Exhibit No.:	
Issues:	Rate of Return on Equity
Witness:	Pauline M. Ahern
Exhibit Type:	Direct
Sponsoring Party:	Missouri American Water Company
Case Nos.:	WR-2008-XXXX
	SR-2008-XXXX
Date:	

PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

CASE NOS. WR-2008-XXXX
SR-2008-XXXX

DIRECT TESTIMONY

OF

PAULINE M. AHERN, CRRA

ON BEHALF OF

MISSOURI AMERICAN WATER COMPANY

JEFFERSON CITY, MISSOURI

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

IN THE MATTER OF MISSOURI-AMERICAN WATER COMPANY FOR AUTHORITY TO FILE TARIFFS REFLECTING INCREASED RATES FOR WATER AND SEWER SERVICE	)))))	**CASE NO. WR-2008-XXXX** **CASE NO. SR-2008-XXX**

AFFIDAVIT OF PAULINE M. AHERN

Pauline M. Ahern, being first duly sworn, deposes and says that she is the witness who sponsors the accompanying testimony entitled "Direct Testimony of Pauline M. Ahern"; that said testimony and schedules were prepared by her and/or under her direction and supervision; that if inquires were made as to the facts in said testimony and schedules, she would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of her knowledge.

Pauline M. Ahern

State of New Jersey
County of Burlington
SUBSCRIBED and sworn to
Before me this 19th day of March 2008.

Notary Public

My commission expires:

SHARON M. KEEFE
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES JULY 9, 2011

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Pauline M. Ahern and I am a Principal of AUS Consultants. My business address is 155 Gaither Drive, Suite A, Mt. Laurel, New Jersey 08054.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I am a graduate of Clark University, Worcester, MA, where I received a Bachelor of Arts degree with honors in Economics in 1973. In 1991, I received a Master of Business Administration with high honors from Rutgers University.

In June 1988, I joined AUS Consultants as a Financial Analyst and am now a Principal. I am responsible for the preparation of all fair rate of return and capital structure exhibits for AUS Consultants. I have offered expert testimony on behalf of investor-owned utilities before twenty-four state regulatory commissions. The details of these appearances, as well as details of my educational background, are shown in Appendix A supplementing this testimony.

I also calculate and maintain the A.G.A. Index under contract with the American Gas Association (A.G.A.). The A.G.A. Index is a market capitalization weighted index of the common stocks of about 70 corporate members of the A.G.A.

I have co-authored an article with Frank J. Hanley, a Principal & Director of AUS Consultants entitled "Comparable Earnings: New Life for an Old Precept" which was published in the American Gas Association's Financial

Quarterly Review, Summer 1994. I also 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 am a member of the Society of Utility and Regulatory Financial Analysts (formerly the National Society of Rate of Return Analysts) serving as President for 2006-2008 and Secretary/Treasurer for 2004-2006. In 1992, I was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by the National Society of Rate of Return Analysts. This designation is based upon education, experience and the successful completion of a comprehensive written examination.

I am an associate member of the National Association of Water Companies, serving on its Finance Committee, a member of the Energy Association of Pennsylvania, formerly the Pennsylvania Gas Association, and a member of the American Finance and Financial Management Associations.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose is to provide testimony on behalf of Missouri American Water Company (MAWC or the Company) as to the appropriate common equity cost rate which it should be afforded the opportunity to earn on the common equity financed portion of its jurisdictional rate base

Q. WHAT IS YOUR RECOMMENDED COMMON EQUITY COST RATE RANGE?

A. I recommend that the Public Service Commission of the State of Missouri (MO PSC or the Commission) authorize the Company the opportunity to earn

common equity cost rate in the range of 11.075% to 11.425%, with a midpoint of 11.25% on the common equity financed portion of its jurisdictional rate base. A common equity cost rate of 11.25% results in an overall rate of return of 8.60% when applied to a common equity ratio of 47.65% pro forma at September 30, 2008 developed by Company Witness Scott W. Rungren as summarized in Table 1 below:

Table 1

	Capital Structure Ratios	Cost Rate	Weighted Return
Long-Term Debt	51.99%	6.17%	3.21%
Short-Term Debt	0.00	0.00	0.00
Total Debt	51.99		3.33
Preferred Stock	0.36	9.17	0.03
Common Equity	47.65	11.25	5.36
Total	100.00%		8.60%

Q. HAVE YOU PREPARED SCEDULES WHICH SUPPORT YOUR RECOMMENDED COMMON EQUITY COST RATE?

A. Yes, I have. They have been marked for identification as Schedules PMA-1 through PMA-13.

II. SUMMARY

Q. PLEASE SUMMARIZE YOUR RECOMMENDED COMMON EQUITY COST RATE RANGE.

A. My recommended common equity cost rate range of 11.075% to 11.425% is summarized on Schedule PMA-1, page 2. Because MAWC's common stock is

not publicly traded, a market-based common equity cost rate cannot be determined directly for MAWC. Therefore, in arriving at my recommended common equity cost rate range of 11.075% to 11.425%, I assessed the market-based cost rates of companies of relatively similar risk, i.e., proxy group(s), for insight into a recommended common equity cost rate applicable to MAWC and suitable for cost of capital purposes. Using other utilities of relatively comparable risk as proxies is consistent with the principles of fair rate of return established in the Hope[1] and Bluefield[2] cases and adds reliability to the informed expert judgment used in arriving at a recommended common equity cost rate. However, no proxy group can be selected to be identical in risk to MAWC and therefore, the proxy groups' results must be adjusted to reflect the greater relative business risk of MAWC as will be subsequently discussed in detail. The bases of selection of the two proxy groups will also be discussed subsequently.

As explained in more detail below, my analysis reflects current capital market conditions and results from the application of four well-tested market-based cost of common equity models, the Discounted Cash Flow (DCF) approach, the Risk Premium Model (RPM), the Capital Asset Pricing Model (CAPM), and the Comparable Earnings Model (CEM).

The results derived from each are as follows:

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[1] Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

[2] Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1922).

Table 2

	Proxy Group of Six AUS Utility Reports Water Companies		Proxy Group of Four Value Line (Std. Ed.) Water Cos.
Discounted Cash Flow Model	9.86%		10.23%
Risk Premium Model	11.00		11.31
Capital Asset Pricing Model	10.80		11.42
Comparable Earnings Model	14.13		14.00
Indicated Common Equity Cost Rate Before Business Risk Adjustment	11.05%	--	11.40%
Business Risk Adjustment	0.025		0.025
Recommended Range of Common Equity Cost Rate After Adjustment for Business Risk	11.075%	--	11.425%

After reviewing the cost rates based upon the four models, I conclude that a range of common equity cost rate, before adjustment for business risk, of 11.05% to 11.40%, is indicated based upon the application of all four models to the market data of the proxy groups of six AUS Utility Reports water companies and four Value Line (Std. Ed.) water companies. After applying a business risk adjustment of 2.5 basis points (0.025%), an indicated risk adjusted range of common equity cost rate of 11.075% to 11.425% is applicable to the Company's common equity ratio of 47.65%, pro forma at September 30, 2008.

III. GENERAL PRINCIPLES

Q. WHAT GENERAL PRINCIPLES HAVE YOU CONSIDERED IN ARRIVING AT YOUR RECOMMENDED COMMON EQUITY COST RATE RANGE OF 11.075% TO 11.425%?

A. In unregulated industries, the competition of the marketplace is the principal

determinant of the price of a product or service. In the case of regulated public utilities, regulation must act as a substitute for such marketplace competition. Consequently, marketplace data must be relied upon to assure that the utility can fulfill its obligations to the public and provide adequate service at all times. This requires a level of earnings sufficient to maintain the integrity of presently invested capital and permit the attraction of needed new capital at a reasonable cost in competition with other firms of comparable risk, consistent with the fair rate of return standards established by the U.S. Supreme Court in the Hope and Bluefield cases cited previously. Consequently, in my determination of common equity cost rate, I have evaluated data gathered from the marketplace for utilities as similar in risk as possible to MAWC.

IV. BUSINESS RISK

Q. PLEASE DEFINE BUSINESS RISK AND EXPLAIN WHY IT IS IMPORTANT TO THE DETERMINATION OF A FAIR RATE OF RETURN.

A. Business risk incorporates all of the risks of a firm other than financial risk, which will be discussed subsequently. Examples of business risk include the quality of management, the regulatory environment, customer mix, service territory growth, size and the like, which have a direct bearing on earnings.

Business risk is important to the determination of a fair rate of return because the greater the level of risk, the greater the rate of return investors demand, consistent with the basic financial precept of risk and return.

Q. PLEASE DISCUSS THE BUSINESS RISKS FACING THE WATER INDUSTRY IN GENERAL.

A. The water and wastewater utility industry faces significant risks related to replacing aging transmission and distribution systems. Although Value Line Investment Survey[3] observes the following about the water utility industry, it applies equally to the wastewater utility industry as many of the water companies followed by Value Line also have wastewater operations:

> After a brief spurt late last year, water utility stocks, as a group, have recently given back most of the gains. Therefore, the industry ranks in the bottom rungs of our Survey for Timeliness. Although broad-market weakness, the result of a plunging housing market and lofty commodity prices, played a role, weaker-than-expected third-quarter results, due to industry-specific woes, namely unfavorable weather conditions and a hiccup in the regulatory process, was the primary reason for the decline. And, although conditions probably got a little better in the fourth quarter, we suspect that earnings growth remained weak for most of these stocks in the fourth-quarter 2007. (Results are likely to be released for most in the coming weeks.)
>
> Earnings growth ought to get back on track this year, as more-normalized weather patterns and recent company initiatives (discussed further below) boost usage rates and act as a catalysts [sic]. However, long term, we worry that many water utilities lack the finances to keep up with the elevated infrastructure costs that should persist for years to come.
>
> * * * * *
>
> Water providers have seen maintenance costs jump considerably in recent years as aging infrastructures required repairs and, in many cases, even rebuilding. However, we suspect that many systems are still outdated and require additional renovations. That, coupled, with more stringent water purification standards, due to greater fears of bioterrorism, ought to result in high costs for the foreseeable future. Unfortunately, many companies here do not have the finances to fund these endeavors and will be forced to look to outside financiers to help meet the costs.
>
> Appealing investment options are difficult to find here. Not a single stock in the group is ranked favorably for Timeliness or the

[3] Value Line Investment Survey, January 25, 2008.

> 3- to 5-year pull, due to the capital constraints of the industry. Indeed, any gains we envision stemming from an improving regulatory landscape and/or penetration into new markets, will likely be offset by rising interest costs and higher share count. This affects the income component as well. The once lofty dividend yields are a thing of the past, and income-oriented investors have better investments [sic] options. That said, as always, we caution all potential investors to take a careful look at the individual reports on the following pages before making any financial commitments.

In addition, because the water and wastewater industry is much more capital-intensive than the electric, natural gas or telephone industries, the investment required to produce a dollar of revenue is greater. And, because investor-owned water and wastewater utilities typically do not receive federal funds for infrastructure replacement, the challenge to investor-owned water and wastewater utilities is exacerbated and their access to financing is restricted, thus increasing risk.

The National Association of Regulatory Commissioners (NARUC) has also highlighted the challenges facing the water and wastewater industry stemming from its capital intensity. NARUC's Board of Directors adopted a resolution in July 2006, taking the position that[4]:

> WHEREAS, To meet the challenges of the water and wastewater industry which may face a combined capital investment requirement nearing one trillion dollars over a 20-year period, the following policies and mechanisms were identified to help ensure sustainable practices in promoting needed capital investment and cost-effective rates: a) the use of prospectively relevant test years; b) the distribution system improvement charge; c) construction work in progress; d) pass-through adjustments; e) staff-assisted rate cases; f) consolidation to achieve economies of scale; g) acquisition adjustment policies to promote consolidation and elimination of non-viable systems; h) a streamlined rate case

[4] "Resolution Supporting Consideration of Regulatory Policies Deemed as 'Best Practices'", Sponsored by the Committee on Water. Adopted by the NARUC Board of Directors, July 27, 2006.

process; i) mediation and settlement procedures; j) defined timeframes for rate cases; k) integrated water resource management; l) a fair return on capital investment; *and* m) improved communications with ratepayers and stakeholders; *and*

WHEREAS, Due to the massive capital investment required to meet current and future water quality and infrastructure requirements, adequately adjusting allowed equity returns to recognize industry risk in order to provide a fair return on invested capital was recognized as crucial…

RESOLVED, That the National Association of Regulatory Utility Commissions (NARUC), convened in its July 2006 Summer Meetings in Austin, Texas, conceptually supports review and consideration of the innovative regulatory policies and practices identified herein as "best practices;" *and be it further*

RESOLVED, That NARUC recommends that economic regulators consider and adopt as many as appropriate of the regulatory mechanisms identified herein as best practices…

The water and wastewater utility industry also experiences lower relative depreciation rates. Lower depreciation rates, as one of the principal sources of internal cash flows for all utilities, mean that water and wastewater utility depreciation as a source of internally-generated cash is far less than for electric, natural gas or telephone utilities. Water and wastewater utilities' assets have longer lives and, hence, longer capital recovery periods. As such, water and wastewater utilities face greater risk due to inflation which results in a higher replacement cost per dollar of net plant than for other types of utilities. Water utilities experienced an average depreciation rate of 2.5% for 2006 with MAWC experiencing a significantly lower depreciation rate of 1.5%. In contrast, in 2006 the electric, combination electric and gas, natural gas or telephone industries, experienced average depreciation rates of 4.2%, 4.4%, 4.3% and 6.5%, respectively.

In addition, as noted by S&P[5]:

Environmental regulations, which can be particularly stringent for water utilities, impact credit quality. Mandatory compliance with environmental legislation is often quite capital intensive. This is particularly so in the areas of wastewater discharge and drinking water quality. In most jurisdictions observed by Standard & Poor's, pressures from environmental standards is likely to increase. High compliance costs can impact a water utility's creditworthiness if their financing is up-front and their recovery is over a long period, potentially putting stress on the financial profile in the short term.

A key rating consideration is the extent of the link between a water utility's legislated environmental standards and its rate-setting mechanism. Stringent environmental rules requiring expensive upgrade and compliance costs are not necessarily a negative rating factor, so long as the utility has a flexible and transparent process for passing the costs through to consumers, and these consumers are willing and able to bear these costs. Standard & Poor's considers whether the environmental and economic regulators are acting in isolation, or perhaps have different constituencies.

Moody's[6] also notes that:

We expect that the credit quality of the investor-owned U.S. water utilities will likely deteriorate over the next several years, due to ongoing large capital spending requirements in the industry. Larger capital expenditures facing the water utility industry result from the following factors:

- Continued federal and state environmental compliance requirements;
- Higher capital investments for constructing modern water treatment and filtration facilities;
- Ongoing improvement of maturing distribution and delivery infrastructure; and
- Heightened security measures for emergency preparedness designed to prevent potential terrorist acts.

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[5] Standard & Poor's, Criteria: Infrastructure Finance, Water and Wastewater Utilities, Projects and Concessions, September 1998, p. 47.

[6] Moody's Investors Service, Global Credit Research, "Credit Risks and Increasing for U.S. Investor Owned Water Utilities", Special Comment, January 2004, p. 5.

> Given the overwhelming importance of protecting the public health, the water utility industry remains regulated by the federal and state regulatory agencies. As a result of this importance, the level of state regulators' responsiveness is critical in enabling the water utilities to maintain their financial integrity. In addition, when utilities are permitted a fair rate of return and timely rate adjustments to reflect the costs of providing this essential service, they will be more able to implement the necessary safeguards to protect the public health.

In addition, the water utility industry, as well as the electric and natural gas utility industries, faces the need for increased funds to finance the increasing security costs required to protect the water supply and infrastructure from potential terrorist attacks in the post-September 11, 2001 world.

In view of the foregoing, it is clear that the water and wastewater utility industry's high degree of capital intensity coupled with the need for substantial infrastructure capital spending and increased anti-terrorism and anti-bioterrorism security spending, requires regulatory support in the form of adequate and timely rate relief, as recognized by NARUC, so water and wastewater utilities will be able to successfully meet the challenges they face.

Q. DOES MAWC FACE ADDITIONAL BUSINESS RISK?

A. Yes. MAWC's smaller size as shown on page 3 of Schedule 1, i.e., total capital of $573.038 million at December 31, 2006 relative to average total capital of $626.006 million in 2006 for the proxy group of six AUS Utility Reports water companies and $895.381 million for the proxy group of four Value Line (Std. Ed.) water companies indicates greater relative business risk because all else equal, size has a bearing on risk.

Q. PLEASE EXPLAIN WHY SIZE HAS A BEARING ON BUSINESS RISK.

A. Smaller companies are simply less able to cope with significant events which affect sales, revenues and earnings. In general, as will be discussed in detail subsequently, the loss of revenues from a few larger customers, for example, would have a greater effect on a small company than on a much larger company with a larger customer base. In addition, the effect of extreme weather conditions, i.e., prolonged droughts or extremely wet weather will have a greater effect upon a small operating water utility than upon the much larger, more geographically diverse companies.

Another factor contributing to the risk effects of size include the fact that investors demand greater returns to compensate for a lack of marketability and liquidity. Because MAWC is the regulated utility to whose rate base the Commission's ultimately allowed overall cost of capital and fair rate of return will be applied, the relevant risk reflected in the cost of capital must be that of MAWC, including the impact of its small size on common equity cost rate. Size is an important factor which affects common equity cost rate, and MAWC is smaller than the average company in each proxy group based upon total investor-provided capital as shown below:

Table 3

	2006 Total Capital (1) ($ millions)	Times Greater than The Company	Market Capitalization(1) ($ Millions)	Times Greater than the Company
Proxy Group of Six AUS Utility Reports Water Companies	$626.006	1.1x	$743.999	1.2x
Proxy Group of Four Value Line (Std. Ed.) Water Companies	895.381	1.6x	1,056.718	1.7x
MAWC	573.038		642.973 (2) 616.044 (3)	

(1) From Schedule PMA-1, page 3.
(2) Based upon the average market-to-book ratio of the proxy group of six AUS Utility Reports water companies.
(3) Based upon the average market-to-book ratio of the proxy group of four Value Line (Std. Ed.) water companies.

Table 3 above also shows the results of my study of the market capitalization of the proxy groups of six AUS Utility Reports water companies and four Value Line (Std. Ed.) water companies. The results are shown on page 5 of Schedule PMA-1 which summarizes the market capitalizations as of February 20, 2008.

MAWC's common stock is not publicly traded. Consequently, I have assumed that if it were publicly traded, the common shares would be selling at the same market-to-book ratio as the average market-to-book ratio for each proxy group, or 212.1% (six water companies) and 203.2% (four water companies) on February 20, 2008. Hence, MAWC's market capitalization is estimated at $642.973 million and $616.044 million based upon the average market-to-book ratios of each proxy group, respectively, as of February 20, 2008. In contrast, the market capitalization of the average AUS Utility Reports water company was $743.999 million on February 20, 2008, or 1.2 times larger

than MAWC's estimated market capitalization. In addition, the market capitalization of the average Value Line (Std. Ed.) water company was $1,056.718 billion on February 20, 2008 or 1.7 times larger than MAWC. It is conventional wisdom, supported by actual returns over time, that smaller companies tend to be more risky causing investors to expect greater returns as compensation for that risk.

Q. DOES THE FINANCIAL LITERATURE AFFIRM A RELATIONSHIP BETWEEN SIZE AND COMMON EQUITY COST RATE?

A. Yes. Brigham[7] states:

> A number of researchers have observed that portfolios of small-firms have earned consistently higher average returns than those of large-firms stocks; this is called "small-firm effect." On the surface, it would seem to be advantageous to the small firms to provide average returns in a stock market that are higher than those of larger firms. In reality, it is bad news for the small firm; what *the small-firm effect means is that the capital market demands higher returns on stocks of small firms than on otherwise similar stocks of the large firms.* (italics added)

V. FINANCIAL RISK

Q. PLEASE DEFINE FINANCIAL RISK AND EXPLAIN WHY IT IS IMPORTANT TO THE DETERMINATION OF A FAIR RATE OF RETURN.

A. Financial risk is the additional risk created by the introduction of senior capital, i.e., debt and preferred stock, into the capital structure. In other words, the higher the proportion of senior capital in the capital structure, the higher the financial risk.

Utilities formerly were considered to have much less business risk in

[7] Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition, The Dryden Press, 1989, p. 623.

comparison to unregulated enterprises, and, as a result, a larger percentage of debt capital was acceptable to investors.

In November 2007, S&P published its electric, gas, and water utility ratings rankings lists in a framework consistent with the manner in which it presents is rating conclusions across all other corporate sectors. As S&P stated[8]:

> Incorporating utility ratings into a shared framework to communicate the fundamental credit analysis of a company furthers the goals of transparency and comparability in the ratings process.
>
> * * *
>
> The utilities rating methodology remains unchanged, and the use of the corporate risk matrix has not resulted in any changes to ratings or outlooks. The same five factors that we analyzed to produce a business risk score in the familiar 10-point scale are used in determining whether a utility possesses an "Excellent," "Strong," "Satisfactory," "Weak," or "Vulnerable" business risk profile.

Pages 1 through 9 of Exhibit PMA-2 describe the utility bond rating process. S&P's new business risk/financial risk matrix is shown in Table 1 on page 11 of Exhibit PMA-1, while financial risk indicative ratios for utilities are shown in Table 2 on page 12. Notwithstanding the metrics published in Table 2, S&P states:

> Note that even after we assign a company a business risk and a financial risk, the committee does not arrive by rote at a rating based on the matrix. The matrix is a guide – it is not intended to convey precision in the ratings process or reduce the decision to plotting intersections on a graph.

[8] Standard & Poor's – Ratings Direct – "U.S. Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix", November, 30, 2007, p. 2.

As shown on Schedule PMA-11, page 2, the average S&P bond rating (issuer credit rating), business risk profile and financial risk profile of the six AUS Utility Reports water companies is AA-/A+(A), Excellent and Intermediate and for the four Value Line (Std. Ed.) water companies, A+(A+), Excellent and Intermediate, respectively.

Q. NEVERTHELESS, CAN ONE STILL MEASURE THE COMBINED BUSINESS RISKS, I.E., INVESTMENT RISK OF AN ENTERPRISE USING BOND RATINGS AND CREDIT RATINGS?

A. Yes, similar bond ratings/issue credit ratings reflect similar combined business risks, i.e., total risk. Although the specific business or financial risks may differ between companies, the same bond rating indicates that the combined risks are similar as the bond rating process reflects acknowledgment of all diversifiable business and financial risks in order to assess credit quality or credit risk. For example, S&P expressly indicates that the bond rating process encompasses a qualitative analysis of business and financial risks (see pages 3 through 9 of Schedule PMA-2). While not a means by which one can specifically quantify the differential in common equity risk between companies, the bond (credit) rating provides a useful means to compare/differentiate investment risk between companies because it is the result of a thorough and comprehensive analysis of all diversifiable business risks, i.e., investment risk.

VI. MISSOURI AMERICAN WATER COMPANY

Q. HAVE YOU REVIEWED THE FINANCIAL DATA FOR MAWC?

A. Yes. MAWC provides water service to approximately 1.3 million people in more than 100 communities throughout Missouri. MAWC is a wholly-owned subsidiary of American Water, which, in turn, is a subsidiary of RWE AG. Thus, the Company's common stock is not publicly traded.

As shown on page 1 of Exhibit PMA-3, during the five-year period ending 2006, the achieved average earnings rate on book common equity for MAWC was 8.90% ranging between 6.75% in 2004 and 11.22% in 2002. The five-year ending 2006 average common equity ratio based upon total capital (including short-term debt) was 41.16%, while the five-year average dividend payout ratio was 79.75%.

Coverage of interest charges, excluding all AFUDC, from funds from operations for the years 2002-2006 ranged between 2.19 and 4.35 times and averaged 3.64 times during the period, while funds from operations relative to total debt ranged from 6.50% to 19.70% and averaged 15.00% for the period.

VII. PROXY GROUPS

Q. PLEASE EXPLAIN HOW YOU CHOSE THE PROXY GROUP OF SIX AUS UTILITY REPORTS WATER COMPANIES.

A. The basis of selection for the proxy group of six AUS Utility Reports water companies were those companies that meet the following criteria: 1) they are included in the Water Company Group of AUS Utility Reports (February 2008); they have Value Line or Reuters consensus five-year EPS growth projections;

and 3) they have more than 70% of their 2006 operating revenues derived from water operations. Six companies met all of these criteria. BIW Ltd., Middlesex Water Co., Pennichuck Corp. and SJW Corp. were eliminated because Reuters was not reporting a consensus five-year EPS growth rate projection for the companies at the time of the selection of the proxy group. Southwest Water Company was eliminated because it did not derive more than 70% of its 2006 operating revenues from water operations.

Q. PLEASE DESCRIBE SCHEDULE PMA-4.

A. Schedule PMA-4 contains comparative capitalization and financial statistics for the six AUS Utility Reports water companies for the years 2002 through 2006. Page 1 contains a summary of the comparative data for the years 2002-2006. Page 2 contains notes relevant to page 1, as well as the basis of selection and names of the individual companies in the proxy group. Page 3 contains the capital structure ratios based upon total capital (including short-term debt) by company and on average for the years 2002-2006.

During the five-year period ending 2006, the historically achieved average earnings rate on book common equity for this group averaged 9.88%. The average common equity ratio based upon total capital was 46.27% for the five-years ending 2006, while the five-year average dividend payout ratio was 74.73%.

Coverage of interest charges, excluding all AFUDC from funds from operations for the years 2002-2006 ranged between 3.46 and 4.10 times and averaging 3.75 times, while funds from operations relative to total debt ranged

from 16.10% to 18.62% averaging 16.79%.

Q. PLEASE EXPLAIN HOW YOU CHOSE THE PROXY GROUP OF FOUR VALUE LINE WATER COMPANIES.

A. The basis of selection for the proxy group of four Value Line (Std. Ed.) water companies was to include those companies which are part of Value Line's (Std. Ed.) Water Utility Industry Group.

Q. PLEASE DESCRIBE SCHEDULE PMA-5.

A. Schedule PMA-5 contains comparative capitalization and financial statistics for the four Value Line (Std. Ed.) water companies for the years 2002 through 2006. Page 1 contains a summary of the comparative data for the years 2002-2006. Page 2 contains notes relevant to page 1, as well as the basis of selection and names of the individual companies in the proxy group. Page 3 contains the capital structure ratios based upon total capital (including short-term debt) by company and on average for the years 2002-2006.

During the five-year period ending 2006, the historically achieved average earnings rate on book common equity for this group averaged 9.16%. The average common equity ratio based upon total capital was 46.98% for the five-year period ending 2006, while the five-year average dividend payout ratio was 67.20%.

Coverage of interest charges, excluding all AFUDC from funds from operations for the years 2002-2006 ranged between 3.66 and 4.34 times, averaging 3.99 times, while funds from operations relative to total debt ranged from 14.97% to 19.78%, averaging 18.34%.

VIII. COMMON EQUITY COST RATE MODELS

A. The Efficient Market Hypothesis (EMH)

Q. ARE THE COST OF COMMON EQUITY MODELS YOU USE MARKET-BASED MODELS, AND HENCE BASED UPON THE EMH?

A. Yes. The DCF model is market-based in that market prices are utilized in developing the dividend yield component of the model. The RPM is market-based in that the bond ratings and expected bond yields used in the application of the RPM reflect the market's assessment of risk. In addition, the use of betas to determine the equity risk premium also reflects the market's assessment of risk as betas are derived from regression analyses of market prices. The CAPM is market-based for many of the same reasons that the RPM is market-based i.e., the use of expected bond (Treasury bond) yields and betas. The CEM is market-based in that the process of selecting the comparable risk non-utility companies is based upon statistics which result from regression analyses of market prices. Therefore, all the cost of common equity models I utilize are market-based models, and hence based upon the EMH.

Q. PLEASE DESCRIBE THE CONCEPTUAL BASIS OF THE EMH.

A. The Efficient Market Hypothesis (EMH), which is the foundation of modern investment theory, was pioneered by Eugene F. Fama[9] in 1970. An efficient market is one in which security prices reflect all relevant information all the time. This implies that prices adjust instantaneously to new information, thus reflecting

[9] Fama, Eugene F., "Efficient Capital Markets: A Review of Theory and Empirical Work". Journal of Finance, May 1970, pp. 383-417.

the intrinsic fundamental economic value of a security.[10]

The essential components of the EMH are:

A. Investors are rational and invest in assets providing the highest expected return given a particular level of risk.

B. Current market prices reflect all publicly available information.

C. Returns are independent i.e., today's market returns are unrelated to yesterday's returns.

D. Capital markets follow a random walk i.e., the probability distribution of expected returns approximates a normal distribution.

Brealey and Myers state:[11]

> When economists say that the security market is 'efficient', they are not talking about whether the filing is up to date or whether desktops are tidy. They mean that information is widely and cheaply available to investors and that all relevant and ascertainable information is already reflected in security prices.

The three forms of the EMH are:

A. The "weak" form which asserts that all past market prices and data are fully reflected in securities prices i.e., technical analysis cannot enable an investor to "outperform the market".

B. The "semistrong" form which asserts that all publicly available information is fully reflected in securities prices i.e., fundamental analysis cannot enable an investor to "outperform the market".

C. The "strong" form which asserts that all information, both public and private, is fully reflected in securities prices i.e., even insider information cannot enable an investor to "outperform the market".

The "semistrong" form of the EMH is generally held to be true because the use of insider information often enables investors to "outperform the market" and

[10] Morin, Roger A., New Regulatory Finance, Public Utility Reports, Inc., Arlington, VA, 2006, pp. 279-281.

[11] Brealey, R.A. and Myers, S.C., Principles of Corporate Finance, McGraw-Hill Publications, Inc., 1996, pp. 323-324.

earn excessive returns. The generally-accepted "semistrong" form of the EMH means that all perceived risks are taken into account by investors in the prices they pay for securities. Investors are aware of all publicly-available information, including bond ratings, discussions about companies by bond rating agencies and investment analysts as well as the various cost of common equity methodologies (models) discussed in the financial literature. In an attempt to emulate investor behavior, this means that no single common equity cost rate model should be relied upon in determining a cost rate of common equity and that the results of multiple cost of common equity models should be taken into account.

Q. IS THERE SUPPORT IN THE ACADEMIC LITERATURE FOR THE NEED TO RELY UPON MORE THAN ONE COST OF COMMON EQUITY MODEL IN ARRIVING AT A RECOMMENDED COMMON EQUITY COST RATE?

A. Yes. For example, Phillips[12] states:

> Since regulation establishes a level of authorized earnings which, in turn, implicitly influences dividends per share, *estimation of the growth rate from such data is an inherently circular process. For these reasons, the DCF model "suggests a degree of precision which is in fact not present" and leaves "wide room for controversy and argument about the level of k" [investors' capitalization or discount rate, i.e., the cost of capital].* (italics added) (p. 396)
>
> * * *
>
> Despite the difficulty of measuring relative risk, the comparable earnings standard is no harder to apply than is the market-determined standard. The DCF method, to illustrate, requires a subjective determination of the growth rate the market is contemplating. Moreover, as Leventhal has argued: *'Unless the*

[12] Charles F. Phillips, Jr., The Regulation of Public Utilities-Theory and Practice, 1993, Public Utility Reports, Inc., Arlington, VA, p. 396, 398.

utility is permitted to earn a return comparable to that available elsewhere on similar risk, it will not be able in the long run to attract capital.' (italics added) (p. 398)

Also, Morin[13] states:

> Each methodology requires the exercise of considerable judgment on the reasonableness of the assumptions underlying the methodology and on the reasonableness of the proxies used to validate a theory. *The inability of the DCF model to account for changes in relative market valuation, discussed below, is a vivid example of the potential shortcomings of the DCF model when applied to a given company.* Similarly, the inability of the CAPM to account for variables that affect security returns other than beta tarnishes its use. (italics added)
>
> No one individual method provides the necessary level of precision for determining a fair return, but each method provides useful evidence to facilitate the exercise of an informed judgment. Reliance on any single method or preset formula is inappropriate when dealing with investor expectations because of possible measurement difficulties and vagaries in individual companies' market data. (Morin, p. 428)

* * *

The financial literature supports the use of multiple methods. Professor Eugene Brigham, a widely respected scholar and finance academician, asserts:[1](footnote omitted)

> Three methods typically are used: (1) the Capital Asset Pricing Model (CAPM), (2) the discounted cash flow (DCF) method, and (3) the bond-yield-plus-risk-premium approach. These methods are not mutually exclusive – no method dominates the others, and all are subject to error when used in practice. Therefore, when faced with the task of estimating a company's cost of equity, we generally use all three methods and then choose among them on the basis of our confidence in the data used for each in the specific case at hand.

Another prominent finance scholar, Professor Stewart Myers, in an early pioneering article on regulatory finance, stated:[2](footnote omitted)

> Use more than one model when you can. Because estimating

[13] Id, at pp. 428 and 430 - 431.

> the opportunity cost of capital is difficult, only a fool throws away useful information. That means you should not use any one model or measure mechanically and exclusively. Beta is helpful as one tool in a kit, to be used in parallel with DCF models or other techniques for interpreting capital market data.
>
> Reliance on multiple tests recognizes that no single methodology produces a precise definitive estimate of the cost of equity. As stated in Bonbright, Danielsen, and Kamerschen (1988), '*no single or group test or technique is conclusive.*' Only a fool discards relevant evidence. (italics in original) (Morin, p. 430)
>
> * * *
>
> While it is certainly appropriate to use the DCF methodology to estimate the cost of equity, there is no proof that the DCF produces a more accurate estimate of the cost of equity than other methodologies. Sole reliance on the DCF model ignores the capital market evidence and financial theory formalized in the CAPM and other risk premium methods. The DCF model is one of many tools to be employed in conjunction with other methods to estimate the cost of equity. *It is not a superior methodology that supplants other financial theory and market evidence. The broad usage of the DCF methodology in regulatory proceedings in contrast to its virtual disappearance in academic textbooks does not make it superior to other methods. The same is true of the Risk Premium and CAPM methodologies.* (italics added) (Morin, p. 431)

In view of the foregoing, it is clear that investors are or should be aware of all of the models available for use in determining a common equity cost rate. The EMH requires the assumption that, collectively, investors consider them all.

B. Discounted Cash Flow Model (DCF)

Q. WHAT IS THE THEORETICAL BASIS OF THE DCF MODEL?

A. The theory of the DCF model is that the present value of an expected future stream of net cash flows during the investment holding period can be determined by discounting the cash flows at the cost of capital, or the capitalization rate. DCF theory suggests that an investor buys a stock for an expected total return

rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate). Thus, the dividend yield on market price plus a growth rate equals the capitalization rate, i.e., the total return rate expected by investors.

Q. PLEASE COMMENT ON THE APPLICABILITY OF THE DCF MODEL IN ESTABLISHING A COST OF COMMON EQUITY FOR MAWC.

A. The extent to which the DCF is relied upon should depend upon the extent to which the cost rate results differ from those resulting from the use of other cost of common equity models because the DCF model has a tendency to mis-specify investors' required return rate when the market value of common stock differs significantly from its book value. Mathematically, because the "simplified" DCF model traditionally used in rate regulation assumes a market-to-book ratio of one, it understates/overstates investors' required return rate when market value exceeds/is less than book value. It does so because, in many instances, market prices reflect investors' assessments of long-range market price growth potentials (consistent with the infinite investment horizon implicit in the standard regulatory version of the DCF model) not fully reflected in analysts' shorter range forecasts of future growth for earnings per share (EPS) and dividends per share (DPS) accounting proxies. Thus, the market-based DCF model will result in a total annual dollar return on book common equity equal to the total annual dollar return expected by investors only when market and book values are equal, a rare and unlikely situation. In recent years, the market values of utilities' common stocks have been well in excess of their book values as shown on page 1 of Schedule

PMA-4 ranging between 226.95% and 264.27% for the proxy group of six AUS Utility Reports water companies and between 220.49% and 262.50% for the proxy group of four Value Line (Std. Ed.) water companies as shown on page 1 of Schedule PMA-5.

Roger A. Morin has confirmed this tendency of the DCF by stating[14]:

> The third and perhaps most important reason for caution and skepticism is that application of the DCF model produces estimates of common equity cost that are consistent with investors' expected return only when stock price and book value are reasonably similar, that is when the M/B is close to unity. As shown below, application of the standard DCF model to utility stocks understates the investor's expected return when the market-to-book (M/B) ratio of a given stock exceeds unity. This is particularly relevant in the capital market environment of the 1990s and 2000s, where utility stocks are trading at M/B ratios well above unity and have been for nearly two decades. The converse is also true, that is, the DCF model overstates that investor's return when the stock's M/B ratio is less than unity. The reason for the distortion is that the DCF market return is applied to a book value rate base by the regulator, that is, a utility's earnings are limited to earnings on a book value rate base. (emphasis supplied)

Under the DCF model, the rate of return investors require is related to the price paid for a security. Thus, market prices form the basis of investment decisions and investors' expected rates of return. In contrast, a regulated utility is limited to earning on its net book value (depreciated original cost) rate base. Market values can diverge from book values for a myriad of reasons including, but not limited to, earnings per share (EPS) and dividends per share (DPS) expectations, merger / acquisition expectations, interest rates, etc. Thus, when market values are grossly disparate from their book values, a market-based DCF cost rate applied to the book value of common equity will not reflect investors'

[14] Id., at p. 434.

expected common equity cost rate. It will either overstate the common equity cost rate (without regard to any adjustment for flotation costs which may, at times, be appropriate) when market value is less than book value or understate the cost rate when market value is, as here, above book value.

This indicates the need to better match market prices with investors' longer range growth expectations embedded in those prices. However, the understatement/overstatement of investors' required return rate associated with the application of the market price-based DCF model to the book value of common equity clearly illustrates why reliance upon a single common equity cost rate model should be avoided.

Q. IS IT REASONABLE TO EXPECT THE MARKET VALUES OF UTILITIES' COMMON STOCKS TO CONTINUE TO SELL WELL ABOVE THEIR BOOK VALUES?

A. Yes. I believe that the common stocks of utilities will continue to sell substantially above their book values, because many investors, especially individuals who traditionally committed less capital to the equity markets, will likely continue to commit a greater percentage of their available capital to common stocks in view of lower interest rate alternative investment opportunities and to provide for retirement. The recent past and current capital market environment is in stark contrast to the late 1970's and early 1980's when very high (by historical standards) yields on secured debt instruments in public utilities were available. Despite the fact that the market declined significantly during late 2001 through 2003, following the September 11, 2001 tragedy and despite recent and

continuing market volatility due to volatile energy prices, the stressed housing market, the credit crunch in the currently fragile U.S. economy and rumors of an economic recession, utility stocks have continued to sell at market prices well above their book values. The significant recent increases in market-to-book ratios have been influenced by factors other than fundamentals such as actual and reported growth in earnings per share (EPS) and dividends per share (DPS).

Traditional rate base/rate of return regulation, where a market-based common equity cost rate is applied to a book value rate base, presumes that market-to-book ratios are one. However, there is ample empirical evidence over sustained periods which demonstrate that this is an incorrect presumption. Market-to-book ratios of one are rarely the case as there are many factors affecting the market price of common stocks, in addition to earnings. Moreover, allowed ROEs have a limited effect on utilities' market/book ratios as market prices of common stocks are influenced by a number of other factors beyond the direct influence of the regulatory process.

For example, Phillips[15] states:

> Many question the assumption that market price should equal book value, believing that 'the earnings of utilities should be sufficiently high to achieve market-to-book ratios which are consistent with those prevailing for stocks of unregulated companies.'

In addition, Bonbright[16] states:

> In the first place, commissions cannot forecast, except within wide limits, the effect their rate orders will have on the market prices of the stocks of the companies they regulate. In the second place,

[15] Id., at p. 395.

[16] James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates, 1988, Public Utilities Reports, Inc., Arlington, VA, p. 334.

> *whatever the initial market prices may be, they are sure to change not only with the changing prospects for earnings, but with the changing outlook of an inherently volatile stock market.* In short, market prices are beyond the control, though not beyond the influence of rate regulation. Moreover, even if a commission did possess the power of control, any attempt to exercise it ... would result in harmful, uneconomic shifts in public utility rate levels. (italics added)

In view of the foregoing, a mismatch results in the application of the DCF model as market prices reflect long range expectations of growth in market prices (consistent with the presumed infinite investment horizon of the standard DCF model), while the short range forecasts of growth in accounting proxies, i.e., EPS and DPS, do not reflect the full measure of growth (market price appreciation) expected in per share market value.

Q. HAVE ANY COMMISSIONS RECOGNIZED THIS TENDENCY OF THE DCF MODEL TO UNDERSTATE/OVERSTATE INVESTORS' REQUIRED RETURN RATE WHEN MARKET-TO-BOOK RATIOS ARE GREATER/LESS THAN UNITY?

A. Yes. The Pennsylvania Public Utility Commission recognized this tendency in its order of August 26, 2006 in Docket No. R-00049862, et al re: The City of Lancaster – Sewer Fund when it stated:

> The ALJ recommended a market-to-book adjustment (MTB) of 65 basis points (.65%) to her recommended equity return. The ALJ reasoned that this adjustment had been adopted by the Commission in three major rate cases in the past 18 months. *See Pa. P.U.C. v. PPL Electric Utilities Corporation,* 2004 Pa. P.U.C. LEXIS 40; *Pa. P.U.C. (PPL) Pa. PUC v. Aqua Pennsylvania, Inc.,* R-00038805, (Order entered August 5, 1004) (*Aqua)*; and *Pa. P.U.C.V. Pennsylvania-American Water Company*, Docket No. R-00038304 (Order entered January 29, 204) (*PAWC*)

* * * *

> As discussed previously herein, the ALJ recommended a MTB adjustment of 65 basis points to her unadjusted DCF starting point of 10.1 percent. We shall adopt this adjustment. First, this adjustment is consistent with our recent orders in *PAWC, Aqua,* and *PPL*. Next, we note that *Aqua* and *PAWC* are subsidiaries of corporate parents which are publicly traded. The actual utilities operating in Pennsylvania are not publicly traded. Nevertheless, we applied the adjustment to the entities which are providing service in Pennsylvania. Thus, we reject the argument advanced by the OTS in its Exceptions that this adjustment is inappropriate because the City's operation is not an investor-owned utility. As in *PPL*, we find that adjustment is necessary because the DCF method produces the investor required return based on the current market price, not the return on the book value capitalization. With the MTB adjustment, the equity return allowance is 10.75 percent. (emphasis added)

Similarly, in 1994, the Indiana Utility Regulatory Commission (IURC), for example, recognized the tendency of the DCF model to understate the cost of equity when market value exceeds book value[17]:

> In determining a common equity cost rate, we must again recognize the tendency of the traditional DCF model, . . . to understate the cost of common equity. As the Commission stated in Indiana-Mich. Power Co. (IURC 8/24/90), Cause No. 38728, 116 PUR 4th 1, 17-18, *"the unadjusted DCF result is almost always well below what any informed financial analyst would regard as defensible, and therefore, requires an upward adjustment based largely on the expert witness's judgement."* (italics added)
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> * * *
>
> [u]nder the traditional DCF model . . . the appropriate earnings level of the utility would not be derived by applying the DCF result to the market price of the Company's stock . . . it would be applied to the utility's net original cost rate base. *If the market price of the stock exceeds its book value, . . . the investor will not achieve the return which the model finds is necessary.* (italics added)

Q. PLEASE EXPLAIN WHY A DCF-DERIVED COMMON EQUITY COST RATE

[17] Re: Indiana-American Water Company, Inc., Cause No. 39595, 150 PUR4th at 167-168.

MIS-SPECIFIES INVESTORS' EXPECTED COMMON EQUITY COST RATE WHEN THE MARKET/BOOK RATIO IS GREATER OR LESS THAN UNITY (100%).

A. Under the DCF model, the rate of return investors require is related to the price paid for a stock i.e., market price is the basis upon which they formulate the required rate of return. A regulated utility is limited to earning on its net book value (depreciated original cost) rate base. As discussed previously, market values differ from book values for many reasons unrelated to earnings. Thus, when market values differ significantly from book values, a market-based DCF cost rate applied to the book value of common equity will not accurately reflect investors' expected common equity cost rate. It will either overstate or understate investors' expected common equity cost rate (without regard to any adjustment for flotation costs which may, at times, be appropriate on an ad hoc basis) depending upon whether market value is less than or greater than book value.

Schedule PMA-6 demonstrates how a market-based DCF cost rate applied to a book value which is either below or above market value will either understate or overstate investors' expectations because these expectations are based on a required return on market value. As shown, there is no realistic opportunity to earn the market-based rate of return on book value. Note that in Column 1, investors expect a 10.00% return on a market price of $24.00. Moreover, as shown in Column 2, when the 10.00% return rate on market value is applied to book value which is approximately 55.5% of market value, the total annual return

opportunity is just $1.333 on book value. With an annual dividend of $0.840, there is an opportunity for growth of $0.493 which translates to just 2.05% in contrast to the 6.50% growth in market price expected by investors. There is no way to possibly achieve the expected growth of $1.560 or 6.50% absent a huge cut in the annual dividend, an unreasonable expectation which would result in an extremely adverse reaction by investors because it would be a sign of extreme financial distress.

Conversely, in Column 3, where the market-to-book ratio is 80%, when the 10.00% return rate on market value is applied to a book value which is approximately 25.0% greater than market value, the total annual return opportunity is $3.000 on book value with an annual dividend of $0.840, there is an opportunity for growth of $2.160 which translates to 9.00% in contrast to the 6.50% growth in market price expected by investors.

In view of the foregoing, it is clear that the DCF model either understates or overstates investors' required cost of common equity capital when market values exceed or are less than their underlying book values and thus multiple cost of common equity models should be relied upon when estimating investors' expectations.

Q. HAVE ANY COMMISSIONS EXPLICITLY STATED THAT THE DCF MODEL SHOULD NOT BE RELIED UPON EXCLUSIVELY?

A. Yes. As stated previously, the majority of regulatory commissions rely upon a combination of the various cost of common equity models available.

Specifically, the Iowa Utilities Board (IUB) has recognized the tendency of

the DCF model to understate investors' expected cost of common equity capital when market values are significantly above their book values. In its June 17, 1994 Final Decision and Order in Re U.S. West Communications, Docket No. RPU-93-9 the IUB stated:[18]

> While the Board has relied in the past on the DCF model, in *Iowa Electric Light and Power Company*, Docket No. RPU-89-9, "Final Decision and Order" (October 15, 1990), the Board stated: '[T]he DCF model may understate the return on equity in some circumstances. This is particularly true when the market is relatively volatile and the company in question has a market-to-book ratio in excess of one." Those conditions exist in this case and the Board will not rely on the DCF return. (Consumer Advocate Ex. 367, See Tr. 2208, 2250, 2277, 2283-2284). *The DCF approach underestimates the cost of equity needed to assure capital attraction during this time of market uncertainty and volatility. The board will, therefore, give preference to the risk premium approach.* (italics added)

Also, the Hawaii Public Utilities Commission (HPUC) recognized this phenomenon in a decision dated June 30, 1992[19] in a case regarding Hawaiian Electric Company, Inc., when it stated:

> In this docket, as in other rate proceedings, experts disagree on the relative merits of the various methods of determining the cost of common equity. In this docket, HECO is particularly critical of the use of the constant growth DCF methodology. It asserts that method is imbued with downward bias and, thus, its use will understate common equity cost. *We are cognizant of the shortcomings of the DCF method.* There are, however, shortcomings to be found with the use of CAPM and the RP methods as well. We reiterate that, despite the problems with the use of any methodology, *all methods should be considered and that the DCF method and the combined CAPM and RP methods should be given equal weight.* (italics added)

[18] Re: U.S. West Communications, Inc., Docket No. RPU-93-9, 152 PUR4th at 459.

[19] Re: Hawaiian Electric Company, Inc., Docket No. 6998, 134 PUR4th at 479.

Q. DO OTHER COST OF COMMON EQUITY MODELS ALSO CONTAIN UNREALISTIC ASSUMPTIONS AND HAVE SHORTCOMINGS?

A. Yes. That is why I am not recommending that any of the models be relied upon exclusively. I have focused on the shortcomings of the DCF model because some regulatory commissions still place excessive or exclusive reliance upon it. Although the DCF model is useful, it is not a superior methodology that supplants financial theory and market evidence based upon other valid cost of common equity models. For these reasons, no model, including the DCF, should be relied upon exclusively.

Q. PLEASE DESCRIBE THE DIVIDEND YIELD YOU USED IN YOUR APPLICATION OF THE DCF MODEL.

A. The unadjusted dividend yields are based upon an average of a recent spot date (February 20, 2008) as well as an average of the three months ended January 31, 2008, respectively, which are derived on Schedule PMA-8. The average unadjusted yield is 3.17% and the median unadjusted yield is 3.21% for the six AUS Utility Reports water companies and 2.66% and 2.66%, respectively, for the four Value Line (Std. Ed.) water companies.

Q. PLEASE EXPLAIN THE DIVIDEND GROWTH COMPONENT SHOWN ON SCHEDULE PMA-7, PAGE 1, COLUMN 2.

A. Because dividends are paid quarterly, or periodically, as opposed to continuously (daily), an adjustment to the dividend yield must be made. This is often referred to as the discrete, or the Gordon Periodic, version of the DCF model.

Since the various companies in the proxy groups increase their quarterly

dividend at various times during the year, a reasonable assumption is to reflect one-half the annual dividend growth rate in the D_1 expression, or $D_{1/2}$. This is a conservative approach which does not overstate the dividend yield which should be representative of the next twelve-month period. Therefore, the actual average dividend yields in Column 1 on Schedule PMA-7 have been adjusted upward to reflect one-half the growth rates shown in Column 4.

Q. PLEASE EXPLAIN THE BASIS OF THE GROWTH RATES OF THE PROXY GROUP OF SIX AUS UTLITY REPORTS WATER COMPANIES AND THE PROXY GROUP OF FOUR VALUE LINE (STD. ED.) WATER COMPANIES WHICH YOU USE IN YOUR APPLICATION OF THE DCF MODEL.

A. Schedule PMA-9 shows that approximately 64% of the common shares of the proxy group of six AUS Utility Reports water companies and 50% of the common shares of the proxy group of four Value Line (Std. Ed.) water companies are held by individuals as opposed to institutional investors. Individual investors are particularly likely to place great significance on the opinions expressed by financial information services, such as Value Line and Reuters, which are easily accessible and/or available on the Internet.

Forecasts by analysts, including Value Line, are typically limited to five years. In my opinion, investors in water utilities would have little interest in historical growth rates beyond the most recent five years because an historical five-year period balances the five-year period for projected growth rates. Consequently, the use of five-year historical and five-year projected growth rates in earnings per share (EPS) and dividends per share (DPS) as well as the sum of

internal and external growth in per share value (BR + SV) is appropriate to consider in the determination of a growth rate for use in this application of the DCF model. In addition, investors realize that analysts have significant insight into the dynamics of the industries and they analyze individual companies as well as companies' abilities to effectively manage the effects of changing laws and regulations. Consequently, I have reviewed analysts' projected growth in EPS, as well as historical and projected five-year compound growth rates in EPS, DPS and (BR + SV) for each company in each proxy group. The historical growth rates are from Value Line or are calculated in a manner similar to Value Line, while the projected growth rates in earnings are from Value Line and Reuters forecasts. Reuters growth rate estimates are not available for DPS and internal growth, and they do not include the Value Line projections.

In addition to evaluating EPS and DPS growth rates, it is reasonable to assume that investors also assess (BR + SV). The concept is based on well documented financial theory that future dividend growth is a function of the portion of the overall return to investors which is reinvested in the firm plus the sales of new common stock. Consequently, the growth component as proxied by internal and external growth is defined as follows:

$$g = BR + SV$$

Where:

B = the fraction of earnings retained by the firm, i.e., retention ratio
R = the return on common equity

S = the growth in common shares outstanding

V = the premium/discount of a company's stock price relative to its book value, i.e., one minus the complement of the market/book ratio.

Consistent with the use of five-year historical and five-year projected growth rates in EPS and DPS, I have derived five-year historical and five-year projected (BR + SV) growth. Projected EPS growth rate averages and medians are shown in Column 4 on the lower half of Schedule PMA-7, while historical and projected growth rates in DPS, EPS, and BR + SV are shown in Column 4 on the upper half of Schedule PMA-7. The bases of these growth rates are summarized for the companies in each proxy group on page 1, Schedule PMA-10. Supporting growth rate data are detailed on pages 2 through 7 of Schedule PMA-10, while pages 8 through 13 contain all of the most current Value Line Investment Survey data for the companies in both proxy groups.

Q. PLEASE SUMMARIZE THE DCF MODEL RESULTS.

A. As shown on Schedule PMA-7, the results of the applications of the single-stage DCF model are 9.86% for the proxy group of six AUS Utility Reports water companies and 10.23% for the proxy group of four Value Line (Std. Ed.) water companies. In arriving at conclusions of indicated common equity cost rates for the two proxy groups, I have relied upon the median of the results of

the DCF for each proxy group. I utilize the median due to the wide range of DCF results as well as the currently extremely volatile capital market condition. In my opinion, the median is a more accurate and reliable measure of central tendency, and provides recognition to all the DCF results.

In view of the foregoing, as shown on Schedule PMA-7, the results of the applications of the DCF model are 9.86% for the proxy group of six AUS Utility Reports water companies and 10.23% for the proxy group of four Value Line (Std. Ed.) water companies.

C. The Risk Premium Model (RPM)

Q. PLEASE DESCRIBE THE THEORETICAL BASIS OF THE RPM.

A. Risk Premium theory indicates that the cost of common equity capital is greater than the prospective company-specific cost rate for long-term debt capital. In other words, the cost of common equity equals the expected cost rate for long-term debt capital plus a risk premium to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on the corporation's assets and earnings.

Q. SOME ANALYSTS STATE THAT THE RPM IS ANOTHER FORM OF THE CAPM. DO YOU AGREE?

A. While there are some similarities, there is a very significant distinction between the two models. The RPM and CAPM both add a "risk premium" to an interest rate. However, the beta approach to the determination of an equity risk premium in the RPM should not be confused with the CAPM. Beta is a measure of systematic, or market, risk, a relatively small percentage of total risk

(the sum of both non-diversifiable systematic and diversifiable unsystematic risk). Unsystematic risk is fully captured in the RPM through the use of the prospective long-term bond yield as can be shown by reference to pages 3 through 9 of Schedule PMA-2, which confirm that the bond rating process involves an assessment of all business risks. In contrast, the use of a risk-free rate of return in the CAPM does not, and by definition cannot, reflect a company's specific i.e., unsystematic risk. Consequently, a much larger portion of the total common equity cost rate is reflected in the company-specific bond yield (a product of the bond rating) than is reflected in the risk-free rate in the CAPM, or indeed even by the dividend yield employed in the DCF model. Moreover, the financial literature recognizes the RPM and CAPM as two separate and distinct cost of common equity models as discussed previously.

Q. HAVE YOU PERFORMED RPM ANALYSES OF COMMON EQUITY COST RATE FOR THE TWO PROXY GROUPS?

A. Yes. The results of my application of the RPM are summarized on page 1 of Schedule PMA-11. The first step is to determine the expected bond yield.

Q. PLEASE EXPLAIN THE BASIS OF THE EXPECTED BOND YIELD OF 5.95% APPLICABLE TO THE AVERAGE COMPANY IN BOTH PROXY GROUPS.

A. Because the cost of common equity is prospective, a prospective yield on similarly-rated long-term debt is essential. As shown on Schedule PMA-11, page 2, although based upon only one water company, the average Moody's bond rating is A2 for both the six AUS Utility Reports water companies and four Value Line (Std. Ed.) water companies. I relied upon a consensus forecast of

about 50 economists of the expected yield on Aaa rated corporate bonds for the six calendar quarters ending with the second calendar quarter of 2009 as derived from the February 1, 2008 Blue Chip Financial Forecasts (shown on page 7 of Schedule PMA-11). As shown on Line No. 1 of page 1 of Schedule PMA-11, the average expected yield on Moody's Aaa rated corporate bonds is 5.32%. It is necessary to adjust that average yield to be equivalent to a Moody's A2 rated public utility bond. Consequently, an adjustment to the average prospective yield on Aaa rated corporate bonds of 0.63% was required. It is shown on Line No. 2, page 1 of Schedule PMA-11 and explained in Note 2 at the bottom of the page. After adjustment, the expected bond yield applicable to a Moody's A rated public utility bond is 5.95% as shown on Line No. 3, page 1 of Schedule PMA-11.

Because both the proxy group of six AUS Utility Reports water companies and the proxy group of four Value Line (Std. Ed.) water companies' average Moody's bond rating is A2, no adjustment is necessary to make the prospective bond yield applicable to an A2 public utility bond. Therefore, the expected specific bond yields is 5.95% for both proxy groups of water companies.

Q. PLEASE EXPLAIN THE METHOD UTILIZED TO ESTIMATE THE EQUITY RISK PREMIUM.

A. I evaluated the results of two different historical equity risk premium studies, as well as Value Line's forecasted total annual market return in excess of the prospective yield on high grade corporate bonds, as detailed on pages 5, 6 and

8 of Schedule PMA-11. As shown on Line No. 3, page 5, the mean equity risk premium based on both of the studies is 5.05% applicable to the proxy group of six AUS Utility Reports water companies and 5.36% applicable to the proxy group of four Value Line (Std. Ed.) water companies. These estimates are the result of an average of a beta-derived historical equity risk premium and a forecasted total market equity risk premium as well as the mean historical equity risk premium applicable to public utilities with bonds rated A based upon holding period returns.

The basis of the beta-derived equity risk premia applicable to the proxy groups is shown on page 6 of Schedule PMA-11. Beta-determined equity risk premia should receive substantial weight because betas are derived from the market prices of common stocks over a recent five-year period. Beta is a meaningful measure of prospective relative risk to the market as a whole and is a logical means by which to allocate a relative share of the market's total equity risk premium.

The total market equity risk premium utilized is 6.20% and is based upon the long-term historical market risk premium after a review of both the long-term historical and forecasted market risk premium of 6.20%. Because it is my opinion that the current and recent substantial decline in the stock market is extraordinary and not representative of the expected long-term, neither is the current forecasted market risk premium as shown on page 6 of Schedule PMA-11. To derive the historical market equity risk premium, I used the most recent

Morningstar[20] data on holding period returns for the S&P 500 Composite Index and the average historical yield on Moody's Aaa and A rated corporate bonds for the period 1926-2007. The use of holding period returns over a very long period of time is useful in the beta approach. As the 2007 Yearbook - Valuation Edition states[21]:

> The estimate of the equity risk premium depends on the length of the data series studied. A proper estimate of the equity risk premium requires a data series long enough to give a reliable average without being unduly influenced by very good and very poor short-term returns. When calculated using a long data series, the historical equity risk premium is relatively stable.[5] Furthermore, because an average of the realized equity risk premium is quite volatile when calculated using a short history, using a long series makes it less likely that the analyst can justify any number he or she wants. The magnitude of how shorter periods can affect the result will be explored later in this chapter.
>
> Some analysts estimate the expected equity risk premium using a shorter, more recent time period on the basis that recent events are more likely to be repeated in the near future; furthermore, they believe that the 1920s, 1930s and 1940s contain too many unusual events. This view is suspect because all periods contain "unusual" events. Some of the most unusual events this century took place quite recently, including the inflation of the late 1970s and early 1980s, the October 1987 stock market crash, the collapse of the high-yield bond market, the major contraction and consolidation of the thrift industry, the collapse of the Soviet Union, the development of the European Economic Community, and the attacks of September 11, 2001.
>
> It is even difficult for economists to predict the economic environment of the future. For example, if one were analyzing the stock market in 1987 before the crash, it would be statistically improbable to predict the impending short-term volatility without considering the stock market crash and market volatility of the 1929-1931 period.

[20] Morningstar, Inc. acquired Ibbotson Associates in 2006.

[21] 2007 Yearbook – Valuation Edition, Morningstar, Inc., 2007, pp. 82-83. Morningstar, Inc. acquired Ibbotson Associates in 2006.

> Without an appreciation of the 1920s and 1930s, no one would believe that such events could happen. The 81-year period starting with 1926 is representative of what can happen: it includes high and low returns, volatile and quiet markets, war and peace, inflation and deflation, and prosperity and depression. Restricting attention to a shorter historical period underestimates the amount of change that could occur in a long future period. Finally, because historical event-types (not specific events) tend to repeat themselves, long-run capital market return studies can reveal a great deal about the future. Investors probably expect "unusual" events to occur from time to time, and their return expectations reflect this. (footnote omitted)

In addition, the use of long-term data in a RPM model is consistent with the long-term investment horizon presumed by the DCF model. Consequently, the long-term arithmetic mean total return rates on the market as a whole of 12.30% and the long-term arithmetic mean yield on corporate bonds of 6.10% were used, as shown at Line Nos. 1 and 2 of page 6 of Schedule PMA-11. As shown on Line No. 3 of page 6, the resultant long-term historical equity risk premium on the market as a whole is 6.20%.

I used arithmetic mean return rates because they are appropriate for cost of capital purposes. As stated in the 2007 Yearbook - Valuation Edition[22]:

> The equity risk premium data presented in this book are arithmetic average risk premia as opposed to geometric average risk premia. The arithmetic average equity risk premium can be demonstrated to be most appropriate when discounting future cash flows. For use as the expected equity risk premium in either the CAPM or the building block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number. This is because both the CAPM and the building block approach are additive models, in which the cost of capital is the sum of its parts. The geometric average is more appropriate for reporting past performance, since it represents the compound average

[22] Id., p. 77.

return.

> The argument for using the arithmetic average is quite straightforward. In looking at projected cash flows, the equity risk premium that should be employed is the equity risk premium that is expected to actually be incurred over the future time periods. Graph 5-3 shows the realized equity risk premium for each year based on the returns of the S&P 500 and the income return on long-term government bonds. (The actual, observed difference between the return on the stock market and the riskless rate is known as the realized equity risk premium.) There is considerable volatility in the year-by-year statistics. At times the realized equity risk premium is even negative.

As Ibbotson Associates[23] states in their 1999 Yearbook:

> The expected equity risk premium should always be calculated using the arithmetic mean. The arithmetic mean is the rate of return which, when compounded over multiple periods, gives the mean of the probability distribution of ending wealth values....Stated another way, the arithmetic mean is correct because an investment with uncertain returns will have a higher expected ending wealth value than an investment which earns, with certainty, its compound or geometric rate of return every year....*Therefore, in the investment markets, where returns are described by a probability distribution, the arithmetic mean is the measure that accounts for uncertainty, and is the appropriate one for estimating discount rates and the cost of capital.* (italics added)

Ex-post (historical) total returns and equity risk premium spreads differ in size and direction over time. This is precisely why the arithmetic mean is important as it provides insight into the variance and standard deviation of returns. This prospect for variance, as captured in the arithmetic mean, provides the valuable insight needed by investors to estimate future risk when making a current investment. Absent such valuable insight into the potential variance of returns, investors cannot meaningfully evaluate prospective risk.

[23] Ibbotson Associates, Stocks, Bonds, Bills and Inflation - 1999 Yearbook, pp. 157-158.

As discussed previously, all of the cost of common equity models, including the DCF, are premised upon the EMH, that all publicly available information is reflected in the market prices paid. If investors relied upon the geometric mean of ex-post spreads, they would have no insight into the potential variance of future returns because the geometric mean relates the change over many periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, *critical to risk analysis*.

The basis of the forecasted market equity risk premium can be found on Line Nos. 4 through 6 on page 6 of Schedule PMA-11. It is derived from an average of the most recent 3-month (using the months of November 2007 through January 2008) and a recent spot (February 22, 2008) median market price appreciation potentials by Value Line as explained in detail in Note 1 on page 3 of Schedule PMA-12.

The average expected price appreciation is 60% which translates to 12.47% per annum and, when added to the average (similarly calculated) dividend yield of 2.07% equates to a forecasted annual total return rate on the market as a whole of 14.54%. Thus, this methodology is consistent with the use of the 3-month and spot dividend yields in my application of the DCF model. To derive the forecasted total market equity risk premium of 9.22% shown on Schedule PMA-11, page 6, Line No. 6, the February 1, 2008 forecast of about 50 economists of the expected yield on Moody's Aaa rated corporate bonds for the six calendar quarters ending with the second calendar quarter 2009 of 5.32% from Blue Chip Financial Forecasts was deducted from the

Value Line total market return of 14.54%. The calculation resulted in an expected market risk premium of 9.22%.

However, because I believe the current and recent substantial decline in the stock market is extraordinary and not representative of the expected long-term, in this instance, I will not rely upon the forecasted market equity risk premium but rather, will rely upon this historical long-term arithmetic market equity risk premium of 6.20%.

On page 9 of Schedule PMA-11, the most current Value Line (Standard Edition) betas for the companies in the two proxy groups are shown. Applying the median beta of each proxy group, consistent with my reliance upon the median DCF results as previously discussed, to the market equity risk premium of 6.20% results in a beta adjusted equity risk premium of 5.58% for the proxy group of six AUS Utility Reports water companies and 6.20% for the proxy group of four Value Line (Std. Ed.) water companies as shown on Schedule PMA-11, page 6, Line No. 9.

A mean equity risk premium of 4.51% applicable to companies with A rated public utility bonds was calculated based upon holding period returns from a study using public utilities, as shown on Line No. 2, page 5 of Schedule PMA-11, and detailed on page 8 of the same schedule.

The equity risk premia applicable to the proxy group of six AUS Utility Reports water companies and the proxy group of four Value Line (Std. Ed.) water companies are the averages of the beta-derived premia and that based upon the holding period returns of public utilities with A rated bonds, as

summarized on Schedule PMA-11, page 5, i.e., 5.05% and 5.36%.

Q. WHAT ARE THE INDICATED RPM COMMON EQUITY COST RATES?

A. They are 11.00% for the six AUS Utility Reports water companies and 11.31% for the four Value Line (Std. Ed.) water companies as shown on Schedule PMA-11, page 1.

Q. SOME CRITICS OF THE RPM MODEL CLAIM THAT ITS WEAKNESS IS THAT IT PRESUMES A CONSTANT EQUITY RISK PREMIUM. IS SUCH A CLAIM VALID?

A. No. The equity risk premium varies inversely with interest rate changes, although not in tandem with those changes. This presumption of a constant equity risk premium is no different than the presumption of a constant "g", or growth component, in the DCF model. If one calculates a DCF cost rate today, the absolute result "k", as well as the growth component "g", would invariably differ from a calculation made just one or several months earlier. This implies that the "g" does change, although in the application of the standard DCF model, the "g" is presumed to be constant. Hence, there is no difference between the RPM and DCF models in that both models assume a constant component, but in reality, these components, the "g" and the equity risk premium both change.

As Morin[24] states with respect to the DCF model:

> It is not necessary that *g* be constant year after year to make the model valid. *The growth rate may vary randomly around some average expected value. Random variations around trend are perfectly acceptable, as long as the mean expected growth*

[24] Id., p. 256.

is constant. The growth rate must be 'expectationally constant' to use formal statistical jargon. (italics added)

The foregoing confirms that the RPM is similar to the DCF model. Both assume an "expectationally constant" risk premium and growth rate, respectively, but in reality both vary (change) randomly around an arithmetic mean. Consequently, the use of the arithmetic mean, and not the geometric mean is confirmed as appropriate in the determination of an equity risk premium as discussed previously.

D. The Capital Asset Pricing Model (CAPM)

Q. PLEASE EXPLAIN THE THEORETICAL BASIS OF THE CAPM.

A. CAPM theory defines risk as the covariability of a security's returns with the market's returns. This covariability is measured by beta ("β"), an index measure of an individual security's variability relative to the market. A beta less than 1.0 indicates lower variability while a beta greater than 1.0 indicates greater variability than the market.

The CAPM assumes that all other risk, i.e., all non-market or unsystematic risk, can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. The CAPM presumes that investors require compensation for risks that cannot be eliminated through diversification. Systematic risks are caused by macroeconomic and other events that affect the returns on all assets. Essentially, the model is applied by adding a risk-free rate of return to a market risk premium. This market risk premium is adjusted proportionately to reflect the systematic risk of the individual security relative to the market as measured

by beta. The traditional CAPM model is expressed as:

$$R_s = R_f + \beta(R_m - R_f)$$

Where:
- R_s = Return rate on the common stock
- R_f = Risk-free rate of return
- R_m = Return rate on the market as a whole
- β = Adjusted beta (volatility of the security relative to the market as a whole)

Numerous tests of the CAPM have confirmed its validity. These tests have measured the extent to which security returns and betas are related as predicted by the CAPM. However, Morin observes that while the results support the notion that beta is related to security returns, it has been determined that the empirical Security Market Line (SML) described by the CAPM formula is not as steeply sloped as the predicted SML. Morin[25] states:

> With few exceptions, the empirical studies agree that ... low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.
>
> * * *
>
> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:
>
> $$K = R_F + x\,\beta(R_M - R_F) + (1-x)\,\beta(R_M - R_F)$$
>
> where x is a fraction to be determined empirically. The value of x that best explains the observed relationship Return = 0.0829 + 0.0520 β is between 0.25 and 0.30. If x = 0.25, the equation becomes:
>
> $$K = R_F + 0.25(R_M - R_F) + 0.75\,\beta(R_M - R_F)$$[26]

[25] Id., at p. 175.

[26] Id., at p. 190.

In view of theory and practical research, I have applied both the traditional CAPM and the empirical CAPM to the companies in the proxy groups and averaged the results.

Q. PLEASE DESCRIBE YOUR SELECTION OF A RISK-FREE RATE OF RETURN.

A. As shown at the top of column 3 on page 2 of Schedule PMA-12, the risk-free rate adopted for both applications of the CAPM is 4.32%. It is based upon the average consensus forecast of the reporting economists in the February 1, 2008 Blue Chip Financial Forecasts as shown in Note 2, page 3, of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the second calendar quarter 2009.

Q. WHY IS THE PROSPECTIVE YIELD ON LONG-TERM U.S. TREASURY BONDS APPROPRIATE FOR USE AS THE RISK-FREE RATE?

A. The yield on long-term T-Bonds is almost risk-free and its term is consistent with the long-term cost of capital to public utilities measured by the yields on A rated public utility bonds, and is consistent with the long-term investment horizon inherent in utilities' common stocks. Therefore, it is consistent with the long-term investment horizon presumed in the standard DCF model employed in regulatory ratemaking. As Morin[27] states:

> As a proxy for the risk-free rate, long-term rates are the relevant benchmarks when determining the cost of common equity rather than short-term or intermediate-term interest rates.[4(footnote omitted)] There are several reasons for this, both conceptual and practical.

[27] Id., at p. 151.

> At the conceptual level, because common stock is a long-term investment and because the cash flows to investors in the form of dividends last indefinitely, the yield on very long-term government bonds, namely, the yield on 30-year Treasury bonds, is the best measure of the risk-free rate for use in the CAPM[5(footnote omitted)] . . . . The expected common stock return is based on long-term cash flows, regardless of an individual's holding time period.
>
> On the grounds of stability and consistency, the yields on long-term Treasury bonds match more closely with expected commons tock returns. Finally, yields on 90-day Treasury Bills typically do not match the investor's planning horizons. Equity investors generally have an investment horizon far in excess of 90 days.
>
> At the practical level, short-term rates are volatile, fluctuate widely, and are subject to more random disturbances than are long-term rates, leading to volatile and unreliable equity return estimates. Short-term rates are also largely administered rates. For example, Treasury Bills are used by the Federal Reserve as a policy vehicle to stimulate the economy and to control the money supply, and are used by foreign governments, companies, and individuals as a temporary safe harbor for money.

In addition, as noted in the 2007 Yearbook - Valuation Edition[28]:

> The horizon of the chosen Treasury security should match the horizon of whatever is being valued. When valuing a business that is being treated as a going concern, the appropriate Treasury yield should be that of a long-term Treasury bond. Note that the horizon is a function of the investment, not the investor. If an investor plans to hold stock in a company for only five years, the yield on a five-year Treasury Note would not be appropriate since the Company will continue to exist beyond those five years.
>
> In conclusion, the average expected yield on 30-year Treasury Bonds is

the appropriate proxy for the risk-free rate in the CAPM because it is less volatile than yields on Treasury Bills, is almost risk-free as noted by Morin

[28] Id., p. 59.

above and is consistent with the long-term investment horizon implicit in common stocks.

Q. PLEASE EXPLAIN THE ESTIMATION OF THE EXPECTED EQUITY RISK PREMIUM FOR THE MARKET.

A. First, I estimate investors' expected total return rate for the market. Then I estimate the expected risk-free rate which I subtract from the expected total return rate for the market. The result is an expected equity risk premium for the market, some proportion of which must be allocated to the companies in the proxy group through the use of beta. As a measure of risk relative to the market as a whole, the beta is an appropriate means by which to apportion the market risk premium to a specific company or group. The total market equity risk premium utilized was 7.20% and, in this instance, is based upon the long-term historical market risk premia because, in my opinion, the current and recent substantial decline in the stock market is extraordinary and not representative of the expected long-term.

The basis of the projected median market equity risk premium is explained in detail in Note 1 on page 3 of Schedule PMA-12. As previously discussed, it is derived from an average of the most recent 3-month (using the months of November 2007 through January 2008) and a recent spot (February 22, 2008) 3 - 5 year median total market price appreciation projections from Value Line, and the long-term historical average from Morningstar. The appreciation projections by Value Line plus average dividend yield equate to a forecasted annual total return rate on the market of 14.54%. The long-term

historical return rate of 12.30% on the market as a whole is from the 2008 Ibbotson Risk Premia Over Time Report – Estimates for 1926-2007. In each instance, the relevant risk-free rate was deducted from the total market return rate. For example, from the Value Line projected total market return of 14.54%, the forecasted average risk-free rate of 4.32% was deducted indicating a forecasted market risk premium of 10.22%. From the Ibbotson Associates' long-term historical total return rate of 12.30%, the long-term historical income return rate on long-term U.S. Government Securities of 5.20% was deducted indicating an historical equity risk premium of 7.10%. Thus, the average of the projected and historical total market risk premia of 10.22% and 7.10%, respectively, is 8.66%. However, as stated previously, I will rely upon the historical market equity risk premium of 7.10%.

Q. WHAT ARE THE RESULTS OF YOUR APPLICATIONS OF THE TRADITIONAL AND EMPIRICAL CAPM TO THE PROXY GROUPS?

A. As shown on Schedule PMA-12, Line No. 1 of page 1, the traditional CAPM cost rate is 10.71% for the proxy group of six AUS Utility Reports water companies and 11.42% for the proxy group of four Value Line (Std. Ed.) water companies. And, as shown on Line No. 2 of page 1, the empirical CAPM cost rate is 10.89% for the six AUS Utility Reports water companies and 11.42% for the four Value Line (Std. Ed.) water companies. The traditional and empirical CAPM cost rates are shown individually by company on pages 2 and 3 of Schedule PMA-12. As with the DCF results discussed previously, and for the same reasons, namely the wide range of results and the current extremely

volatile capital markets, I rely upon the median results of the traditional CAPM and ECAPM for both proxy groups. As shown on Line No. 3 on page 1, the CAPM cost rate applicable to the proxy group of six AUS Utility Reports water companies is 10.80% and to the proxy group of four Value Line (Std. Ed.) water companies is 11.42%, based upon the traditional and empirical CAPM results.

Q. SOME CRITICS OF THE ECAPM MODEL CLAIM THAT USING ADJUSTED BETAS IN A TRADITIONAL CAPM AMOUNTS TO USING AN ECAPM. IS SUCH A CLAIM VALID?

A. No. Using adjusted betas in a CAPM analysis is not equivalent to the ECAPM. Betas are adjusted because of the regression tendency of betas to converge toward 1.0 over time, i.e., over successive calculations of beta. As discussed previously, numerous studies have determined that the Security Market Line (SML) described by the CAPM formula at any given moment in time is not as steeply sloped as the predicted SML. Morin[29] states:

> Some have argued that the use of the ECAPM is inconsistent with the use of adjusted betas, such as those supplied by Value Line and Bloomberg. This is because the reason for using the ECAPM is to allow for the tendency of betas to regress toward the mean value of 1.00 over time, and, since Value Line betas are already adjusted for such trend [sic], an ECAPM analysis results in double-counting. This argument is erroneous. Fundamentally, the ECAPM is not an adjustment, increase or decrease, in beta. This is obvious from the fact that the expected return on high beta securities is actually lower than that produced by the CAPM estimate. The ECAPM is a formal recognition that the observed risk-return tradeoff is flatter than predicted by the CAPM based on myriad empirical evidence. The ECAPM and the use of adjusted betas comprised two separate features of asset pricing. Even if a company's beta is estimated accurately, the CAPM still understates the return for

[29] Id., at p. 191.

low-beta stocks. Even if the ECAPM is used, the return for low-beta securities is understated if the betas are understated. Referring back to Figure 6-1, the ECAPM is a return (vertical axis) adjustment and not a beta (horizontal axis) adjustment. Both adjustments are necessary.

Moreover, the slope of the Security Market Line (SML) should not be confused with beta. As Eugene F. Brigham, finance professor emeritus and the author of many financial textbooks states[30] :

> The slope of the SML reflects the degree of risk aversion in the economy – the greater the average investor's aversion to risk, then (1) the steeper is the slope of the line, (2) the greater is the risk premium for any risky asset, and (3) the higher is the required rate of return on risky assets.[12]
>
> [12]Students sometimes confuse beta with the slope of the SML. This is a mistake. As we saw earlier in connection with Figure 6-8, and as is developed further in Appendix 6A, beta does represent the slope of a line, but *not* the Security Market Line. This confusion arises partly because the SML equation is generally written, in this book and throughout the finance literature, as $k_i = R_F + b_i(k_M - R_F)$, and in this form b_i looks like the slope coefficient and $(k_M - R_F)$ the variable. It would perhaps be less confusing if the second term were written $(k_M - R_F)b_i$, but this is not generally done.

In addition, regulatory support for the ECAPM can be found in the New York Public Service Commission's Generic Financing Docket, Case 91-M-0509. In addition, the Regulatory Commission of Alaska (RCA) in its Order No. 151 in Docket No. P-97-4 re: In the Matter of the Correct Calculation and Use of Acceptable Input Data to Calculate the 1997, 1998, 1999, 2000, 2001 and 2002 Tariff Rates for the Intrastate Transportation of Petroleum over the TransAlaska Pipeline System noted:

> Although we primarily rely upon Tesoro's recommendation, we are concerned, however, about Tesoro's CAPM analysis. Tesoro

[30] Eugene F. Brigham, Financial Management – Theory and Practice, 4th Ed., The Dryden Press, 1985, p. 203.

> averaged the results it obtained from CAPM and ECAPM while at the same time providing empirical testimony[604] (footnote omitted) that the ECAPM results are more accurate then [sic] traditional CAPM results. The reasonable investor would be aware of these empirical results. Therefore, we adjust Tesoro's recommendation to reflect only the ECAPM result.

In view of the foregoing, using adjusted betas in an ECAPM analysis is not incorrect, nor inconsistent with the financial literature. Rather, the use of the traditional CAPM results in an understated estimate of the cost of common equity capital for a utility with an adjusted beta below 1.00. And notwithstanding regulatory support for the use of only the ECAPM, my CAPM analysis, which includes both the traditional CAPM and the ECAPM, is a conservative approach resulting in a reasonable estimate of the cost of common equity.

E. Comparable Earnings Model (CEM)

Q. PLEASE DESCRIBE YOUR APPLICATION OF THE COMPARABLE EARNINGS MODEL AND HOW IT IS USED TO DETERMINE COMMON EQUITY COST RATE.

A. My application of the CEM is summarized on Schedule PMA-13 which consists of sixteen pages. Pages 1 through 7 show the CEM results for the proxy groups of six AUS Utility Reports water companies and four Value Line (Std. Ed.) water companies. Supporting data are shown on pages 8 through 14 and pages 15 and 16 contain notes related to pages 1 through 14.

The comparable earnings approach is derived from the "corresponding risk" standard of the landmark cases of the U.S. Supreme Court. Therefore, it is consistent with the Hope doctrine that the return to the equity investor should

be commensurate with returns on investments in other firms having corresponding risks.

The CEM is based upon the fundamental economic concept of opportunity cost which maintains that the true cost of an investment is equal to the cost of the best available alternative use of the funds to be invested. The opportunity cost principle is also consistent with one of the fundamental principles upon which regulation rests: that regulation is intended to act as a surrogate for competition and to provide a fair rate of return to investors.

The CEM is designed to measure the returns expected to be earned on the book common equity, in this case net worth, of similar risk enterprises. Thus, it provides a direct measure of return, since it translates into practice the competitive principle upon which regulation rests. In my opinion, it is inappropriate to use the achieved returns of regulated utilities of similar risk because to do so would be circular and inconsistent with the principle of equality of risk with non-price regulated firms.

The difficulty in application of the CEM is to select a proxy group of companies which are similar in risk, but are not price regulated utilities. Consequently, the first step in determining a cost of common equity using the comparable earnings model is to choose an appropriate proxy group of non-price regulated firms. The proxy group should be broad-based in order to obviate any company-specific aberrations. As stated previously, utilities need to be eliminated to avoid circularity since the returns on book common equity of utilities are substantially influenced by regulatory awards and are therefore not

representative of the returns that could be earned in a truly competitive market.

Q. PLEASE DESCRIBE YOUR APPLICATION OF THE CEM.

A. My application of the CEM is market-based in that the selection of non-price regulated firms of comparable risk is based upon statistics derived from the market prices paid by investors.

I have chosen two proxy groups of domestic, non-price regulated firms to reflect both the systematic and unsystematic risks of the proxy group of six AUS Utility Reports water companies and the proxy group of four Value Line (Std. Ed.) water companies, respectively. The proxy group of one hundred fifty-one non-utility companies similar in risk to the proxy group of six AUS Utility Reports water companies and two hundred three non-utility companies similar in risk to the proxy group of four Value Line (Std. Ed.) water companies are listed on pages 1 through 14, Schedule PMA-13. The criteria used in the selection of these proxy companies were that they be domestic non-utility companies and have a meaningful rate of return on net worth, common equity or partners' capital reported in Value Line (Std. Ed.) for each of the five years ended 2006, or projected for 2010-2012. Value Line betas were used as a measure of systematic risk. The standard error of the regression was used as a measure of each firm's unsystematic or specific risk. The standard error of the regression reflects the extent to which events specific to a company's operations will affect its stock price and, therefore, is a measure of diversifiable, unsystematic, company-specific risk. *In essence, companies which have similar betas and standard errors of the regressions, have similar investment*

risk, i.e., the sum of systematic (market) risk as reflected by beta and unsystematic (business and financial) risk, as reflected by the standard error of the regression, respectively. Those statistics are derived from regression analyses using market prices which, under the EMH reflect all relevant risks. The application of these criteria results in proxy groups of non-price regulated firms similar in risk to the average company in each proxy group.

Using a Value Line, Inc. proprietary database dated January 9, 2008, the proxy group of one hundred fifty-one non-price regulated companies were chosen based upon ranges of unadjusted beta and standard error of the regression. The ranges were based upon the average standard deviations of the unadjusted beta and the average standard error of the regression for the proxy group of six AUS Utility Reports water companies.

The six AUS Utility Reports water companies in the proxy group have an average unadjusted beta of 0.77 whose standard deviation is 0.1122 as of January 9, 2008, as shown on page 3, Schedule PMA-13. The average standard error of the regression is 2.9385 as also shown on page 3 of Schedule PMA-13, with a standard deviation of 0.1291 as derived in Note 5, page 15. Ranges of unadjusted betas from 0.43 to 1.11 and of standard errors of the regression from 2.5512 to 3.3258 were used to select the proxy group of one hundred fifty-one domestic non-utility companies comparable to the profile of the proxy group of six AUS Utility Reports water companies as can be gleaned from pages 1 through 3 and explained in Note 1 on page 15 of Schedule PMA-13. These ranges are based upon the proxy group's average unadjusted beta of 0.77 and average standard error of the regression of 2.9385 plus or minus

three standard deviations of beta (0.1122 x 3 = 0.3366) and standard error of the regressions (0.1291 x 3 = 0.3873). The use of three standard deviations assures capturing 99.73% of the distribution of unadjusted betas and standard errors, assuring comparability.

Likewise, using the same Value Line, Inc. proprietary database dated January 9, 2008, the proxy group of two hundred three non-price regulated companies were chosen based upon ranges of unadjusted beta and standard error of the regression. The ranges were based upon the average standard deviations of the unadjusted beta and the average standard error of the regression for the proxy group of four Value Line (Std. Ed.) water companies.

The four Value Line (Std. Ed.) water companies in the proxy group have an average unadjusted beta of 0.97 whose standard deviation is 0.1173 as of January 9, 2008, as shown on page 7, Schedule PMA-13. The average standard error of the regression is 3.0719 as also shown on Schedule PMA-13, page 7 with a standard deviation of 0.1350 as derived in Note 10, page 16. Ranges of unadjusted betas from 0.62 to 1.32 and of standard errors of the regression from 2.6669 to 3.4769 were used to select the proxy group of two hundred three domestic non-utility companies comparable to the profile of the proxy group of four Value Line (Std. Ed.) water companies as can be gleaned from pages 3 through 7 and explained in Note 9 on pages 15 and 16 of Schedule PMA-13. These ranges are based upon the proxy group's average unadjusted beta of 0.97 and average standard error of the regression of 3.0719 plus or minus three standard deviations of beta (0.1173 x 3 = 0.3519) and

standard error of the regressions (0.1350 x 3 = 0.4050). The use of three standard deviations assures capturing 99.73% of the distribution of unadjusted betas and standard errors, assuring comparability.

I believe that this methodology for selecting non-price regulated firms of similar total risk (i.e., non-diversifiable systematic and diversifiable non-systematic risk) is meaningful and effectively responds to the criticisms normally associated with the selection of firms presumed to be comparable in total risk. This is because the selection of non-price regulated companies comparable in total risk is based upon regression analyses of market prices which reflect investors' assessment of all risks, diversifiable and non-diversifiable. Thus, the empirical selection process results in companies comparable in both systematic and unsystematic risks, i.e., total risk.

Once proxy groups of non-price regulated companies are selected, it is then necessary to derive returns on book common equity, net worth or partners' capital for the companies in the groups. I have measured these returns using the rate of return on net worth, common equity or partners' capital reported by Value Line (Standard Edition). It is reasonable to measure these returns over both the most recent historical five-year period as well as those projected over the ensuing five-year period.

Q. WHAT ARE YOUR CONCLUSIONS OF CEM COST RATE?

A. Conclusions of CEM cost rates based upon the average of the median of all of the five-year median historical and projected returns on book common equity, net worth or partners' capital are 14.50% for the proxy group of six AUS Utility

Reports water companies as shown on page 3 of Schedule PMA-13 and 14.15%, for the proxy group of four Value Line (Std. Ed.) water companies as shown on page 7. As with the DCF and CAPM results discussed previously, I have again relied upon median and for the same reasons, namely, the wide range of returns and the extreme volatility of the current capital markets. After I apply a test of significance (Student's t-statistic) to determine whether any of the projected returns are significantly different from their respective means at the 95% confidence level, the projected means of several companies have been excluded. After excluding these outliers, my conclusion of CEM cost rates are 14.13% for the six water companies and 14.00% for the four water companies.

IX. CONCLUSION OF COMMON EQUITY COST RATE RANGE

Q. WHAT IS YOUR RECOMMENDED COMMON EQUITY COST RATE RANGE?

A. It is 11.075% to 11.425% based upon the common equity cost rates resulting from all four cost of common equity models consistent with the EMH which logically mandates the use of multiple cost of common equity models as adjusted for MAWC's greater business risk.

In formulating my recommended common equity cost rate range of 11.075% to 11.425%, I reviewed the results of the application of four different cost of common equity models, namely, the DCF, RPM, CAPM, and CEM for the two proxy groups. I employ all four cost of common equity models as primary tools in arriving at my recommended common equity cost rate range because no single model is so inherently precise that it can be relied upon

solely, to the exclusion of other theoretically sound models. As discussed above, all four models are based upon the Efficient Market Hypothesis (EMH), and therefore, have application problems associated with them. The EMH, as also previously discussed, requires the assumption that investors rely upon multiple cost of common equity models. Moreover, as demonstrated in this testimony, the prudence of using multiple cost of common equity models is supported in the financial literature. Therefore, none should be relied upon exclusively to estimate investors' required rate of return on common equity.

In a market environment where market value deviates significantly from book value (lower or higher), sole reliance on the simplified DCF model is particularly problematic for a regulated utility because its application results in both a practical and theoretical overstatement or understatement, respectively, of investors' required rate of return. Investors expect to achieve their required rate of return based upon dividends received and appreciation in market price. This testimony has shown that market prices are significantly influenced by factors other than earnings per share (EPS) and dividends per share (DPS). Thus, because it is necessary to use accounting proxies for growth in the DCF model (such as EPS, DPS, or their derivative, internal growth), that model does not reflect the full extent of market price growth expected by investors. Market prices reflect other factors affecting growth not accounted for in the standard regulatory version of the DCF model such as an increase in the market value per share due to expected increases in price/earnings multiples and less obvious factors included in the long-range goals of investors. For these

reasons, sole reliance on the DCF model should be avoided. In fact, as discussed in detail above, state commissions in Iowa, Indiana, Hawaii and Pennsylvania have questioned their previous primary reliance upon the DCF, having explicitly recognized this tendency of the DCF model to understate the common equity cost rate when, as now, market prices significantly exceed book values.

The results of the four cost of common equity models applied to the proxy groups of six AUS Utility Reports water companies and four Value Line (Std. Ed.) water companies are shown on Schedule PMA-1, page 2 and summarized below:

Table 4

	Proxy Group of Six AUS Utility Reports Water Companies		Proxy Group of Four Value Line (Std. Ed.) Water Cos.
Discounted Cash Flow Model	9.86%		10.23%
Risk Premium Model	11.00		11.31
Capital Asset Pricing Model	10.80		11.42
Comparable Earnings Model	14.13		14.00
Indicated Common Equity Cost Rate Before Business Risk Adjustment	11.05%	--	11.40%
Business Risk Adjustment	0.025		0.025
Recommended Range of Common Equity Cost Rate After Adjustment for Business Risk	11.075%	--	11.425%

Based upon these common equity cost rate results, I conclude that a common equity cost rate in the range of 11.05% to 11.40% is indicated based

upon the use of multiple common equity cost rate models applied to the market data of both proxy groups and before any adjustment for MAWC's greater relative business risk as shown on Line No. 5, page 2 of Schedule PMA-1.

Q. IS THERE A WAY TO QUANTIFY A BUSINESS RISK ADJUSTMENT DUE TO MAWC'S SMALL SIZE RELATIVE TO THE TWO PROXY GROUPS?

A. Yes. As discussed previously, MAWC has greater business risk than the average proxy group company because of its smaller size relative to each proxy group, whether measured by book capitalization or the market capitalization of common equity (estimated market value for MAWC, whose common stock is not traded). Therefore, it is necessary to upwardly adjust the common equity cost rate range of 11.05% to 11.40% based upon the two proxy groups. Based upon MAWC's size, no adjustment is necessary to reflect its size relative to the market-based common equity cost rates of the six AUS Utility Reports water companies and an adjustment of 0.53% (53 basis points) relative to the market-based common equity cost rates of the four Value Line (Std. Ed.) water companies are indicated. These adjustments are based upon data contained in the 2008 Ibbotson Risk Premia Over Time Report – Estimates for 1926-2007. The determinations are based on the size premia for decile portfolios of New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and NASDAQ listed companies for the 1926-2007 period and related data shown on pages 3 through 21 of Schedule PMA-1. The average size premia for the deciles in which the proxy groups fall have been compared to the average size premia for the 8^{th} and 9^{th} deciles in which MAWC

would fall if its stock were traded and sold at the February 20, 2008 average market/book ratio of either 212.1% or 203.2% experienced by each proxy group, respectively. As shown on page 3 of Schedule PMA-1, the size premium spread between MAWC and the six AUS Utility Reports water companies is 0.00% and 0.53% between MAWC and the four Value Line (Std. Ed.) water companies. Page 4 contains notes relative to page 3. Page 5 contains data in support of page 3 while pages 6 through 21 of Schedule PMA-1 contain relevant information from the 2008 Ibbotson Risk Premia Over Time Report – Estimates for 1926-2007 discussed previously.

Consequently, business risk adjustments of 0.00% and 0.53% are indicated based upon the six AUS Utility Reports water companies and the four Value Line (Std. Ed.) water companies, respectively. However, I will make a conservatively reasonable business risk adjustment of 0.025% (25 basis points) as shown on Line No. 6 on page 2 of Schedule PMA-1 to the indicated common equity cost rate range of 11.05% to 11.40%. I have restricted this adjustment to only 2.5 basis points. This results in a range of business risk adjusted common equity cost rates of 11.075% to 11.425% as shown on Line No. 7, the midpoint of which is 11.25%. In my opinion, such a cost rate is both reasonable and conservative and will provide MAWC with sufficient earnings to enable it to attract necessary new capital.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

Exhibit No.:	
Issues:	Rate of Return on Equity
Witness:	Pauline M. Ahern
Exhibit Type:	Direct Schedules
Sponsoring Party:	Missouri American Water Company
Case Nos.:	WR-2008-XXXX SR-2008-XXXX
Date:	

PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

CASE NOS. WR-2008-XXXX
SR-2008-XXXX

SCHEDULES

TO ACCOMPANY THE

DIRECT TESTIMONY

OF

PAULINE M. AHERN, CRRA

ON BEHALF OF

MISSOURI AMERICAN WATER COMPANY

JEFFERSON CITY, MISSOURI

Missouri American Water Company
Table of Contents
to the Supporting Schedules
of Pauline M. Ahern

Missouri American Water Company
Summary of Cost of Capital and Fair Rate of Return
Based upon the Pro Forma Capital Structure at September 30, 2008

Type of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate
Long-Term Debt	51.99 %	6.17 % (1)	3.21 %
Short-Term Debt	0.00	0.00 (1)	0.00
Total Debt	51.99		3.21
Preferred Stock	0.36	9.17 (1)	0.03
Common Equity	47.65	11.25 (2)	5.36
Total	100.00 %		8.60 %

Notes:

(1) From Schedule SWR-1, page 1.
(2) Based upon informed judgment from the entire study, the principal results of which are summarized on page 2 of this Schedule.

Missouri American Water Company
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)	9.86 %		10.23 %
2.	Risk Premium Model (RPM) (2)	11.00		11.31
3.	Capital Asset Pricing Model (CAPM) (3)	10.80		11.42
4.	Comparable Earnings Model (CEM) (4)	14.13		14.00
5.	Indicated Range of Common Equity Cost Rate before Adjustment for Business Risk	11.05 %	--	11.40 %
6.	Business Risk Adjustment (5)	0.025		0.025
7.	Indicated Range of Common Equity Cost Rate after Adjustment for Business Risk	11.075 %	--	11.425 %
8.	Recommendation	11.25%		

Notes: (1) From Exhibit PMA-7.
(2) From page 1 of Exhibit PMA-11.
(3) From page 1 Exhibit PMA-12.
(4) From pages 3 and 7 of Exhibit PMA-13 of this Exhibit.
(5) Business risk adjustment to reflect Missouri American Water Company's greater business risk due to its small size vis-à-vis each proxy group as detailed in Ms. Ahern's accompanying direct testimony.

Missouri American Water Company
Derivation of Investment Risk Adjustment Based upon
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		1 Total Capitalization (incl. Short-Term Debt) for the Year 2005 (millions)	(times larger)	2 Market Capitalization on February 20, 2008 (1) (millions)	(times larger)	3 Applicable Decile of the NYSE/AMEX/ NASDAQ	4 Applicable Size Premium		5 Spread from Applicable Size Premium for (2)
1.	Missouri American Water Company	$ 573.038 (3)							
	a. Based Upon the Proxy Group of Six AUS Utility Reports Water Companies			$ 642.973		8 - 9 (4)	2.38%	(5)	
	b. Based Upon the Proxy Group of Four Value Line (Standard Edition) Water Companies			$ 616.044		9 (4)	2.56%	(6)	
2.	Proxy Group of Six AUS Utility Reports Water Companies	$ 626.006 (7)	1.1 x	$ 743.999	1.2 x	8 - 9 (8)	2.38%	(5)	0.00%
3.	Proxy Group of Four Value Line (Standard Edition) Water Companies	$ 895.381 (9)	1.6 x	$ 1,056.718	1.7 x	7 - 8 (10)	1.85%	(11)	0.53%

Decile	Market Capitalization of Smallest Company (millions)	Market Capitalization of Largest Company (millions)	Midpoint (millions)
1 - Largest	$20,386.369	$472,518.672	$246,452.521
2	9,274.049	20,234.526	14,754.288
3	5,025.807	9,206.713	7,116.260
4	3,426.586	5,012.577	4,219.582
5	2,413.583	3,422.743	2,918.163
6	1,633.668	2,411.794	2,022.731
7	1,129.192	1,633.320	1,381.256
8	725.267	1,128.765	927.016
9	363.549	723.258	543.404
10 - Smallest	1.922	363.479	182.701

See page 4 for notes.

Missouri American Water Company
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 0.53% in Column 5, Line No. 3 is derived as follows 0.53%% = 2.38% - 1.85 %.

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

(4) With an estimated market capitalization of $642.973 million (based upon the proxy group of six AUS Utility Reports water companies) and $616.044 million (based upon the proxy group of four Value Line (Standard Edition) water companies), Missouri American Water Company falls between the 8th and 9th deciles and in the 9th decile, respectively, of the NYSE/AMEX/NASDAQ which have an average midpoint market capitalization of $735.210 million and $543.404 million as shown in the table on the bottom half of page 3 of this Schedule.

(5) Average size premium applicable to the 8th and 9th deciles of the NYSE/AMEX/NASDAQ as shown on page 17 of this Schedule.

(6) Size premium applicable to the 9th decile of the NYSE/AMEX/NASDAQ as shown on page 17 of this Schedule.

(7) From page 1 of Exhibit PMA-4.

(8) With an estimated market capitalization of $743.999 million, the proxy group of six AUS Utility Reports water companies falls in the between 8th and 9th deciles of the NYSE/AMEX/NASDAQ which have an average midpoint market capitalization of $735.210 million as shown in the table on the bottom half of page 3 of this Schedule.

(9) From page 1 of Exhibit PMA-5.

(10) With an estimated market capitalization of $1,056.718 million, the proxy group of four Value Line (Standard Edition) water companies falls between the 7th and 8th deciles of the NYSE/AMEX/NASDAQ which have an average midpoint market capitalization of $1,154.136 million as shown in the table on the bottom half of page 3 of this Schedule.

(11) Average size premium applicable to the 7th and 8th deciles of the NYSE/AMEX/NASDAQ as shown on page 17 of this Schedule.

Source of Information: 2008 Ibbotson Risk Premia Over Time Report – Estimates for 1926-2007, Morningstar, Inc., Chicago, IL, 2008

Missouri American Water Company
Market Capitalization of Missouri American Water Company,
the Proxy Group of Six AUS Utility Reports Water Companies and
the Proxy Group of Four Value Line (Standard Edition) Water Companies and

Company	1 Common Stock Shares Outstanding at September 30, 2007 (millions)	2 Book Value per Share at September 30, 2007 (1)	3 Total Common Equity at September 30, 2007 (millions)	4 Closing Stock Market Price on February 20, 2008	5 Market-to-Book Ratio at February 20, 2008 (2)	6 Market Capitalization on February 20, 2008 (3) (millions)
Missouri American Water Company	NA	NA	$ 303.146 (4)	NA		
Based Upon the Proxy Group of Six AUS Utility Reports Water Companies					212.1 % (5)	$ 642.973 (6)
Based Upon the Proxy Group of Four Value Line (Standard Edition) Water Companies					203.2 % (7)	$ 616.044 (8)
Proxy Group of Six AUS Utility Reports Water Companies						
American States Water Co.	17.197	$ 17.384	$ 298.947	$ 32.710	188.2 %	$ 562.514
Aqua America, Inc.	133.834	7.210	964.939	19.860	275.5	2,657.943
Artesian Resources Corp.	7.425	11.450	85.013	18.850	164.6	139.961
California Water Services Group	20.691	18.539	383.596	35.500	191.5	734.531
Connecticut Water Service Inc.	8.293	12.027	99.737	24.210	201.3	200.774
York Water Company	11.248	5.953	66.954	14.960	251.3	168.270
Average	33.115	$ 12.094	$ 316.531	$ 24.348	212.1 %	$ 743.999
Proxy Group of Four Value Line (Standard Edition) Water Companies						
American States Water Co.	17.197	$ 17.384	$ 298.947	$ 32.710	188.2 %	$ 562.514
Aqua America, Inc.	133.834	7.210	964.939	19.860	275.5	2,657.943
California Water Services Group	20.691	18.539	383.596	35.500	191.5	734.531
Southwest Water Company	24.472	7.042	172.341	11.110	157.8	271.884
Average	49.049	$ 12.544	$ 454.956	$ 24.795	203.2 %	$ 1,056.718

NA = Not Available

Notes:
(1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 5 * Column 3.
(4) Company provided.
(5) The market-to-book ratio of Missouri American Water Company at February 20, 2008 is assumed to be equal to the average market-to-book ratio at February 20, 2008 of the proxy group of six AUS Utility Reports water companies.
(6) Missouri American Water Company's common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at February 20, 2008 of the proxy group of six AUS Utility Reports water companies, 212.1%, and Missouri American Water Company's market capitalization at February 20, 2008 would therefore have been $642.973 million. ($642.973 = $303.146 * 212.1%).
(7) The market-to-book ratio of Missouri American Water Company at February 20, 2008 is assumed to be equal to the average market-to-book ratio at February 20, 2008 of the proxy group of four Value Line (Standard Edition) water companies.
(8) Missouri American Water Company's common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at February 20, 2008 of the proxy group of four Value Line (Standard Edition) water companies, 203.2%, and Missouri American Water Company's market capitalization at February 20, 2008 would therefore have been $616.044 million. ($616.044 = $303.146 * 203.2%).

Source of Information: Quarterly Forms 10Q for the period ending September 30, 2007
EDGAR Online's I-Metrix Database, 2/21/08

2008 Ibbotson® Risk Premia Over Time Report

Estimates for 1926–2007

The information presented in the 2008 Ibbotson® Risk Premia Over Time Report has been obtained with the greatest of care from sources believed to be reliable, but is not guaranteed to be complete, accurate or timely.

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Morningstar, Inc.
225 West Wacker Dr.
Chicago, Illinois 60606
Main (312) 696-6000
Product Sales (888) 298-3647
Fax (312) 696-6010
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Key Variables in Estimating the Cost of Capital

2008 Ibbotson SBBI Valuation Yearbook: Appendix C, Table C-1, page 262
As of December 31, 2007

Yields (Riskless Rates)

Long-term (20-year) U.S. Treasury Coupon Bond Yield[1]	4.5%

Equity Risk Premium

Long-horizon expected equity risk premium (historical): Large company stock total returns minus long-term government bond income returns[2]	7.1%
Long-horizon expected equity risk premium (supply side): historical equity risk premium minus price-to-earnings ratio calculated using three-year average earnings[3]	6.2%

Size Premia (market capitalization in millions)[4]

Decile	Smallest Company	Largest Company	Size Premium (Return in Excess of CAPM)
Mid-Cap (3–5)	$2,413.583 –	$9,206.713	0.92%
Low-Cap (6–8)	$725.267 –	$2,411.794	1.65%
Micro-Cap (9–10)	$1.922 –	$723.258	3.65%
Breakdown of Deciles 1–10			
1-Largest	$20,386.369 –	$472,518.672	-0.34%
2	$9,274.049 –	$20,234.526	0.68%
3	$5,025.807 –	$9,206.713	0.76%
4	$3,426.586 –	$5,012.577	0.93%
5	$2,413.583 –	$3,422.743	1.47%
6	$1,633.668 –	$2,411.794	1.60%
7	$1,129.192 –	$1,633.320	1.50%
8	$725.267 –	$1,128.765	2.20%
9	$363.549 –	$723.258	2.56%
10-Smallest	$1.922	$363.479	5.82%
Breakout of the 10th decile			
10a	$211.628 –	$363.479	3.99%
10b	$1.922 –	$211.590	9.73%

[1] Maturity is approximate

[2] Expected risk premium for equities is based on the difference of historical arithmetic mean returns for 1926-2007. Large company stocks are represented by the S&P 500.

[3] A supply side equity risk premium estimate was first published in Ibbotson's *2004 SBBI Valuation Edition Yearbook*.

[4] Return in excess of CAPM estimation. Mid-Cap stocks are defined here as the aggregate of size-deciles 3–5 of the NYSE/AMEX/NASDAQ; Low-Cap stocks are defined here as the aggregate of size-deciles 6–8 of the NYSE/AMEX/NASDAQ; Micro-Cap stocks are defined here as the aggregate of size-deciles 9–10 of the NYSE/AMEX/NASDAQ. The betas used in CAPM estimation were estimated from CRSP NYSE/AMEX/NASDAQ decile portfolio monthly 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 2007. Source of underlying NYSE/AMEX/NASDAQ decile returns and breakpoints: ©200801 CRSP®, Center for Research in Security Prices. Graduate School of Business, The University of Chicago used with permission. All rights reserved. www.crsp.chicagogsb.edu

Stocks, Bonds, Bills, and Inflation

Market Results for 1926–2006

2007 Yearbook
Valuation Edition

MORNINGSTAR

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 168 stocks, while the smallest decile accounts for just over one percent of the

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.

market value. The data in the second column of Table 7-1 are averages across all 81 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 2006.

Table 7-1
Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Size and Composition
1926 through September 30, 2006

Decile	Historical Average Percentage of Total Capitalization	Recent Number of Companies	Recent Decile Market Capitalization (in thousands)	Recent Percentage of Total Capitalization
1-largest	63.26%	168	$9,586,846,750	61.64%
2	13.97%	179	2,148,609,950	13.81%
3	7.57%	198	1,126,434,240	7.24%
4	4.73%	184	624,621,080	4.02%
5	3.24%	209	492,840,110	3.17%
6	2.30%	264	428,711,640	2.76%
7	1.74%	291	333,661,890	2.15%
8	1.29%	355	284,415,720	1.83%
9	1.00%	660	298,400,730	1.92%
10-Smallest	0.82%	1,744	229,218,310	1.47%
Mid-Cap 3-5	15.54%	591	2,243,894,380	15.41%
Low-Cap 6-8	5.41%	910	1,046,789,110	7.19%
Micro-Cap 9-10	1.83%	2,404	527,619,100	3.62%

Source: © 200703 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 81 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, 2006.

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 $7,777,183,000 but greater than $1,946,588,000. Low-cap stocks include deciles 6–8 and currently include all companies in the NYSE/AMEX/NASDAQ with market capitalizations at or below $1,946,588,000 but greater than $626,955,000. Micro-cap stocks include deciles 9–10 and include companies with market capitalizations at or below $626,955,000. The market capitalization of the smallest company included in the micro-capitalization group is currently $2,247,000.

Table 7-2
Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, Largest Company and Its Market Capitalization by Decile
September 30, 2006

Decile	Market Capitalization of Largest Company (in thousands)	Company Name
1-Largest	$371,187,368	Exxon Mobil Corp
2	16,820,566	EOG Resources Inc
3	7,777,183	Xcel Energy Inc
4	4,085,184	First American Corp /CA
5	2,848,771	Scotts Miracle Gro Co
6	1,946,588	DRS Technologies Inc
7	1,378,476	ESCO Technologies Inc
8	976,624	Knoll Inc.
9	626,955	Bandag Inc
10-Smallest	314,433	M & F Worldwide Corp.

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 1926–2006 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	$13,635	$4,263	$13,660	$4,278	$43
1927	$65,078	$14,522	$4,450	$14,664	$4,496	$65
1928	$81,095	$18,788	$5,119	$18,801	$5,170	$135
1929	$103,054	$24,300	$5,850	$24,328	$5,852	$118
1930	$66,750	$12,918	$3,356	$13,050	$3,359	$30
1931	$43,120	$8,142	$1,944	$8,222	$1,946	$15
1932	$12,667	$2,208	$468	$2,223	$469	$19
1933	$40,298	$7,280	$1,875	$7,346	$1,892	$120
1934	$38,019	$6,638	$1,691	$6,659	$1,722	$59
1935	$37,631	$6,549	$1,350	$6,605	$1,383	$38
1936	$46,980	$11,526	$2,800	$11,563	$2,801	$98
1937	$51,750	$13,635	$3,563	$13,793	$3,600	$68
1938	$36,102	$8,372	$2,195	$8,400	$2,200	$60
1939	$35,409	$7,478	$1,854	$7,500	$1,860	$75
1940	$30,930	$8,007	$1,872	$8,130	$1,929	$51
1941	$31,398	$8,336	$2,087	$8,357	$2,100	$72
1942	$26,037	$6,870	$1,779	$6,875	$1,788	$82
1943	$42,721	$11,403	$3,847	$11,475	$3,903	$395
1944	$46,221	$13,066	$4,812	$13,088	$4,820	$309
1945	$55,268	$17,575	$6,426	$17,584	$6,466	$225
1946	$77,784	$24,192	$10,149	$24,199	$10,168	$829
1947	$57,942	$17,735	$6,380	$17,872	$6,410	$747
1948	$67,238	$19,632	$7,329	$19,651	$7,348	$784
1949	$56,082	$14,549	$5,108	$14,577	$5,112	$379
1950	$66,143	$18,675	$6,225	$18,700	$6,243	$303
1951	$82,517	$22,750	$7,598	$22,860	$7,600	$668
1952	$97,936	$25,452	$8,480	$25,532	$8,551	$480
1953	$98,595	$25,374	$8,168	$25,395	$8,177	$459
1954	$125,834	$29,707	$8,486	$29,791	$8,502	$463
1955	$170,829	$41,681	$12,444	$41,861	$12,524	$553
1956	$183,792	$46,886	$13,623	$47,103	$13,659	$1,122
1957	$194,300	$47,658	$13,848	$48,509	$13,950	$926
1958	$195,536	$46,774	$13,816	$46,871	$14,015	$550
1959	$256,283	$64,110	$19,548	$64,221	$19,701	$1,804
1960	$252,292	$61,529	$19,344	$61,596	$19,385	$831
1961	$301,464	$77,996	$23,562	$78,976	$23,613	$2,455
1962	$250,786	$58,785	$18,744	$58,866	$18,952	$1,018
1963	$308,903	$71,846	$23,927	$71,971	$24,056	$296
1964	$349,675	$79,508	$25,595	$79,937	$25,607	$223
1965	$365,675	$84,600	$28,483	$85,065	$28,543	$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 2006

	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	$403,137	$99,960	$34,884	$100,107	$34,966	$381
1967	$459,438	$118,988	$42,188	$119,635	$42,237	$381
1968	$531,306	$150,893	$60,543	$151,260	$60,719	$592
1969	$518,485	$146,792	$54,353	$147,311	$54,503	$2,119
1970	$382,884	$94,754	$29,916	$94,845	$29,932	$822
1971	$551,690	$147,426	$45,570	$147,810	$45,571	$865
1972	$557,181	$143,635	$46,728	$144,263	$46,757	$1,031
1973	$431,354	$96,699	$29,352	$96,710	$29,430	$581
1974	$356,876	$79,878	$23,355	$80,280	$23,400	$444
1975	$477,054	$102,313	$30,353	$103,283	$30,394	$540
1976	$566,296	$121,717	$34,864	$121,992	$34,901	$564
1977	$584,577	$139,196	$40,700	$139,620	$40,765	$513
1978	$580,881	$164,093	$47,927	$164,455	$48,038	$830
1979	$665,019	$177,378	$51,197	$177,769	$51,274	$948
1980	$762,195	$199,312	$50,496	$199,315	$50,544	$549
1981	$962,397	$264,690	$72,104	$264,783	$72,450	$1,446
1982	$770,517	$210,301	$55,336	$210,630	$55,423	$1,060
1983	$1,209,911	$353,889	$104,382	$356,238	$104,588	$2,025
1984	$1,075,436	$315,965	$91,004	$316,103	$91,195	$2,093
1985	$1,440,436	$370,224	$94,875	$370,729	$94,887	$760
1986	$1,857,621	$449,015	$110,617	$449,462	$110,953	$706
1987	$2,059,143	$468,948	$113,419	$470,662	$113,430	$1,277
1988	$1,957,926	$421,340	$94,449	$421,675	$94,573	$696
1989	$2,145,947	$480,975	$100,285	$483,623	$100,384	$96
1990	$2,171,217	$474,065	$93,750	$474,477	$93,790	$132
1991	$2,129,863	$457,958	$87,586	$458,853	$87,733	$278
1992	$2,428,671	$500,327	$103,352	$500,346	$103,500	$510
1993	$2,705,192	$603,588	$137,105	$607,449	$137,137	$602
1994	$2,470,244	$596,059	$148,104	$597,975	$148,216	$598
1995	$2,789,938	$647,210	$155,386	$647,253	$155,532	$89
1996	$3,142,657	$751,316	$193,001	$751,680	$193,016	$1,043
1997	$3,484,440	$813,923	$228,900	$814,355	$229,058	$585
1998	$4,216,707	$925,688	$252,553	$926,215	$253,031	$1,671
1999	$4,251,741	$875,309	$220,397	$875,582	$220,456	$1,502
2000	$4,143,902	$840,000	$192,083	$840,730	$192,439	$1,393
2001	$5,156,315	$1,108,224	$265,734	$1,108,969	$265,736	$443
2002	$4,930,326	$1,116,525	$308,980	$1,124,331	$309,245	$501
2003	$4,744,580	$1,163,369	$329,060	$1,163,423	$329,529	$332
2004	$6,241,953	$1,607,854	$505,437	$1,607,931	$506,410	$1,393
2005	$7,187,244	$1,728,886	$586,393	$1,729,364	$587,243	$1,079
2006	$7,777,183	$1,946,588	$626,955	$1,947,240	$627,017	$2,247

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 1926–2006

Decile	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Correlation
1-Largest	9 6	11.3	19 06	0 09
2	11.0	13 3	21 72	0 03
3	11 3	13 8	23 51	–0 02
4	11 3	14 3	25 78	–0 02
5	11 7	14 9	26 61	–0 02
6	11 8	15 3	27 67	0 04
7	11 7	15 6	29.80	0 01
8	11 9	16 6	33.27	0 04
9	12 1	17 5	36 31	0 05
10-Smallest	14 0	21 6	45 16	0 15
Mid-Cap, 3–5	11 4	14.2	24 59	–0 02
Low-Cap, 6–8	11 8	15 7	29 34	0 03
Micro-Cap, 9–10	12 8	18 8	38.92	0 08
NYSE/AMEX/NASDAQ Total Value-Weighted Index	10 1	12 1	20 08	0 03

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

Aspects of the Firm Size Effect

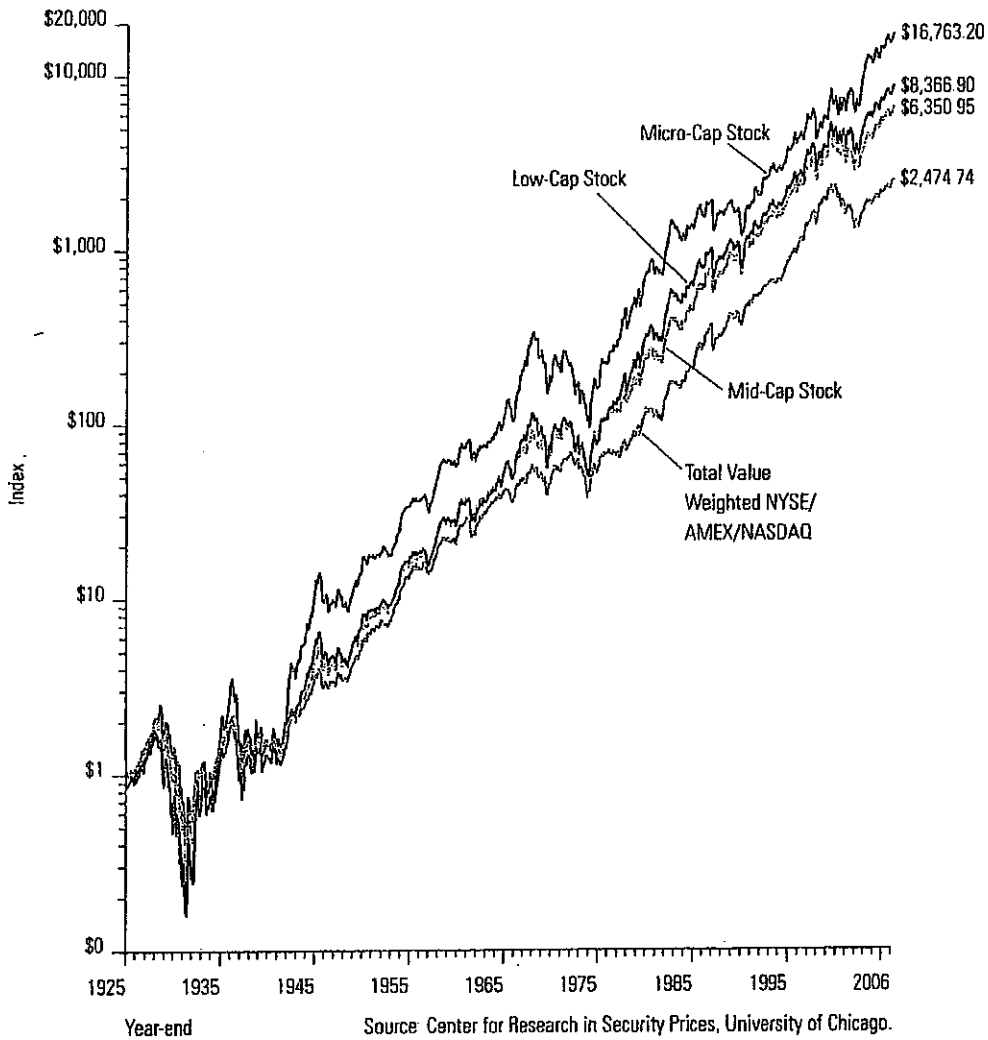
The firm size phenomenon is remarkable in several ways. First, the greater risk of small stocks does not, in the context of the capital asset pricing model (CAPM), fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small company stocks have 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
Year-end 1925 = $1.00

1925–2006



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 81 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 81-year arithmetic mean return on large company stocks, 12.34 percent, less the 81-year arithmetic mean income-return component of 20-year government bonds as the historical riskless rate, in this case 5.21 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 2006. 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
1926–2006

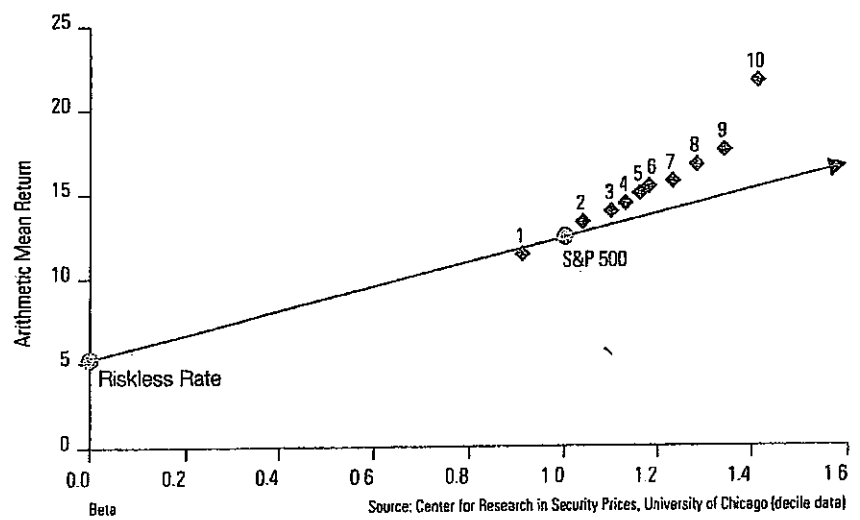
Decile	Beta*	Arithmetic Mean Return	Realized Return in Excess of Riskless Rate**	Estimated Return in Excess of Riskless Rate†	Size Premium (Return in Excess of CAPM)
1-Largest	0.91	11.35%	6.13%	6.49%	-0.36%
2	1.04	13.25%	8.04%	7.39%	0.65%
3	1.10	13.85%	8.64%	7.82%	0.81%
4	1.13	14.28%	9.07%	8.04%	1.03%
5	1.16	14.92%	9.71%	8.26%	1.45%
6	1.18	15.33%	10.11%	8.45%	1.67%
7	1.23	15.63%	10.42%	8.80%	1.62%
8	1.28	16.61%	11.39%	9.12%	2.28%
9	1.34	17.46%	12.27%	9.57%	2.70%
10-Smallest	1.41	21.57%	16.36%	10.09%	6.27%
Mid-Cap, 3-5	1.12	14.15%	8.94%	7.97%	0.97%
Low-Cap, 6-8	1.22	15.67%	10.46%	8.70%	1.76%
Micro-Cap, 9-10	1.36	18.77%	13.56%	9.68%	3.88%

*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 2006

**Historical riskless rate is measured by the 81-year arithmetic mean income return component of 20-year government bonds (5.21 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 (12.34 percent) minus the arithmetic mean income return component of 20-year government bonds (5.21 percent) from 1926–2006

Graph 7-2
Security Market Line versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
1926–2006



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, 2006

Decile	Recent Number of Companies	Recent Decile Market Capitalization (in thousands)	Market Capitalization of Largest Company (in thousands)	Company Name
10a	511	124,268,473	314,433	M & F Worldwide Corp.
10b	1,237	103,630,389	173,439	Great Lakes Bancorp Inc New

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
1926–2006

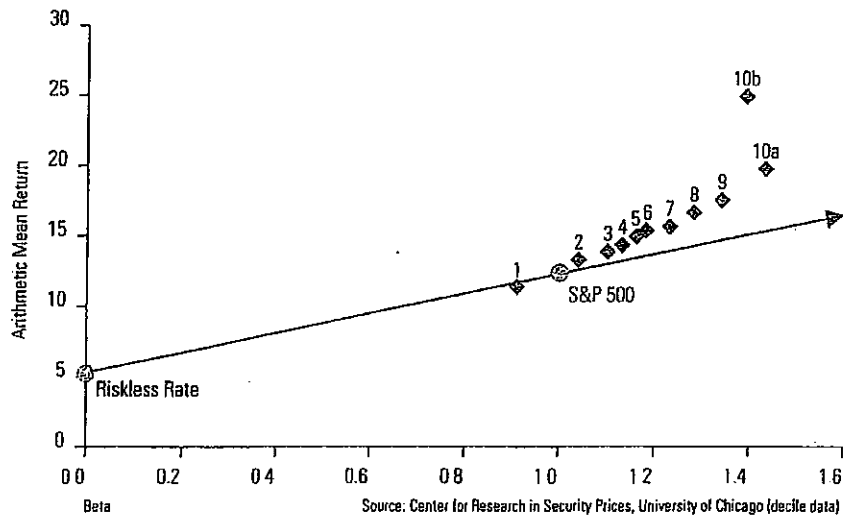
	Beta*	Arithmetic Mean Return	Realized Return in Excess of Riskless Rate**	Estimated Return in Excess of Riskless Rate†	Size Premium (Return in Excess of CAPM)
1-Largest	0 91	11 35%	6 13%	6 49%	-0 36%
2	1.04	13 25%	8 04%	7 39%	0 65%
3	1 10	13 85%	8 64%	7 82%	0 81%
4	1 13	14 28%	9 07%	8 04%	1 03%
5	1 16	14 92%	9 71%	8.26%	1 45%
6	1 18	15 33%	10 11%	8 45%	1 67%
7	1 23	15 63%	10 42%	8 80%	1.62%
8	1 28	16 61%	11 39%	9 12%	2 28%
9	1 34	17 48%	12 27%	9 57%	2 70%
10a	1 43	19 74%	14 53%	10 17%	4.35%
10b-Smallest	1 39	24 78%	19 57%	9 89%	9 68%
Mid-Cap, 3-5	1 12	14 15%	8 94%	7 97%	0.97%
Low-Cap, 6-8	1 22	15 67%	10 46%	8.70%	1 76%
Micro-Cap, 9-10	1 36	18 77%	13 56%	9 68%	3 88%

*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 2006

**Historical riskless rate is measured by the 81-year arithmetic mean income return component of 20-year government bonds (5 21 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 (12.34 percent) minus the arithmetic mean income return component of 20-year government bonds (5 21 percent) from 1926–2006

Graph 7-3
Security Market Line versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, with 10th Decile Split
1926-2006



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
2006	1,744

*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, 1926–2006, 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 6.41, as opposed to 7.13 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

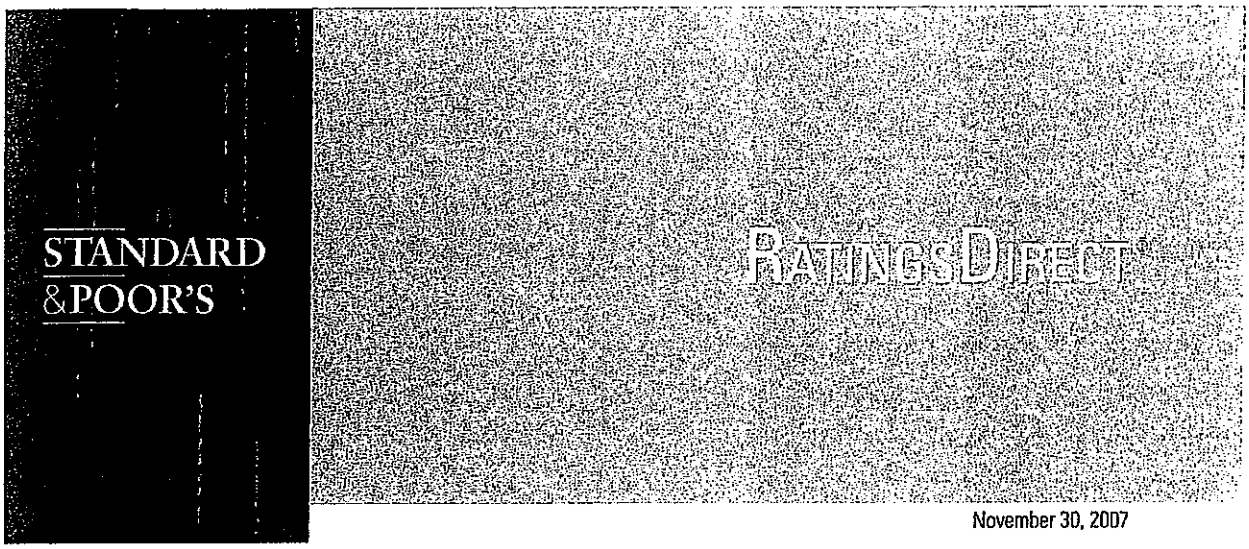
Cash flow adequacy relates to a company's ability to generate funds internally relative to its needs. It is a basic component of credit analysis because it takes cash to pay expenses, fund capital spending, pay dividends, and make interest and principal payments. Since both common and preferred dividend 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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U.S. Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix

Primary Credit Analysts:
Todd A Shipman, CFA, New York (1) 212-438-7676; todd_shipman@standardandpoors.com
William Ferara, New York (1 212-438-1776; bill_ferara@standardandpoors.com
John W Whitlock, New York (1) 212-438-7678; john_whitlock@standardandpoors.com

Secondary Credit Analyst:
Michael Messer, New York (1) 212- 438-1618; michael_messer@standardandpoors.com

U.S. Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix

The electric, gas, and water utility ratings ranking lists published today by Standard & Poor's U.S. Utilities & Infrastructure Ratings practice are categorized under the business risk/financial risk matrix used by the Corporate Ratings group. This is designed to present our rating conclusions in a clear and standardized manner across all corporate sectors. Incorporating utility ratings into a shared framework to communicate the fundamental credit analysis of a company furthers the goals of transparency and comparability in the ratings process. Table 1 shows the matrix.

Table 1

Business Risk/Financial Risk

	Financial Risk Profile				
Business Risk Profile	**Minimal**	**Modest**	**Intermediate**	**Aggressive**	**Highly leveraged**
Excellent	AAA	AA	A	BBB	BB
Strong	AA	A	A-	BBB-	BB-
Satisfactory	A	BBB+	BBB	BB+	B+
Weak	BBB	BBB-	BB+	BB-	B
Vulnerable	BB	B+	B+	B	B-

The utilities rating methodology remains unchanged, and the use of the corporate risk matrix has not resulted in any changes to ratings or outlooks. The same five factors that we analyzed to produce a business risk score in the familiar 10-point scale are used in determining whether a utility possesses an "Excellent," "Strong," "Satisfactory," "Weak," or "Vulnerable" business risk profile:

- Regulation,
- Markets,
- Operations,
- Competitiveness, and
- Management.

Regulated utilities and holding companies that are utility-focused virtually always fall in the upper range ("Excellent" or "Strong") of business risk profiles. The defining characteristics of most utilities--a legally defined service territory generally free of significant competition, the provision of an essential or near-essential service, and the presence of regulators that have an abiding interest in supporting a healthy utility financial profile--underpin the business risk profiles of the electric, gas, and water utilities.

As the matrix concisely illustrates, the business risk profile loosely determines the level of financial risk appropriate for any given rating. Financial risk is analyzed both qualitatively and quantitatively, mainly with financial ratios and other metrics that are calculated after various analytical adjustments are performed on financial statements prepared under GAAP. Financial risk is assessed for utilities using, in part, the indicative ratio ranges in table 2.

Table 2

Financial Risk Indicative Ratios - U.S. Utilities

(Fully adjusted, historically demonstrated, and expected to consistently continue)

	Cash flow		Debt leverage
	(FFO/debt) (%)	(FFO/interest) (x)	(Total debt/capital) (%)
Modest	40 - 60	4.0 - 6.0	25 - 40
Intermediate	25 - 45	3.0 - 4.5	35 - 50
Aggressive	10 - 30	2.0 - 3.5	45 - 60
Highly leveraged	Below 15	2.5 or less	Over 50

The indicative ranges for utilities differ somewhat from the guidelines used for their unregulated counterparts because of several factors that distinguish the financial policy and profile of regulated entities. Utilities tend to finance with long-maturity capital and fixed rates. Financial performance is typically more uniform over time, avoiding the volatility of unregulated industrial entities. Also, utilities fare comparatively well in many of the less-quantitative aspects of financial risk. Financial flexibility is generally quite robust, given good access to capital, ample short-term liquidity, and the like. Utilities that exhibit such favorable credit characteristics will often see ratings based on the more accommodative end of the indicative ratio ranges, especially when the company's business risk profile is solidly within its category. Conversely, a utility that follows an atypical financial policy or manages its balance sheet less conservatively, or falls along the lower end of its business risk designation, would have to demonstrate an ability to achieve financial metrics along the more stringent end of the ratio ranges to reach a given rating.

Note that even after we assign a company a business risk and financial risk, the committee does not arrive by rote at a rating based on the matrix. The matrix is a guide--it is not intended to convey precision in the ratings process or reduce the decision to plotting intersections on a graph. Many small positives and negatives that affect credit quality can lead a committee to a different conclusion than what is indicated in the matrix. Most outcomes will fall within one notch on either side of the indicated rating. Larger exceptions for utilities would typically involve the influence of related unregulated entities or extraordinary disruptions in the regulatory environment.

We will use the matrix, the ranking list, and individual company reports to communicate the relative position of a company within its business risk peer group and the other factors that produce the ratings.

MISSOURI AMERICAN WATER COMPANY
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2000 - 2004, INCLUSIVE

	2006	2005	2004	2003	2002	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$510.163	$508.792	$515.396	$509.136	$503.729	
SHORT-TERM DEBT	62.875	24.530	21.475	2.274	5.257	
TOTAL-CAPITAL EMPLOYED	$573.038	$533.322	$536.871	$511.410	$508.986	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	5.80 %	5.83 %	5.84 %	5.93 %	5.66 %	
						5 YEAR AVERAGE
DIVIDEND PAYOUT RATIO	78.43 %	103.95 %	69.34 %	72.35 %	74.70 %	79.75 %
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL.						
LONG-TERM DEBT	55.70 %	55.87 %	56.26 %	56.96 %	57.59 %	56.47 %
MINORITY INTEREST	0.52	0.52	0.52	0.53	0.54	0.53
COMMON EQUITY	43.78	43.61	43.22	42.51	41.87	43.00
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL.						
TOTAL DEBT, INCLUDING SHORT-TERM	60.56 %	57.90 %	58.01 %	57.15 %	58.04 %	58.33 %
MINORITY INTEREST	0.46	0.50	0.50	0.53	0.53	0.51
COMMON EQUITY	38.98	41.60	41.49	42.32	41.43	41.16
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
RATE OF RETURN ON AVERAGE COMMON EQUITY	7.71 %	9.51 %	6.75 %	9.33 %	11.22 %	8.90 %
FUNDS FROM OPERATIONS / INTEREST COVERAGE(3)	2.19 x	3.95 x	3.40 x	4.30 x	4.35 x	3.64 x
FUNDS FROM OPERATIONS / TOTAL DEBT(4)	6.50 %	17.28 %	13.62 %	19.70 %	17.90 %	15.00 %
TOTAL DEBT / TOTAL CAPITAL	60.56 %	57.90 %	58.01 %	57.15 %	58.04 %	58.33 %

SEE PAGE 2 FOR NOTES.

Missouri American Water Company
Capitalization and Financial Statistics
2002-2006, Inclusive

Notes:

(1) All capitalization and financial statistics 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.

Source of Information: Missouri American Annual Reports to the Public Service Commission of the State of Missouri and Audited Financial Statements

PROXY GROUP OF SIX AUS UTILITY REPORTS WATER COMPANIES
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2002 - 2006, INCLUSIVE

CAPITALIZATION STATISTICS	2006	2005	2004	2003	2002	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$598.290	$541.637	$506.048	$452.289	$403.976	
SHORT-TERM DEBT	$27.716	$30.125	$24.465	$31.600	$33.342	
TOTAL CAPITAL EMPLOYED	$626.006	$571.762	$530.513	$483.889	$437.318	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	6.39 %	6.17 %	6.21 %	6.37 %	6.52 %	
PREFERRED STOCK	3.03	2.96	4.30	14.37	5.38	
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	49.47 %	51.51 %	50.91 %	51.13 %	52.92 %	51.19 %
PREFERRED STOCK	0.18	0.20	0.21	0.23	0.26	0.21
COMMON EQUITY	50.35	48.29	48.88	48.64	46.82	48.60
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	51.09 %	53.42 %	52.85 %	54.65 %	55.57 %	53.52 %
PREFERRED STOCK	0.17	0.19	0.20	0.22	0.25	0.21
COMMON EQUITY	48.74	46.39	46.95	45.13	44.18	46.27
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	3.56 %	4.00 %	4.40 %	4.00 %	4.92 %	4.18 %
MARKET / AVERAGE BOOK RATIO	264.27	258.69	233.18	235.36	226.95	243.69
DIVIDEND YIELD	2.71	2.86	3.14	3.23	3.53	3.09
DIVIDEND PAYOUT RATIO	76.99	70.99	71.41	81.91	72.36	74.73
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	9.05 %	10.00 %	10.06 %	9.48 %	10.83 %	9.88 %
FUNDS FROM OPERATIONS / INTEREST COVERAGE (3)	3.64 X	3.94 X	4.10 X	3.61 X	3.46 X	3.75 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	18.65 %	17.39 %	18.62 %	16.10 %	15.20 %	16.79 %
TOTAL DEBT / TOTAL CAPITAL	51.09 %	53.42 %	52.85 %	54.65 %	55.57 %	53.52 %

See Page 2 for notes.

Proxy Group of Six AUS Utility Reports Water Companies
Capitalization and Financial Statistics
2002-2006, 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 AUS Utility Reports (February 2008); 2) which have Value Line five-year EPS growth rate projections or Reuters consensus five-year EPS growth rate projections; and 3) which have more than 70% of their 2006 operating revenues derived from water operations. BIW, Ltd, Middlesex Water Co., Pennichuck Corp. and SJW Corp. were eliminated because Reuters was not reporting a consensus five-year EPS growth rate projections at the time of the selection of the proxy group. Southwest Water Company was eliminated because it did not derive more than 70% of its 2006 operating revenues 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
Connecticut Water Service, Inc.
York Water Co.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database
EDGAR Online's I-Metrix 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 2002 through 2006

	2006	2005	2004	2003	2002	5 YEAR AVERAGE
American States Water Company						
Long-Term Debt	45.95 %	48.03 %	44.83 %	46.21 %	55.89 %	48.18 %
Short-Term Debt	5.48	4.82	8.38	11.22	6.22	7.22
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	48.57	47.15	46.79	42.57	37.89	44.60
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Aqua America, Inc.						
Long-Term Debt	48.53 %	48.68 %	50.03 %	49.35 %	50.36 %	49.39 %
Short-Term Debt	5.88	7.47	5.10	6.47	9.39	6.86
Preferred Stock	0.09	0.08	0.08	0.06	0.06	0.08
Common Equity	45.50	43.77	44.79	44.12	40.19	43.67
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Artesian Resources Corp.						
Long-Term Debt	56.30 %	60.30 %	55.85 %	54.79 %	53.82 %	56.21 %
Short-Term Debt	6.03	2.08	7.38	9.39	3.24	5.62
Preferred Stock	0.00	0.00	0.00	0.07	0.17	0.05
Common Equity	37.67	37.62	36.77	35.75	42.77	38.12
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	43.47 %	48.07 %	48.66 %	51.77 %	51.25 %	48.64 %
Short-Term Debt	0.00	0.00	0.00	1.22	7.42	1.73
Preferred Stock	0.52	0.61	0.61	0.66	0.71	0.62
Common Equity	56.01	51.32	50.73	46.35	40.62	49.01
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Connecticut Water Service Inc.						
Long-Term Debt	43.14 %	44.44 %	41.42 %	40.92 %	42.54 %	42.49 %
Short-Term Debt	2.93	2.65	3.51	6.11	4.55	3.95
Preferred Stock	0.43	0.47	0.53	0.53	0.55	0.50
Common Equity	53.50	52.44	54.54	52.44	52.36	53.06
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
York Water Company						
Long-Term Debt	48.82 %	47.34 %	51.94 %	41.40 %	45.00 %	46.90 %
Short-Term Debt	0.00	6.65	0.00	9.07	3.77	3.90
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	51.18	46.01	48.06	49.53	51.23	49.20
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Six AUS Utility Reports Water Companies						
Long-Term Debt	47.70 %	49.48 %	48.79 %	47.41 %	49.81 %	48.64 %
Short-Term Debt	3.39	3.95	4.06	7.24	5.76	4.88
Preferred Stock	0.17	0.19	0.20	0.22	0.25	0.21
Common Equity	48.74	46.38	46.95	45.13	44.18	46.27
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information:
EDGAR Online's I-Metrix Database
Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Data Base
Company Annual Forms 10-K and 10-Q

PROXY GROUP OF FOUR VALUE LINE (STANDARD EDITION) WATER COMPANIES
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2002 - 2006, INCLUSIVE

	2006	2005	2004	2003	2002	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$857.593	$773.683	$722.039	$628.903	$559.434	
SHORT-TERM DEBT	$37.788	$41.376	$32.529	$39.728	$46.623	
TOTAL CAPITAL EMPLOYED	$895.381	$815.059	$754.567	$668.632	$606.057	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	6.69 %	6.36 %	6.25 %	6.18 %	6.06 %	
PREFERRED STOCK	4.81	4.27	3.38	2.83	3.73	
CAPITAL STRUCTURE RATIOS						5 YEAR AVERAGE
BASED ON TOTAL PERMANENT CAPITAL						
LONG-TERM DEBT	46.87 %	49.45 %	49.71 %	51.43 %	56.90 %	50.87 %
PREFERRED STOCK	0.19	0.22	0.24	0.40	0.39	0.29
COMMON EQUITY	52.94	50.33	50.05	48.17	42.71	48.84
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL						
TOTAL DEBT, INCLUDING SHORT-TERM	48.29 %	50.94 %	51.38 %	53.69 %	59.40 %	52.74 %
PREFERRED STOCK	0.19	0.21	0.24	0.39	0.38	0.28
COMMON EQUITY	51.52	48.85	48.38	45.92	40.22	46.98
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	3.15 %	3.88 %	3.88 %	4.12 %	4.96 %	4.00 %
MARKET / AVERAGE BOOK RATIO	262.50	248.19	222.69	220.49	223.08	235.39
DIVIDEND YIELD	2.15	2.42	2.79	2.91	3.10	2.67
DIVIDEND PAYOUT RATIO	67.55	61.18	71.81	74.09	61.40	67.20
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	8.15 %	9.19 %	8.38 %	9.19 %	10.91 %	9.16 %
FUNDS FROM OPERATIONS / INTEREST COVERAGE (3)	3.94 X	4.18 X	4.34 X	3.84 X	3.66 X	3.99 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	19.28 %	19.73 %	19.78 %	17.95 %	14.97 %	18.34 %
TOTAL DEBT / TOTAL CAPITAL	48.29 %	50.94 %	51.38 %	53.69 %	59.40 %	52.74 %

See Page 2 for notes.

Proxy Group of Four Value Line (Standard Edition) Water Companies
Capitalization and Financial Statistics
2002-2006, 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
EDGAR Online's I-Metrix 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 2002 through 2006

	2006	2005	2004	2003	2002	5 YEAR AVERAGE
American States Water Co.						
Long-Term Debt	45.95 %	48.03 %	44.83 %	46.21 %	55.89 %	48.18 %
Short-Term Debt	5.48	4.82	8.38	11.22	6.22	7.22
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	48.57	47.15	46.79	42.57	37.89	44.60
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Aqua America						
Long-Term Debt	48.53 %	48.68 %	50.03 %	49.35 %	50.36 %	49.39 %
Short-Term Debt	5.88	7.47	5.10	6.47	9.39	6.86
Preferred Stock	0.09	0.08	0.08	0.06	0.06	0.08
Common Equity	45.50	43.77	44.79	44.12	40.19	43.67
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	43.47 %	48.07 %	48.66 %	51.77 %	51.25 %	48.64 %
Short-Term Debt	0.00	0.00	0.00	1.22	7.42	1.73
Preferred Stock	0.52	0.61	0.61	0.66	0.71	0.62
Common Equity	56.01	51.32	50.73	46.35	40.62	49.01
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Southwest Water Company						
Long-Term Debt	43.85 %	46.67 %	48.53 %	48.50 %	57.07 %	48.92 %
Short-Term Debt	0.00	0.00	0.00	0.00	0.00	0.00
Preferred Stock	0.15	0.17	0.28	0.85	0.74	0.44
Common Equity	56.00	53.16	51.19	50.65	42.19	50.64
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Four Value Line (Standard Edition) Water Companies						
Long-Term Debt	45.45 %	47.86 %	48.01 %	48.96 %	53.64 %	48.79 %
Short-Term Debt	2.84	3.07	3.37	4.73	5.76	3.95
Preferred Stock	0.19	0.22	0.24	0.39	0.38	0.28
Common Equity	51.52	48.85	48.38	45.92	40.22	46.98
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)

Missouri American Water Company
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%).

Missouri American Water Company
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 86 %	0 07 %	2 93 %	4 97 %	7 90 %
Aqua America, Inc	2 45	0 10	2 55	7 81	10 36
Artesian Resources Corp	3 65	0 09	3 74	5 20	8 94
California Water Service Group	3 25	0 07	3 32	4 50	7 82
Connecticut Water Service Inc	3 62	0 10	3 72	5 73	9 45
York Water Co	3.17	0.09	3.26	5.97	9.23
Average	3.17 %	0.09 %	3.25 %	5.70 %	8.95 %
Median	3.21 %	0.09 %	3.29 %	5.47 %	9.09 %
Proxy Group of Four Value Line (Standard Edition) Water Companies					
American States Water Co	2 86 %	0 07 %	2 93 %	4 97 %	7 90 %
Aqua America, Inc	2 45	0 10	2 55	7 81	10 36
California Water Service Group	3 25	0 07	3 32	4 50	7 82
Southwest Water Company	2.07	0.11	2.18	10.25	12.43
Average	2.66 %	0.09 %	2.75 %	6.88 %	9.63 %
Median	2.66 %	0.09 %	2.74 %	6.39 %	9.13 %

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 86 %	0 10 %	2 96 %	7 00 %	9 96 %
Aqua America, Inc	2 45	0 11	2 56	9 13	11 69
Artesian Resources Corp	3 65	0 09	3 74	5 00	8 74
California Water Service Group	3 25	0 12	3 37	7 59	10 96
Connecticut Water Service Inc	3.62	0.27	3.89	15.00	18.89
York Water Co	3.17	0.11	3.28	7.00	10.28
Average	3.17 %	0.13 %	3.30 %	8.45 %	11.75 %
Median	3.21 %	0.11 %	3.33 %	7.30 %	10.62 %
Proxy Group of Four Value Line (Standard Edition) Water Companies					
American States Water Co	2 86 %	0 10 %	2 96 %	7 00 %	9 96 %
Aqua America, Inc	2 45	0 11	2 56	9 13	11 69
California Water Service Group	3 25	0 12	3 37	7 59	10 96
Southwest Water Company	2.07	0.14	2.21	13.25	15.46
Average	2.66 %	0.12 %	2.78 %	9.24 %	12.02 % (6)
Median	2.66 %	0.12 %	2.76 %	8.36 %	11.33 %
Conclusion					
Proxy Group of Six AUS Utility Reports Water Companies					
Average					10.35 %
Median					9.86 %
Proxy Group of Four Value Line (Standard Edition) Water Companies					
Average					10.83 %
Median					10.23 %

Missouri American Water Company
Derivation of Dividend Yield for Use in the
Discounted Cash Flow Model

	Dividend Yield		
	Spot (2/20/2008) (1)	Average of Last 3 Months (2)	Average Dividend Yield (3)
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	3.06 %	2.65 %	2.86 %
Aqua America, Inc.	2.52	2.38	2.45
Artesian Resources Corp.	3.65	3.65	3.65
California Water Service Group	3.30	3.20	3.25
Connecticut Water Service Inc.	3.59	3.64	3.62
York Water Co.	3.24	3.10	3.17
Average	3.23 %	3.10 %	3.17 %
Median	3.27 %	3.15 %	3.21 %
Proxy Group of Four Value Line (Standard Edition) Water Companies			
American States Water Co.	3.06 %	2.65 %	2.86 %
Aqua America, Inc.	2.52	2.38	2.45
California Water Service Group	3.30	3.19	3.25
Southwest Water Company	2.16	1.98	2.07
Average	2.76 %	2.55 %	2.66 %
Median	2.79 %	2.52 %	2.66 %

Notes:
(1) The spot dividend yield is the current annualized dividend per share divided by the spot market price on 2/20/08.
(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 January 31, 2008.
(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: EDGAR Online's I-Metrix Database
Report Date: 2/21/2008

Missouri American Water Company
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 February 2008 Percentage of Institutional Holdings	2 February 2008 Percentage of Individual Holdings (1)
Proxy Group of Six AUS Utility Reports Water Companies		
American States Water Co.	56.59	43.41 %
Aqua America	46.18	53.82
Artesian Resources Corp.	21.32	78.68
California Water Service Group	49.50	50.50
Connecticut Water Service Inc.	25.17	74.83
York Water Co.	14.72	85.28
Average	35.58 %	64.42 %
Proxy Group of Four Value Line (Standard Edition)Water Companies		
American States Water Co.	56.59 %	43.41 %
Aqua America	46.18	53.82
California Water Service Group	49.50	50.50
Southwest Water Company	48.40	51.60
Average	50.17 %	49.83 %

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

Source of Information: today.reuters.com, updated February 20, 2008

Missouri American Water Company
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)		Reuters 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			Median of all Growth Rates	Average of Midpoint and Average of all Growth Rates (9)
Proxy Group of Six AUS Utility Reports Water Companies	DPS	EPS		DPS	EPS	EPS	No. of Est.			Low	High	Midpoint		
American States Water Co.	1.00 %	(0.50) %	4.36 %	4.50 %	10.00 %	4.00	[1]	7.00 %	7.05 %	1.00 % (8)	10.00 % (8)	5.50 %	4.43 % (8)	4.97 %
Aqua America, Inc.	7.00	8.00	7.90	9.50	7.50	10.75	[4]	9.13	4.66	4.66	10.75	7.71	7.90	7.81
Artesian Resources Corp.	3.76 (5)	6.34 (5)	5.70	NA	NA	5.00	[1]	5.00	NA	3.76	6.34	5.05	5.35	5.20
California Water Service Group	0.50	2.50	4.90	1.00	7.50	7.67	[3]	7.59	6.04	0.50	7.67	4.09	4.90	4.50
Connecticut Water Service Inc.	1.00	(2.50)	3.45	NA	NA	15.00	[1]	15.00	NA	1.00 (8)	15.00 (8)	8.00	3.45 (8)	5.73
York Water Co.	5.24 (5)	6.88 (5)	4.73	NA	NA	7.00	[1]	7.00	NA	4.73	7.00	5.87	6.06	5.97
Average	3.08 %	5.93 % (8)	5.17 %	5.00 %	8.33 %	8.24 %		8.45 %	5.92 %	2.61 %	9.46 %	6.04 %	5.35 %	5.70 %
Median	2.38 %	6.61 % (8)	4.82 %	4.50 %	7.50 %	7.34 %		7.30 %	6.04 %	2.38 %	8.84 %	5.69 %	5.13 %	5.47 %
Proxy Group of Four Value Line (Standard Edition) Water Companies														
American States Water Co.	1.00 %	(0.50) %	4.36 %	4.50 %	10.00 %	4.00 %	[1]	7.00 %	7.05 %	1.00 % (8)	10.00 % (8)	5.50 %	4.43 % (8)	4.97 %
Aqua America, Inc.	7.00	8.00	7.90	9.50	7.50	10.75	[4]	9.13	4.66	4.66	10.75	7.71	7.90	7.81
California Water Service Group	0.50	2.50	4.90	1.00	7.50	7.67	[3]	7.59	6.04	0.50	7.67	4.09	4.90	4.50
Southwest Water Company	9.00	(2.50)	11.92	7.50	14.00	12.50	[2]	13.25	6.05	6.05 (8)	14.00 (8)	10.03	10.46 (8)	10.25
Average	4.38 %	5.25 % (8)	7.27 %	5.63 %	9.75 %	8.73 %		9.24 %	5.95 %	3.05 %	10.61 %	6.83 %	6.92 %	6.88 %
Median	4.00 %	5.25 % (8)	6.40 %	6.00 %	8.75 %	9.21 %		8.36 %	6.05 %	2.83 %	10.38 %	6.61 %	6.40 %	6.39 %

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 2006.
(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, January 25, 2008
stocks.us.reuters.com, February 20, 2008

Missouri American Water Company
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.	3.18 %	2.50 %	47.13 %	1.18 %	4.36 %
Aqua America, Inc.	5.11	4.02	69.46	2.79	7.90
Artesian Resources Corp.	2.73	6.24	47.59	2.97	5.70
California Water Service Group	1.49	6.49	52.58	3.41	4.90
Connecticut Water Service Inc.	2.52	1.58	58.76	0.93	3.45
York Water Co.	2.40	3.48	66.82	2.33	4.73
Average	2.91 %	4.05 %	57.06 %	2.27 %	5.17 %
Median	2.63 %	3.75 %	55.67 %	2.56 %	4.82 %
Proxy Group of Four Value Line (Standard Edition) Water Companies					
American States Water Co.	3.18 %	2.50 %	47.13 %	1.18 %	4.36 %
Aqua America, Inc.	5.11	4.02	69.46	2.79	7.90
California Water Service Group	1.49	6.49	52.58	3.41	4.90
Southwest Water Company	3.83	15.18	53.29	8.09	11.92
Average	3.40 %	7.05 %	55.62 %	3.87 %	7.27 %
Median	3.51 %	5.26 %	52.94 %	3.10 %	6.40 %

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.

Missouri American Water Company
Historical Internal Growth Rate (1), i.e. BR, for
the Proxy Group of Six AUS Utility Reports Water Companies, the
Proxy Group of Four Value Line (Standard Edition) Water Companies
for the Years 2002 -2006

	1	2	3	4	5	6
	2006	2005	2004	2003	2002	Five-Year Average 2002-2006 Internal Growth Rate, i.e., BR
Proxy Group of Six AUS Utility Reports Water Companies						
American States Water Co.						
Common Equity Return Rate	8 43 %	10 38 %	7 99 %	5 59 %	9 83 %	
Retention Ratio	32 40	43 59	25 17	(12 98)	35 04	
Internal Growth Rate (1)	2 73	4 52	2 01	(0 73)	3 44	3 18 % (2)
Aqua America, Inc.						
Common Equity Return Rate	10 61 %	11 69 %	11 39 %	12 30 %	13 92 %	
Retention Ratio	36 93	43 90	42 75	43 61	45 22	
Internal Growth Rate (1)	3 92	5 13	4 87	5 36	6 29	5 11
Artesian Resources Corp.						
Common Equity Return Rate	10 15 %	8 93 %	8 18 %	7 41 %	9 67 %	
Retention Ratio	38 82	31 08	25 80	19 24	34 96	
Internal Growth Rate (1)	3 94	2 78	2 11	1 43	3 38	2 73
California Water Service Group						
Common Equity Return Rate	7 56 %	9 31 %	9 72 %	8 68 %	9 56 %	
Retention Ratio	14 21	25 81	22 97	8 79	10 13	
Internal Growth Rate (1)	1 07	2 40	2 23	0 76	0 97	1 49
Connecticut Water Service Inc.						
Common Equity Return Rate	7 02 %	7 84 %	10 93 %	11 23 %	11 60 %	
Retention Ratio	(5 16)	4 98	29 02	28 82	28 20	
Internal Growth Rate (1)	(0 36)	0 39	3 17	3 24	3 27	2 52 (2)
York Water Co.						
Common Equity Return Rate	10 52 %	11 85 %	12 17 %	11 66 %	10 37 %	
Retention Ratio	20 87	24 70	25 86	21 04	12 32	
Internal Growth Rate (1)	2 20	2 93	3 15	2 45	1 28	2.40
Average						2.91 %
Median						2.63 %
Proxy Group of Four Value Line (Standard Edition) Water Companies						
American States Water Co.						
Common Equity Return Rate	8 43 %	10 38 %	7 99 %	5 59 %	9 83 %	
Retention Ratio	32 40	43 59	25 17	(12 98)	35 04	
Internal Growth Rate (1)	2 73	4 52	2 01	(0 73)	3 44	3 18 % (2)
Aqua America, Inc.						
Common Equity Return Rate	10 61 %	11 69 %	11 39 %	12 30 %	13 92 %	
Retention Ratio	36 93	43 90	42 75	43 61	45 22	
Internal Growth Rate (1)	3 92	5 13	4 87	5 36	6 29	5 11
California Water Service Group						
Common Equity Return Rate	7 56 %	9 31 %	9 72 %	8 68 %	9 56 %	
Retention Ratio	14 21	25 81	22 97	8 79	10 13	
Internal Growth Rate (1)	1 07	2 40	2 23	0 76	0 97	1 49
Southwest Water Company						
Common Equity Return Rate	5 99 %	5 38 %	4 40 %	10 20 %	10 32 %	
Retention Ratio	46 26	42 00	21 88	64 23	64 02	
Internal Growth Rate (1)	2 77	2 26	0 96	6 55	6 61	3.83
Average						3.40 %
Median						3.51 %

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

Missouri American Water Company
Calculation of Five Year Average Growth in Common Shares Outstanding (1), i.e., S Factor

	1 2001 Common Shares Outstanding (1)	2 01-02 Growth	3 2002 Common Shares Outstanding (1)	4 02-03 Growth	5 2003 Common Shares Outstanding (1)	6 03-04 Growth	7 2004 Common Shares Outstanding (1)	8 04-05 Growth	9 2005 Common Shares Outstanding (1)	10 05-06 Growth	11 2006 Common Shares Outstanding (1)	12 Five Year Average Common Share Growth
Proxy Group of Six AUS Utility Reports Water Companies												
American States Water Co.	15.120	0.40 %	15.181	0.20 %	15.212	10.12 %	16.752	0.27 %	16.798	1.49 %	17.049	2.50 %
Aqua America, Inc.	113.977	(0.69)	113.195	9.06	123.452	3.02	127.180	1.41	128.969	2.60	132.325	4.02 (2)
Artesian Resources Corp.	4.590	26.23	5.794	1.00	5.852	1.40	5.934	1.47	6.021	1.08	6.086	6.24
California Water Service Group	15.182	0.00	15.182	11.53	16.932	8.48	18.367	0.13	18.390	12.33	20.657	6.49
Connecticut Water Service Inc.	7.649	3.80	7.940	0.34	7.967	0.85	8.035	1.68	8.170	1.23	8.270	1.58
York Water Co.	9.462	0.90	9.547	0.86	9.629	7.29	10.331	0.67	10.400	7.70	11.201	3.46
Average												4.05 %
Median												3.75 %
Proxy Group of Four Value Line (Standard Edition) Water Companies												
American States Water Co.	15.120	0.40 %	15.181	0.20 %	15.212	10.12 %	16.752	0.27 %	16.798	1.49 %	17.049	2.50 %
Aqua America, Inc.	113.977	(0.69)	113.195	9.06	123.452	3.02	127.180	1.41	128.969	2.60	132.325	4.02 (2)
California Water Service Group	15.182	0.00	15.182	11.53	16.932	8.48	18.367	0.13	18.390	12.33	20.657	6.49
Southwest Water Company	14.174	(3.61)	13.662	18.38	16.173	25.92	20.365	3.75	21.129	12.65	23.802	15.18 (2)
Average												7.05 %
Median												5.26 %

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

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

Missouri American Water Company
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
	2002 Market to Book Ratio (1)	2003 Market to Book Ratio (1)	2004 Market to Book Ratio (1)	2005 Market to Book Ratio (1)	2006 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.	180.60 %	180.32 %	164.33 %	191.52 %	228.93 %	189.14 %	47.13 %
Aqua America, Inc.	289.79	295.63	291.42	383.81	376.47	327.42	69.46
Artesian Resources Corp.	162.05	184.47	192.85	211.12	203.62	190.82	47.59
California Water Service Group	181.57	199.83	212.55	231.58	228.96	210.90	52.58
Connecticut Water Service Inc.	266.17	265.03	250.50	223.07	207.66	242.49	58.76
York Water Co.	281.50	286.90	287.48	311.01	339.98	301.37	66.82
Average						243.69 %	57.06 %
Median						226.70 %	55.67 %
Proxy Group of Four Value Line (Standard Edition) Water Companies							
American States Water Co.	180.60 %	180.32 %	164.33 %	191.52 %	228.93 %	189.14 %	47.13 %
Aqua America, Inc.	289.79	295.63	291.42	383.81	376.47	327.42	69.46
California Water Service Group	181.57	199.83	212.55	231.58	228.96	210.90	52.58
Southwest Water Company	240.34	206.16	222.48	185.84	215.62	214.09	53.29
Average						235.39 %	55.62 %
Median						212.50 %	52.94 %

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
EDGAR Online's I-Metrix Database
Company Annual Forms 10-K

Missouri American Water Company
Calculation of Projected BR + SV

	1	2	3	4	5	6	7	8	9	10	11
	Common Shares Outstanding (1) (000,000)			Projected 2010 - 2012 (1)							
	Actual 2006	Projected 2010-2012	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.	17.05	19.00	2.19 %	$55.00	$35.00	$19.10	$45.00	57.56 %	1.26 %	5.79 %	7.05 %
Aqua America, Inc.	132.33	140.00	1.13	30.00	20.00	9.30	25.00	62.80	0.71	3.95	4.66
Artesian Resources Corp.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
California Water Service Group	20.66	22.50	1.72	55.00	35.00	20.50	45.00	54.44	0.94	5.10	6.04
Connecticut Water Service Inc.	8.27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
York Water Co.	11.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average			1.68 %					58.27 %	0.97 %	4.95 %	5.92 %
Median			1.72 %					57.56 %	0.94 %	5.10 %	6.04 %
Proxy Group of Four Value Line (Standard Edition) Water											
American States Water Co.	17.05	19.00	2.19 %	$55.00	$35.00	$19.10	$45.00	57.56 %	1.26 %	5.79 %	7.05 %
Aqua America, Inc.	132.33	140.00	1.13	30.00	20.00	9.30	25.00	62.80	0.71	3.95	4.66
California Water Service Group	20.66	22.50	1.72	55.00	35.00	20.50	45.00	54.44	0.94	5.10	6.04
Southwest Water Company	23.80	30.00	4.74	20.00	14.00	10.50	17.00	38.24	1.81	4.24	6.05
Average			2.45 %					53.26 %	1.18 %	4.77 %	5.95 %
Median			1.96 %					56.00 %	1.10 %	4.67 %	6.05 %

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 2006 and 2011 (mid-point of 2010-2012 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 7, column 14 of this Schedule.
(7) Column 9 + column 10.

Source of Information: Value Line Investment Survey, January 25, 2008

Missouri American Water Company
Projected Internal Growth Rate

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	2006			2010-2012					2010-2012					
	Common Equity (%) (1)	Total Capital ($ mil) (1)	Common Equity ($ mil) (2)	Common Equity (%) (1)	Total Capital ($ mil) (1)	Common Equity ($ mil) (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.	51.40 %	$551.60	$283.52	50.00 %	$725.00	$362.50	5.04 %	1.02 %	12.00 %	12.24 %	$2.20	$1.16	47.27 %	5.79 %
Aqua America, Inc.	48.40	1,904.40	921.73	49.00	2,550.00	1,249.50	6.27	1.03	11.50	11.85	1.05	0.70	33.33	3.95
Artesian Resources Corp.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
California Water Service Group	55.90	670.10	374.59	51.00	900.00	459.00	4.15	1.02	11.00	11.22	2.20	1.20	45.45	5.10
Connecticut Water Service Inc.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
York Water Co.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average														4.95 %
Median														5.10 %
Proxy Group of Four Value Line (Standard Edition) Water Companies														
American States Water Co.	51.40 %	$551.60	$283.52	50.00 %	$725.00	$362.50	5.04 %	1.02 %	12.00 %	12.24 %	$2.20	$1.16	47.27 %	5.79 %
Aqua America, Inc.	48.40	1,904.40	921.73	49.00	2,550.00	1,249.50	6.27	1.03	11.50	11.85	1.05	0.70	33.33	3.95
California Water Service Group	55.90	670.10	374.59	51.00	900.00	459.00	4.15	1.02	11.00	11.22	2.20	1.20	45.45	5.10
Southwest Water Company	56.30	295.20	166.20	56.50	560.00	316.40	13.74	1.06	7.00	7.42	0.70	0.30	57.14	4.24
Average														4.77 %
Median														4.67 %

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 2006 to 2010-2012 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, January 25, 2008

AMER. STATES WATER NYSE-AWR

RECENT PRICE 37.23 | P/E RATIO 21.6 (Trailing: 25.3 / Median: 18.0) | RELATIVE P/E RATIO 1.36 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS 3 Raised 8/17/07
SAFETY 3 New 2/4/00
TECHNICAL 1 Raised 1/25/08
BETA 1.00 (1.00 = Market)

2010-12 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+50%)	13%
Low	35	(-5%)	2%

Insider Decisions

	M	A	M	J	J	A	S	O	N
to Buy	0	0	0	0	0	1	1	0	0
Options	0	0	2	1	0	2	2	0	4
to Sell	0	0	2	1	0	2	2	0	4

Institutional Decisions

	1Q2007	2Q2007	3Q2007
to Buy	57	65	63
to Sell	47	44	53
Hld's(000)	9282	9778	10424

High: 16.1 17.1 19.5 26.5 25.3 25.4 29.0 29.0 26.8 34.6 43.8 46.1
Low: 12.5 13.5 14.1 14.8 16.7 19.0 20.3 21.6 20.8 24.3 30.3 33.6

LEGENDS
1.25 x Dividends p sh divided by Interest Rate
..... Relative Price Strength
3-for-2 split 6/02
Options: No
Shaded area indicates recession

3-for-2

Target Price Range 2010 | 2011 | 2012

% TOT. RETURN 12/07

	THIS STOCK	VL ARITH. INDEX
1 yr.	-0.1	1.3
3 yr.	57.2	25.2
5 yr.	88.3	117.2

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	© VALUE LINE PUB., INC	10-12
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	14.05	15.75	17.40	18.00	Revenues per sh	20.55
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	2.64	2.90	3.30	3.55	"Cash Flow" per sh	3.90
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	1.32	1.33	1.63	1.80	Earnings per sh A	2.20
.73	.77	.79	.80	.81	.82	.83	.84	.85	.86	.87	.87	.88	.89	.90	.91	.96	1.02	Div'd Decl'd per sh B■	1.16
2.77	2.31	1.90	2.43	2.19	2.40	2.58	3.11	4.30	3.03	3.16	2.68	3.76	5.03	4.24	3.91	3.00	3.00	Cap'l Spending per sh	3.25
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	16.64	17.70	18.00	Book Value per sh	19.10
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	17.05	17.25	17.50	Common Shs Outst'g C	19.00
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	21.9	27.7	23.9		Avg Ann'l P/E Ratio	21.0
.56	.64	.79	.84	.78	.79	.84	.81	.97	1.03	.86	1.00	1.82	1.23	1.17	1.47	1.27		Relative P/E Ratio	1.40
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%	2.4%	2.5%		Avg Ann'l Div'd Yield	2.6%
						153.8	148.1	173.4	184.0	197.5	209.2	212.7	228.0	236.2	268.6	300	315	Revenues ($mill)	390
						14.1	14.6	16.1	18.0	20.4	20.3	11.9	16.5	22.5	23.1	29.0	33.0	Net Profit ($mill)	43.0
						41.1%	40.9%	46.0%	45.7%	43.0%	38.9%	43.5%	37.4%	47.0%	40.5%	40.5%	41.0%	Income Tax Rate	42.0%
						--	--	--	--	--	--	--	--	--	--	Nil	Nil	AFUDC % to Net Profit	Nil
						43.0%	43.6%	51.0%	47.5%	54.9%	52.0%	52.0%	47.7%	50.4%	48.6%	47.0%	48.0%	Long-Term Debt Ratio	50.0%
						56.3%	55.7%	48.4%	51.9%	44.7%	48.0%	48.0%	52.3%	49.6%	51.4%	53.0%	52.0%	Common Equity Ratio	50.0%
						268.4	277.1	328.2	371.1	447.6	444.4	442.3	480.4	532.5	551.6	575	605	Total Capital ($mill)	725
						383.6	414.8	449.6	509.1	539.8	563.3	602.3	664.2	713.2	750.6	770	800	Net Plant ($mill)	900
						6.9%	7.0%	6.6%	6.4%	6.1%	6.5%	4.6%	5.2%	5.4%	6.0%	7.0%	7.5%	Return on Total Cap'l	8.0%
						9.2%	9.4%	10.0%	9.2%	10.1%	9.5%	5.6%	6.6%	8.5%	8.1%	9.5%	10.5%	Return on Shr. Equity	12.0%
						9.2%	9.4%	10.1%	9.3%	10.1%	9.5%	5.6%	6.6%	8.5%	8.1%	9.5%	10.5%	Return on Com Equity	12.0%
						1.8%	2.1%	2.9%	3.0%	3.6%	3.3%	NMF	1.0%	2.8%	2.7%	5.5%	5.0%	Retained to Com Eq	6.0%
						80%	78%	72%	68%	65%	65%	113%	84%	67%	67%	57%	54%	All Div'ds to Net Prof	51%

CAPITAL STRUCTURE as of 9/30/07
Total Debt $297.2 mill. Due in 5 Yrs $20.0 mill.
LT Debt $267.6 mill. LT Interest $24.0 mill.
(LT interest earned: 3.5x; total interest coverage: 3.4x) (47% of Cap'l)

Leases, Uncapitalized: None
Pension Assets-12/06 $64.3 mill.
Oblig. $86.1 mill.
Pfd Stock None Pfd Div'd None.

Common Stock 17,197,055 shs.
MARKET CAP: $650 million (Small Cap)

CURRENT POSITION ($MILL.)	2005	2006	9/30/07
Cash Assets	13.0	3.2	3.6
Receivables	13.3	14.8	19.6
Inventory (Avg Cst)	1.4	1.6	1.8
Other	41.2	44.8	44.2
Current Assets	68.9	64.4	69.2
Accts Payable	19.7	24.0	25.3
Debt Due	27.6	32.6	29.6
Other	30.3	29.3	34.1
Current Liab.	77.6	85.9	89.0
Fix. Chg. Cov.	413%	268%	330%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '04-'06 to '10-'12
Revenues	3.0%	2.5%	6.0%
"Cash Flow"	4.0%	2.0%	7.0%
Earnings	1.5%	-0.5%	10.0%
Dividends	1.0%	1.0%	4.5%
Book Value	4.0%	4.5%	3.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2004	46.7	59.3	69.0	53.0	228.0
2005	49.8	60.5	68.1	57.8	236.2
2006	64.3	63.0	75.0	66.3	268.6
2007	72.3	79.2	75.8	72.7	300
2008	77.0	82.0	81.0	75.0	315

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2004	.08	.30	.52	.15	1.05
2005	.22	.34	.47	.29	1.32
2006	.35	.36	.32	.30	1.33
2007	.31	.42	.44	.46	1.63
2008	.37	.45	.57	.41	1.80

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	.221	.221	.221	.225	.89
2005	.225	.225	.225	.225	.90
2006	.225	.225	.225	.235	.91
2007	.235	.235	.235	.250	.96
2008					

BUSINESS: American States Water Co operates as a holding company. Through its principal subsidiary, Golden State Water Company, it supplies water to more than 250,000 customers in 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 nearly 23,250 customers in the city of Big Bear Lake and in areas of San Bernardino County. Acquired Chaparral City Water of Arizona (10/00). Has roughly 555 employees. Officers & directors own 3.1% of common stock (4/07 Proxy). Chairman: Lloyd Ross. President & CEO: Floyd Wicks. Inc: CA. Addr.: 630 East Foothill Boulevard, San Dimas, CA 91773. Tele.: 909-394-3600. Internet: www.aswater.com

We've raised our near-term expectations for American States Water. The California Public Utilities Commission (CPUC) recently announced that it approved the company's general rate case appeal for its Region II service area as well as the request to recover general office expenses. The decision, which is retroactive to January 1, 2007, and will be recorded in the company's fourth-quarter 2007 results (set to be released as we headed to press), ought to increase revenue by roughly $6.4 million and add more than a dime to share earnings for the quarter. We now look for the company to earn $0.46 a share in the final quarter of 2007. Note that our estimate would have been higher if not for the unfavorable weather conditions that have limited usage rates in recent months. **There may be additional regulatory backing on the horizon.** Although the regulatory climate is much improved from years ago, the CPUC is mulling over the idea of instituting a few of the proposals included in the Water Action Plan of 2005. Doing so would likely further streamline the decision making process, while removing some earnings volatility through the adoption of a weather normalization clause.

Even still, we advise investors to look elsewhere at this time. The aforementioned changes at the CPUC are still speculation and are not being factored into our estimates just yet. That said, earnings growth will probably slow considerably in 2008. Even if adopted, we suspect that a fair portion of the benefits coming from these changes would likely be offset by capital constraints. Indeed, American is highly leveraged and had only $3.6 million in cash on hand at the end of the most recent quarter. Infrastructure costs are expected to remain high, given aging systems and tighter EPA regulations, forcing management to look to outside financiers for help. The higher interest costs associated with taking on more debt and/or additional shares will likely limit shareholder gains, as well. Meanwhile, the once robust dividend yield pales in comparison to years past, despite the recent 6% hike. **These shares offer limited 3- to 5-year total-return appeal,** despite the 10% drop in price since our October review.

Andre J. Costanza *January 25, 2008*

(A) Primary earnings. Excludes nonrecurring gains: '91, 73¢; '92, 13¢; '04, 14¢; '05, 25¢; '06, 8¢. Next earnings report due early February.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for splits.

Company's Financial Strength	B++
Stock's Price Stability	75
Price Growth Persistence	75
Earnings Predictability	60

AQUA AMERICA NYSE-WTR

RECENT PRICE 20.42 | P/E RATIO 23.2 (Trailing: 28.4 / Median: 24.0) | RELATIVE P/E RATIO 1.46 | DIV'D YLD 2.5% | VALUE LINE

TIMELINESS 4 Raised 3/5/07
SAFETY 3 Lowered 8/1/03
TECHNICAL 2 Raised 1/11/08
BETA .90 (1.00 = Market)

2010-12 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	30	(+45%)	13%
Low	20	(Nil)	3%

Insider Decisions

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

Institutional Decisions

	1Q2007	2Q2007	3Q2007
to Buy	108	109	84
to Sell	95	109	114
Hld's(000)	56295	64821	55922

	High:	5.7	8.5	11.5	11.5	12.0	14.8	15.0	16.8	18.5	29.2	29.8	26.6
	Low:	3.9	4.4	7.2	7.6	6.3	9.4	9.6	11.8	14.2	17.5	20.1	18.9

LEGENDS
— 1.60 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
3-for-2 split 7/96
4-for-3 split 1/98
5-for-4 split 12/00
5-for-4 split 12/01
5-for-4 split 12/03
4-for-3 split 12/05
Options: Yes
Shaded area indicates recession

Target Price Range 2010 | 2011 | 2012

% TOT. RETURN 12/07

	THIS STOCK	VL ARITH. INDEX
1 yr.	-5.0	1.3
3 yr.	21.5	25.2
5 yr.	90.3	117.2

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	© VALUE LINE PUB., INC.	10-12
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	4.03	4.55	4.80	Revenues per sh	5.35
.45	.39	.42	.42	.47	.50	.56	.61	.72	.76	.86	.94	.96	1.09	1.21	1.26	1.45	1.55	"Cash Flow" per sh	1.80
.25	.24	.24	.26	.29	.30	.34	.40	.42	.47	.51	.54	.57	.64	.71	.70	.75	.90	Earnings per sh [A]	1.05
.19	.20	.21	.21	.22	.23	.24	.26	.27	.28	.30	.32	.35	.37	.40	.44	.48	.55	Div'd Decl'd per sh [B] ■	.70
.54	.60	.47	.46	.52	.48	.58	.82	.90	1.16	1.09	1.20	1.32	1.54	1.84	2.05	2.10	2.15	Cap'l Spending per sh	2.30
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	6.96	7.15	7.45	Book Value per sh	9.30
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	132.33	134.00	136.00	Common Shs Outst'g [C]	140.00
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	34.7	30.3		Avg Ann'l P/E Ratio	25.0
.69	.76	.85	.89	.80	.98	1.03	1.17	1.21	1.18	1.21	1.29	1.40	1.33	1.69	1.87	1.60		Relative P/E Ratio	1.65
7.2%	6.8%	5.9%	6.0%	6.2%	4.9%	3.8%	2.9%	3.0%	3.3%	2.5%	2.5%	2.5%	2.3%	1.8%	1.8%	2.1%		Avg Ann'l Div'd Yield	2.7%
						136.2	151.0	257.3	275.5	307.3	322.0	367.2	442.0	496.8	533.5	610	650	Revenues ($mill)	750
						23.2	28.8	45.0	50.7	58.5	62.7	67.3	80.0	91.2	92.0	100	115	Net Profit ($mill)	150
						40.6%	40.5%	38.4%	38.9%	39.3%	38.5%	39.3%	39.4%	38.4%	39.6%	39.5%	39.0%	Income Tax Rate	39.0%
						--	--	--	--	--	--	--	--	2.9%	2.0%	2.0%	2.0%	AFUDC % to Net Profit	2.0%
						54.4%	52.7%	52.9%	52.0%	52.2%	54.2%	51.4%	50.0%	52.0%	51.6%	52.0%	52.0%	Long-Term Debt Ratio	51.0%
						44.8%	46.6%	46.7%	47.8%	47.7%	45.8%	48.6%	50.0%	48.0%	48.4%	48.0%	48.0%	Common Equity Ratio	49.0%
						427.2	496.6	782.7	901.1	990.4	1076.2	1355.7	1497.3	1690.4	1904.4	2000	2110	Total Capital ($mill)	2550
						534.5	609.8	1135.4	1251.4	1368.1	1490.8	1824.3	2069.8	2280.0	2506.0	2750	2900	Net Plant ($mill)	3500
						7.4%	7.6%	7.6%	7.4%	7.8%	7.6%	6.4%	6.7%	6.9%	6.4%	6.5%	7.0%	Return on Total Cap'l	7.5%
						11.9%	12.3%	12.2%	11.7%	12.3%	12.7%	10.2%	10.7%	11.2%	10.0%	10.5%	11.0%	Return on Shr. Equity	11.5%
						12.0%	12.4%	12.3%	11.7%	12.4%	12.7%	10.2%	10.7%	11.2%	10.0%	10.5%	11.0%	Return on Com Equity	11.5%
						3.6%	4.5%	4.3%	4.7%	5.1%	5.2%	4.2%	4.6%	4.9%	3.7%	3.5%	3.5%	Retained to Com Eq	4.0%
						70%	64%	65%	60%	59%	59%	59%	57%	58%	63%	64%	61%	All Div'ds to Net Prof	67%

CAPITAL STRUCTURE as of 9/30/07
Total Debt $1062.3 mill. Due in 5 Yrs $150.0 mill.
LT Debt $1038.0 mill. LT Interest $56.5 mill.
(LT interest earned: 3.6x; total interest coverage: 3.4x) (52% of Cap'l)

Pension Assets-12/06 $126.5 mill. Oblig. $178.3 mill.

Pfd Stock None
Common Stock 133,249,378 shares as of 10/23/07

MARKET CAP: $2.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2005	2006	9/30/07
Cash Assets	11.9	44.0	15.6
Receivables	62.7	72.1	94.4
Inventory (AvgCst)	7.8	10.2	9.6
Other	7.6	8.4	9.1
Current Assets	90.0	134.7	128.7
Accts Payable	55.5	49.4	27.4
Debt Due	163.1	150.4	24.3
Other	44.7	55.8	263.7
Current Liab.	263.3	255.6	315.4
Fix. Chg. Cov.	377%	360%	360%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '04-'06 to '10-'12
Revenues	7.5%	8.5%	6.0%
"Cash Flow"	10.0%	9.0%	7.0%
Earnings	9.0%	8.0%	7.5%
Dividends	6.5%	7.0%	9.5%
Book Value	9.5%	11.0%	6.5%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	99.8	106.5	120.3	115.4	442.0
2005	114.0	123.1	136.8	122.9	496.8
2006	118.0	131.7	147.0	136.8	533.5
2007	137.3	150.6	165.5	156.6	610
2008	145	165	185	155	650

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	.13	.14	.20	.17	.64
2005	.15	.17	.22	.17	.71
2006	.13	.17	.21	.19	.70
2007	.13	.18	.22	.22	.75
2008	.20	.24	.24	.22	.90

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	.09	.09	.09	.098	.37
2005	.098	.098	.098	.107	.40
2006	.107	.107	.115	.115	.44
2007	.115	.115	.125	.125	.48
2008					

(A) Primary shares outstanding through '96; diluted thereafter. Excl. nonrec. gains (losses): '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 Feb.
(B) Dividends historically paid in early March, June, Sept. & Dec. ■ Div'd. reinvestment plan available (5% discount).
(C) In millions, adjusted for stock splits.

BUSINESS: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately 2.8 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 '06: residential, 60%; commercial, 14%; industrial & other, 26%. Officers and directors own 1.2% of the common stock (4/07 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.

We have lowered our share-net estimate for Aqua America's recently completed fourth quarter. Due to the struggling housing market and the inability of the company to raise its rates in a few markets, we now believe that the company earned $0.22 a share during the December period, down from our previous estimate of $0.24 (WTR will release its fourth-quarter financial results within the next few weeks). On the bright side,

We expect a healthy share-net advance this year. Aqua's profits will likely be fueled by its recent acquisition activities. Over the last several months, it has purchased a number of water companies that have expanded its market reach to new areas in Florida, New Jersey, Indiana, Pennsylvania, and Texas. Moreover, management continues to implement rate hikes throughout the nation, which will help advance the operating margin and profits this year. In sum, Aqua will likely post share earnings of $0.90 this year, 20% better than our estimate for 2007.

The company's balance sheet should be able to support a few more purchases. Although Aqua does not have a huge stash of cash (only $15 million), and already possesses an ample amount of debt, it probably generates enough funds to complete a few more acquisitions this year. Aqua will likely seek opportunities to bolster its water utility businesses in Texas, Pennsylvania, and Virginia.

These shares are not particularly appealing at this time. Although recent acquisitions should help Aqua America register a solid share-earnings advance in 2008, our Timeliness Ranking System suggests that this issue will lag the year-ahead market. Furthermore, looking long term, this stock already trades at the low end of our projected Target Price Range for 2010–2012, limiting appreciation potential out to that time frame. That said, our share-net estimates would likely be raised if Aqua can complete a few additional acquisitions over the next few years. Lastly,

Income-oriented accounts can probably find better options elsewhere. Although Aqua has raised its quarterly dividend every year over the past decade, its current yield of 2.5% is probably not a good enough reason to look here.

Ian Gendler *January 25, 2008*

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	80
Earnings Predictability	100

CALIFORNIA WATER NYSE-CWT

RECENT PRICE 36.23 | P/E RATIO 24.2 (Trailing: 25.5 / Median: 20.0) | RELATIVE P/E RATIO 1.52 | DIV'D YLD 3.2% | VALUE LINE

TIMELINESS 4 Lowered 11/9/07
SAFETY 3 Lowered 1/27/07
TECHNICAL 1 Raised 1/25/08
BETA 1.15 (1.00 = Market)

2010-12 PROJECTIONS

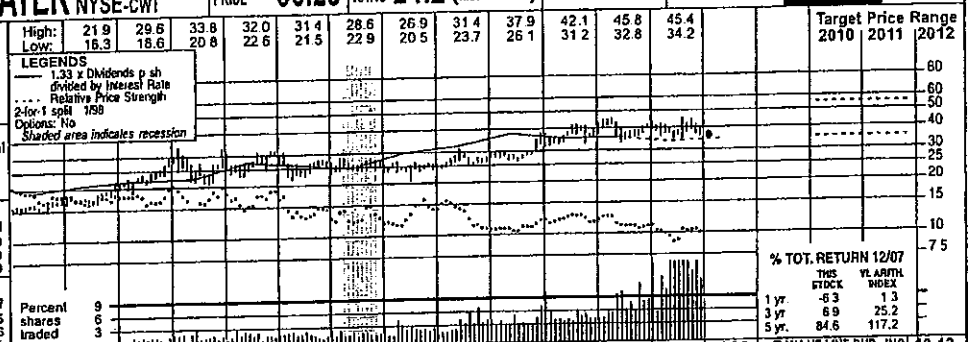
	Price	Gain	Ann'l Total Return
High	55	(+50%)	13%
Low	35	(-5%)	3%

Insider Decisions

	M	A	M	J	J	A	S	O	N
to Buy	0	0	0	0	0	1	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	1Q2007	2Q2007	3Q2007
to Buy	51	54	45
to Sell	39	43	46
Hld's(000)	8626	9544	9581



1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	© VALUE LINE PUB., INC	10-12
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	16.20	17.40	18.15	Revenues per sh	21.80
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	3.03	2.71	3.10	3.30	"Cash Flow" per sh	3.95
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	1.34	1.43	1.65	Earnings per sh [A]	2.20
.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	1.17	Div'd Decl'd per sh [B] ■	1.20
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	5.65	4.05	3.85	Cap'l Spending per sh	4.00
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	15.79	16.15	19.05	19.05	Book Value per sh [C]	20.50
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	20.65	21.00	21.50	Common Shs Outst'g [D]	22.50
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	29.2	27.3		Avg Ann'l P/E Ratio	21.0
.72	.86	.80	.92	.92	.75	.73	.93	1.01	1.27	1.39	1.08	1.26	1.06	1.33	1.58	1.44		Relative P/E Ratio	1.40
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%	2.9%	3.0%		Avg Ann'l Div'd Yield	2.7%
195.3	186.3	206.4	244.8	246.8	263.2	277.1	315.6	320.7	334.7	365	390	Revenues ($mill)	490
23.3	18.4	19.9	20.0	14.4	19.1	19.4	26.0	27.2	25.6	30.0	35.0	Net Profit ($mill)	50.0
37.4%	36.4%	37.9%	42.3%	39.4%	39.7%	39.9%	39.6%	42.4%	37.4%	40.0%	41.0%	Income Tax Rate	41.0%
--	--	--	--	--	--	10.3%	3.2%	3.3%	10.6%	5.0%	5.0%	AFUDC % to Net Profit	5.0%
45.4%	44.2%	46.9%	48.9%	50.3%	55.3%	50.2%	48.6%	48.3%	43.5%	44.5%	46.0%	Long-Term Debt Ratio	48.5%
53.5%	54.7%	52.0%	50.2%	48.8%	44.0%	49.1%	50.8%	51.1%	55.9%	55.5%	53.5%	Common Equity Ratio	51.0%
306.7	308.6	333.8	388.8	402.7	453.1	498.4	565.9	568.1	670.1	720	765	Total Capital ($mill)	900
460.4	478.3	515.4	582.0	624.3	697.0	759.5	800.3	862.7	941.5	995	1050	Net Plant ($mill)	1175
9.4%	7.8%	7.8%	6.8%	5.3%	5.9%	5.6%	6.1%	6.3%	5.2%	5.5%	6.0%	Return on Total Cap'l	7.5%
13.9%	10.7%	11.2%	10.0%	7.2%	9.4%	7.8%	8.9%	9.3%	6.8%	7.5%	8.5%	Return on Shr. Equity	11.0%
14.1%	10.8%	11.4%	10.1%	7.2%	9.5%	7.8%	9.0%	9.3%	6.8%	7.5%	8.5%	Return on Com Equity	11.0%
6.0%	2.8%	3.5%	1.8%	NMF	1.0%	.7%	2.1%	2.1%	1.0%	1.5%	2.5%	Retained to Com Eq	5.0%
58%	74%	70%	82%	119%	90%	91%	77%	78%	86%	81%	72%	All Div'ds to Net Prof	54%

CAPITAL STRUCTURE as of 9/30/07
Total Debt $292.9 mill. Due in 5 Yrs $12.0 mill.
LT Debt $291.1 mill. LT Interest $21.5 mill.

(LT interest earned: 3.3x; total int. cov.: 3.2x)

Pension Assets-12/06 $78.4 mill. Oblig. $109.1 mill.
Pfd Stock $3.5 mill. Pfd Div'd $.15 mill.
139,000 shares, 4.4% cumulative ($25 par)

Common Stock 20,666,869 shs.
as of 11/1/07
MARKET CAP: $750 million (Small Cap)

CURRENT POSITION ($MILL.)	2005	2006	9/30/07
Cash Assets	9.5	60.3	26.5
Other	42.7	49.3	61.9
Current Assets	52.2	109.6	88.4
Accts Payable	36.1	33.1	39.1
Debt Due	1.1	1.8	1.8
Other	39.6	35.3	40.8
Current Liab.	76.8	70.2	81.7
Fix. Chg. Cov.	361%	317%	380%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '04-'06 to '10-'12
Revenues	2.5%	1.0%	4.5%
"Cash Flow"	2.5%	3.0%	5.5%
Earnings	1.0%	2.5%	7.5%
Dividends	1.0%	.5%	1.0%
Book Value	3.5%	5.0%	3.5%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	60.2	88.9	97.1	69.4	315.6
2005	60.3	81.5	101.1	77.8	320.7
2006	65.2	81.1	107.8	80.6	334.7
2007	71.6	95.8	113.9	83.7	365
2008	76.0	102	120	92.0	390

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	.08	.59	.59	.20	1.46
2005	.03	.41	.71	.32	1.47
2006	.04	.31	.68	.31	1.34
2007	.07	.37	.67	.32	1.43
2008	.09	.42	.77	.37	1.65

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	.283	.283	.283	.283	1.13
2005	.285	.285	.285	.285	1.14
2006	.2875	.2875	.2875	.2875	1.15
2007	.290	.290	.290	.290	1.16
2008					

BUSINESS: California Water Service Group provides regulated and nonregulated water service to over 2 million people (483,900 customers) in 83 communities in California, Washington, New Mexico, and Hawaii. 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, '06: residential, 70%; business, 18%; public authorities, 5%; industrial, 5%; other, 2%. '05 reported deprec. rate: 3.3%. Has roughly 870 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.calwatergroup.com

We've softened our outlook for California Water Service Group a bit since our October report. The water utility provider ran into some unforeseen problems in the third quarter 2007, when unfavorable weather conditions, and lower usage rates, caused it to post earnings of $0.67 a share, a penny off the prior year's mark. Meanwhile, there has been an unexpected holdup on the regulatory front. The California Public Utilities Commission, which appeared to have turned over a new leaf and had been handing out more timely and favorable rulings in recent memory, has yet to rule on the company's 2006 general rate case. Also, approval of parts of the Water Action Plan, namely of a Water Revenue Adjustment Mechanism (WRAM) and modified cost-balancing accounting was postponed. As a result, we've reduced our fourth-quarter 2007 share-net estimate by a few pennies to $0.32 and our full-year 2008 figure by a dime to $1.65. Note, that our 2008 figure would receive a boost if any of the WRAM amendments are implemented before the third quarter. **The stock has given back most of the gains it enjoyed last year . . .** Indeed, it has fallen from its $45-plus perch, trading down more than 10% since our October report. The issue is now ranked 4 (Below Average) for Timeliness based on our momentum-driven system.

. . . however, we still think it is richly valued according to current market conditions. The stock is currently trading at nearly 25 times 12-month earnings (through June), a premium compared to our 2010-2012 projections. Although we suspect that recent regulatory lag is just a hiccup, and that an improving landscape paints a favorable backdrop for the industry as a whole, we think that the current share price accounts for these potential changes. Meanwhile, capital constraints continue to concern us. Infrastructure costs are likely to continue rising as systems and pipelines age and EPA requirements grow tougher. However, California does not have the cash to fund these endeavors and will probably have to issue more shares and/or debt, thereby limiting shareholders' gains. Although the dividend provides some downside risk, income-minded investors have better options.

Andre J. Costanza *January 25, 2008*

Company's Financial Strength	B++
Stock's Price Stability	65
Price Growth Persistence	75
Earnings Predictability	70

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (7¢); '01, 4¢; 02, 8¢. Next earnings report due early February.

(B) Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.

(C) Incl. deferred charges. In '06: $69.5 mill., $3.36/sh.

(D) In millions, adjusted for split.

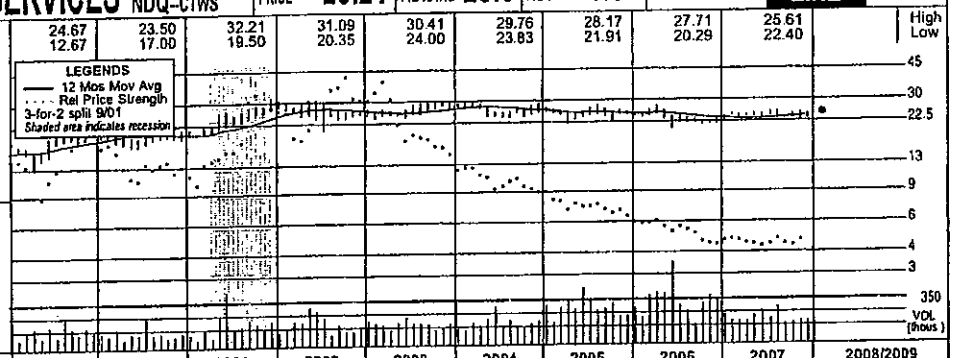
CONN. WATER SERVICES NDQ-CTWS

RECENT PRICE 25.21 | TRAILING P/E RATIO 28.0 | RELATIVE P/E RATIO 1.67 | DIV'D YLD 3.5% | VALUE LINE

RANKS

PERFORMANCE 3 Average
Technical 3 Average
SAFETY 3 Average
BETA .85 (1.00 = Market)

Financial Strength B+
Price Stability 85
Price Growth Persistence 40
Earnings Predictability 85



© VALUE LINE PUBLISHING, INC.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008/2009
	24.67 12.67	23.50 17.00	32.21 19.50	31.09 20.35	30.41 24.00	29.76 23.83	28.17 21.91	27.71 20.29	25.61 22.40	High Low
SALES PER SH	5.87	5.70	5.93	5.77	5.91	6.04	5.81	5.68	–	
"CASH FLOW" PER SH	1.65	1.73	1.78	1.78	1.89	1.91	1.62	1.52	–	
EARNINGS PER SH	1.03	1.09	1.13	1.12	1.15	1.16	.88	.81	*1.10* [A,B]	*1.17* [C]*/NA*
DIV'DS DECL'D PER SH	.79	.79	.80	.81	.83	.84	.85	.86	–	
CAP'L SPENDING PER SH	1.42	1.43	1.86	1.98	1.49	1.58	1.96	1.96	–	
BOOK VALUE PER SH	8.61	8.92	9.25	10.06	10.46	10.94	11.52	11.60	–	
COMMON SHS OUTST'G (MILL.)	7.26	7.28	7.65	7.94	7.97	8.04	8.17	8.27	–	
AVG ANN'L P/E RATIO	18.2	18.2	21.5	24.3	23.5	22.9	28.6	29.0	*22.9*	*21.5/NA*
RELATIVE P/E RATIO	1.04	1.18	1.10	1.33	1.34	1.21	1.51	1.57	–	
AVG ANN'L DIV'D YIELD	4.2%	4.0%	3.3%	3.0%	3.0%	3.1%	3.4%	3.6%	–	
SALES ($MILL.)	42.6	41.5	45.4	45.8	47.1	48.5	47.5	46.9	–	
OPERATING MARGIN	48.7%	48.8%	56.1%	57.7%	52.1%	51.0%	48.3%	43.7%	–	
DEPRECIATION ($MILL.)	4.5	4.7	5.0	5.4	5.9	6.0	6.1	5.9	–	
NET PROFIT ($MILL.)	7.5	8.0	8.7	8.8	9.2	9.4	7.2	6.7	–	
INCOME TAX RATE	40.1%	35.7%	36.1%	33.8%	17.9%	22.9%	–	23.5%	–	
NET PROFIT MARGIN	17.6%	19.2%	19.1%	19.2%	19.5%	19.4%	15.1%	14.3%	–	
WORKING CAP'L ($MILL.)	d3.8	.3	d3.3	d5.1	d3.9	d.7	13.0	1.2	–	
LONG-TERM DEBT ($MILL.)	65.4	64.7	64.0	64.8	64.8	66.4	77.4	77.3	–	
SHR. EQUITY ($MILL.)	63.3	65.7	71.6	80.7	84.2	88.7	94.9	96.7	–	
RETURN ON TOTAL CAP'L	7.4%	7.6%	7.9%	7.4%	7.5%	7.0%	5.0%	4.9%	–	
RETURN ON SHR. EQUITY	11.8%	12.1%	12.1%	10.9%	10.9%	10.6%	7.5%	6.9%	–	
RETAINED TO COM EQ	3.1%	3.2%	3.6%	3.1%	3.2%	3.1%	.3%	NMF	–	
ALL DIV'DS TO NET PROF	74%	74%	71%	72%	71%	71%	95%	105%	–	

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

[A] *No. of analysts changing earn. est. in last 12 days: 0 up, 0 down, consensus 5-year earnings growth not available* [B] *Based upon 2 analysts' estimates* [C] *Based upon 2 analysts' estimates*

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Sales	–	-2.5%
"Cash Flow"	-0.5%	-6.0%
Earnings	-2.5%	-8.0%
Dividends	1.0%	1.0%
Book Value	5.0%	0.5%

QUARTERLY SALES ($mill.)

Fiscal Year	1Q	2Q	3Q	4Q	Full Year
12/31/05	10.9	11.0	14.1	11.5	47.5
12/31/06	10.5	11.4	13.3	11.7	46.9
12/31/07	13.2	14.4	17.0		
12/31/08					

EARNINGS PER SHARE

Fiscal Year	1Q	2Q	3Q	4Q	Full Year
12/31/04	.24	.26	.47	.19	1.16
12/31/05	.24	.15	.41	.08	.88
12/31/06	.21	.12	.45	.03	.81
12/31/07	.18	.22	.47	.23	
12/31/08	.20	.27			

QUARTERLY DIVIDENDS PAID

Cal-endar	1Q	2Q	3Q	4Q	Full Year
2005	.21	.21	.213	.213	.85
2006	.213	.213	.215	.215	.86
2007	.215	.215	.218	.218	.87
2008					

INSTITUTIONAL DECISIONS

	1Q'07	2Q'07	3Q'07
to Buy	18	17	20
to Sell	11	12	9
Hld's(000)	1461	1717	1828

ASSETS ($mill.)	2005	2006	9/30/07
Cash Assets	4.4	1.4	3
Receivables	5.9	9.5	13.2
Inventory (Avg cost)	9	9	1.1
Other	14.9	2.4	4.0
Current Assets	26.1	14.2	18.6
Property, Plant & Equip. at cost	345.0	370.5	--
Accum Depreciation	97.3	102.4	--
Net Property	247.7	268.1	276.0
Other	32.2	32.9	35.3
Total Assets	306.0	315.2	329.9
LIABILITIES ($mill.)			
Accts Payable	4.8	6.0	7.1
Debt Due	7.1	5.3	11.5
Other	1.3	1.7	2.4
Current Liab	13.2	13.0	21.0

LONG-TERM DEBT AND EQUITY
as of 9/30/07

Total Debt $88.8 mill. Due in 5 Yrs. NA
LT Debt $77.3 mill.
Including Cap. Leases NA (43% of Cap'l)

Leases, Uncapitalized Annual rentals NA

Pension Liability None in '06 vs None in '05

Pfd Stock $.8 mill. Pfd Div'd Paid NMF

Common Stock 8,358,436 shares (57% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: Connecticut Water Service, Inc. primarily operates as a water utility company in Connecticut. It operates through three segments: Water Activities, Real Estate Transactions, and Services and Rentals. The Water Activities segment supplies public drinking water to its customers. The Real Estate Transactions segment involves in the sale of its limited excess real estate holdings. The Services and Rentals segment provides contracted services to water and wastewater utilities and other clients, as well as leases certain of its properties to third parties. This segment's services include contract operations of water and wastewater facilities; Linebacker, its service line protection plan for public drinking water customers; and provision of bulk deliveries of emergency drinking water to businesses and residences via tanker truck. As of November 7, 2007, Connecticut Water provided water to approximately 83,000 or 286,000 customers in 41 towns in Connecticut. Has about 200 employees. Chairman, C.E.O. & President: Eric W. Thornburg. Inc.: CT. Address: 93 West Main Street, Clinton, CT 06413. Tel.: (860) 669-8630. Internet: http://www.ctwater.com. *L.Y.*

January 25, 2008

TOTAL SHAREHOLDER RETURN
Dividends plus appreciation as of 12/31/2007

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
2.10%	-1.46%	7.36%	-1.17%	10.40%

YORK WATER CO NDQ-YORW

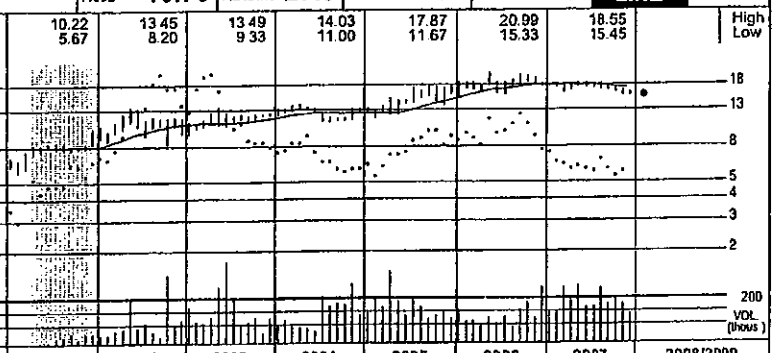
RECENT PRICE 15.73 | TRAILING P/E RATIO 27.6 | RELATIVE P/E RATIO 1.65 | DIV'D YLD 3.1% | VALUE LINE

RANKS

PERFORMANCE 3 Average
Technical 2 Above Average
SAFETY 3 Average
BETA .50 (1.00 = Market)

Financial Strength B+
Price Stability 65
Price Growth Persistence 40
Earnings Predictability 90

LEGENDS
12 Mos Mov Avg
Rel Price Strength
2-for-1 split 5/02
3-for-2 split 9/06
Shaded area indicates recession



© VALUE LINE PUBLISHING, INC.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008/2009
REVENUES PER SH	–	–	2.05	2.05	2.17	2.18	2.58	2.56	–	
"CASH FLOW" PER SH	–	–	.59	.57	.65	.65	.79	.77	–	
EARNINGS PER SH	–	–	.43	.40	.47	.49	.56	.58	.57 [A,B]	.67 [C]/NA
DIV'D DECL'D PER SH	–	–	.34	.35	.37	.39	.42	.45	–	
CAP'L SPENDING PER SH	–	–	.75	.66	1.07	2.50	1.69	1.85	–	
BOOK VALUE PER SH	–	–	3.79	3.90	4.06	4.65	4.85	5.84	–	
COMMON SHS OUTST'G (MILL)	–	–	9.46	9.55	9.63	10.33	10.40	11.20	–	
AVG ANN'L P/E RATIO	–	–	17.9	26.9	24.5	25.7	26.3	31.2	27.6	23.5/NA
RELATIVE P/E RATIO	–	–	.92	1.47	1.40	1.36	1.39	1.68	–	
AVG ANN'L DIV'D YIELD	–	–	4.3%	3.3%	3.2%	3.1%	2.9%	2.5%	–	
REVENUES ($MILL)	–	18.5	19.4	19.6	20.9	22.5	26.8	28.7	–	
NET PROFIT ($MILL)	–	3.8	4.0	3.8	4.4	4.8	5.8	6.1	–	
INCOME TAX RATE	–	35.7%	35.8%	34.9%	34.8%	36.7%	36.7%	34.4%	–	
AFUDC % TO NET PROFIT	–	–	2.2%	3.7%	–	–	–	7.2%	–	
LONG-TERM DEBT RATIO	–	50.2%	47.7%	46.7%	43.4%	42.5%	44.1%	48.3%	–	
COMMON EQUITY RATIO	–	49.8%	52.3%	53.3%	56.6%	57.5%	55.9%	51.7%	–	
TOTAL CAPITAL ($MILL)	–	65.2	68.6	69.9	69.0	83.6	90.3	126.5	–	
NET PLANT ($MILL)	–	97.0	102.3	106.7	116.5	140.0	155.3	174.4	–	
RETURN ON TOTAL CAP'L	–	7.9%	7.9%	7.4%	8.5%	7.6%	8.4%	6.2%	–	
RETURN ON SHR. EQUITY	–	11.6%	11.2%	10.2%	11.4%	10.0%	11.6%	9.3%	–	
RETURN ON COM EQUITY	–	11.6%	11.2%	10.2%	11.4%	10.0%	11.6%	9.3%	–	
RETAINED TO COM EQ	–	2.5%	2.5%	1.3%	2.6%	2.1%	3.0%	2.2%	–	
ALL DIV'DS TO NET PROF	–	78%	78%	88%	77%	79%	74%	77%	–	

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

[A] No. of analysts changing earn est. in last 12 days: 0 up, 0 down, consensus 5-year earnings growth 11.3% per year. [B] Based upon 3 analysts' estimates. [C] Based upon 3 analysts' estimates.

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Revenues	3.5%	-0.5%
"Cash Flow"	4.5%	-2.5%
Earnings	4.5%	3.5%
Dividends	-3.0%	7.0%
Book Value	6.0%	20.5%

Fiscal Year	QUARTERLY SALES ($mill.) 1Q	2Q	3Q	4Q	Full Year
12/31/05	6.2	6.7	7.2	6.7	26.8
12/31/06	6.6	7.0	7.7	7.4	28.7
12/31/07	7.4	8.0	8.3		
12/31/08					

Fiscal Year	EARNINGS PER SHARE 1Q	2Q	3Q	4Q	Full Year
12/31/04	.12	.11	.12	.14	.49
12/31/05	.12	.14	.17	.13	.56
12/31/06	.12	.14	.17	.15	.58
12/31/07	.12	.15	.15	.15	
12/31/08	.14	.17			

Cal-endar	QUARTERLY DIVIDENDS PAID 1Q	2Q	3Q	4Q	Full Year
2005	.104	.104	.104	.104	.42
2006	.112	.112	.112	.112	.45
2007	.118	.118	.118	.118	.47
2008	.121				

INSTITUTIONAL DECISIONS

	1Q'07	2Q'07	3Q'07
to Buy	13	14	10
to Sell	1	5	4
Hld's(000)	1222	1416	1595

ASSETS ($mill.)	2005	2006	9/30/07
Cash Assets	0	0	0
Receivables	3.8	4.8	5.5
Inventory (Avg cost)	.8	.8	.8
Other	.5	1.1	.8
Current Assets	5.1	6.7	7.1
Property, Plant & Equip. at cost	182.4	202.7	--
Accum Depreciation	27.1	28.3	--
Net Property	155.3	174.4	184.4
Other	11.9	15.0	14.9
Total Assets	172.3	196.1	206.4
LIABILITIES ($mill.)			
Accts Payable	2.6	1.6	3.3
Debt Due	19.3	1.2	6.3
Other	2.8	3.1	3.6
Current Liab	24.7	5.9	13.2

LONG-TERM DEBT AND EQUITY
as of 9/30/07

Total Debt $67.3 mill. Due in 5 Yrs. NA
LT Debt $61.1 mill.
Including Cap. Leases NA (48% of Cap'l)

Leases, Uncapitalized Annual rentals NA

Pension Liability $5.9 mill. in '06 vs. $3.9 mill. in '05

Pfd Stock None Pfd Div'd Paid None

Common Stock 11,247,944 shares (52% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: The York Water Company engages in the impounding, purification, and distribution of water in York County and Adams County, Pennsylvania. It supplies water for residential, commercial, industrial, and other customers. The company has two reservoirs, Lake Williams and Lake Redman, which together hold approximately 2.2 billion gallons of water. It also has a 15-mile pipeline from the Susquehanna River to Lake Redman that provides access to an additional supply of water. The company serves 34 municipalities in York County and four municipalities in Adams County. Has 106 employees. C.E.O. & President: Jeffrey S. Osman. Inc.: PA. Address: 130 East Market Street, York, PA 17401. Tel.: (717) 845-3601. Internet: http://www.yorkwater.com.

L.Y.

January 25, 2008

TOTAL SHAREHOLDER RETURN
Dividends plus appreciation as of 12/31/2007

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
-7.26%	-11.40%	-10.84%	29.93%	88.84%

SOUTHWEST WATER NDQ-SWWC

RECENT PRICE 12.11 | P/E RATIO 31.1 (Trailing: 36.7 Median: 21.0) | RELATIVE P/E RATIO 1.96 | DIV'D YLD 2.0% | VALUE LINE

TIMELINESS 4 Lowered 11/23/07
SAFETY 3 New 10/28/05
TECHNICAL 2 Raised 12/28/07
BETA 1.00 (1.00 = Market)

2010-12 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	20	(+65%)	15%
Low	14	(+15%)	6%

Insider Decisions

	M	A	M	J	J	A	S	O	N
to Buy	1	0	1	0	0	0	1	0	0
Options	2	1	2	0	0	1	0	0	0
to Sell	1	1	2	1	1	2	1	1	1

Institutional Decisions

	1Q2007	2Q2007	3Q2007
to Buy	34	33	34
to Sell	26	29	27
Hld's(000)	11936	12590	10913

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	© VALUE LINE PUB., INC.	10-12
	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	9.42	9.00	9.05	Revenues per sh	11.00
	.28	.44	.38	.38	.44	.46	.53	.59	.65	.76	.87	.86	.91	.67	.78	.85	.90	1.10	"Cash Flow" per sh	1.40
	.02	.19	.08	.09	.12	.15	.21	.25	.31	.38	.42	.39	.44	.23	.34	.40	.30	.50	Earnings per sh [A]	.70
	.18	.18	.14	.08	.08	.09	.09	.10	.11	.13	.14	.15	.16	.16	.20	.21	.23	.24	Div'd Decl'd per sh [B]	.30
	.39	.42	.60	.72	.84	.95	.74	.79	.53	.55	1.06	1.78	1.14	1.26	1.66	1.87	1.90	1.95	Cap'l Spending per sh	2.05
	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	6.98	7.15	8.45	Book Value per sh [D]	10.50
	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	23.80	24.50	26.00	Common Shs Outst'g [C]	30.00
	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	51.6	35.5	34.8	43.5		Avg Ann'l P/E Ratio	25.0
	NMF	.88	2.11	1.46	.98	1.03	.97	.89	1.12	1.11	1.01	1.35	1.21	2.73	1.89	1.88	2.30		Relative P/E Ratio	1.65
	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%	1.5%	2.3%		Avg Ann'l Div'd Yield	1.7%
							71.0	72.2	80.9	104.7	115.5	130.8	173.0	188.0	203.2	224.2	220	235	Revenues ($mill)	330
							2.6	3.4	4.2	5.4	6.2	6.0	7.2	4.5	7.3	9.3	8.0	14.0	Net Profit ($mill)	22.0
							41.6%	39.5%	39.0%	37.0%	36.0%	34.9%	35.9%	36.1%	36.0%	35.0%	35.0%	36.0%	Income Tax Rate	35.5%
							--	--	--	--	14.4%	3.2%	--	11.0%	9.5%	12.5%	11.5%	12.0%	AFUDC % to Net Profit	12.5%
							47.9%	48.7%	45.2%	48.8%	51.4%	56.7%	47.9%	47.9%	44.7%	43.6%	44.5%	44.0%	Long-Term Debt Ratio	43.5%
							51.3%	50.5%	54.1%	50.7%	48.2%	42.9%	51.8%	52.0%	55.1%	56.3%	55.5%	56.0%	Common Equity Ratio	56.5%
							62.2	68.5	73.9	85.0	113.0	142.8	152.8	242.0	262.9	295.2	315	380	Total Capital ($mill)	560
							102.1	109.2	113.7	157.8	171.1	203.9	219.5	302.6	344.8	389.6	430	510	Net Plant ($mill)	750
							6.8%	7.1%	7.6%	7.6%	7.6%	5.8%	6.2%	3.1%	4.1%	4.5%	4.0%	5.0%	Return on Total Cap'l	5.0%
							8.0%	9.5%	10.3%	11.1%	11.4%	9.7%	9.0%	3.6%	5.0%	5.6%	4.5%	6.0%	Return on Shr. Equity	7.0%
							8.1%	9.8%	10.4%	11.1%	11.4%	9.7%	9.1%	3.6%	5.0%	5.6%	4.5%	6.0%	Return on Com Equity	7.0%
							4.5%	6.0%	7.0%	7.8%	7.8%	6.3%	5.8%	.8%	2.1%	2.6%	1.5%	3.0%	Retained to Com Eq	3.5%
							45%	38%	33%	31%	32%	36%	36%	78%	58%	54%	77%	48%	All Div'ds to Net Prof	43%

CAPITAL STRUCTURE as of 9/30/07
Total Debt $144.6 mill. Due in 5 Yrs $60.0 mill
LT Debt $143.1 mill LT Interest $8.4 mill
(Total interest coverage: 2.7x) (46% of Cap'l)

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

Pfd Stock $.458 mill. Pfd Div'd $.018 mill.
Common Stock 24,232,637 shs.
as of 11/2/07

MARKET CAP: $300 million (Small Cap)

CURRENT POSITION ($MILL.)	2005	2006	9/30/07
Cash Assets	3.0	4.3	2.4
Receivables	26.5	27.5	27.4
Inventory (Avg Cst)	--	--	--
Other	18.2	16.5	11.9
Current Assets	47.7	48.3	41.7
Accts Payable	10.0	12.7	9.7
Debt Due	9.5	1.4	1.5
Other	21.1	21.7	22.6
Current Liab.	40.6	35.8	33.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '04-'06 to '10-'12
Revenues	7.0%	5.0%	3.0%
"Cash Flow"	6.0%	0.5%	10.5%
Earnings	10.5%	-2.5%	14.0%
Dividends	9.0%	9.0%	7.5%
Book Value	10.5%	13.5%	8.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2004	39.8	45.7	55.0	47.5	188.0
2005	45.2	51.3	54.7	52.0	203.2
2006	50.8	55.4	60.1	57.9	224.2
2007	48.1	55.0	57.4	59.5	220
2008	55.0	58.0	60.0	62.0	235

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2004	--	.13	.11	d.01	.23
2005	d.01	.15	.14	.06	.34
2006	.03	.08	.16	.13	.40
2007	.03	.09	.08	.10	.30
2008	.06	.15	.18	.11	.50

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2004	.044	.044	.044	.048	.18
2005	.048	.048	.048	.052	.20
2006	.052	.052	.052	.058	.21
2007	.058	.058	.058	.058	.23
2008	.06				

Target Price Range 2010 | 2011 | 2012: 40, 32, 24, 16, 12, 10, 8, 6, 4

% TOT. RETURN 12/07

	THIS STOCK	VL ARITH. INDEX
1 yr.	-7.4	1.3
3 yr.	-2.2	25.2
5 yr.	43.2	117.2

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 (38% of 2006 revenues) and Services (62%). 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 6.3% of com. shs.; Stein Roe Investment Council, 9.7% (4/07 proxy). CEO and Chairman: Mark Swatek. Inc.: DE. Addr.: One Wilshire Building, 624 S. Grand Ave. Ste. 2900, Los Angeles, CA 90017. Tel.: 213-929-1800. Internet: www.swwc.com.

Southwest Water has struggled of late. A couple of months ago, it reported weak September-period financial results. For the quarter, due to record rainfall in Texas and the weak housing market, share net came in at just $0.08, well below our estimate of $0.15. In addition, for the recently completed fourth quarter, we have lowered our share-net estimate by $0.03 to $0.10. Along with the struggles of the housing market, which probably limited construction and repair opportunities for SWWC, profits were likely hampered by increased operating costs, stemming from its restructuring initiative. **On the bright side, the situation should improve this year.** Although the housing market has shown few signs of rebounding, Southwest will likely begin to benefit from the improvement of its operations. It recently introduced a new integrated operating system, which has helped improve its communication processes and should help lower operating expenses. Thus, we estimate that this new system will help widen the operating margin by about 50 basis points this year. **Profits will be fueled by Southwest's recent acquisition activity, as well.** A few months ago, it purchased Diamond Water Company, which provides services to approximately 7,500 residents near San Antonio. This purchase helped SWWC expand its market reach and customer base in the Lone Star State. Moreover, the company is currently attempting to implement rate hikes in several of its markets. This action will help margins and profits this year. All told, we believe that 2008 share net will be $0.50, about 67% better than last year's 2007 probable results. **These shares do not stand out for the short or long term.** Although its restructuring initiative and recent acquisitions may well help the company achieve a large share-net gain this year, our Timeliness Ranking System suggests that this issue will lag the year-ahead market. In addition, looking out to the 2010–2012 period, this stock offers below average appreciation potential to that timeframe. That said, Southwest will probably remain active on the acquisition front. Additional purchases would probably cause us to raise our earnings projections.

Ian Gendler *January 25, 2008*

(A) Diluted earnings. Excludes nonrecurring gains (losses): '00, (3¢); '01, (5¢); '02, 1¢; '05, (23¢). Next earnings report due mid-Mar.
(B) Dividends historically paid in late January, April, July, and October.
(C) In millions, adjusted for splits.
(D) Includes intangibles. In 2006: $36.0 million, $1.51/share

Company's Financial Strength	B
Stock's Price Stability	55
Price Growth Persistence	70
Earnings Predictability	60

Missouri American Water Company
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 Companies	Proxy Group of Four Value Line (Standard Edition) Water Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.32 %	5.32 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	0.63 (2)	0.63 (2)
3.	Adjusted Prospective Yield on A Rated Public Utility Bonds	5.95 %	5.95 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.00 (3)	0.00 (3)
5	Adjusted Prospective Bond Yield	5.95	5.95
6.	Equity Risk Premium (4)	5.05	5.36
7.	Risk Premium Derived Common Equity Cost Rate	11.00 %	11.31 %

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 0.63% from page 4 of this Schedule.
(3) No adjustment necessary as the average Moody's bond rating of the proxy group is A2 as shown on page 2 of this Schedule
(4) From page 5 of this Schedule

Missouri American Water Company
Comparison of Bond Ratings, business risk and financial risk profiles for
the Proxy Group of Six AUS Utility Reports Water Companies, the
Proxy Group of Four Value Line (Standard Edition) Water Companies

	Moody's Bond Rating January 2008		Standard & Poor's Bond Rating January 2008							
Proxy Group of Six AUS Utility Reports Water Companies	Bond Rating	Numerical Weighting (1)	Bond Rating	Numerical Weighting (1)	Credit Rating	Numerical Weighting (1)	Business Risk Profile (2)	Numerical Weighting (1)	Financial Risk Profile (2)	Numerical Weighting (1)
American States Water Co. (3)	A2	6	A	6	A	6	Excellent	1.0	Intermediate	2.0
Aqua America, Inc. (4)	NR	--	AA-	4	A+	5	Excellent	1.0	Intermediate	2.0
Artesian Resources Corp. (5)	NR	--	NR	--	NR	--	NR	--	NR	--
California Water Service Group (6)	NR	--	NR	--	A+	5	Excellent	1.0	Intermediate	2.0
Connecticut Water Service Inc. (7)	NR	--	AAA	1	A	6	Excellent	1.0	Intermediate	2.0
York Water Company	NR	--	A-	7	A-	7	Excellent	1.0	Intermediate	2.0
Average	A2	6.0	AA- / A+	4.5	A	5.8	Excellent	1.0	Intermediate	2.0
Proxy Group of Four Value Line (Standard Edition) Water										
American States Water Co. (3)	A2	6	A	6	A	6	Excellent	1.0	Intermediate	2.0
Aqua America, Inc. (4)	NR	--	AA-	4	A+	5	Excellent	1.0	Intermediate	2.0
California Water Service Group (6)	NR	--	NR	--	A+	5	Excellent	1.0	Intermediate	2.0
Southwest Water Company (8)	NR	--	NR	--	NR	--	NR	--	NR	--
Average	A2	6.0	A+	5.0	A+	5.3	Excellent	1.0	Intermediate	2.0

Notes:
(1) From page 3 of this Schedule.
(2) From Standard & Poor's Issuer Ranking: U.S. Investor-Owned Water Utilities, Strongest to Weakest, February 7, 2008.
(3) Ratings, business risk and financial risk profiles are those of Golden State Water Company
(4) Ratings, business risk and financial risk profiles are those of Aqua Pennsylvania, Inc.
(5) Ratings, business risk and financial risk profiles are a composite of those of Artesian Water Company and Southwood Water Company.
(6) Ratings, business risk and financial risk profiles are those of California Water Service Company.
(7) Ratings, business risk and financial risk profiles are those of The Connecticut Water Company
(8) Ratings, business risk and financial risk profiles are a composite of those of Hornsby Bend Utility Co., New Mexico Utilities, Inc., Suburban Water Systems, and Windermere Utility Co.

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

Missouri American Water Company
Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings
Standard & Poor's Business and Financial Risk Profiles

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-

Standard & Poor's

Business Risk Profile	Numerical Weighting	Financial Risk Profile	Numerical Weighting
Excellent	1	Modest	1
Strong	2	Intermediate	2
Satisfactory	3	Aggressive	3
Weak	4	Highly Leveraged	4
Vulnerable	4		

Moody's
Comparison of Interest Rate Trends
for the Three Months Ending January 2008 (1)

Years	Corporate Bonds Aaa Rated	Public Utility Bonds Aa Rated	Public Utility Bonds A Rated	Public Utility Bonds Baa Rated	Spread - Corporate v. Public Utility Bonds Aa (Pub. Util.) over Aaa (Corp.)	Spread - Corporate v. Public Utility Bonds A (Pub. Util.) over Aaa (Corp.)	Spread - Corporate v. Public Utility Bonds Baa (Pub. Util.) over Aaa (Corp.)	Spread - Public Utility Bonds A over Aa	Spread - Public Utility Bonds Baa over A
November-07	5.44 %	5.87 %	5.97 %	6.27 %					
December-07	5.49	6.03	6.16	6.51					
January-08	5.33	5.80	6.02	6.35					
Average of Last 3 Months	5.42 %	5.90 %	6.05 %	6.38 %	0.48 %	0.63 %	0.96 %	0.15 %	0.33 %

Notes: (1) All yields are distributed yields.

Source of Information: Mergent Bond Record, Feburary 2008, Vol. 75, No. 2

Missouri American Water Company
Judgment of Equity Risk Premium for
the Proxy Group of Six AUS Utility Reports Water Companies, 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)	5.58 %	6 20 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	4.51	4.51
3.	Average equity risk premium	5.05 %	5.36 %

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

Missouri American Water Company
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, 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 - 1926-2007 (1)	12.30 %	12.30 %
2.	Arithmetic mean yield on Aaa and Aa Corporate Bonds 1926-2007 (2)	(6.10)	(6.10)
3.	Historical Equity Risk Premium	6.20 %	6.20 %
4	Forecasted 3-5 year Total Annual Market Return (3)	14.54 %	14.54 %
5	Prospective Yield an Aaa Rated Corporate Bonds (4)	(5.32)	(5.32)
6	Forecasted Equity Risk Premium	9.22 %	9.22 %
7.	Conclusion of Equity Risk Premium (5)	6.20 %	6.20 %
8.	Adjusted Value Line Beta (6)	0.90	1.00
9	Beta Adjusted Equity Risk Premium	5.58 %	6.20 %

Notes: (1) From 2008 Ibbotson Risk Premia Over Time Report - Estimates for 1926-2007, Morningstar, Inc., Chicago, IL, 2008

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

(3) From page 3 of Schedule PMA-13.

(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 February 1, 2008 (see page 7 of this Schedule). The estimates are detailed below

First Quarter 2008	5.20 %
Second Quarter 2008	5.10
Third Quarter 2008	5.20
Fourth Quarter 2008	5.30
First Quarter 2009	5.50
Second Quarter 2009	5.60
Average	5.32 %

(5) The average of the Historical Equity Risk Premium of 6.20% from Line No. 3 and the Forecasted Equity Risk Premium of 9.22% from Line No. 6 ((6.20% + 9.22%) / 2 = 7.71%. Normally, Ms. Ahern would use the average Historical Equity Risk Premium in her Risk Premium Analysis. However, in Ms. Ahern's opinion, the current and recent substantial decline in the stock market is extraordinary and not representative of the expected long-term. Consequently, in this instance, Ms. Ahern will not consider what she believes is an extraordinary expected capital appreciation and instead will rely only upon the 6.20% historical market premium.

(6) From page 9 of this Schedule

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

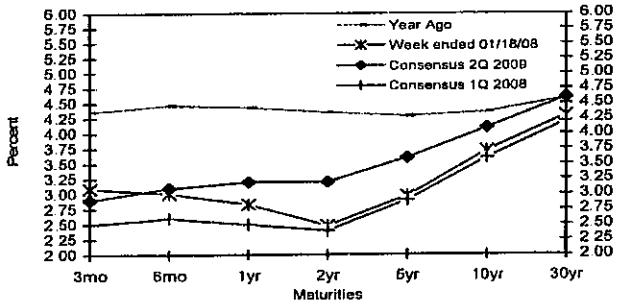
	History: Average For Week End				History: Average For Month			Latest Q	Consensus Forecasts-Quarterly Avg.					
Interest Rates	Jan.18	Jan.11	Jan.4	Dec.28	Dec.	Nov.	Oct.	4Q 2007	1Q 2008	2Q 2008	3Q 2008	4Q 2008	1Q 2009	2Q 2009
Federal Funds Rate	4.24	4.23	3.77	4.21	4.24	4.49	4.76	4.50	3.3	2.7	2.6	2.7	2.8	3.1
Prime Rate	7.25	7.25	7.25	7.25	7.33	7.50	7.74	7.52	6.3	5.7	5.6	5.7	5.9	6.1
LIBOR, 3-mo.	3.93	4.43	4.66	4.80	4.98	4.96	5.15	5.03	3.6	3.0	2.9	3.0	3.2	3.4
Commercial Paper, 1-mo.	3.75	4.03	4.13	4.19	4.25	4.48	4.70	4.48	3.4	2.9	2.9	3.0	3.2	3.5
Treasury bill, 3-mo.	3.09	3.21	3.27	3.25	3.07	3.35	4.00	3.47	2.5	2.2	2.2	2.3	2.6	2.9
Treasury bill, 6-mo.	3.01	3.21	3.33	3.51	3.34	3.58	4.16	3.69	2.6	2.3	2.3	2.5	2.8	3.1
Treasury bill, 1 yr.	2.83	3.04	3.18	3.42	3.26	3.50	4.10	3.62	2.5	2.3	2.4	2.5	2.8	3.2
Treasury note, 2 yr.	2.48	2.70	2.88	3.23	3.12	3.34	3.97	3.48	2.4	2.3	2.4	2.6	2.9	3.2
Treasury note, 5 yr.	2.97	3.13	3.29	3.63	3.49	3.67	4.20	3.79	2.9	2.8	2.9	3.1	3.3	3.6
Treasury note, 10 yr.	3.72	3.85	3.94	4.21	4.10	4.15	4.53	4.26	3.6	3.5	3.6	3.8	4.0	4.1
Treasury note, 30 yr.	4.30	4.37	4.38	4.61	4.53	4.52	4.77	4.61	4.2	4.1	4.2	4.3	4.5	4.6
Corporate Aaa bond	5.29	5.36	5.35	5.57	5.49	5.44	5.66	5.53	5.2	5.1	5.2	5.3	5.5	5.6
Corporate Baa bond	6.52	6.53	6.49	6.72	6.65	6.40	6.48	6.51	6.3	6.2	6.3	6.4	6.5	6.6
State & Local bonds	4.15	4.21	4.32	4.44	4.42	4.46	4.39	4.42	4.1	4.0	4.1	4.2	4.3	4.5
Home mortgage rate	5.69	5.87	6.07	6.17	6.10	6.21	6.38	6.23	5.7	5.6	5.6	5.7	5.9	6.1

	History								Consensus Forecasts-Quarterly Avg.					
Key Assumptions	1Q 2006	2Q 2006	3Q 2006	4Q 2006	1Q 2007	2Q 2007	3Q 2007	*4Q[1] 2007*	1Q 2008	2Q 2008	3Q 2008	4Q 2008	1Q 2009	2Q 2009
Major Currency Index	84.9	82.2	81.7	81.6	81.9	79.3	77.0	73.3	72.9	72.5	72.5	73.0	73.8	74.4
Real GDP	4.8	2.4	1.1	2.1	0.6	3.8	4.9	*1.3*	0.5	0.9	1.7	2.3	2.8	2.9
GDP Price Index	3.4	3.5	2.4	1.7	4.2	2.6	1.0	*2.6*	2.6	2.3	2.1	2.1	2.2	2.1
Consumer Price Index	1.8	5.1	3.0	-2.0	3.8	6.0	1.7	4.3	3.2	2.3	2.2	2.1	2.3	2.3

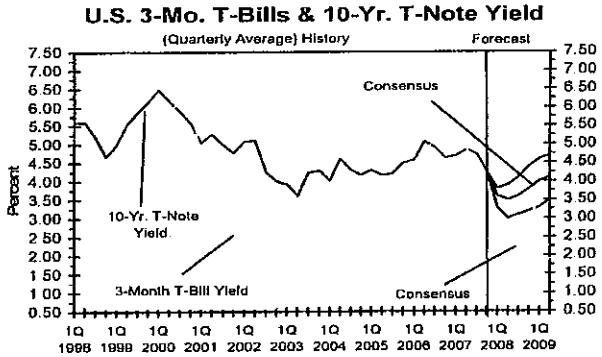
Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Definitions reported here are same as those in FRSR H.15. Treasury yields are reported on a 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 and 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). [1]***Figures for 4Q 2007 Real GDP and GDP Chained Price Index are consensus forecasts based on a special question asked of the panelists (see page 14). Figures for Q5 2007 Major Currency Index and Consumer Price Index are actuals.***

U.S. Treasury Yield Curve

Week ended January 18th, 2008 and Year Ago vs. 1Q 2008 and 2Q 2009 Consensus forecasts

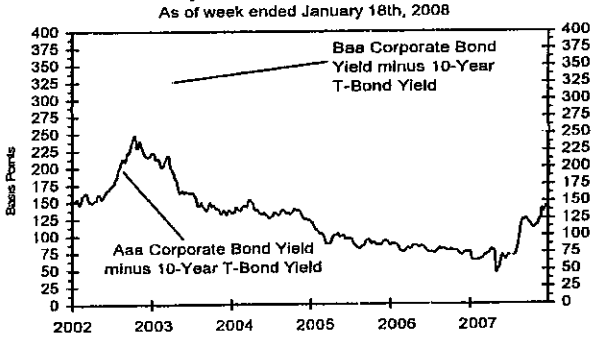


U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield



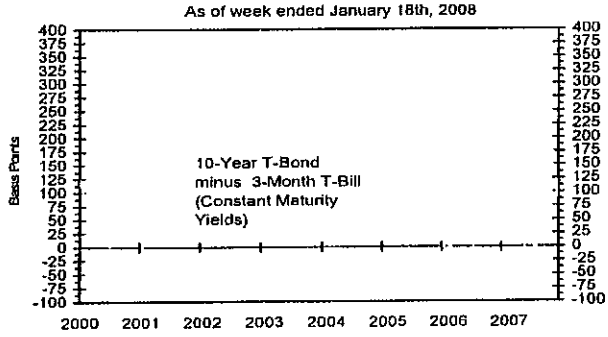
Corporate Bond Spreads

As of week ended January 18th, 2008



U.S. Treasury Yield Curve

As of week ended January 18th, 2008



Missouri American Water Company
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		1928-2006
1.	Arithmetic Mean Holding Period Returns (2): Standard & Poor's Public Utility Index	11.11 %
2.	Arithmetic Mean Yield on: Moody's A Rated Public Utility Bonds	(6.60)
3.	Equity Risk Premium	4.51 %

Notes: (1) S&P Public Utility Index and Moody's Public Utility Bond Average Annual Yields 1928-2006, (US Consultants - Utility Services, 2007).

(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.

Missouri American Water Company
Value Line Adjusted Betas for
the Proxy Group of Six AUS Utility Reports Water Companies, 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.	1.00
Aqua America, Inc.	0.90
Artesian Resources Corp.	NA
California Water Service Group	1.15
Connecticut Water Service Inc.	0.85
York Water Co.	0.50
Average	0.88
Median	0.90
Proxy Group of Four Value Line (Standard Edition) Water Companies	
American States Water Co.	1.00
Aqua America, Inc.	0.90
California Water Service Group	1.15
Southwest Water Company	1.00
Average	1.01
Median	1.00

NA = Not Available

Source of Information: Value Line Investment Survey, January 25, 2007
Standard Edition and Small and Mid-Cap Edition

Missouri American Water Company
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)	10.71 %	11.42 %
2.	Empirical Capital Asset Pricing Model (1)	10.89 %	11.42 %
3.	Conclusion	10.80 %	11.42 %

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

Missouri American Water Company
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 7.10% (1)	CAPM Result Including Risk-Free Rate of 4.32% (2)
Traditional Capital Asset Pricing Model (3)			
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	1.00	7.10 %	11.42 %
Aqua America, Inc	0.90	6.39	10.71
Artesian Resources Corp	NA	NA	NA
California Water Service Group	1.15	8.17	12.49
Connecticut Water Service Inc	0.85	6.04	10.36
York Water Co	0.50	3.55	7.87
Average	0.88	6.25 %	10.57 %
Median	0.90	6.39 %	10.71 %
Proxy Group of Four Value Line (Standard Edition) Water Companies			
American States Water Co.	1.00	7.10 %	11.42 %
Aqua America, Inc	0.90	6.39	10.71
California Water Service Group	1.15	8.17	12.49
Southwest Water Company	1.00	7.10	11.42
Average	1.01	7.19 %	11.51 %
Median	1.00	7.10 %	11.42 %
Empirical Capital Asset Pricing Model (4)			
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	1.00	7.10 %	11.42 %
Aqua America, Inc	0.90	6.57	10.89
Artesian Resources Corp	NA	NA	NA
California Water Service Group	1.15	7.90	12.22
Connecticut Water Service Inc	0.85	6.30	10.62
York Water Co	0.50	4.44	8.76
Average	0.88	6.46 %	10.78 %
Median	0.90	6.57 %	10.89 %
Proxy Group of Four Value Line (Standard Edition) Water Companies			
American States Water Co.	1.00	7.10 %	11.42 %
Aqua America, Inc.	0.90	6.57	10.89
California Water Service Group	1.15	7.90	12.22
Southwest Water Company	1.00	7.10	11.42
Average	1.01	7.17 %	11.49 %
Median	1.00	7.10 %	11.42 %

See page 3 for notes.

Missouri American Water Company
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) For reasons explained in Ms. Ahern's accompanying direct testimony, from the three previous month-end (Nov. '07 – Jan. '07), as well as a recently available (Feb. 22, 2008), Value Line Summary & Index, a forecasted 3-5 year total annual market return of 14.54% 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 60% produces a four-year average annual return of 12.47% ($(1.60^{25}) - 1$). When the average annual forecasted dividend yield of 2 07% is added, a total average market return of 14.54% (2.07% + 12.47%) is derived.

The 3-month and spot forecasted total market return of 14.54% minus the risk-free rate of 4.32% (developed in Note 2) is 10.22% (14.54% - 4.32%). The Morningstar, Inc. (Ibbotson Associates)calculated market premium of 7.10% for the period 1926-2007 results from a total market returnof 12.30% less the average income return on long-term U.S. Government Securities of 5.20% (12.30% - 5.20% = 7.10%). This is then averaged with the 10.22% Value Line market premium resulting in a 8.66% market premium. In Ms. Ahern's opinion, the current and recent substantial decline in the stock market is extraordinary and not representative of the expected long-term. Consequently, in this instance, Ms. Ahern will not consider what she believes is an extraordinary expected capital appreciation and instead will rely only uponthe 7.10% historical market premium which will be 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 February 1, 2008 (see page 7 of Schedule PMA-11.) The estimates are detailed below:

	30-Year Treasury Note Yield
First Quarter 2008	4.20%
Second Quarter 2008	4.10
Third Quarter 2008	4.20
Fourth Quarter 2008	4.30
First Quarter 2009	4.50
Second Quarter 2009	4.60
Average	4.32%

(3) The traditional Capital Asset Pricing Model (CAPM) is applied using thefollowing 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) The empirical CAPM (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, February 1, 2008
Value Line Investment Survey, January 25, 2008, Standard Edition and Small and Mid-Cap Edition
2008 Ibbotson Risk Premia Over Time Report – Estimates for 1926-2007, Morningstar, Inc., Chicago, IL, 2008

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the Proxy Group of Six 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 5-year Median (2) Percent	Student's Statistic	5-Year Projected (3) Percent	Student's Statistic
Airgas Inc.	1.05	1.04	3.0614	0.1169	11.70 %	(0.58)	14.50 %	(0.28)
Allergan Inc.	0.85	0.74	2.7965	0.1058	30.40	1.65	18.50	0.26
Alliant Techsystems	1.00	0.94	2.6151	0.0998	27.00	1.24	15.50	(0.15)
Allied Capital Corp.	0.75	0.56	2.8539	0.1093	12.60	(0.47)	21.50	0.67
Amer. Cap. Strategies	1.05	1.07	2.8829	0.1101	11.80	(0.57)	7.50	(1.23)
Amer. Greetings	0.70	0.54	3.0283	0.1156	7.80	(1.04)	10.00	(0.89)
AmerisourceBergen	0.90	0.77	3.1611	0.1207	10.80	(0.69)	12.00	(0.52)
Amgen	0.75	0.57	3.0645	0.1170	14.60	(0.23)	18.00	0.19
Anadarko Petroleum	0.95	0.89	3.2251	0.1231	17.20	0.08	14.50	(0.28)
Applied Biosystems	0.80	0.62	3.2173	0.1228	15.00	(0.19)	19.00	0.33
AvalonBay Communities	0.95	0.92	2.6579	0.1015	10.90	(0.67)	11.50	(0.69)
Beckman Coulter	0.70	0.50	2.9144	0.1113	19.30	0.33	13.00	(0.49)
Bed Bath & Beyond	1.10	1.11	3.0081	0.1148	22.90	0.76	23.00	0.87
Berkley (W.R.)	1.00	0.99	2.6957	0.1029	19.50	0.35	12.00	(0.62)
Black & Decker	1.05	1.02	2.8635	0.1093	36.50 (4)	2.38	21.00	0.60
Block (H&R)	1.05	1.04	2.9987	0.1145	32.20	1.86	27.00	1.41
Bob Evans Farms	1.00	0.93	2.9692	0.1134	8.20	(1.00)	13.50	(0.42)
Brinker Int'l	0.90	0.78	3.2606	0.1245	18.00	0.17	41.00 (4)	3.31
Bristol-Myers Squibb	1.00	0.93	2.7085	0.1034	23.40	0.82	27.00	1.41
Brown & Brown	0.90	0.79	2.7197	0.1038	20.60	0.48	14.50	(0.28)
Brunswick Corp.	1.20	1.24	3.1660	0.1209	12.20	(0.52)	11.50	(0.69)
Bunge Ltd.	0.85	0.72	3.2758	0.1251	13.90	(0.32)	11.00	(0.76)
Burlington Northern	1.05	1.06	2.5804	0.0985	11.60	(0.59)	16.50	(0.01)
CBRL Group	0.90	0.84	3.3240	0.1269	13.40	(0.38)	28.50	1.62
CVS Caremark Corp.	0.80	0.68	2.9249	0.1117	13.80	(0.33)	11.50	(0.69)
Carlisle Cos.	1.00	0.94	2.7600	0.1054	16.90	0.04	14.50	(0.28)
ChoicePoint Inc.	0.80	0.65	3.1423	0.1200	16.10	(0.05)	19.50	0.40
Cintas Corp.	1.05	1.02	2.6631	0.1017	15.10	(0.17)	14.00	(0.35)
Coca-Cola Bottling	0.80	0.66	3.3145	0.1266	33.90 (4)	2.07	19.50	0.40
Commerce Bancorp NJ	1.05	1.01	3.0940	0.1181	15.20	(0.16)	15.50	(0.15)
ConocoPhillips	0.90	0.82	2.7691	0.1057	19.00	0.29	10.50	(0.82)
Constellation Brands	0.85	0.72	3.3166	0.1266	11.80	(0.57)	10.00	(0.89)
Corrections Corp. Amer.	0.85	0.75	3.0969	0.1182	10.10	(0.77)	14.00	(0.35)
Costco Wholesale	0.90	0.82	2.9052	0.1109	11.60	(0.59)	17.00	0.06
Curtiss-Wright	1.00	0.98	2.8299	0.1080	10.90	(0.67)	12.50	(0.55)
Cytec Inds.	1.05	1.02	2.9554	0.1128	12.00	(0.54)	13.50	(0.42)
Dell Inc.	1.00	0.99	3.1608	0.1207	51.20 (4)	4.13	20.50	0.53
Developers Div. R'lty	0.90	0.82	2.7230	0.1040	10.50	(0.72)	10.50	(0.82)
Diebold Inc.	1.00	1.00	2.9891	0.1141	14.60	(0.23)	20.50	0.53
Dionex Corp.	0.95	0.90	3.0203	0.1153	21.00	0.53	23.50	0.94
Donaldson Co.	0.95	0.88	2.6668	0.1018	21.30	0.56	19.00	0.33
Donnelley (R.R) & Sons	0.95	0.90	2.6271	0.1003	13.50	(0.36)	14.50	(0.28)
East West Bancorp	1.00	0.92	3.2934	0.1257	15.20	(0.16)	13.50	(0.42)
Edwards Lifesciences	0.80	0.64	2.6679	0.1019	16.60	-	16.00	(0.08)
Energizer Holdings	0.70	0.49	3.2643	0.1246	45.50 (4)	3.45	22.50	0.80
Equifax Inc.	0.95	0.91	2.5663	0.0980	41.20 (4)	2.94	17.50	0.12
Equity Residential	0.95	0.90	2.6053	0.0995	2.90	(1.63)	6.50	(1.37)
Ethan Allen Interiors	1.05	1.03	3.1681	0.1210	18.40	0.22	16.50	(0.01)
Fannie Mae	1.00	0.97	2.9181	0.1114	16.00	(0.07)	8.00	(1.16)
Federal Rlty. Inv. Trust	0.95	0.85	2.7373	0.1045	10.80	(0.69)	13.00	(0.49)
First Commonwealth	1.05	1.03	2.5760	0.0984	9.40	(0.85)	8.50	(1.10)
Fiserv Inc.	1.00	0.96	2.6423	0.1009	15.40	(0.14)	16.50	(0.01)
Freddie Mac	0.95	0.85	2.6154	0.0999	13.30	(0.39)	7.00	(1.30)
G&K Services 'A'	1.05	1.05	3.1204	0.1191	8.40	(0.97)	9.00	(1.03)
Gladstone Capital	0.70	0.50	2.6496	0.1012	8.87	(0.92)	10.00	(0.89)
Global Payments	0.95	0.86	3.2430	0.1238	14.50	(0.25)	14.50	(0.28)
Graco Inc.	1.05	1.07	2.7195	0.1038	45.20 (4)	3.41	40.50 (4)	3.25

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the Proxy Group of Six 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 5-year Median (2) Percent	5-year Median (2) Student's Statistic	5-Year Projected (3) Percent	5-Year Projected (3) Student's Statistic
HNI Corp.	0.85	0.73	3.1197	0.1191	17.10	0.06	20.00	0.46
Hancock Holding	0.95	0.92	3.0444	0.1162	12.50	(0.48)	13.00	(0.49)
Harte-Hanks	0.80	0.64	2.5686	0.0981	17.10	0.06	17.00	0.06
Hasbro Inc.	1.05	1.02	2.6546	0.1014	13.80	(0.33)	19.00	0.33
Healthcare R'lty Trust	0.90	0.78	3.0410	0.1161	5.00	(1.38)	7.50	(1.23)
Henry (Jack) & Assoc.	1.05	1.07	3.0340	0.1158	14.60	(0.23)	16.50	(0.01)
Hillenbrand Inds.	0.85	0.76	2.6613	0.1016	19.30	0.33	14.00	(0.35)
Home Depot	1.00	0.94	2.6443	0.1010	20.70	0.49	33.00 (40	2.23
IDEXX Labs.	0.70	0.51	3.2382	0.1236	18.80	0.27	20.00	0.46
IHOP Corp.	0.95	0.92	3.1723	0.1211	12.00	(0.54)	19.50	0.40
Ingles Markets	0.85	0.71	3.1559	0.1205	9.60	(0.83)	16.50	(0.01)
Interactive Data	0.90	0.78	2.5568	0.0976	9.50	(0.84)	12.00	(0.62)
Iron Mountain	0.90	0.81	2.9681	0.1133	7.90	(1.03)	12.50	(0.55)
Jones Apparel Group	0.95	0.91	3.3205	0.1268	11.40	(0.62)	8.50	(1.10)
Journal Communications	0.85	0.74	2.7536	0.1261	13.60	(0.35)	11.00	(0.76)
Kelly Services 'A'	1.10	1.10	2.9351	0.1121	3.40	(1.57)	9.50	(0.96)
Kimco Realty	0.95	0.89	2.6700	0.1019	11.40	(0.62)	13.50	(0.42)
Kroger Co.	1.05	1.03	2.6254	0.1002	21.80	0.62	22.50	0.80
L-3 Communic. Hldgs.	1.05	1.05	2.8369	0.1083	10.80	(0.69)	11.00	(0.76)
Laboratory Corp.	0.80	0.66	2.9205	0.1115	18.20	0.20	20.00	0.46
Lauder (Estee)	0.80	0.68	3.0913	0.1180	21.70	0.61	37.00 (4)	2.77
Lee Enterprises	0.75	0.61	2.6570	0.1014	9.70	(0.82)	5.50	(1.50)
Leggett & Platt	1.05	1.03	2.8744	0.1097	12.30	(0.51)	15.50	(0.15)
Liz Claiborne	1.00	0.94	2.7384	0.1046	17.30	0.09	9.50	(0.96)
Lowe's Cos.	1.10	1.08	2.8598	0.1092	18.90	0.28	15.00	(0.21)
Mack-Cali R'lty	0.85	0.70	2.6416	0.1009	6.40	(1.21)	6.00	(1.44)
Magna Int'l 'A'	1.00	0.99	2.6411	0.1008	11.30	(0.63)	11.00	(0.76)
Marathon Oil Corp.	1.05	1.05	3.2083	0.1225	16.70	0.02	18.00	0.19
Mattel Inc.	0.90	0.79	2.7981	0.1068	23.10	0.78	30.00	1.82
Matthews Int'l	1.10	1.11	2.8574	0.1091	17.90	0.16	17.00	0.06
McDonald's Corp.	1.05	1.07	2.7231	0.1040	16.60	-	25.00	1.14
Media General 'A'	0.90	0.85	2.8870	0.1102	6.80	(1.16)	5.00	(1.57)
Microsoft Corp.	0.95	0.89	2.5694	0.0981	19.90	0.40	37.00 (40	2.77
Millipore Corp.	0.90	0.81	2.8558	0.1090	16.80	0.03	20.00	0.45
New York Community	0.90	0.80	2.7227	0.1040	11.10	(0.65)	12.00	(0.62)
Newell Rubbermaid	1.05	1.02	2.8951	0.1105	21.60	0.60	21.00	0.60
Noble Energy	1.00	0.98	3.3077	0.1263	20.40	0.46	10.00	(0.89)
O'Reilly Automotive	1.05	1.03	2.9786	0.1137	12.80	(0.45)	13.00	(0.49)
Occidental Petroleum	1.05	1.04	2.9583	0.1129	22.70	0.73	12.50	(0.55)
Oracle Corp.	1.10	1.08	3.1942	0.1220	33.50	2.02	33.00 (4)	2.23
Owens & Minor	0.95	0.90	3.1012	0.1184	13.10	(0.41)	13.00	(0.49)
Pactiv Corp.	1.00	0.93	2.9343	0.1120	21.70	0.61	17.50	0.12
Pall Corp.	1.00	0.98	2.9487	0.1126	12.40	(0.50)	17.50	0.12
Papa John's Int'l	0.95	0.91	3.0717	0.1173	28.00	1.36	20.00	0.46
Paychex Inc.	0.96	0.85	2.9037	0.1109	27.20	1.27	43.00 (4)	3.58
Penn Virginia Res.	0.85	0.71	2.9619	0.1131	21.20	0.55	18.00	0.19
Penn. R.E.I.T.	0.80	0.67	2.9858	0.1140	4.80	(1.40)	6.50	(1.37)
People's United Fin'l	0.90	0.84	3.0088	0.1149	7.80	(1.04)	6.30	(1.39)
Pepsi Bottling Group	0.80	0.69	2.9550	0.1128	23.40	0.82	18.00	0.19
PepsiAmericas Inc.	0.85	0.77	2.6000	0.0993	10.70	(0.70)	13.00	(0.49)
Pfizer Inc.	0.85	0.74	2.6958	0.1029	22.90	0.76	19.00	0.33
Progressive (Ohio)	0.80	0.64	2.5844	0.0987	24.10	0.90	23.50	0.94
Prologis	0.95	0.91	2.7270	0.1041	7.30	(1.10)	12.50	(0.55)
Public Storage	0.95	0.88	2.7681	0.1057	6.00	(1.02)	6.00	(1.44)
Quest Diagnostics	0.70	0.49	3.0474	0.1164	19.80	0.39	16.50	(0.01)
RPM Int'l	1.00	0.96	2.9829	0.1139	14.50	(0.25)	17.50	0.12
Regis Corp.	1.05	1.04	2.9779	0.1137	15.30	(0.15)	10.50	(0.82)

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Fifty-One 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 5-year Median (2) Percent	Student's Statistic	5-Year Projected (3) Percent	Student's Statistic
Respironics Inc.	0.80	0.64	3.2356	0.1235	13.50	(0.36)	13.50	(0.42)
Ruddick Corp.	1.00	0.94	2.9921	0.1142	11.80	(0.57)	11.00	(0.76)
SLM Corporation	0.70	0.51	3.2637	0.1245	39.60 (4)	2.75	13.00	(0.49)
STERIS Corp.	0.85	0.72	3.2012	0.1222	11.40	(0.62)	13.50	(0.42)
SUPERVALU INC.	0.90	0.81	2.9433	0.1124	12.80	(0.45)	11.50	(0.69)
Safeway Inc.	1.05	1.02	3.2506	0.1241	13.70	(0.34)	14.50	(0.28)
Schein (Henry)	0.80	0.67	3.2580	0.1244	13.20	(0.40)	15.00	(0.08)
Schering-Plough	1.05	1.05	3.2576	0.1244	8.60	(0.95)	17.00	0.06
Scotts Miracle-Gro	1.05	1.06	2.9627	0.1131	12.30	(0.51)	22.50	0.80
Selective Ins. Group	0.95	0.92	2.7290	0.1042	12.80	(0.45)	12.00	(0.62)
Sensient Techn.	0.95	0.88	2.7999	0.1069	11.50	(0.60)	11.50	(0.69)
Sherwin-Williams	1.05	1.01	2.6847	0.1025	23.90	0.87	23.50	0.94
Simon Property Group	1.00	0.94	2.5843	0.0987	10.10	(0.77)	13.50	(0.42)
Smithfield Foods	0.90	0.81	3.1387	0.1198	9.40	(0.85)	9.50	(0.96)
Snap-on Inc.	0.95	0.92	2.5547	0.0975	9.90	(0.79)	16.50	(0.01)
Sonic Corp.	0.90	0.84	3.0597	0.1168	19.70	0.37	29.00	1.69
Southwest Airlines	0.95	0.86	2.8919	0.1104	5.90	(1.27)	10.00	(0.89)
Sovereign Bancorp	1.10	1.08	2.7859	0.1064	11.60	(0.59)	12.00	(0.62)
Starbucks Corp.	0.90	0.81	3.2525	0.1242	15.80	(0.09)	25.00	1.14
Stryker Corp.	0.85	0.77	2.8332	0.1082	21.30	0.56	24.00	1.01
Sybase Inc.	0.95	0.86	3.2208	0.1230	11.30	(0.63)	13.50	(0.42)
TJX Companies	0.95	0.88	2.8186	0.1076	41.00 (4)	2.91	36.50 (4)	2.70
Target Corp.	1.10	1.10	2.8668	0.1095	17.00	0.05	19.50	0.40
Techne Corp.	1.05	1.04	3.2047	0.1224	19.20	0.31	17.00	0.06
Toro Co.	1.10	1.10	2.8965	0.1106	26.00	1.13	33.00 (4)	2.23
Total System Svcs.	1.00	0.96	3.3086	0.1263	19.20	0.31	18.50	0.26
UnitedHealth Group	0.70	0.54	3.1660	0.1209	24.10	0.90	25.00	1.14
Universal Corp.	0.85	0.71	2.6596	0.1015	13.50	(0.36)	12.50	(0.55)
Viad Corp.	1.05	1.05	3.0969	0.1588	9.20	(0.88)	10.00	(0.89)
W.P. Carey & Co. LLC	0.70	0.47	2.7344	0.1044	10.50	(0.72)	14.50	(0.28)
Walgreen Co.	0.80	0.66	2.6773	0.1022	16.50	(0.01)	16.50	(0.01)
Weingarten Realty	0.90	0.82	2.5667	0.0980	13.40	(0.38)	11.00	(0.76)
Werner Enterprises	1.10	1.08	3.2469	0.1240	11.30	(0.63)	8.50	(1.10)
Wolverine World Wide	1.05	1.04	3.2519	0.1242	14.40	(0.26)	17.00	0.06
World Wrestling Ent.	0.80	0.68	3.2673	0.1247	10.10	(0.77)	24.00	1.01
Wyeth	0.95	0.89	2.9045	0.1109	33.00	1.96	24.50	1.07
Xerox Corp.	1.00	0.97	2.9533	0.1128	12.90	(0.44)	14.00	(0.35)
Average	0.94	0.87	2.9269	0.1122				
Average for the Proxy Group of Six AUS Utility Reports Water Companies	0.88	0.77	2.9385 (5)	0.1122				
Median					14.50%		14.50%	
Conclusion (6)						14.50% (6)		
Conservative Median (7)					13.75%		14.50%	
Conservative Conclusion (8)						14.13% (8)		

See pages 15 and 16 for notes.

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of Two Hundred Three Non-Utility Companies Comparable to the
Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of Two Hundred Three 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 5-year Median (2) Percent	Student's Statistic	5-Year Projected (3) Percent	Student's Statistic
ABM Industries Inc.	0.85	0.77	3.4680	0.1324	9.50 %	(0.82)	13.00 %	(0.46)
Advance Auto Parts	1.00	0.94	3.4733	0.1326	25.40	1.24	17.50	0.16
Affiliated Computer	1.10	1.08	3.4519	0.1318	13.90	(0.25)	15.50	(0.12)
Airgas Inc.	1.05	1.04	3.0614	0.1169	11.70	(0.54)	14.50	(0.26)
Albany Int'l 'A'	1.10	1.14	2.8388	0.1084	12.00	(0.50)	13.50	(0.39)
Albemarle Corp.	1.10	1.13	2.7940	0.1067	11.80	(0.52)	18.00	0.22
Allergan Inc.	0.85	0.74	2.7965	0.1068	30.40	1.89	15.50	(0.12)
Amer. Cap. Strategies	1.05	1.07	2.8829	0.1101	11.80	(0.52)	7.50	(1.22)
AmerisourceBergen	0.90	0.77	3.1611	0.1207	10.80	(0.65)	12.00	(0.60)
Anadarko Petroleum	0.95	0.89	3.2251	0.1231	17.20	0.18	14.50	(0.26)
Anixter Int'l	1.25	1.31	3.1305	0.1195	9.60	(0.81)	17.00	0.09
Annaly Capital Mgmt.	1.00	0.97	3.3817	0.1291	4.30	(1.50)	3.00	(1.83)
Apache Corp.	0.95	0.89	3.4355	0.1312	19.30	0.45	11.50	(0.67)
Applied Biosystems	0.80	0.62	3.2173	0.1228	15.00	(0.11)	19.00	0.36
Apria Healthcare	0.90	0.78	3.4445	0.1315	28.50	1.64	11.50	(0.67)
Archer Daniels Midl'd	1.00	0.94	3.3769	0.1289	9.70	(0.80)	13.00	(0.46)
Baldor Electnc	1.15	1.16	2.7642	0.1055	12.40	(0.45)	14.00	(0.33)
Barnes & Noble	1.10	1.14	3.0841	0.1653	12.10	(0.49)	12.50	(0.53)
Bed Bath & Beyond	1.10	1.11	3.0081	0.1148	22.90	0.92	23.00	0.91
Berkley (W.R.)	1.00	0.99	2.6957	0.1029	19.50	0.47	12.00	(0.60)
Black & Decker	1.05	1.02	2.8635	0.1093	36.50 (4)	2.68	21.00	0.64
Block (H&R)	1.05	1.04	2.9987	0.1145	32.20 (4)	2.12	27.00	1.46
Bob Evans Farms	1.00	0.93	2.9692	0.1134	8.20	(0.99)	13.50	(0.39)
BorgWarner	1.20	1.29	2.9573	0.1129	13.90	(0.25)	15.00	(0.19)
Briggs & Stratton	1.15	1.16	3.2697	0.1248	15.70	(0.02)	14.00	(0.33)
Brink's (The) Co.	1.10	1.11	3.3501	0.1279	12.50	(0.43)	12.00	(0.60)
Brinker Int'l	0.90	0.78	3.2606	0.1245	18.00	0.28	41.00 (4)	3.38
Bristol-Myers Squibb	1.00	0.93	2.7085	0.1034	23.40	0.98	35.50 (4)	2.62
Brown & Brown	0.90	0.79	2.7197	0.1038	20.60	0.62	14.50	(0.26)
Brunswick Corp.	1.20	1.24	3.1660	0.1209	12.20	(0.47)	11.50	(0.67)
Buckle (The)Inc.	0.95	0.91	3.4532	0.1318	13.00	(0.37)	17.50	0.16
Bunge Ltd.	0.85	0.72	3.2758	0.1251	13.90	(0.25)	11.00	(0.74)
C.H. Robinson	1.05	1.00	3.3440	0.1277	22.60	0.88	26.00	1.32
CBRL Group	0.90	0.84	3.3240	0.1269	13.40	(0.32)	28.50	1.66
CIT Group	1.20	1.28	3.3442	0.1277	12.80	(0.39)	12.00	(0.60)
CLARCOR Inc.	1.10	1.14	2.9588	0.1134	14.90	(0.12)	14.50	(0.26)
CSX Corp.	1.15	1.17	2.7126	0.1036	7.50	(1.08)	15.50	(0.12)
CVS Caremark Corp.	0.80	0.68	2.9249	0.1117	13.80	(0.26)	11.50	(0.67)
Cabot Corp.	1.10	1.12	3.0442	0.1162	11.50	(0.56)	14.00	(0.33)
Cameron Int'l Corp.	0.95	0.92	3.3806	0.1291	8.10	(1.00)	23.00	0.91
Carlisle Cos.	1.00	0.94	2.7600	0.1054	16.90	0.14	14.50	(0.26)
Casey's Gen'l Stores	1.10	1.13	3.1215	0.1192	9.80	(0.78)	13.00	(0.46)
Caterpillar Inc.	1.20	1.25	2.7304	0.1042	27.30	1.49	28.50	1.66
ChoicePoint Inc.	0.80	0.65	3.1423	0.1200	16.10	0.03	19.50	0.43
Cisco Systems	1.20	1.28	3.2280	0.1232	20.70	0.63	27.00	1.46
Coca-Cola Bottling	0.80	0.66	3.3145	0.1266	33.90 (4)	2.34	19.50	0.43
Columbia Sportswear	1.00	0.97	3.3606	0.1283	17.80	0.25	14.00	(0.33)
Commerce Bancorp NJ	1.05	1.01	3.0940	0.1181	15.20	(0.08)	15.50	(0.12)
Computer Sciences	0.95	0.90	3.3494	0.1279	9.60	(0.81)	12.50	(0.53)
Con-way Inc.	1.10	1.09	3.3445	0.1277	19.40	0.46	17.00	0.09
ConocoPhillips	0.90	0.82	2.7691	0.1057	19.00	0.41	10.50	(0.81)
Constellation Brands	0.85	0.72	3.3166	0.1266	11.80	(0.52)	10.00	(0.87)
Corn Products Int'l	0.90	0.80	3.4831	0.1322	8.30	(0.98)	13.00	(0.46)
Corrections Corp. Amer.	0.85	0.75	3.0969	0.1182	10.10	(0.74)	14.00	(0.33)
Costco Wholesale	0.90	0.82	2.9052	0.1109	11.60	(0.55)	17.00	0.09
Curtiss-Wright	1.00	0.98	2.8299	0.1080	10.90	(0.64)	13.00	(0.46)

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Cytec Inds.	1.05	1.02	2.9554	0.1128	12.00	(0.50)	13.50	(0.39)
Datascope Corp.	1.15	1.20	3.2793	0.1252	8.20	(0.99)	9.00	(1.01)
Deere & Co.	1.20	1.29	2.6815	0.1024	19.40	0.46	20.50	0.57
Dell Inc.	1.00	0.99	3.1608	0.1207	51.20 (4)	4.59	20.50	0.57
Developers Div. R'lty	0.90	0.82	2.7230	0.1040	10.50	(0.69)	10.50	(0.81)
Diebold Inc.	1.00	1.00	2.9891	0.1141	14.60	(0.16)	20.50	0.57
Dionex Corp.	0.95	0.90	3.0203	0.1153	21.00	0.67	23.50	0.98
East West Bancorp	1.00	0.92	3.2934	0.1257	15.20	(0.08)	13.50	(0.39)
Eastman Chemical	1.10	1.14	2.7995	0.1069	16.50	0.09	26.00	1.32
Edwards Lifesciences	0.80	0.64	2.6679	0.1019	16.60	0.10	16.00	(0.05)
Ethan Allen Interiors	1.05	1.03	3.1681	0.1210	18.40	0.33	16.50	0.02
Fannie Mae	1.00	0.97	2.9181	0.1114	16.00	0.02	8.00	(1.15)
Federal R'lty. Inv. Trust	0.95	0.85	2.7373	0.1045	10.80	(0.65)	13.00	(0.46)
G&K Services 'A'	1.05	1.06	3.1204	0.1191	8.40	(0.96)	9.00	(1.01)
Genlyte Group	1.20	1.30	3.3381	0.1275	14.00	(0.24)	12.00	(0.60)
Glatfelter	1.15	1.19	3.4041	0.1300	4.00	(1.54)	11.50	(0.67)
Global Payments	0.95	0.86	3.2430	0.1238	14.50	(0.17)	14.50	(0.26)
Goodrich Corp.	1.20	1.30	3.3353	0.1273	16.60	0.10	22.00	0.77
Graco Inc.	1.05	1.07	2.7195	0.1038	45.20 (4)	3.81	46.50 (4)	4.13
Grainger (W.W.)	1.15	1.16	2.7107	0.1035	14.20	(0.21)	17.80	0.20
Griffon Corp.	1.05	1.02	3.3480	0.1278	13.50	(0.30)	10.50	(0.81)
HNI Corp.	0.85	0.73	3.1197	0.1191	17.10	0.16	20.00	0.50
Hancock Holding	0.95	0.92	3.0444	0.1162	12.50	(0.43)	13.00	(0.46)
Harrah's Entertain.	0.95	0.89	2.6672	0.1018	16.80	0.12	13.00	(0.46)
Healthcare R'lty Trust	0.90	0.78	3.0410	0.1161	5.00	(1.41)	6.50	(1.35)
Henry (Jack) & Assoc.	1.05	1.07	3.0340	0.1158	14.60	(0.16)	16.50	0.02
IHOP Corp.	0.95	0.92	3.1723	0.1211	12.00	(0.50)	19.50	0.43
Imation Corp.	0.90	0.78	3.4028	0.1299	9.30	(0.85)	6.50	(1.35)
Ingles Markets	0.85	0.71	3.1559	0.1205	9.60	(0.81)	16.50	0.02
Intel Corp.	1.25	1.32	3.3552	0.1281	14.90	(0.12)	21.50	0.70
Invacare Corp.	0.75	0.62	3.3650	0.1285	10.00	(0.76)	10.00	(0.87)
Iron Mountain	0.90	0.81	2.9681	0.1133	7.90	(1.03)	12.50	(0.53)
Jacobs Engineering	1.20	1.27	3.1959	0.1220	13.80	(0.26)	17.00	0.09
Jones Apparel Group	0.95	0.91	3.3205	0.1268	11.40	(0.58)	8.50	(1.08)
Journal Communications	0.85	0.74	2.7536	0.1261	13.60	(0.29)	11.00	(0.74)
Kaydon Corp.	1.20	1.25	2.8364	0.1083	12.40	(0.45)	14.50	(0.26)
Kelly Services 'A'	1.10	1.10	2.9351	0.1121	3.40	(1.61)	9.50	(0.94)
Kimco Realty	0.95	0.89	2.6700	0.1019	11.40	(0.58)	12.00	(0.60)
Kirby Corp.	1.20	1.28	2.9706	0.1134	11.90	(0.51)	12.00	(0.60)
L-3 Communic. Hldgs.	1.05	1.05	2.8369	0.1083	10.80	(0.65)	11.00	(0.74)
Laboratory Corp.	0.80	0.66	2.9205	0.1115	18.20	0.31	20.00	0.50
Landry's Restaurants	1.15	1.16	3.4060	0.1300	8.30	(0.98)	8.50	(1.08)
Lauder (Estee)	0.80	0.68	3.0913	0.1180	21.70	0.76	37.00 (4)	2.83
Leggett & Platt	1.05	1.03	2.8744	0.1097	12.30	(0.46)	15.50	(0.12)
Limited Brands	1.15	1.18	3.1454	0.1201	22.70	0.89	26.00	1.32
Lincoln Elec Hldgs.	1.20	1.25	2.8134	0.1074	17.20	0.18	14.50	(0.26)
Liz Claiborne	1.00	0.94	2.7384	0.1046	17.30	0.19	9.50	(0.94)
Lowe's Cos.	1.10	1.08	2.8598	0.1092	18.90	0.40	15.00	(0.19)
Macy's Inc.	1.25	1.31	3.0729	0.1173	11.00	(0.63)	10.00	(0.87)
Manpower Inc.	1.15	1.18	3.0231	0.1154	11.30	(0.59)	14.50	(0.26)
Marathon Oil Corp.	1.05	1.05	3.2083	0.1225	16.70	0.11	18.00	0.22
Mattel Inc.	0.90	0.79	2.7981	0.1068	23.10	0.94	30.00	1.87
Matthews Int'l	1.10	1.11	2.8574	0.1091	17.90	0.27	17.00	0.09
McDonald's Corp.	1.05	1.07	2.7231	0.1040	16.60	0.10	25.00	1.16

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					5-year Median (2)		5-Year Projected (3)	
					Percent	Student's Statistic	Percent	Student's Statistic
McKesson Corp.	0.90	0.78	3.4384	0.1313	12.50	(0.43)	15.50	(0.12)
Media General 'A'	0.90	0.85	2.8870	0.1102	6.80	(1.17)	5.00	(1.56)
Millipore Corp.	0.90	0.81	2.8558	0.1090	16.80	0.12	20.00	0.50
Mohawk Inds.	1.10	1.14	2.9064	0.1110	13.50	(0.30)	9.50	(0.94)
Molex Inc.	1.25	1.31	3.1678	0.1209	8.50	(0.95)	9.50	(0.94)
Monsanto Co.	1.15	1.16	3.3677	0.1286	8.30	(0.98)	17.50	0.16
Murphy Oil Corp.	0.90	0.81	3.4449	0.1315	14.90	(0.12)	13.50	(0.39)
New York Community	0.90	0.80	2.7227	0.1040	11.10	(0.61)	11.50	(0.67)
Newell Rubbermaid	1.05	1.02	2.8951	0.1105	21.60	0.75	21.00	0.64
Noble Energy	1.00	0.98	3.3077	0.1263	20.40	0.59	10.00	(0.87)
Nordson Corp.	1.15	1.21	3.3397	0.1275	15.80	(0.01)	15.50	(0.12)
Norfolk Southern	1.10	1.14	3.3458	0.1277	10.90	(0.64)	14.00	(0.33)
O'Reilly Automotive	1.05	1.03	2.9786	0.1137	12.80	(0.39)	13.00	(0.46)
Occidental Petroleum	1.05	1.04	2.9583	0.1129	22.70	0.89	12.50	(0.53)
Oracle Corp.	1.10	1.08	3.1942	0.1220	33.50 (4)	2.29	33.00 (4)	2.28
Oshkosh Truck	1.10	1.12	3.4360	0.1312	17.70	0.24	16.50	0.02
Overseas Shipholding	1.05	1.06	3.4038	0.1300	19.10	0.42	13.00	(0.46)
Owens & Minor	0.95	0.90	3.1012	0.1184	13.10	(0.36)	13.00	(0.46)
Pactiv Corp.	1.00	0.93	2.9343	0.1120	21.70	0.76	17.50	0.16
Pall Corp.	1.00	0.98	2.9487	0.1126	12.40	(0.45)	17.50	0.16
Papa John's Int'l	0.95	0.91	3.0717	0.1173	28.00	1.58	20.00	0.50
Paychex Inc.	0.95	0.85	2.9037	0.1109	27.20	1.47	43.00 (4)	3.65
Penn Virginia Res.	0.85	0.71	2.9619	0.1131	21.20	0.70	18.00	0.22
Penn. R.E.I.T.	0.80	0.67	2.9856	0.1140	4.80	(1.43)	6.50	(1.35)
Pentair Inc.	1.15	1.17	3.3004	0.1260	11.40	(0.58)	13.00	(0.46)
People's United Fin'l	0.90	0.84	3.0088	0.1149	7.80	(1.04)	6.50	(1.35)
Pepsi Bottling Group	0.80	0.69	2.9550	0.1128	23.40	0.98	18.00	0.22
Pfizer Inc.	0.85	0.74	2.6958	0.1029	22.90	0.92	19.00	0.36
Phillips-Van Heusen	1.10	1.14	3.2587	0.1244	17.10	0.16	12.50	(0.53)
Polo Ralph Lauren 'A'	1.10	1.14	3.3972	0.1297	15.20	(0.08)	14.50	(0.26)
Pool Corp.	0.95	0.87	3.4741	0.1326	37.80 (4)	2.85	46.50 (4)	4.13
Prologis	0.95	0.91	2.7270	0.1041	30.40	1.89	14.00	(0.33)
Public Storage	0.95	0.86	2.7681	0.1057	7.30	(1.11)	6.00	(1.42)
Quaker Chemical	1.15	1.20	3.4662	0.1323	6.00	(1.02)	15.00	(0.19)
RPM Int'l	1.00	0.96	2.9829	0.1139	9.70	(0.80)	17.50	0.16
Regal-Beloit	1.20	1.29	3.0378	0.1160	14.50	(0.17)	15.00	(0.19)
Regis Corp.	1.05	1.04	2.9779	0.1137	6.40	(1.22)	10.50	(0.81)
Respironics Inc.	0.80	0.64	3.2356	0.1235	15.30	(0.07)	13.50	(0.39)
Reynolds American	0.85	0.76	3.3611	0.1283	13.50	(0.30)	17.00	0.09
Rockwell Automation	1.25	1.32	3.2440	0.1239	10.20	(0.73)	35.00 (4)	2.56
Rollins Inc.	0.95	0.86	3.4650	0.1323	16.50	0.09	25.00	1.18
Ross Stores	1.10	1.13	3.2950	0.1258	27.30	1.49	27.50	1.53
Ruddick Corp.	1.00	0.94	2.9921	0.1142	26.60	1.40	11.00	(0.74)
Ryder System	1.10	1.13	3.0484	0.1164	11.80	(0.52)	11.00	(0.74)
STERIS Corp.	0.85	0.72	3.2012	0.1222	12.70	(0.41)	13.50	(0.39)
SUPERVALU INC.	0.90	0.81	2.9433	0.1124	11.40	(0.58)	11.50	(0.67)
Safeway Inc.	1.05	1.02	3.2506	0.1241	12.80	(0.39)	14.50	(0.26)
Schein (Henry)	0.80	0.67	3.2580	0.1244	13.70	(0.28)	16.00	(0.05)
Schering-Plough	1.05	1.05	3.2576	0.1244	13.20	(0.34)	17.50	0.16
Schlumberger Ltd.	1.00	0.95	3.3960	0.1297	8.60	(0.94)	17.50	0.16
Scotts Miracle-Gro	1.05	1.06	2.9627	0.1131	20.20	0.57	22.50	0.84
Selective Ins. Group	0.95	0.92	2.7290	0.1042	12.30	(0.46)	12.00	(0.60)
Sensient Techn.	0.95	0.88	2.7999	0.1069	12.80	(0.39)	11.50	(0.67)
Sherwin-Williams	1.05	1.01	2.6847	0.1025	11.50	(0.56)	23.50	0.98
Silgan Holdings	1.10	1.09	3.4248	0.1308	23.90	1.05	18.00	0.22

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of Two Hundred Three Non-Utility Companies Comparable to the
Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of Two Hundred Three 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 5-year Median (2) Percent	Student's Statistic	5-Year Projected (3) Percent	Student's Statistic
Smithfield Foods	0.90	0.81	3.1387	0.1198	40.10 (4)	3.15	9.50	(0.94)
Sonic Automotive	1.20	1.26	3.2931	0.1257	9.40	(0.84)	12.50	(0.53)
Sonic Corp.	0.90	0.84	3.0597	0.1168	12.40	(0.45)	29.00	1.73
Southwest Airlines	0.95	0.86	2.8919	0.1104	19.70	0.50	10.00	(0.87)
Sovereign Bancorp	1.10	1.08	2.7659	0.1064	5.90	(1.29)	11.00	(0.74)
St. Joe Corp.	1.05	1.04	3.3290	0.1271	11.60	(0.55)	16.00	(0.05)
Standex Int'l	1.15	1.21	3.3548	0.1281	17.20	0.18	15.50	(0.12)
Stanley Works	1.10	1.12	2.8485	0.1088	11.40	(0.58)	17.00	0.09
Staples Inc.	1.10	1.12	2.8830	0.1101	18.90	0.40	21.00	0.64
Starbucks Corp.	0.90	0.81	3.2525	0.1242	17.20	0.18	25.00	1.18
Steak n Shake	1.20	1.24	3.3929	0.1295	15.80	(0.01)	9.50	(0.94)
Stryker Corp.	0.85	0.77	2.8332	0.1082	12.60	(0.42)	24.00	1.05
Sybase Inc.	0.95	0.86	3.2208	0.1230	21.30	0.71	13.50	(0.39)
TJX Companies	0.95	0.88	2.8186	0.1076	11.30	(0.59)	36.50 (4)	2.76
Target Corp.	1.10	1.10	2.8668	0.1095	41.00 (4)	3.26	19.50	0.43
Tech Data	1.10	1.14	3.3533	0.1280	17.00	0.15	8.50	(1.08)
Techne Corp.	1.05	1.04	3.2047	0.1224	6.70	(1.19)	17.00	0.09
Temple-Inland	1.15	1.20	2.9069	0.1110	19.20	0.44	11.50	(0.67)
Tennant Co.	1.00	0.98	3.3704	0.1287	7.70	(1.06)	13.50	(0.39)
Time Warner	1.10	1.14	3.1093	0.1187	8.50	(0.95)	8.50	(1.08)
Toro Co.	1.10	1.10	2.8965	0.1106	5.30	(1.37)	33.00 (4)	2.28
Total System Svcs.	1.00	0.96	3.3088	0.1263	26.00	1.32	15.00	(0.19)
United Stationers	1.15	1.22	3.2078	0.1225	19.20	0.44	12.50	(0.53)
Varian Inc.	1.05	1.04	3.4375	0.1312	12.50	(0.43)	13.00	(0.46)
Viad Corp.	1.05	1.05	3.0969	0.1588	11.70	(0.54)	10.50	(0.81)
WD-40 Co.	1.10	1.08	3.3440	0.1277	9.20	(0.86)	16.00	(0.05)
Walgreen Co.	0.80	0.66	2.6773	0.1022	22.80	0.90	16.50	0.02
Washington Mutual	1.10	1.12	2.7697	0.1057	16.50	0.09	30.00	1.87
WellPoint Inc.	0.90	0.81	3.3698	0.1287	36.90 (4)	2.73	12.00	(0.60)
Werner Enterprises	1.10	1.08	3.2469	0.1240	10.00	(0.76)	8.50	(1.08)
Whirlpool Corp.	1.20	1.28	3.1324	0.1196	11.30	(0.59)	15.00	(0.19)
Wolverine World Wide	1.05	1.04	3.2519	0.1242	25.30	1.23	17.00	0.09
World Wrestling Ent.	0.80	0.68	3.2573	0.1247	14.40	(0.19)	24.00	1.05
Wyeth	0.95	0.89	2.9045	0.1109	10.10	(0.74)	24.00	1.05
Xerox Corp.	1.00	0.97	2.9533	0.1128	33.00 (4)	2.23	14.00	(0.33)
Zale Corp.	1.10	1.15	3.3362	0.1274	12.90	(0.38)	8.50	(1.08)
Zimmer Holdings	0.80	0.66	3.4494	0.1317	13.10	(0.36)	15.50	(0.12)
Average	1.02	0.99	3.0921	0.1186				
Average for the Proxy Group of Four Value Line (Standard Edition) Water Companies	1.01	0.97	3.0719 (10)	0.1173				
Median					13.80%		14.50%	
Conclusion (6)						14.15% (6)		
Conservative Median (7)					13.50%		14.50%	
Conservative Conclusion (8)						14.00% (8)		

See pages 15 and 16 for notes.

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the Proxy Group of Six 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 2002	2003	2004	2005	2006	5-Year Projected
Airgas Inc.	1.05	1.04	3.0614	0.1169	11.7 %	11.6 %	11.3 %	13.7 %	13.7 %	14.5 %
Allergan Inc.	0.85	0.74	2.7965	0.1068	24.5	42.4	33.2	30.4	14.4	18.5
Alliant Techsystems	1.00	0.94	2.6151	0.0998	27.0	28.8	22.4	24.5	31.9	15.5
Allied Capital Corp.	0.75	0.58	2.8639	0.1093	14.7	10.0	12.6	33.3	8.6	21.5
Amer. Cap. Strategies	1.05	1.07	2.8829	0.1101	14.9	12.0	11.8	10.8	9.8	7.5
Amer. Greetings	0.70	0.54	3.0263	0.1156	11.2	8.3	7.8	7.4	2.5	10.0
AmerisourceBergen	0.90	0.77	3.1611	0.1207	10.8	11.2	10.8	8.3	11.6	12.0
Amgen	0.75	0.57	3.0645	0.1170	8.7	11.7	14.6	18.1	22.0	18.0
Anadarko Petroleum	0.95	0.89	3.2251	0.1231	11.8	14.4	17.2	22.3	18.7	14.5
Applied Biosystems	0.80	0.62	3.2173	0.1228	15.0	13.0	13.9	15.6	18.6	19.0
AvalonBay Communities	0.95	0.92	2.6579	0.1015	10.5	10.9	11.5	11.5	10.5	11.5
Beckman Coulter	0.70	0.50	2.9144	0.1113	26.9	20.3	19.3	15.8	13.5	13.0
Bed Bath & Beyond	1.10	1.11	3.0081	0.1148	20.8	20.1	22.9	25.3	23.1	23.0
Berkley (W.R.)	1.00	0.99	2.6957	0.1029	10.4	17.0	19.5	20.7	20.8	12.0
Black & Decker	1.05	1.02	2.8635	0.1093	43.6	36.5	28.3	35.7	41.8	21.0
Block (H&R)	1.05	1.04	2.9987	0.1145	37.2	37.1	32.2	24.6	26.5	27.0
Bob Evans Farms	1.00	0.93	2.9592	0.1134	13.4	11.4	5.7	6.8	8.2	13.5
Brinker Int'l	0.90	0.78	3.2606	0.1245	17.0	16.1	20.7	18.0	18.0	41.0
Bristol-Myers Squibb	1.00	0.93	2.7085	0.1034	22.7	31.7	23.4	26.8	13.6	27.0
Brown & Brown	0.90	0.79	2.7197	0.1038	21.2	22.2	20.6	19.7	18.5	14.5
Brunswick Corp.	1.20	1.24	3.1660	0.1209	9.4	11.4	15.8	16.2	12.2	11.5
Bunge Ltd.	0.85	0.72	3.2758	0.1251	18.9	17.6	13.9	12.5	9.2	11.0
Burlington Northern	1.05	1.06	2.5804	0.0985	9.6	9.1	11.6	16.1	17.9	16.5
CBRL Group	0.90	0.84	3.3240	0.1269	11.7	13.4	13.2	14.6	38.5	28.5
CVS Caremark Corp.	0.80	0.68	2.9249	0.1117	13.8	14.1	13.1	14.1	13.5	11.5
Carlisle Cos.	1.00	0.94	2.7600	0.1054	13.1	14.1	16.9	18.3	18.8	14.5
ChoicePoint Inc.	0.80	0.65	3.1423	0.1200	19.1	16.1	15.0	16.0	20.9	19.5
Cintas Corp.	1.05	1.02	2.6631	0.1017	16.5	15.1	14.4	14.3	15.7	14.0
Coca-Cola Bottling	0.80	0.66	3.3145	0.1266	69.0	58.5	33.9	30.5	24.7	19.5
Commerce Bancorp NJ	1.05	1.01	3.0940	0.1181	15.8	15.2	16.4	12.3	11.3	15.5
ConocoPhillips	0.90	0.82	2.7691	0.1057	5.1	13.4	19.0	20.3	19.5	10.5
Constellation Brands	0.85	0.72	3.3186	0.1266	16.4	11.2	11.3	12.8	11.8	10.0
Corrections Corp. Amer.	0.85	0.75	3.0969	0.1182	14.5	19.2	7.7	8.0	10.1	14.0
Costco Wholesale	0.90	0.82	2.9052	0.1109	12.3	11.0	11.6	11.1	12.1	17.0
Curtiss-Wright	1.00	0.98	2.8299	0.1080	10.1	10.9	11.3	11.8	10.6	12.5
Cytec Inds.	1.05	1.02	2.9554	0.1128	13.3	12.0	13.2	11.4	10.6	13.5
Dell Inc.	1.00	0.99	3.1608	0.1207	43.5	42.1	51.2	92.6	58.2	20.5
Developers Div. R'lty	0.90	0.82	2.7230	0.1040	10.7	14.9	10.5	10.3	9.6	10.5
Diebold Inc.	1.00	1.00	2.9891	0.1141	16.8	15.2	14.6	11.8	11.2	20.5
Dionex Corp.	0.95	0.90	3.0203	0.1153	21.0	19.7	22.6	24.9	19.3	23.5
Donaldson Co.	0.95	0.88	2.6668	0.1018	22.7	21.3	19.4	21.1	24.2	19.0
Donnelley (R.R) & Sons	0.95	0.90	2.6271	0.1003	18.2	15.1	8.5	13.3	13.5	14.5
East West Bancorp	1.00	0.92	3.2934	0.1257	16.1	16.3	15.2	14.8	14.1	13.5
Edwards Lifesciences	0.80	0.64	2.6679	0.1019	15.4	15.2	16.6	18.1	17.0	16.0
Energizer Holdings	0.70	0.49	3.2643	0.1246	26.4	21.0	45.5	63.2	122.5	22.5
Equifax Inc.	0.95	0.91	2.5663	0.0980	86.6	54.3	41.2	29.1	21.2	17.5
Equity Residential	0.95	0.90	2.6053	0.0995	6.2	4.6	2.9	2.5	1.8	8.5
Ethan Allen Interiors	1.05	1.03	3.1681	0.1210	16.7	15.5	19.3	18.4	21.2	18.5
Fannie Mae	1.00	0.97	2.9181	0.1114	38.6	31.7	12.8	16.0	9.7	8.0
Federal Rlty. Inv. Trust	0.95	0.85	2.7373	0.1045	10.6	10.8	12.5	10.8	15.1	13.0
First Commonwealth	1.05	1.03	2.5760	0.0984	12.1	11.8	7.5	9.4	9.3	8.5
Fiserv Inc.	1.00	0.96	2.6423	0.1009	14.5	14.3	15.4	17.8	18.4	16.5
Freddie Mac	0.95	0.85	2.6154	0.0999	32.2	15.3	9.0	13.3	7.8	7.0
G&K Services 'A'	1.05	1.06	3.1204	0.1191	11.2	8.9	8.3	8.4	7.6	9.0
Gladstone Capital	0.70	0.50	2.6496	0.1012	5.8	8.6	8.9	11.4	11.2	10.0
Global Payments	0.95	0.86	3.2430	0.1238	13.4	14.5	13.9	16.5	16.5	14.5
Graco Inc.	1.05	1.07	2.7195	0.1038	30.8	51.1	47.1	43.7	45.2	40.5

Missouri American Water Company
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Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the Proxy Group of Six 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					
					2002	2003	2004	2005	2006	5-Year Projected
HNI Corp.	0.85	0.73	3.1197	0.1191	14.1	13.8	17.1	22.7	24.9	20.0
Hancock Holding	0.95	0.92	3.0444	0.1162	12.0	12.6	12.5	11.3	15.9	13.0
Harte-Hanks	0.80	0.64	2.5686	0.0981	17.0	15.7	17.1	20.4	22.7	17.0
Hasbro Inc.	1.05	1.02	2.6546	0.1014	8.9	15.3	13.3	13.8	15.0	19.0
Healthcare R'lty Trust	0.90	0.78	3.0410	0.1161	9.2	7.7	5.0	4.1	4.5	7.5
Henry (Jack) & Assoc.	1.05	1.07	3.0340	0.1158	16.7	13.5	14.1	14.6	15.6	16.5
Hillenbrand Inds.	0.85	0.75	2.6613	0.1016	19.8	21.1	17.5	18.8	19.3	14.0
Home Depot	1.00	0.94	2.6443	0.1010	18.5	19.2	20.7	21.7	23.0	33.0
IDEXX Labs.	0.70	0.51	3.2382	0.1236	13.8	14.9	18.8	21.5	21.4	20.0
IHOP Corp.	0.95	0.92	3.1723	0.1211	11.2	11.1	12.0	15.0	15.6	19.5
Ingles Markets	0.85	0.71	3.1559	0.1205	6.4	7.0	11.0	9.6	14.0	16.5
Interactive Data	0.90	0.78	2.5568	0.0976	9.2	9.5	9.4	11.0	10.2	12.0
Iron Mountain	0.90	0.81	2.9681	0.1133	7.1	7.9	7.7	8.3	8.3	12.5
Jones Apparel Group	0.95	0.91	3.3205	0.1268	16.7	12.9	11.4	11.1	11.4	8.5
Journal Communications	0.85	0.74	2.7536	0.1051	13.6	14.4	16.0	12.6	11.6	11.0
Kelly Services 'A'	1.10	1.10	2.9351	0.1121	3.0	0.8	3.4	58.0	7.6	9.5
Kimco Realty	0.95	0.89	2.6700	0.1019	10.6	11.4	12.6	13.9	10.6	13.5
Kroger Co.	1.05	1.03	2.6254	0.1002	33.9	21.8	21.4	21.8	22.6	22.5
L-3 Communic. Hldgs.	1.05	1.05	2.8369	0.1083	9.6	10.8	10.1	11.3	11.9	11.0
Laboratory Corp.	0.80	0.66	2.9205	0.1115	15.8	15.9	18.2	20.5	22.2	20.0
Lauder (Estee)	0.80	0.68	3.0913	0.1180	15.8	18.7	21.7	25.6	25.7	37.0
Lee Enterprises	0.75	0.61	2.6570	0.1014	9.6	9.7	9.8	10.3	8.8	5.5
Leggett & Platt	1.05	1.03	2.8744	0.1097	11.8	9.7	12.3	12.3	12.5	15.5
Liz Claiborne	1.00	0.94	2.7384	0.1046	18.5	17.7	17.3	15.8	4.5	9.5
Lowe's Cos.	1.10	1.08	2.8598	0.1092	17.7	18.1	18.9	19.3	19.7	15.0
Mack-Cali R'lty	0.85	0.70	2.6416	0.1009	9.6	9.3	6.4	5.9	4.6	6.0
Magna Int'l 'A'	1.00	0.99	2.6411	0.1008	10.9	12.9	13.2	11.3	9.0	11.0
Marathon Oil Corp.	1.05	1.05	3.2083	0.1225	11.1	16.7	16.2	26.1	31.7	18.0
Mattel Inc.	0.90	0.79	2.7981	0.1068	24.6	24.9	21.3	23.1	21.8	30.0
Matthews Int'l	1.10	1.11	2.8574	0.1091	21.1	17.5	18.0	17.9	16.8	17.0
McDonald's Corp.	1.05	1.07	2.7231	0.1040	16.5	15.3	17.3	16.6	18.6	25.0
Media General 'A'	0.90	0.85	2.8870	0.1102	5.0	4.9	6.8	6.9	8.4	5.0
Microsoft Corp.	0.85	0.89	2.5694	0.0981	19.9	17.3	15.1	26.4	31.4	37.0
Millipore Corp.	0.90	0.81	2.8558	0.1090	28.7	20.4	16.5	16.8	18.5	20.0
New York Community	0.90	0.80	2.7227	0.1040	17.3	11.3	11.1	8.8	6.3	12.0
Newell Rubbermaid	1.05	1.02	2.8951	0.1105	20.5	20.2	21.5	25.8	24.9	21.0
Noble Energy	1.00	0.98	3.3077	0.1263	1.7	13.1	22.4	20.4	20.9	10.0
O'Reilly Automotive	1.05	1.03	2.9786	0.1137	12.6	12.8	12.4	13.9	13.1	13.0
Occidental Petroleum	1.05	1.04	2.9583	0.1129	16.2	20.3	25.4	26.4	22.7	12.5
Oracle Corp.	1.10	1.08	3.1942	0.1220	36.4	36.5	33.5	32.7	28.3	33.0
Owens & Minor	0.95	0.90	3.1012	0.1184	18.1	13.1	13.1	13.0	10.2	13.0
Pactiv Corp.	1.00	0.93	2.9343	0.1120	24.5	21.7	19.7	17.7	26.8	17.5
Pall Corp.	1.00	0.98	2.9487	0.1126	8.9	15.4	14.4	12.4	12.3	17.5
Papa John's Int'l	0.95	0.91	3.0717	0.1173	38.4	23.0	28.0	25.7	32.0	20.0
Paychex Inc.	0.95	0.85	2.9037	0.1109	29.7	27.2	25.2	26.6	28.1	43.0
Penn Virginia Res.	0.85	0.71	2.9619	0.1131	15.2	14.8	22.9	23.0	21.2	18.0
Penn. R.E.I.T.	0.80	0.67	2.9856	0.1140	12.6	2.8	4.8	5.1	3.2	6.5
People's United Fin'l	0.90	0.84	3.0088	0.1149	5.9	6.4	7.8	9.7	9.3	6.3
Pepsi Bottling Group	0.80	0.69	2.9550	0.1128	23.5	22.4	23.4	22.8	25.0	18.0
PepsiAmericas Inc.	0.85	0.77	2.6000	0.0993	9.4	9.9	10.8	12.0	10.7	13.0
Pfizer Inc.	0.85	0.74	2.6958	0.1029	47.9	19.5	23.6	22.9	21.0	19.0
Progressive (Ohio)	0.80	0.64	2.5844	0.0987	19.1	24.8	31.0	22.8	24.1	23.5
Prologis	0.95	0.91	2.7270	0.1041	6.7	7.3	7.3	11.4	11.1	12.5
Public Storage	0.95	0.88	2.7681	0.1057	7.9	8.0	8.3	9.5	3.8	6.0
Quest Diagnostics	0.70	0.49	3.0474	0.1164	18.1	18.2	22.2	19.8	21.2	16.5
RPM Int'l	1.00	0.96	2.9829	0.1139	11.8	14.1	14.5	14.7	16.2	17.5
Regis Corp.	1.05	1.04	2.9779	0.1137	15.8	15.4	15.3	13.6	11.4	10.5

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Fifty-One Non-Utility Companies Comparable to the Proxy Group of Six 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 2002	2003	2004	2005	2006	5-Year Projected
Respironics Inc.	0.80	0.64	3.2356	0.1235	11.5	13.5	13.8	14.1	13.1	13.5
Ruddick Corp.	1.00	0.94	2.9921	0.1142	12.3	12.1	11.8	11.3	10.8	11.0
SLM Corporation	0.70	0.51	3.2637	0.1246	39.6	53.4	61.7	36.5	26.5	13.0
STERIS Corp.	0.85	0.72	3.2012	0.1222	13.9	13.8	11.4	8.8	11.4	13.5
SUPERVALU INC.	0.90	0.81	2.9433	0.1124	12.8	13.1	13.3	12.3	8.5	11.5
Safeway Inc.	1.05	1.02	3.2506	0.1241	36.1	22.0	13.0	12.8	13.7	14.5
Schein (Henry)	0.80	0.67	3.2580	0.1244	13.7	13.9	12.3	13.2	12.4	16.0
Schering-Plough	1.05	1.05	3.2576	0.1244	24.2	6.1	0.2	8.6	17.1	17.0
Scotts Miracle-Gro	1.05	1.06	2.9627	0.1131	17.0	14.3	11.5	9.8	12.3	22.5
Selective Ins. Group	0.95	0.92	2.7290	0.1042	6.1	7.7	12.8	14.0	13.0	12.0
Sensient Techn.	0.95	0.88	2.7999	0.1069	16.2	13.4	11.5	9.1	9.4	11.5
Sherwin-Williams	1.05	1.01	2.6847	0.1025	23.2	22.8	23.9	26.8	28.9	23.5
Simon Property Group	1.00	0.94	2.5843	0.0987	12.2	10.1	5.7	6.3	10.9	13.5
Smithfield Foods	0.90	0.81	3.1387	0.1198	2.0	10.1	15.7	9.4	8.4	9.5
Snap-on Inc.	0.95	0.92	2.5547	0.0975	12.7	7.8	7.4	9.9	11.2	16.5
Sonic Corp.	0.90	0.84	3.0597	0.1168	20.7	19.7	18.6	19.6	20.1	29.0
Southwest Airlines	0.95	0.86	2.8919	0.1104	4.4	5.9	5.7	7.0	9.2	10.0
Sovereign Bancorp	1.10	1.08	2.7859	0.1064	12.9	12.9	11.1	11.6	7.6	12.0
Starbucks Corp.	0.90	0.81	3.2525	0.1242	12.6	12.9	15.8	23.7	26.1	25.0
Stryker Corp.	0.85	0.77	2.8332	0.1082	23.8	21.0	21.3	22.1	19.8	24.0
Sybase Inc.	0.95	0.86	3.2208	0.1230	13.7	10.5	8.7	12.2	11.3	13.5
TJX Companies	0.95	0.88	2.8186	0.1076	41.0	42.4	41.3	33.5	33.9	36.5
Target Corp.	1.10	1.10	2.8658	0.1095	17.5	16.6	14.5	17.0	17.8	19.5
Techne Corp.	1.05	1.04	3.2047	0.1224	18.6	19.2	18.3	24.7	21.6	17.0
Toro Co.	1.10	1.10	2.8965	0.1106	17.4	18.5	26.0	29.2	32.9	33.0
Total System Svcs.	1.00	0.96	3.3086	0.1263	20.9	19.2	17.4	19.2	20.5	18.5
UnitedHealth Group	0.70	0.54	3.1660	0.1209	30.5	35.6	24.1	18.8	20.0	25.0
Universal Corp.	0.85	0.71	2.6596	0.1015	18.1	18.3	13.5	5.6	10.6	12.5
Viad Corp.	1.05	1.05	3.0969	0.1588	17.9	13.2	6.7	9.2	8.9	10.0
W.P. Carey & Co. LLC	0.70	0.47	2.7344	0.1044	6.0	10.5	11.2	7.1	13.9	14.5
Walgreen Co.	0.80	0.66	2.6773	0.1022	16.3	16.1	16.5	17.5	17.3	16.5
Weingarten Realty	0.90	0.82	2.5667	0.0980	10.9	13.4	13.4	13.0	13.5	11.0
Werner Enterprises	1.10	1.08	3.2489	0.1240	9.5	10.4	11.3	11.4	11.3	8.5
Wolverine World Wide	1.05	1.04	3.2519	0.1242	13.0	12.0	14.4	16.1	16.4	17.0
World Wrestling Ent.	0.80	0.68	3.2673	0.1247	4.8	14.0	10.1	11.9	8.2	24.0
Wyeth	0.95	0.89	2.9045	0.1109	35.3	32.8	34.9	33.0	29.2	24.5
Xerox Corp.	1.00	0.97	2.9533	0.1128	21.4	11.5	11.0	12.9	14.8	14.0
Average	0.94	0.87	2.9269	0.1122						
Median	0.95	0.89	2.9249	0.1120						
Average for the Proxy Group of Six AUS Utility Reports Water Companies	0.88	0.77	2.9385 (5)	0.1122						

See pages 15 and 16 for notes.

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of Two Hundred Three Non-Utility Companies Comparable to the
Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of Two Hundred Three 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					
					2002	2003	2004	2005	2006	5-Year Projected
ABM Industries Inc.	0.85	0.77	3.4680	0.1324	12.1 %	8.2 %	9.5 %	9.6 %	8.9 %	13.0 %
Advance Auto Parts	1.00	0.94	3.4733	0.1326	20.7	25.4	26.3	25.5	22.4	17.5
Affiliated Computer	1.10	1.08	3.4519	0.1316	11.0	12.6	13.9	14.3	14.6	15.5
Airgas Inc.	1.05	1.04	3.0614	0.1169	11.7	11.6	11.3	13.7	13.7	14.5
Albany Int'l 'A'	1.10	1.14	2.8388	0.1084	13.7	11.6	9.8	12.9	12.0	13.5
Albemarle Corp.	1.10	1.13	2.7940	0.1067	12.6	10.3	10.8	11.8	19.2	18.0
Allergan Inc.	0.85	0.74	2.7965	0.1068	24.5	42.4	33.2	30.4	14.4	15.5
Amer. Cap. Strategies	1.05	1.07	2.8829	0.1101	14.9	12.0	11.8	10.8	9.8	7.5
AmerisourceBergen	0.90	0.77	3.1611	0.1207	10.8	11.2	10.8	8.3	11.6	12.0
Anadarko Petroleum	0.95	0.89	3.2251	0.1231	11.8	14.4	17.2	22.3	16.7	14.5
Anixter Int'l	1.25	1.31	3.1305	0.1195	6.9	6.1	9.6	12.7	21.8	17.0
Annaly Capital Mgmt.	1.00	0.97	3.3817	0.1291	3.3	4.3	5.7	6.5	3.3	3.0
Apache Corp.	0.95	0.89	3.4355	0.1312	11.5	19.1	20.4	24.9	19.3	11.5
Applied Biosystems	0.80	0.62	3.2173	0.1228	15.0	13.0	13.9	15.6	18.6	19.0
Apria Healthcare	0.90	0.78	3.4445	0.1315	29.4	31.7	28.5	25.6	18.0	11.5
Archer Daniels Midl'd	1.00	0.94	3.3769	0.1289	6.8	6.2	9.7	10.0	13.4	13.0
Baldor Electric	1.15	1.16	2.7642	0.1055	8.7	9.5	12.4	14.4	15.8	14.0
Barnes & Noble	1.10	1.14	3.0841	0.1653	9.7	12.1	11.3	13.6	12.9	12.5
Bed Bath & Beyond	1.10	1.11	3.0081	0.1148	20.8	20.1	22.9	25.3	23.1	23.0
Berkley (W.R.)	1.00	0.99	2.6957	0.1029	10.4	17.0	19.5	20.7	20.8	12.0
Black & Decker	1.05	1.02	2.8635	0.1093	43.6	36.5	28.3	35.7	41.8	21.0
Block (H&R)	1.05	1.04	2.9987	0.1145	37.2	37.1	32.2	24.6	26.5	27.0
Bob Evans Farms	1.00	0.93	2.9692	0.1134	13.4	11.4	5.7	6.8	8.2	13.5
BorgWarner	1.20	1.29	2.9573	0.1129	15.3	13.9	13.5	15.0	12.5	15.0
Briggs & Stratton	1.15	1.16	3.2697	0.1248	11.8	15.7	16.6	16.1	9.9	14.0
Brink's (The) Co.	1.10	1.11	3.3501	0.1279	18.1	3.7	14.9	5.1	12.5	12.0
Brinker Int'l	0.90	0.78	3.2606	0.1245	17.0	16.1	20.7	18.0	18.0	41.0
Bristol-Myers Squibb	1.00	0.93	2.7085	0.1034	22.7	31.7	23.4	26.8	13.6	35.5
Brown & Brown	0.90	0.79	2.7197	0.1038	21.2	22.2	20.6	19.7	18.5	14.5
Brunswick Corp.	1.20	1.24	3.1650	0.1209	9.4	11.4	15.8	16.2	12.2	11.5
Buckle (The)Inc.	0.95	0.91	3.4532	0.1318	12.1	11.3	13.0	17.3	19.4	17.5
Bunge Ltd.	0.85	0.72	3.2758	0.1251	18.9	17.6	13.9	12.5	9.2	11.0
C.H. Robinson	1.05	1.00	3.3440	0.1277	22.6	22.1	22.1	26.1	28.3	26.0
CBRL Group	0.90	0.84	3.3240	0.1269	11.7	13.4	13.2	14.6	38.5	28.5
CIT Group	1.20	1.28	3.3442	0.1277	16.4	10.5	11.9	13.6	12.8	12.0
CLARCOR Inc.	1.10	1.14	2.9688	0.1134	14.8	14.7	14.9	15.8	15.4	14.5
CSX Corp.	1.15	1.17	2.7126	0.1036	7.5	6.3	6.8	9.7	11.6	15.5
CVS Caremark Corp.	0.80	0.68	2.9249	0.1117	13.8	14.1	13.1	14.1	13.5	11.5
Cabot Corp.	1.10	1.12	3.0442	0.1162	12.1	11.8	10.2	11.5	8.8	14.0
Cameron Int'l Corp.	0.95	0.92	3.3806	0.1291	8.1	5.7	7.7	10.7	17.2	23.0
Carlisle Cos.	1.00	0.94	2.7600	0.1054	13.1	14.1	15.9	18.3	18.8	14.5
Casey's Gen'l Stores	1.10	1.13	3.1215	0.1192	9.8	8.3	9.1	12.0	10.6	13.0
Caterpillar Inc.	1.20	1.25	2.7304	0.1042	14.6	18.7	27.3	33.8	52.3	28.5
ChoicePoint Inc.	0.80	0.65	3.1423	0.1200	19.1	16.1	15.0	16.0	20.9	19.5
Cisco Systems	1.20	1.28	3.2280	0.1232	10.0	15.3	20.7	24.8	23.3	27.0
Coca-Cola Bottling	0.80	0.66	3.3145	0.1266	69.0	58.5	33.9	30.5	24.7	19.5
Columbia Sportswear	1.00	0.97	3.3606	0.1283	21.7	18.7	17.8	17.6	14.8	14.0
Commerce Bancorp NJ	1.05	1.01	3.0940	0.1181	15.8	15.2	16.4	12.3	11.3	15.5
Computer Sciences	0.95	0.90	3.3494	0.1278	9.6	9.7	7.6	9.2	11.1	12.5
Con-way Inc.	1.10	1.09	3.3446	0.1277	8.9	10.5	19.4	24.4	29.3	17.0
ConocoPhillips	0.90	0.82	2.7691	0.1057	5.1	13.4	19.0	20.3	19.5	10.5
Constellation Brands	0.85	0.72	3.3166	0.1266	16.4	11.2	11.3	12.8	11.8	10.0
Corn Products Int'l	0.90	0.80	3.4631	0.1322	7.6	8.3	8.7	7.4	9.3	13.0
Corrections Corp. Amer.	0.85	0.75	3.0959	0.1182	14.5	19.2	7.7	8.0	10.1	14.0
Costco Wholesale	0.90	0.82	2.9052	0.1109	12.3	11.0	11.6	11.1	12.1	17.0
Curtiss-Wright	1.00	0.98	2.8299	0.1080	10.1	10.9	11.3	11.8	10.6	13.0

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of Two Hundred Three Non-Utility Companies Comparable to the
Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of Two Hundred Three 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					
					2002	2003	2004	2005	2006	5-Year Projected
Cytec Inds.	1.05	1.02	2.9554	0.1128	13.3	12.0	13.2	11.4	10.6	13.5
Datascope Corp.	1.15	1.20	3.2793	0.1252	9.3	7.9	8.2	5.5	9.1	9.0
Deere & Co.	1.20	1.29	2.6815	0.1024	10.1	16.1	21.7	21.1	19.4	20.5
Dell Inc.	1.00	0.99	3.1608	0.1207	43.5	42.1	51.2	92.6	58.2	20.5
Developers Div. R'lty	0.90	0.82	2.7230	0.1040	10.7	14.9	10.5	10.3	9.6	10.5
Diebold Inc.	1.00	1.00	2.9891	0.1141	16.8	15.2	14.6	11.8	11.2	20.5
Dionex Corp.	0.95	0.90	3.0203	0.1153	21.0	19.7	22.6	24.9	19.3	23.5
East West Bancorp	1.00	0.92	3.2934	0.1257	16.1	16.3	15.2	14.8	14.1	13.5
Eastman Chemical	1.10	1.14	2.7995	0.1069	6.7	7.2	16.5	30.1	20.5	26.0
Edwards Lifesciences	0.80	0.64	2.6579	0.1019	15.4	15.2	16.6	18.1	17.0	16.0
Ethan Allen Interiors	1.05	1.03	3.1681	0.1210	16.7	15.5	19.3	18.4	21.2	16.5
Fannie Mae	1.00	0.97	2.9181	0.1114	38.6	31.7	12.8	16.0	9.7	8.0
Federal Rlty. Inv. Trust	0.95	0.85	2.7373	0.1045	10.6	10.8	12.5	10.8	15.1	13.0
G&K Services 'A'	1.05	1.06	3.1204	0.1191	11.2	8.9	8.3	8.4	7.6	9.0
Genlyte Group	1.20	1.30	3.3381	0.1275	14.0	11.5	13.2	15.8	17.8	12.0
Glatfelter	1.15	1.19	3.4041	0.1300	10.6	2.9	3.2	4.0	6.3	11.5
Global Payments	0.95	0.86	3.2430	0.1238	13.4	14.5	13.9	16.5	16.5	14.5
Goodrich Corp.	1.20	1.30	3.3353	0.1273	26.2	3.2	12.8	16.6	17.0	22.0
Graco Inc.	1.05	1.07	2.7195	0.1038	30.8	51.1	47.1	43.7	45.2	46.5
Grainger (W.W.)	1.15	1.16	2.7107	0.1035	14.2	12.3	13.4	14.7	16.9	17.8
Griffon Corp.	1.05	1.02	3.3480	0.1278	11.6	15.1	16.9	13.5	12.6	10.5
HNI Corp.	0.85	0.73	3.1197	0.1191	14.1	13.8	17.1	22.7	24.9	20.0
Hancock Holding	0.95	0.92	3.0444	0.1162	12.0	12.6	12.5	11.3	15.9	13.0
Harrah's Entertain.	0.95	0.89	2.6672	0.1018	22.9	18.7	16.8	8.4	10.2	13.0
Healthcare R'lty Trust	0.90	0.78	3.0410	0.1161	9.2	7.7	5.0	4.1	4.5	6.5
Henry (Jack) & Assoc.	1.05	1.07	3.0340	0.1158	15.7	13.5	14.1	14.6	15.6	16.5
IHOP Corp.	0.95	0.92	3.1723	0.1211	11.2	11.1	12.0	15.0	15.6	19.5
Imation Corp.	0.90	0.78	3.4028	0.1299	9.3	9.4	5.4	9.6	8.3	6.5
Ingles Markets	0.85	0.71	3.1559	0.1205	6.4	7.0	11.0	9.6	14.0	16.5
Intel Corp.	1.25	1.32	3.3552	0.1281	9.7	14.9	19.5	23.9	13.7	21.5
Invacare Corp.	0.75	0.62	3.3660	0.1285	13.5	11.6	10.0	7.2	7.8	10.0
Iron Mountain	0.90	0.81	2.9681	0.1133	7.1	7.9	7.7	8.3	8.3	12.5
Jacobs Engineering	1.20	1.27	3.1959	0.1220	15.9	15.2	12.6	13.2	13.6	17.0
Jones Apparel Group	0.95	0.91	3.3205	0.1268	16.7	12.9	11.4	11.1	11.4	8.5
Journal Communications	0.85	0.74	2.7536	0.1261	13.6	14.4	16.0	12.6	11.6	11.0
Kaydon Corp.	1.20	1.25	2.8364	0.1083	10.1	10.9	12.4	12.9	16.0	14.5
Kelly Services 'A'	1.10	1.10	2.9351	0.1121	3.0	0.8	3.4	58.0	7.6	9.5
Kimco Realty	0.95	0.89	2.6700	0.1019	10.6	11.4	12.6	13.9	10.6	12.0
Kirby Corp.	1.20	1.28	2.9706	0.1134	11.9	11.0	11.4	12.8	15.1	12.0
L-3 Communic. Hldgs.	1.05	1.05	2.8359	0.1083	9.6	10.6	10.1	11.3	11.9	11.0
Laboratory Corp.	0.80	0.66	2.9205	0.1115	15.8	16.9	18.2	20.5	22.2	20.0
Landry's Restaurants	1.15	1.16	3.4060	0.1300	7.3	8.3	10.1	8.7	7.1	8.5
Lauder (Estee)	0.80	0.68	3.0913	0.1180	15.8	18.7	21.7	25.6	25.7	37.0
Leggett & Platt	1.05	1.03	2.8744	0.1097	11.8	9.7	12.3	12.3	12.5	15.5
Limited Brands	1.15	1.18	3.1454	0.1201	10.5	11.1	27.3	22.7	22.8	26.0
Lincoln Elec Hldgs.	1.20	1.25	2.8134	0.1074	17.2	11.7	14.8	17.4	20.0	14.5
Liz Claiborne	1.00	0.94	2.7384	0.1046	18.5	17.7	17.3	15.8	4.6	9.5
Lowe's Cos.	1.10	1.08	2.8598	0.1092	17.7	18.1	18.9	19.3	19.7	15.0
Macy's Inc.	1.25	1.31	3.0729	0.1173	11.1	11.0	11.2	8.2	9.4	10.0
Manpower Inc.	1.15	1.18	3.0231	0.1154	11.3	10.5	11.3	12.1	13.3	14.5
Marathon Oil Corp.	1.05	1.05	3.2083	0.1225	11.1	16.7	16.2	26.1	31.7	18.0
Mattel Inc.	0.90	0.79	2.7981	0.1068	24.6	24.9	21.3	23.1	21.8	30.0
Matthews Int'l	1.10	1.11	2.8574	0.1091	21.1	17.5	18.0	17.9	16.6	17.0
McDonald's Corp.	1.05	1.07	2.7231	0.1040	16.5	15.3	17.3	16.6	18.6	25.0

Missouri American Water Company
Comparable Earnings Analysis
for a Proxy Group of Two Hundred Three Non-Utility Companies Comparable to the
Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of Two Hundred Three 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					
					2002	2003	2004	2005	2006	5-Year Projected
McKesson Corp.	0.90	0.78	3.4384	0.1313	12.6	12.5	12.4	12.5	14.0	15.5
Media General 'A'	0.90	0.85	2.8870	0.1102	5.0	4.9	6.8	6.9	8.4	5.0
Millipore Corp.	0.90	0.81	2.8558	0.1090	28.7	20.4	16.5	16.8	16.5	20.0
Mohawk Inds.	1.10	1.14	2.9064	0.1110	14.3	13.5	13.8	12.6	12.0	9.5
Molex Inc.	1.25	1.31	3.1678	0.1209	5.3	6.0	8.5	9.0	11.6	9.5
Monsanto Co.	1.15	1.16	3.3677	0.1286	6.0	6.5	8.3	10.1	11.1	17.5
Murphy Oil Corp.	0.90	0.81	3.4449	0.1315	6.4	13.1	17.8	21.0	14.9	13.5
New York Community	0.90	0.80	2.7227	0.1040	17.3	11.3	11.1	8.8	6.3	11.5
Newell Rubbermaid	1.05	1.02	2.8951	0.1105	20.5	20.2	21.6	25.8	24.9	21.0
Noble Energy	1.00	0.98	3.3077	0.1263	1.7	13.1	22.4	20.4	20.9	10.0
Nordson Corp.	1.15	1.21	3.3397	0.1275	11.7	11.7	15.8	23.7	22.7	15.5
Norfolk Southern	1.10	1.14	3.3458	0.1277	7.1	7.6	10.9	12.5	15.4	14.0
O'Reilly Automotive	1.05	1.03	2.9786	0.1137	12.6	12.8	12.4	13.9	13.1	13.0
Occidental Petroleum	1.05	1.04	2.9583	0.1129	16.2	20.3	25.4	26.4	22.7	12.5
Oracle Corp.	1.10	1.08	3.1942	0.1220	36.4	36.5	33.5	32.7	26.3	33.0
Oshkosh Truck	1.10	1.12	3.4360	0.1312	14.5	14.6	17.7	19.6	19.4	15.5
Overseas Shipholding	1.05	1.06	3.4038	0.1300	0.9	13.5	22.7	24.8	19.1	13.0
Owens & Minor	0.95	0.90	3.1012	0.1184	18.1	13.1	13.1	13.0	10.2	13.0
Pactiv Corp.	1.00	0.93	2.9343	0.1120	24.5	21.7	19.7	17.7	26.8	17.5
Pall Corp.	1.00	0.98	2.9487	0.1126	8.9	15.4	14.4	12.4	12.3	17.5
Papa John's Int'l	0.95	0.91	3.0717	0.1173	36.4	23.0	28.0	25.7	32.0	20.0
Paychex Inc.	0.95	0.85	2.9037	0.1109	29.7	27.2	25.2	26.6	28.1	43.0
Penn Virginia Res.	0.85	0.71	2.9619	0.1131	15.2	14.8	22.9	23.0	21.2	18.0
Penn. R.E.I.T.	0.80	0.67	2.9858	0.1140	12.6	2.8	4.8	5.1	3.2	6.5
Pentair Inc.	1.15	1.17	3.3004	0.1260	11.7	11.4	9.5	11.9	11.0	13.0
People's United Fin'l	0.90	0.84	3.0088	0.1149	5.9	6.4	7.8	9.7	9.3	6.5
Pepsi Bottling Group	0.80	0.69	2.9550	0.1128	23.5	22.4	23.4	22.8	25.0	18.0
Pfizer Inc.	0.85	0.74	2.6958	0.1029	47.9	19.5	23.6	22.9	21.0	19.0
Phillips-Van Heusen	1.10	1.14	3.2587	0.1244	11.2	17.1	19.4	18.3	15.8	12.5
Polo Ralph Lauren 'A'	1.10	1.14	3.3972	0.1297	15.2	13.0	15.3	15.0	17.2	14.5
Polaris Inds.	1.10	1.09	3.4211	0.1306	37.4	34.7	37.8	39.0	67.4	52.5
Pool Corp.	0.95	0.87	3.4741	0.1326	29.1	26.0	30.4	30.6	34.2	46.5
Prologis	0.95	0.91	2.7270	0.1041	6.7	7.3	7.3	11.4	11.2	14.0
Public Storage	0.95	0.88	2.7681	0.1057	7.9	8.0	8.3	9.5	3.8	6.0
Quaker Chemical	1.15	1.20	3.4662	0.1323	16.2	13.2	7.6	6.4	9.7	15.0
RPM Int'l	1.00	0.96	2.9829	0.1139	11.8	14.1	14.5	14.7	18.2	17.5
Regal-Beloit	1.20	1.29	3.0378	0.1160	8.4	6.3	5.7	10.7	14.6	15.0
Regis Corp.	1.05	1.04	2.9779	0.1137	15.8	15.4	15.3	13.6	11.4	10.5
Respironics Inc.	0.80	0.64	3.2356	0.1235	11.5	13.5	13.8	14.1	13.1	13.5
Reynolds American	0.85	0.76	3.3611	0.1283	6.2	4.3	10.2	15.0	16.1	17.0
Rockwell Automation	1.25	1.32	3.2440	0.1239	10.8	13.4	16.5	29.7	32.7	35.0
Rollins Inc.	0.95	0.86	3.4650	0.1323	29.9	25.8	26.1	29.8	27.3	25.0
Ross Stores	1.10	1.13	3.2950	0.1258	31.3	30.2	23.5	23.9	26.6	27.5
Ruddick Corp.	1.00	0.94	2.9921	0.1142	12.3	12.1	11.8	11.3	10.8	11.0
Ryder System	1.10	1.13	3.0484	0.1164	10.4	10.1	12.7	14.9	14.3	11.0
STERIS Corp.	0.85	0.72	3.2012	0.1222	13.9	13.8	11.4	8.8	11.4	13.5
SUPERVALU INC.	0.90	0.81	2.9433	0.1124	12.8	13.1	13.3	12.3	8.5	11.5
Safeway Inc.	1.05	1.02	3.2506	0.1241	36.1	22.0	13.0	12.6	13.7	14.5
Schein (Henry)	0.80	0.67	3.2580	0.1244	13.7	13.9	12.3	13.2	12.4	16.0
Schering-Plough	1.05	1.05	3.2576	0.1244	24.2	6.1	0.2	8.6	17.1	17.5
Schlumberger Ltd.	1.00	0.95	3.3980	0.1297	12.4	15.5	20.2	26.6	36.0	17.5
Scotts Miracle-Gro	1.05	1.06	2.9627	0.1131	17.0	14.3	11.5	9.8	12.3	22.5
Selective Ins. Group	0.95	0.92	2.7290	0.1042	6.1	7.7	12.8	14.0	13.0	12.0
Sensient Techn.	0.95	0.88	2.7999	0.1069	16.2	13.4	11.5	9.1	9.4	11.5
Sherwin-Williams	1.05	1.01	2.6847	0.1025	23.2	22.8	23.9	26.8	28.9	23.5
Silgan Holdings	1.10	1.09	3.4248	0.1308	82.7	48.5	40.1	34.6	29.8	18.0

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Proxy Group of Four Value Line (Standard Edition) Water Companies (9)

Proxy Group of Two Hundred Three 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 2002	2003	2004	2005	2006	5-Year Projected
Smithfield Foods	0.90	0.81	3.1387	0.1198	2.0	10.1	15.7	9.4	8.4	9.5
Sonic Automotive	1.20	1.26	3.2931	0.1257	17.0	12.6	12.4	12.3	9.0	12.5
Sonic Corp.	0.90	0.84	3.0597	0.1168	20.7	19.7	18.8	19.6	20.1	29.0
Southwest Airlines	0.95	0.86	2.8919	0.1104	4.4	5.9	5.7	7.0	9.2	10.0
Sovereign Bancorp	1.10	1.08	2.7859	0.1064	12.9	12.9	11.1	11.6	7.6	11.0
St. Joe Corp.	1.05	1.04	3.3290	0.1271	31.5	15.6	17.2	24.6	10.5	16.0
Standex Int'l	1.15	1.21	3.3546	0.1281	11.4	11.1	13.5	14.4	10.5	15.5
Stanley Works	1.10	1.12	2.8485	0.1088	20.7	18.8	20.2	18.9	18.7	17.0
Staples Inc.	1.10	1.12	2.8830	0.1101	15.7	15.1	17.2	18.9	18.9	21.0
Starbucks Corp.	0.90	0.81	3.2525	0.1242	12.6	12.9	15.8	23.7	26.1	25.0
Steak n Shake	1.20	1.24	3.3929	0.1295	13.8	12.9	12.6	11.9	9.8	9.5
Stryker Corp.	0.85	0.77	2.8332	0.1082	23.8	21.0	21.3	22.1	19.8	24.0
Sybase Inc.	0.95	0.86	3.2208	0.1230	13.7	10.5	8.7	12.2	11.3	13.5
TJX Companies	0.95	0.88	2.8156	0.1076	41.0	42.4	41.3	33.5	33.9	36.5
Target Corp.	1.10	1.10	2.8668	0.1095	17.5	16.6	14.5	17.0	17.8	19.5
Tech Data	1.10	1.14	3.3533	0.1280	9.9	6.4	7.8	6.7	4.2	8.5
Techne Corp.	1.05	1.04	3.2047	0.1224	18.6	19.2	18.3	24.7	21.6	17.0
Temple-Inland	1.15	1.20	2.9069	0.1110	2.7	4.9	7.7	8.5	16.7	11.5
Tennant Co.	1.00	0.98	3.3704	0.1287	8.0	8.5	8.5	11.9	13.0	13.5
Time Warner	1.10	1.14	3.1093	0.1187	1.8	5.6	5.3	4.6	8.5	8.5
Toro Co.	1.10	1.10	2.8965	0.1106	17.4	18.5	26.0	29.2	32.9	33.0
Total System Svcs.	1.00	0.96	3.3066	0.1263	20.9	19.2	17.4	19.2	20.5	15.0
United Stationers	1.15	1.22	3.2078	0.1225	11.7	12.3	13.4	12.7	12..9	12.5
Varian Inc.	1.05	1.04	3.4375	0.1312	13.8	11.7	11.7	9.3	9.1	13.0
Viad Corp.	1.05	1.05	3.0969	0.1588	17.9	13.2	6.7	9.2	8.9	10.5
WD-40 Co.	1.10	1.08	3.3440	0.1277	30.5	27.9	22.8	21.6	18.2	16.0
Walgreen Co.	0.80	0.66	2.6773	0.1022	16.3	16.1	16.5	17.5	17.3	16.5
Washington Mutual	1.10	1.12	2.7697	0.1057	33.5	41.1	47.2	36.9	33.5	30.0
WellPoint Inc.	0.90	0.81	3.3698	0.1287	9.4	12.4	5.4	10.0	12.5	12.0
Werner Enterprises	1.10	1.08	3.2469	0.1240	9.5	10.4	11.3	11.4	11.3	8.5
Whirlpool Corp.	1.20	1.28	3.1324	0.1196	56.8	31.8	25.3	24.2	14.8	15.0
Wolverine World Wide	1.05	1.04	3.2519	0.1242	13.0	12.0	14.4	16.1	16.4	17.0
World Wrestling Ent.	0.80	0.68	3.2673	0.1247	4.8	14.0	10.1	11.9	8.2	24.0
Wyeth	0.95	0.89	2.9045	0.1109	36.3	32.8	34.9	33.0	29.2	24.0
Xerox Corp.	1.00	0.97	2.9533	0.1128	21.4	11.5	11.0	12.9	14.8	14.0
Zale Corp.	1.10	1.15	3.3362	0.1274	10.8	15.2	14.7	13.1	5.2	8.5
Zimmer Holdings	0.80	0.66	3.4494	0.1317	70.4	9.3	15.2	16.5	17.0	15.5
Average	1.02	0.99	3.0921	0.1186						
Median	1.05	1.00	3.0969	0.1191						
Average for the Proxy Group of Four Value Line (Standard Edition) Water Companies	1.01	0.97	3.0719 (10)	0.1173						

See pages 15 and 16 for notes.

Missouri American Water Company
Comparable Earnings Analysis

Notes:

(1) The criteria for selection of the proxy group of one hundred fifty-one non-utility companies was that the non-utility companies be domestic and have a meaningful rate of return on book common equity, shareholders' equity, net worth, or partners' capital for each of the five years ended 2006 or projected 2010 - 2012 as reported in Value Line Investment Survey (Standard Edition). The proxy group of one hundred fifty-one non-utility companies was selected based upon the proxy group of six AUS Utility Reports water companies' unadjusted beta range of 0.43 – 1.11 and standard error of the regression range of 2.5512 – 3.3258. 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 2006.

(3) 2010 - 2012.

(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 six AUS Utility Reports water companies' standard error of the regression is 0.1291. The standard deviation of the standard error of the regression is calculated as follows:

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

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

$$\text{Thus, } 0.1291 = \frac{2.9385}{\sqrt{518}} = \frac{2.9385}{22.7596}$$

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

(7) Median of the historical five year average and five year projected rate of return on book common equity, shareholder's equity, net worth, or partners' capital excluding returns identified as outliers as outlined in Note (4) above.

(8) Mid-point of the median of the historical five year average and five year projected rate of return on book common equity, shareholder's equity, net worth, or partners' capital excluding returns identified as outliers as outlined in Note (4) above.

(9) The criteria for selection of the proxy group of two hundred three 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 2006 or projected 2010 - 2012 as reported in Value Line Investment Survey (Standard Edition). The proxy group of two hundred three non-utility companies was selected based upon the proxy group of four Value Line (Standard Edition) water companies' unadjusted beta range of 0.62 – 1.32 and standard error of the regression range of 2.6669 – 3.4769. 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

Missouri American Water Company
Comparable Earnings Analysis

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 0.1350 (3.0719 / 22.7596).

Source of Information: Value Line, Inc., January 9, 2008
Value Line Investment Survey (Standard Edition)