	37.8 (4)	1.55	26.5	1.82
AmerisourceBergen	0.75	0.62	3.7007	0.1121	4.9	10.8	11.2	10.8	8.3	9.2	(0.80)	9.5	(1.16)
Amgen	0.90	0.83	3.7585	0.1114	24.6	8.7	11.7	14.6	18.1	15.5	(0.28)	20.5	0.77
Annaly Mortgage Mgmt.	0.85	0.73	3.6397	0.1079	13.8	20.3	15.7	14.6	4.9	13.9	(0.41)	16.5	0.07
Apache Corp.	0.90	0.84	3.7404	0.1108	17.3	11.5	19.1	20.4	24.9	18.6	(0.02)	9.0	(1.25)
Apria Healthcare	0.65	0.47	3.7381	0.1108	30.2	29.4	31.7	28.5	25.6	29.1	0.84	14.0	(0.37)
Archer Daniels Midl'd	0.75	0.62	3.2698	0.0969	6.1	6.8	6.2	9.7	10.9	7.9	(0.90)	12.5	(0.63)
Arrow Int'l	0.65	0.46	3.1531	0.0934	14.3	13.1	13.3	12.5	8.3	12.3	(0.54)	11.0	(0.89)
Ball Corp.	0.90	0.82	3.2079	0.0951	21.0	32.3	29.4	27.7	34.4	29.0	0.83	20.5	0.77
Bard (C.R.)	0.80	0.65	2.9666	0.0879	18.2	20.1	19.5	19.3	21.3	19.7	0.07	21.5	0.95
Barnes Group	0.90	0.77	3.4404	0.1020	9.6	13.0	10.3	10.8	13.5	11.4	(0.61)	13.5	(0.46)
Biomet	0.75	0.60	3.5298	0.1046	17.2	20.4	22.3	22.5	24.8	21.4	0.20	22.5	1.12
Blyth Inc.	0.85	0.71	3.3917	0.1005	16.5	16.9	17.0	19.0	12.2	16.3	(0.21)	12.5	(0.63)
Bob Evans Farms	0.85	0.75	3.3680	0.0998	12.5	13.4	11.4	5.7	6.5 E	9.9	(0.74)	10.5	(0.98)
Brown & Brown	0.85	0.77	3.6516	0.1082	30.8	21.2	22.2	20.6	19.7	22.9	0.33	16.5	0.07
Buckle (The)Inc.	0.90	0.83	3.5935	0.1065	14.1	12.1	11.3	13.0	17.3	13.6	(0.43)	9.5	(1.16)
Casey's Gen'l Stores	0.85	0.76	3.4927	0.1035	8.6	9.8	8.3	9.1	11.5 E	9.5	(0.77)	12.0	(0.72)
ChoicePoint Inc.	0.90	0.83	3.4396	0.1019	16.3	19.1	16.1	15.0	16.0	16.5	(0.20)	13.5	(0.46)
Church & Dwight	0.60	0.37	3.1342	0.0929	19.1	19.4	17.9	15.9	17.6	18.0	(0.07)	13.5	(0.46)
Coca-Cola Bottling	0.70	0.49	3.2237	0.0955	38.5	69.0	58.5	33.9	30.5	46.1 (4)	2.23	36.0 (4)	3.49
Corn Products Int'l	0.85	0.73	3.3261	0.0986	6.7	7.6	8.3	8.7	7.4	7.7	(0.92)	10.5	(0.98)
Costco Wholesale	0.85	0.76	3.4388	0.1019	12.3	12.3	11.0	11.6	11.1	11.7	(0.59)	11.0	(0.89)
Curtiss-Wright	0.80	0.64	3.4317	0.1017	11.6	10.1	10.9	11.3	11.8	11.1	(0.64)	12.0	(0.72)
DaVita Inc.	0.85	0.71	3.5592	0.1055	19.5	210.3	53.2	41.5	24.4	89.8 (4)	4.17	19.5	0.60
Del Monte Foods	0.70	0.53	3.3016	0.0978	200.8	14.1	16.6	12.6	12.5 E	51.3 (4)	2.66	11.0	(0.89)
Dionex Corp.	0.90	0.79	3.1433	0.0931	24.5	21.0	19.7	22.6	24.9	22.5	0.30	22.0	1.04
ESCO Technologies	0.90	0.83	3.7726	0.1118	6.1	7.1	12.0	12.6	13.2	10.2	(0.71)	15.5	(0.11)
Edwards Lifesciences	0.75	0.61	3.2003	0.0948	13.7	15.4	15.2	16.6	18.1	15.8	(0.25)	16.0	(0.02)
Energizer Holdings	0.80	0.65	3.4767	0.1030	13.2	26.4	21.0	45.5	63.2	33.9	1.23	22.5	1.12
Expeditors Int'l	0.90	0.83	3.6930	0.1094	23.5	21.5	18.9	19.3	21.6	21.0	0.17	23.0	1.21
Fannie Mae	0.85	0.77	2.9166	0.0864	29.6	38.6	31.7	26.0 E	21.5 E	29.5	0.87	11.5	(0.81)
Fisher Scientific	0.90	0.84	3.3061	0.0980	235.6	72.4	24.9	6.9	8.2	69.6 (4)	4.16	11.0	(0.89)
Gallagher (Arthur J.)	0.90	0.80	3.2558	0.0965	33.7	26.5	26.7	24.8	22.4	26.8	0.65	20.0	0.68
Gen'l Dynamics	0.80	0.68	3.0047	0.0890	20.8	20.2	16.8	16.8	18.0	18.5	(0.03)	14.0	(0.37)
HCA Inc.	0.65	0.40	3.7321	0.1106	21.9	21.9	21.5	28.3	29.3	24.6	0.47	18.5	0.42
HNI Corp.	0.80	0.67	2.8977	0.0859	15.2	14.1	13.8	17.1	23.6	16.8	(0.17)	18.0	0.33
Hancock Holding	0.85	0.75	3.0057	0.0891	9.7	12.0	12.6	12.5	11.3	11.6	(0.60)	15.0	(0.19)
Harland (John H.)	0.75	0.55	3.5258	0.1045	19.3	22.4	21.9	20.1	23.7	21.5	0.21	17.5	0.25
Health Mgmt. Assoc.	0.75	0.55	3.5234	0.1044	15.6	18.3	17.3	16.4	15.4	16.6	(0.19)	14.5	(0.28)
IDEXX Labs.	0.75	0.60	3.5834	0.1062	12.5	13.8	14.9	18.8	21.5	18.3	(0.21)	18.5	0.42
Interactive Data	0.90	0.79	2.9367	0.0870	0.7	9.2	9.5	9.4	11.0	8.0	(0.89)	11.5	(0.81)
Invacare Corp.	0.85	0.71	3.2005	0.0948	15.8	13.5	11.6	10.0	7.2	11.6	(0.60)	10.5	(0.98)
Kellwood Co.	0.90	0.80	3.5492	0.1052	7.8	9.2	11.3	9.7	7.5	9.1	(0.80)	9.5	(1.16)
Kimball Int'l 'B'	0.80	0.67	3.6232	0.1074	8.2	5.8	1.3	5.0	4.5	5.0	(1.14)	10.5	(0.98)
Kohl's Corp.	0.90	0.78	3.7392	0.1108	17.8	18.3	14.1	14.7	14.1	15.8	(0.25)	16.5	0.07
Lance Inc.	0.80	0.66	3.6797	0.1090	13.4	11.0	13.1	12.5	11.4	12.3	(0.54)	17.0	0.16
Lauder (Estee)	0.90	0.82	3.3402	0.0990	20.3	15.8	18.7	21.7	25.6	20.4	0.12	35.0 (4)	3.32
Lilly (Eli)	0.85	0.76	3.0488	0.0903	42.4	32.7	28.6	28.1	29.1	32.2	1.09	27.5 (4)	2.00
Lincoln Elec Hldgs.	0.90	0.83	3.3388	0.0989	16.8	17.2	11.7	14.8	17.4	15.6	(0.27)	15.5	(0.11)
Lockheed Martin	0.70	0.52	2.9876	0.0885	10.8	18.0	15.6	18.0	21.8	16.8	(0.17)	20.5	0.77
MacDermid Inc.	0.90	0.80	3.4519	0.1023	9.1	17.0	20.3	17.5	15.1	15.8	(0.25)	16.5	0.07
Manor Care	0.90	0.79	3.6831	0.1091	6.5	13.0	13.6	17.1	20.8	14.2	(0.39)	20.5	0.77
Mattel Inc.	0.75	0.62	3.3284	0.0986	20.5	24.6	24.9	21.3	23.1	22.9	0.33	22.0	1.04
Matthews Int'l	0.75	0.62	3.4195	0.1013	21.0	21.1	17.5	18.0	17.9	19.1	0.02	14.5	(0.28)
Medco Health Solutions	0.65	0.71	3.7486	0.2339	4.1	5.4	8.4	8.4	7.8	6.8	(0.99)	11.0	(0.89)
Medtronic Inc.	0.70	0.54	2.9656	0.0879	23.0	21.8	22.0	21.7	28.6	23.4	0.37	23.0	1.21
NIKE Inc. 'B'	0.90	0.80	2.9172	0.0864	16.9	17.4	18.5	19.8	21.5	18.8	(0.01)	15.0	(0.19)
Newell Rubbermaid	0.90	0.84	3.3105	0.0981	13.1	20.5	20.2	21.6	25.8	20.2	0.11	22.5	1.12
Northrop Grumman	0.70	0.51	3.0038	0.0890	5.5	4.8	4.8	6.4	7.4	5.8	(1.07)	12.0	(0.72)

United Utility Companies, Inc
Comparable Earnings Analysis
for a Proxy Group of Ninety-Nine Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of Ninety-Nine Non-Utility Companies Comparable to the Proxy Group of Six AUS Utility Reports Water Companies (1)	Adj. Beta	Unadj. Beta	Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth or Partners' Capital 2001	2002	2003	2004	2005	5-year Average (2) Percent	5-year Average (2) Student's T-Statistic	5-Year Projected (3) Percent	5-Year Projected (3) Student's T-Statistic
OSI Restaurant Partners	0.90	0.84	3.0631	0.0908	15.0	15.6	16.9	14.5	13.5	15.1	(0.31)	15.0	(0.19)
Oshkosh Truck	0.90	0.78	3.6852	0.1092	14.7	14.5	14.6	17.7	19.6	16.2	(0.22)	15.5	(0.11)
Owens & Minor	0.90	0.82	3.2455	0.0962	15.8	16.1	13.1	13.1	13.0	14.6	(0.35)	14.0	(0.37)
Pacific Cap. Bancorp	0.85	0.77	3.1809	0.0943	17.2	20.2	19.0	19.1	15.5	18.2	(0.06)	8.0	(1.42)
Pactiv Corp.	0.90	0.81	3.1186	0.0924	9.8	24.5	21.7	19.7	17.7	18.7	(0.02)	16.5	0.07
Papa John's Int'l	0.75	0.61	3.1545	0.0935	24.2	38.4	23.0	28.0	25.7	27.9	0.74	16.0	(0.02)
Pepsi Bottling Group	0.80	0.63	3.7267	0.1104	17.5	23.5	22.4	23.4	22.8	21.9	0.25	23.5	1.30
PepsiAmericas Inc.	0.80	0.65	2.9129	0.0863	6.3	9.4	9.8	10.8	12.0	9.7	(0.75)	10.5	(0.98)
Quest Diagnostics	0.90	0.78	3.5547	0.1053	14.1	18.1	18.2	22.2	19.8	18.5	(0.03)	17.5	0.25
RLI Corp.	0.75	0.58	3.0417	0.0901	9.0	8.4	10.6	10.3	14.0	10.5	(0.69)	11.0	(0.89)
Raicorp Holdings	0.55	0.28	3.3832	0.1003	9.9	12.3	13.0	15.0	13.8	12.8	(0.50)	12.5	(0.63)
Raytheon Co.	0.80	0.66	3.6948	0.1095	4.0	8.9	5.3	6.0	8.8	6.6	(1.01)	12.0	(0.72)
Regis Corp.	0.90	0.83	3.4202	0.1014	15.6	15.8	15.4	15.3	13.6	15.1	(0.31)	13.0	(0.54)
Ruddick Corp.	0.85	0.77	2.9323	0.0869	10.8	12.3	12.1	11.8	11.3	11.7	(0.59)	12.0	(0.72)
Schein (Henry)	0.80	0.63	3.6974	0.1096	12.8	13.7	13.9	12.3	13.2	13.2	(0.47)	16.0	(0.02)
Scotts Miracle-Gro	0.90	0.84	2.9222	0.0866	3.1	17.0	14.3	11.5	9.8	11.1	(0.64)	15.0	(0.19)
Sensient Techn.	0.90	0.81	3.1636	0.0937	15.1	16.2	13.4	11.5	9.1	13.1	(0.48)	9.5	(1.16)
ServiceMaster Co.	0.85	0.72	2.8575	0.0847	9.4	14.0	19.4	17.4	17.1	15.5	(0.28)	18.5	0.42
Smithfield Foods	0.85	0.75	3.6151	0.1071	14.4	2.0	10.1	15.7	9.0 E	10.2	(0.71)	10.0	(1.07)
Smucker (J.M.)	0.70	0.50	3.0639	0.0908	12.2	9.3	10.0	8.9	8.5 E	9.8	(0.75)	10.0	(1.07)
Sonic Corp.	0.70	0.51	3.5957	0.1066	19.4	20.7	19.7	18.8	19.6	19.6	0.06	15.0	(0.19)
Speedway Motorsports	0.75	0.59	3.1447	0.0932	12.9	12.5	12.4	12.7	14.1	12.9	(0.49)	11.5	(0.81)
Stryker Corp.	0.80	0.65	3.1797	0.0942	25.7	23.8	21.0	21.3	22.1	22.8	0.32	25.0	1.56
Thornburg Mtg.	0.75	0.62	3.1900	0.0945	11.0	14.4	14.2	13.0	12.8	13.1	(0.48)	12.0	(0.72)
Topps Co.	0.90	0.81	3.6416	0.1079	14.7	8.6	6.0	5.9	2.6	7.6	(0.93)	10.5	(0.98)
Toro Co.	0.95	0.89	2.9780	0.0883	14.8	17.4	18.5	26.0	29.2	21.2	0.19	33.0 (4)	2.96
UnitedHealth Group	0.65	0.41	3.2053	0.0950	23.5	30.5	35.6	24.1	18.6	26.5	0.62	29.0 (4)	2.26
Varian Medical Sys.	0.85	0.72	3.7067	0.1098	17.2	19.8	23.2	27.3	31.3	23.8	0.40	23.5	1.30
Wabtec Corp.	0.85	0.74	3.5093	0.1040	9.1	8.8	9.0	10.3	15.2	10.5	(0.69)	16.0	(0.02)
Walgreen Co.	0.80	0.66	2.9588	0.0877	16.7	16.3	16.1	16.5	17.5	16.6	(0.19)	18.0	0.33
Wendy's Int'l	0.75	0.55	3.3108	0.0981	18.8	15.1	13.4	13.6	12.0	14.6	(0.35)	11.5	(0.81)
West Pharmac. Svcs.	0.75	0.61	3.7551	0.1113	11.8	6.4	10.6	13.6	13.6	11.2	(0.63)	14.5	(0.28)
Zimmer Holdings	0.75	0.61	3.6316	0.1100	242.4	70.4	9.3	15.2	16.5	70.8 (4)	4.25	14.5	(0.28)
Average for the Non-Utility Group	0.82	0.69	3.3489	0.1005									
Average for the Proxy Group of Six AUS Utility Reports Water Companies	0.72	0.54	3.3355 (5)	0.0988									
Mean										16.7%		15.3%	
Conclusion (6)											16.0% (6)		
Conservative Mean (7)										14.2%		13.8%	
Conservative Conclusion (8)											13.9% (8)		

See pages 5 and 6 for notes.

United Utility Companies, Inc
Comparable Earnings Analysis
for a Proxy Group of One Hundred Non-Utility Companies Comparable to the
Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of One Hundred Non-Utility Companies Comparable to the Proxy Group of Four Value Line (Standard Edition) Water Companies (9)	Adj. Beta	Unadj. Beta	Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth or Partners' Capital 2001	2002	2003	2004	2005	5-year Average (2) Percent	5-year Average (2) Student's T-Statistic	5-Year Projected (3) Percent	5-Year Projected (3) Student's T-Statistic
21st Century Ins. Group	0.90	0.82	3.4218	0.1014	3.7 %	7.4 %	8.5 %	9.8 %	10.8 %	8.0 %	(0.91)	9.5 %	(1.14)
ABM Industries Inc.	0.85	0.70	3.4004	0.1008	12.5	12.1	8.2	9.5	9.6	10.4	(0.71)	14.5	(0.29)
Abbott Labs.	0.85	0.73	3.0815	0.0913	32.5	30.4	26.6	24.6	27.1	28.2	0.75	22.5	1.07
Aflac Inc.	0.90	0.79	2.9601	0.0877	12.7	12.9	14.8	15.7	16.3	14.5	(0.38)	17.0	0.14
Allergan Inc.	0.85	0.75	3.3913	0.1005	27.1	24.5	42.4	33.2	28.9	31.2	0.99	16.0	(0.03)
Allied Capital Corp.	0.85	0.73	3.2345	0.0959	14.8	14.7	10.0	12.6	33.3	17.1	(0.16)	21.5	0.90
Altria Group	0.80	0.68	3.2823	0.0973	43.6	48.3	36.7	30.7	29.9	37.8 (4)	1.53	26.5	1.75
Anadarko Petroleum	0.95	0.87	3.4454	0.1021	20.5	11.8	14.4	17.2	22.3	17.2	(0.16)	11.0	(0.88)
Annaly Mortgage Mgmt.	0.85	0.73	3.6397	0.1079	13.8	20.3	15.7	14.6	4.9	13.9	(0.43)	16.5	0.05
Archer Daniels Midl'd	0.75	0.62	3.2698	0.0969	6.1	6.8	6.2	9.7	10.9	7.9	(0.92)	12.5	(0.63)
Arrow Int'l	0.65	0.46	3.1531	0.0934	14.3	13.1	13.3	12.5	8.3	12.3	(0.56)	11.0	(0.88)
Ball Corp.	0.90	0.82	3.2079	0.0951	21.0	32.3	29.4	27.7	34.4	29.0	0.81	20.5	0.73
Bard (C.R.)	0.80	0.65	2.9666	0.0879	18.2	20.1	19.5	19.3	21.3	19.7	0.05	21.5	0.90
Barnes Group	0.90	0.77	3.4404	0.1020	9.6	13.0	10.3	10.8	13.5	11.4	(0.63)	13.5	(0.46)
Biomet	0.75	0.60	3.5298	0.1046	17.2	20.4	22.3	22.5	24.8	21.4	0.19	22.5	1.07
Blyth Inc.	0.85	0.71	3.3917	0.1005	16.5	16.9	17.0	19.0	12.2	16.3	(0.23)	12.5	(0.63)
Bob Evans Farms	0.85	0.75	3.3680	0.0998	12.5	13.4	11.4	5.7	6.5 E	9.9	(0.75)	10.5	(0.97)
Brown & Brown	0.85	0.77	3.6516	0.1082	30.8	21.2	22.2	20.6	19.7	22.9	0.31	16.5	0.05
Buckle (The)Inc.	0.90	0.83	3.5935	0.1065	14.1	12.1	11.3	13.0	17.3	13.6	(0.45)	9.5	(1.14)
C.H. Robinson	0.95	0.88	3.1237	0.0926	23.6	22.6	22.1	22.1	26.1	23.3	0.34	16.5	0.05
Casey's Gen'l Stores	0.85	0.76	3.4927	0.1035	8.6	9.8	8.3	9.1	11.5 E	9.5	(0.79)	12.0	(0.71)
ChoicePoint Inc.	0.90	0.83	3.4396	0.1019	16.3	19.1	16.1	15.0	16.0	16.5	(0.21)	13.5	(0.46)
Church & Dwight	0.60	0.37	3.1342	0.0929	19.1	19.4	17.9	15.9	17.6	18.0	(0.09)	13.5	(0.46)
Coca-Cola Bottling	0.70	0.49	3.2237	0.0955	38.5	69.0	58.5	33.9	30.5	46.1 (4)	2.21	36.0 (4)	3.36
Corn Products Int'l	0.85	0.73	3.3261	0.0986	6.7	7.6	8.3	8.7	7.4	7.7	(0.93)	10.5	(0.97)
Costco Wholesale	0.85	0.76	3.4388	0.1019	12.3	12.3	11.0	11.6	11.1	11.7	(0.61)	11.0	(0.88)
Curtiss-Wright	0.80	0.64	3.4317	0.1017	11.6	10.1	10.9	11.3	11.8	11.1	(0.66)	12.0	(0.71)
DaVita Inc.	0.85	0.71	3.5592	0.1055	19.5	210.3	53.2	41.5	24.4	69.8 (4)	4.16	19.5	0.56
Del Monte Foods	0.70	0.53	3.3016	0.0978	200.8	14.1	16.6	12.6	12.5 E	51.3 (4)	2.64	11.0	(0.88)
Diebold Inc.	0.95	0.87	3.2070	0.0950	15.6	16.8	15.2	14.6	11.8	14.8	(0.35)	15.5	(0.12)
Dionex Corp.	0.90	0.79	3.1433	0.0931	24.5	21.0	19.7	22.6	24.9	22.5	0.28	22.0	0.98
Donaldson Co.	0.95	0.88	2.9527	0.0875	23.7	22.7	21.3	19.4	21.1	21.6	0.20	16.5	0.05
Edwards Lifesciences	0.75	0.61	3.2003	0.0948	13.7	15.4	15.2	16.6	18.1	15.8	(0.27)	16.0	(0.03)
Energizer Holdings	0.80	0.65	3.4767	0.1030	13.2	26.4	21.0	45.5	63.2	33.9	1.21	22.5	1.07
Fannie Mae	0.85	0.77	2.9166	0.0864	29.6	38.6	31.7	26.0 E	21.5 E	29.5	0.85	11.5	(0.80)
Fisher Scientific	0.90	0.84	3.3061	0.0980	235.6	72.4	24.9	6.9	8.2	69.6 (4)	4.14	11.0	(0.88)
Gallagher (Arthur J.)	0.90	0.80	3.2558	0.0965	33.7	26.5	26.7	24.8	22.4	26.8	0.63	20.0	0.64
Gen'l Dynamics	0.80	0.68	3.0047	0.0890	20.8	20.2	16.8	16.8	18.0	18.5	(0.05)	14.0	(0.37)
Golden West Fin'l	0.90	0.80	2.8366	0.0841	11.6	16.1	18.8	18.8	14.4	15.9	(0.26)	13.0	(0.54)
Graco Inc.	0.95	0.88	2.8572	0.0847	37.6	30.8	51.1	47.1	43.7	42.1	1.89	34.0 (4)	3.02
HNI Corp.	0.80	0.67	2.8977	0.0859	15.2	14.1	13.8	17.1	23.6	16.8	(0.19)	18.0	0.31
Hancock Holding	0.85	0.75	3.0057	0.0891	9.7	12.0	12.6	12.5	11.3	11.6	(0.61)	15.0	(0.20)
Harland (John H.)	0.75	0.55	3.5258	0.1045	19.3	22.4	21.9	20.1	23.7	21.5	0.20	17.5	0.22
Health Mgmt. Assoc.	0.75	0.55	3.5234	0.1044	15.6	18.3	17.3	16.4	15.4	16.6	(0.20)	14.5	(0.29)
Hillenbrand Inds.	0.75	0.58	2.8377	0.0841	17.7	19.8	21.1	17.5	18.8	19.0	(0.01)	18.0	0.31
IDEXX Labs.	0.75	0.60	3.5834	0.1062	12.5	13.8	14.9	18.8	21.5	16.3	(0.23)	18.5	0.39
IHOP Corp.	0.95	0.86	3.3763	0.1001	12.9	11.2	11.1	12.0	14.9	12.4	(0.55)	16.0	(0.03)
Int'l Speedway 'A'	0.70	0.54	2.8425	0.0842	8.5	17.1	15.0	14.7	15.3	14.1	(0.41)	11.0	(0.88)
Interactive Data	0.90	0.79	2.9367	0.0870	0.7	9.2	9.5	9.4	11.0	8.0	(0.91)	11.5	(0.80)
Invacare Corp.	0.85	0.71	3.2005	0.0948	15.8	13.5	11.6	10.0	7.2	11.6	(0.61)	10.5	(0.97)
Kellwood Co.	0.90	0.80	3.5492	0.1052	7.8	9.2	11.3	9.7	7.5	9.1	(0.82)	9.5	(1.14)
Kimball Int'l 'B'	0.80	0.67	3.6232	0.1074	8.2	5.8	1.3	5.0	4.5	5.0	(1.16)	10.5	(0.97)
Lancaster Colony	0.80	0.64	2.8296	0.0839	19.6	16.6	16.1	13.4	13.0	15.7	(0.28)	15.5	(0.12)
Lauder (Estee)	0.90	0.82	3.3402	0.0990	20.3	15.8	18.7	21.7	25.6	20.4	0.11	35.0 (4)	3.19
Lilly (Eli)	0.85	0.76	3.0488	0.0903	42.4	32.7	28.6	28.1	29.1	32.2	1.07	27.5	1.92
Lincoln Elec Hldgs.	0.90	0.83	3.3388	0.0989	16.8	17.2	11.7	14.8	17.4	15.6	(0.29)	15.5	(0.12)
Liz Claiborne	0.90	0.84	2.8782	0.0853	19.1	18.5	17.7	17.3	15.9	17.7	(0.11)	13.0	(0.54)
Lockheed Martin	0.70	0.52	2.9876	0.0885	10.8	18.0	15.6	16.0	21.8	16.8	(0.19)	20.5	0.73
MacDermid Inc.	0.90	0.80	3.4519	0.1023	9.1	17.0	20.3	17.5	15.1	15.8	(0.27)	16.5	0.05
Mattel Inc.	0.75	0.62	3.3284	0.0986	20.5	24.6	24.9	21.3	23.1	22.9	0.31	22.0	0.98
Matthews Int'l	0.75	0.62	3.4195	0.1013	21.0	21.1	17.5	18.0	17.9	19.1	-	14.5	(0.29)
Medtronic Inc.	0.70	0.54	2.9656	0.0879	23.0	21.8	22.0	21.7	28.6	23.4	0.35	23.0	1.15
Millipore Corp.	0.95	0.88	3.6006	0.1067	19.1	28.7	20.4	16.5	16.8	20.3	0.10	19.5	0.56
NIKE Inc. 'B'	0.80	0.80	2.9172	0.0864	16.9	17.4	18.5	19.8	21.5	18.8	(0.02)	15.0	(0.20)
New Plan Excel R'lty	0.80	0.64	2.8224	0.0836	7.0	7.8	8.1	8.2	8.0	7.8	(0.93)	10.5	(0.97)
Newell Rubbermaid	0.90	0.84	3.3105	0.0981	13.1	20.5	20.2	21.6	25.8	20.2	0.09	22.5	1.07

United Utility Companies, Inc
Comparable Earnings Analysis
for a Proxy Group of One Hundred Non-Utility Companies Comparable to the
Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of One Hundred Non-Utility Companies Comparable to the Proxy Group of Four Value Line (Standard Edition) Water Companies (9)	Adj. Beta	Unadj. Beta	Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth or Partners' Capital 2001	2002	2003	2004	2005	5-year Average (2) Percent	5-year Average (2) Student's T-Statistic	5-Year Projected (3) Percent	5-Year Projected (3) Student's T-Statistic
Northrop Grumman	0.70	0.51	3.0038	0.0890	5.5	4.8	4.8	6.4	7.4	5.8	(1.09)	12.0	(0.71)
OSI Restaurant Partners	0.90	0.84	3.0631	0.0908	15.0	15.6	16.9	14.5	13.5	15.1	(0.33)	15.0	(0.20)
Owens & Minor	0.90	0.82	3.2455	0.0962	15.8	18.1	13.1	13.1	13.0	14.6	(0.37)	14.0	(0.37)
Pacific Cap. Bancorp	0.85	0.77	3.1809	0.0943	17.2	20.2	19.0	19.1	15.5	18.2	(0.07)	8.0	(1.39)
Pactiv Corp.	0.90	0.81	3.1186	0.0924	9.8	24.5	21.7	19.7	17.7	18.7	(0.03)	16.5	0.05
Papa John's Int'l	0.75	0.61	3.1545	0.0935	24.2	38.4	23.0	26.0	25.7	27.9	0.72	16.0	(0.03)
PepsiAmericas Inc.	0.80	0.65	2.9129	0.0863	6.3	9.4	9.8	10.8	12.0	9.7	(0.77)	10.5	(0.97)
Quest Diagnostics	0.90	0.78	3.5547	0.1053	14.1	18.1	18.2	22.2	19.8	18.5	(0.05)	17.5	0.22
RLI Corp.	0.75	0.58	3.0417	0.0901	9.0	8.4	10.6	10.3	14.0	10.5	(0.70)	11.0	(0.88)
Regis Corp.	0.90	0.83	3.4202	0.1014	15.6	15.8	15.4	15.3	13.6	15.1	(0.33)	13.0	(0.54)
Reynolds & Reynolds	0.95	0.88	3.1355	0.0929	20.9	25.4	26.0	19.7	22.5 E	22.9	0.31	26.5	1.75
Ruddick Corp.	0.85	0.77	2.9323	0.0869	10.8	12.3	12.1	11.8	11.3	11.7	(0.61)	12.0	(0.71)
Scotts Miracle-Gro	0.90	0.84	2.9222	0.0866	3.1	17.0	14.3	11.5	9.8	11.1	(0.66)	15.0	(0.20)
Selective Ins. Group	0.95	0.87	3.0277	0.0897	4.5	6.1	7.7	12.8	14.0	9.0	(0.83)	14.5	(0.29)
Sensient Techn.	0.90	0.81	3.1636	0.0937	15.1	16.2	13.4	11.5	9.1	13.1	(0.49)	9.5	(1.14)
ServiceMaster Co.	0.85	0.72	2.8575	0.0847	9.4	14.0	19.4	17.4	17.1	15.5	(0.30)	18.5	0.39
Smithfield Foods	0.85	0.75	3.6151	0.1071	14.4	2.0	10.1	15.7	9.0 E	10.2	(0.73)	10.0	(1.05)
Smucker (J.M.)	0.70	0.50	3.0639	0.0908	12.2	9.3	10.0	8.9	8.5 E	9.8	(0.76)	10.0	(1.05)
Sonic Corp.	0.70	0.51	3.5957	0.1066	19.4	20.7	19.7	18.8	19.6	19.6	0.04	15.0	(0.20)
Speedway Motorsports	0.75	0.59	3.1447	0.0932	12.9	12.5	12.4	12.7	14.1	12.9	(0.51)	11.5	(0.80)
Standex Int'l	0.95	0.85	3.4403	0.1019	14.5	11.4	11.1	13.5	14.4	13.0	(0.50)	14.5	(0.29)
Stanley Works	0.95	0.86	3.3919	0.1005	24.2	20.7	18.8	20.2	19.0	20.6	0.12	16.0	(0.03)
Stryker Corp.	0.80	0.65	3.1797	0.0942	25.7	23.8	21.0	21.3	22.1	22.8	0.30	25.0	1.49
Tennant Co.	0.95	0.87	3.1645	0.0938	3.1	8.0	8.5	8.5	11.9	8.0	(0.91)	12.5	(0.63)
Thornburg Mtg.	0.75	0.62	3.1900	0.0945	11.0	14.4	14.2	13.0	12.8	13.1	(0.49)	12.0	(0.71)
Topps Co.	0.90	0.81	3.6416	0.1079	14.7	8.6	6.0	5.9	2.6	7.6	(0.94)	10.5	(0.97)
Toro Co.	0.95	0.89	2.9780	0.0883	14.8	17.4	18.5	26.0	29.2	21.2	0.17	33.0 (4)	2.85
UnitedHealth Group	0.65	0.41	3.2053	0.0950	23.5	30.5	35.6	24.1	18.8	26.5	0.61	29.0 (4)	2.17
Wabtec Corp.	0.85	0.74	3.5093	0.1040	9.1	8.8	9.0	10.3	15.2	10.5	(0.70)	16.0	(0.03)
Walgreen Co.	0.80	0.66	2.9588	0.0877	16.7	16.3	16.1	16.5	17.5	16.6	(0.20)	18.0	0.31
Waste Connections	0.95	0.87	3.3554	0.0994	10.3	12.8	12.2	10.9	12.0	11.6	(0.61)	16.0	(0.03)
Waste Management	0.95	0.86	2.9301	0.0868	13.6	15.2	13.2	13.7	14.3	14.0	(0.42)	21.5	0.90
Wendy's Int'l	0.75	0.55	3.3108	0.0981	18.8	15.1	13.4	13.6	12.0	14.6	(0.37)	11.5	(0.80)
Zimmer Holdings	0.75	0.61	3.6316	0.1100	242.4	70.4	9.3	15.2	16.5	70.8 (4)	4.24	14.5	(0.29)
Average for the Non-Utility Group	0.84	0.72	3.2324	0.0958									
Average for the Proxy Group of Four Value Line (Standard Edition) Water Companies	0.76	0.60	3.2463 (10)	0.0962									
Mean										16.8%		15.3%	
Conclusion (6)											16.1% (6)		
Conservative Mean (7)										14.4%		13.8%	
Conservative Conclusion (8)											14.1% (8)		

See pages 5 and 6 for notes.

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E = Estimated

Notes: (1) The criteria for selection of the proxy group of ninety-nine non-utility companies was that the non-utility companies be domestic and have a meaningful rate of return on book common equity, net worth, or partners' capital for each of the five years ended 2005 or projected 2009 - 2011 as reported in Value Line Investment Survey (Standard Edition). The proxy group of ninety-nine non-utility companies was selected based upon the proxy group of seven AUS Utility Reports water companies' unadjusted beta range of 0.24 - 0.84 and standard error of the regression range of 2.8957 – 3.7753. These ranges are based upon plus or minus three standard deviations of the unadjusted beta and standard error of the regression as detailed in Ms. Ahern's direct testimony. Plus or minus three standard deviations captures 99.73% of the distribution of unadjusted betas and standard errors of the regression.

(2) Ending 2005.

(3) 2009 - 2011.

(4) The Student's T-statistic associated with these returns exceeds 1.96 at the 95% level of confidence. Therefore, they have been excluded, as outliers, to arrive at proper mean historical and projected returns as fully explained in Ms. Ahern's testimony.

(5) The standard deviation of group of seven AUS Utility Reports water companies' standard error of the regression is 0.1466. The standard deviation of the standard error of the regression is calculated as follows:

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

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

$$\text{Thus, } 0.1466 = \frac{3.3355}{/518} = \frac{3.3355}{22.7596}$$

(6) Mid-point of the arithmetic mean of the historical five year average and five year projected rate of return on book common equity, net worth, or partners' capital.

(7) Arithmetic mean of historical five year rates of return and five year projected rates of return on net worth, common equity or partners' capital excluding those 20% and greater as well as those 8.8% or less, i.e., 200 basis points above the prospective yield of 6.8% on A rated Moody's public utility bonds (from page 1 of Schedule PMA-10.)

(8) Mid-point of the arithmetic mean of historical five year rates of return and five year projected rates of return on net worth, common equity or partners' capital excluding those 20% and greater as well as those 8.8% or less, i.e., 200 basis points above the prospective yield of 6.8% on A rated Moody's public utility bonds (from page 1 of Schedule PMA-10.)

(9) The criteria for selection of the proxy group of one hundred non-utility companies was that the non-utility companies be domestic and have a meaningful rate of return on book common equity, net worth, or partners' capital for each of the five years ended 2005 or projected 2009 - 2011 as reported in Value Line Investment Survey (Standard Edition). The proxy group of one hundred non-utility companies was selected based upon the proxy group of four Value

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Line (Standard Edition) water companies' unadjusted beta range of 0.31 - 0.89 and standard error of the regression range of 2.8185– 3.6741. These ranges are based upon plus or minus three standard deviations of the unadjusted beta and standard error of the regression as detailed in Ms. Ahern's direct testimony. Plus or minus three standard deviations captures 99.73% of the distribution of unadjusted betas and standard errors of the regression.

(10) The standard deviation of the proxy group of four Value Line (Standard Edition) water companies' standard error of the regression is 0.1426 (3.2463 / 22.7596).

Source of Information: Value Line, Inc., June 16, 2006
Value Line Investment Survey (Standard Edition)