STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 09-W-0824 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of United Water New Rochelle Inc. for Water Service.

NOTICE OF EVIDENTIARY HEARING

(Issued June 28, 2010)

PLEASE TAKE NOTICE that an evidentiary hearing to consider a Joint Proposal filed by the New York State Department of Public Service Staff and United Water New Rochelle Inc. in this proceeding. The hearing will be held on the record before Administrative Law Judge Eleanor Stein commencing on Wednesday, July 21, 2010, at 10:00 a.m., and continuing through Thursday, July 22, 2010, or as soon as the business of the hearing is concluded.

The evidentiary hearing will be held at the Public Service Commission's Albany offices, Three Empire State Plaza, Third Floor Hearing Room.

The principal purpose of this hearing is to consider issues and hear arguments related to the Joint Proposal of the New York State Department of Public Service Staff and United Water New Rochelle Inc., and to enter into the record the evidence proffered in this proceeding.

Jaclyn A. Brilling
Digitally Signed by Secretary
New York Public Service Commission
JACLYN A. BRILLING
Secretary

BEFORE THE

NEW YORK PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

PAULINE M. AHERN, CRRA
PRINCIPAL
AUS CONSULTANTS

CONCERNING

FAIR RATE OF RETURN

RE: UNITED WATER NEW ROCHELLE INC.

NOVEMBER 2009

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I. INTRODUCTION

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

A. My name is Pauline M. Ahern. 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 and offering expert testimony on behalf of investor-owned utilities before twenty-five 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 am also the Publisher of AUS Utility Reports (formerly C.A. Turner), where I am responsible for the production, publication, distribution and marketing of various reports. AUS Utility Reports provides financial data and related ratios as well as merger and acquisition activity covering more than 100 public utility companies on a monthly, quarterly, and annual basis. Coverage includes electric, combination gas and electric, gas distribution, gas transmission, telephone, water and international utilities.

I also calculate and maintain the A.G.A. Index under contract with the American Gas Association (A.G.A.), which serves as the benchmark against which the performance of the American Gas Index Fund (AGIF) is measured on a monthly basis. The A.G.A. Index and AGIF are a market capitalization weighted index and fund, respectively, comprised of the common stocks of the publicly traded corporate members of the A.G.A.

I have co-authored a working paper with Frank J. Hanley, a Principal and Director of AUS Consultants and Richard A. Michelfelder, Ph.D., a professor of Finance at The School of Business, Rutgers University entitled "New Approach to Estimating the Cost of Common Equity for Public Utilities" which was presented at the Advanced Workshop in Regulation and Competition at the 28th Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI) at Rutgers University on May 14, 2009. I have also co-authored a second article with Frank J. Hanley entitled "Comparable Earnings: New Life for an Old Precept" which was published in the American Gas Association's Financial Quarterly Review, Summer 1994. I 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 (SURFA, formerly the National Society of Rate of Return Analysts) serving as President since 2006, being reelected in 2008 with a term ending in 2010. Previously, I held the position of Secretary/Treasurer for 2004-2006. In

1992, I was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by SURFA, which 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/Accounting/Taxation 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 United Water New Rochelle, Inc. (UWNR or the Company) relative 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 OVERALL RATE OF RETURN?

A. I recommend that the New York Public Service Commission (NYPSC or the Commission) authorize the Company the opportunity to earn an overall rate of return of 8.91% based upon the consolidated capital structure at June 30, 2009 of United Water Works, Inc. (UWW or the Parent), which consisted of 48.87% long-term debt, customer deposits of 0.02%, and 51.12% common equity at a long-term debt cost rate of 6.37%, a customer deposit rate of 4.85% and my recommended common equity cost rate of 11.35%. The overall rate of return is summarized in Table 1 below:

Table 1

Type of Capital	Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	48.87%	6.37%	3.11%
Customer Deposits	0.02	4.85	0.00
Common Equity	51.12	11.35	5.80
Total	100.01%		8.91%

* Does not add to 100.00% due to rounding.

Q. HAVE YOU PREPARED SCHEDULES WHICH SUPPORT YOUR RECOMMENDED OVERALL FAIR RATE OF RETURN?

A. Yes, I have. They have been marked for identification as Schedules PMA-1 to PMA-15.

II. SUMMARY

Q. PLEASE SUMMARIZE YOUR RECOMMENDED COMMON EQUITY COST RATE.

A. My recommended common equity cost rate of 11.35% is summarized on page 2 of Schedule PMA-1. As a wholly-owned subsidiary of UWW, UWNR's common stock is not publicly traded. Therefore, a market-based common equity cost rate cannot be determined directly for UWNR. Consequently, in arriving at my recommended common equity cost rate of 11.35%, 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 UWNR 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 necessary to arrive at a recommended common equity cost rate. However, no proxy group(s) can be selected to be identical in risk to UWNR. Therefore, the proxy group(s)' results must be adjusted if necessary, to reflect the greater relative business and/or financial risk of UWNR, will be subsequently discussed in detail.

Consistent with the Efficient Market Hypothesis (EMH) which will be discussed in more detail below, my recommendation 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:

[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 Eight AUS Utility Rpts. Gas Distribution Companies
Discounted Cash Flow Model	11.76%	8.71%
Risk Premium Model	11.06	10.74
Capital Asset Pricing Model	11.58	10.49
Comparable Earnings Model	13.50	NMF
Indicated Common Equity Cost Rate Before Adjustment for Business Risk	12.15%	10.00%
Business Risk Adjustment	0.25	0.30
Indicated Common Equity Cost Rate After Adjustment for Business Risk	12.40%	10.30%
Recommended Common Equity Cost Rate	11.35%	

After reviewing the cost rates based upon the four models, I conclude that common equity cost rates of 12.15% and 10.00% are 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 eight AUS Utility Reports natural gas distribution companies, (LDCs), respectively before any adjustments for business and/or financial/credit risk. These indicated common equity cost rates were then adjusted upward by 25 basis points (0.25%) and 30 basis points (0.30%), respectively, to reflect UWNR's increased business risk, due to its smaller size relative to both proxy groups as will be discussed in detail subsequently. After adjustment, the risk-adjusted common equity cost rates are 12.40% for the water company proxy group and 10.30% for the LDCs. The midpoint of the risk-adjusted common equity cost rates for both proxy groups is

11.35% ((12.40% + 10.30%)/2), which is my recommended common equity cost rate.

III. GENERAL PRINCIPLES

Q. WHAT GENERAL PRINCIPLES HAVE YOU CONSIDERED IN ARRIVING AT YOUR RECOMMENDED COMMON EQUITY COST RATE OF 11.35%?

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 marketplace competition. Therefore, marketplace data must be relied upon in assessing a common equity cost rate appropriate for ratemaking purposes in order to assure that the utility can fulfill its obligations to the public and provide safe and adequate service at all times. This requires a level of earnings sufficient to maintain the integrity of presently invested capital and to 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 UWNR.

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 is the riskiness of a company's common stock without the use of

debt. Examples of business risk include the quality of management, the regulatory environment, customer mix and concentration of customers, service territory growth 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. One of the major risks facing the water and wastewater utility industry is related to replacing aging transmission and distribution systems. Although Value Line Investment Survey[3] (Value Line) 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:

> These stocks, although up, have lost some of their luster since our April report. Indeed, the group, as a whole, has fallen from the upper echelon of the *Value Line Investment* universe for Timeliness, as the broader market showed some glimpses of rallying, and now sports an average rank.
>
> Financing issues raise some concerns, longer-term, however, and limit the group's 3- to 5-year appeal. In fact, not a single stock in this industry stands out for 3- to 5-year appreciation potential, as rising infrastructure costs threaten to erase the bulk of future profit advances.
>
> The water utilities is [sic] an increasingly capital intensive industry. Many infrastructures are outdated and will require heavy investment in order to make the necessary repairs. Greater EPA requirements only make things more difficult, as infrastructure costs are estimated at hundreds of millions of dollars over the next decade.

[3] Value Line Investment Survey, July 24, 2009.

> Cash is at a premium in this space, however, with most companies sporting highly leveraged balance sheets and nominal cash reserves. That said, debt and stock issuances have become, and are likely to remain, commonplace as providers struggle to foot the bill. Unfortunately, the increased costs associated with such financial undertakings, i.e., steeper interest rates and higher share counts, are likely to dilute share earnings growth as well as shareholder gains.

Also in its 2009 infrastructure Fact Sheet[4] published by the American Society of Civil Engineers (ASCE) they state:

> America's drinking water systems face an annual shortfall of at least $11 billion to replace aging facilities that are near the end of their useful lives and to comply with existing and future federal water regulations. This does not account for growth in the demand for drinking water over the next 20 years. Leaking pipes lose an estimated 7 billion gallons of clean drinking water a day.

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. For example, it took $3.44 of net utility plant on average to produce $1.00 in operating revenues in 2008 for the water utility industry as a whole. In contrast, for the electric, combination electric and gas, natural gas or telephone utility industries, on average it took only $1.87, $1.36, $0.89 and $0.87, respectively, to produce $1.00 in operating revenues in 2008. For UWNR specifically it took $3.79 of net utility plant to produce $1.00 in operating revenues in 2008. 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

[4] 2009 American Society of Civil Engineers, Report Card for American's Infrastructure 2009.

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[5]:

> 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 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

[5] "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.

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 2008, with UWNR experiencing a somewhat lower rate of 1.8%. In contrast, in 2008, the electric, combination electric and gas, natural gas or telephone industries, experienced average depreciation rates of 3.7%, 3.7%, 4.0% and 7.7%, respectively.

In addition, as noted by Standard & Poor's (S&P)[6]:

> Standard & Poor's expects the already capital-intensive water utility industry to become even more so over the next several years. Due to the aging pipeline infrastructure and more stringent quality standards, the U.S. Environmental Protection Agency's (EPA) foresees a need for $277 billion to upgrade and maintain U.S. water utilities through 2022, with about $185 billion going toward infrastructure improvements. In addition, about $200 billion will be needed for wastewater applications, which suggests increased capital spending to be a long-term trend in this industry.
>
> In line with these trends, many companies have announced aggressive capital spending programs. Forecast capital spending primarily focuses on infrastructure replacements and growth initiatives. Over the past five years, capital spending has been equivalent to about three times its depreciation expense. However, companies are now forecasting spending to be at or above four times depreciation expense over the intermediate term. For

[6] Standard & Poor's, Credit Outlook For U.S. Investor-Owned Water Utilities Should Remain Stable in 2008 (January 31, 2008) 2, 4.

companies in regulatory jurisdictions that provide timely cost recovery for capital expenditures, the increased spending is likely to have a minimal effect on financial metrics and ratings. However, companies in areas without these mechanisms, earnings, and cash flow could be negatively affected by the increased spending levels, which over the longer term could harm a company's overall credit profile.

Due to the high level of capital spending, U.S. investor-owned water utilities do not generate positive free cash flow. This, coupled with the forecast increase in capital spending over the intermediate term, will require additional access to capital markets. We expect rated water companies to have enough financial flexibility to gain that access. Ratings actions shouldn't result from this increased market activity because we expect companies to use a balanced financing approach, which should maintain debt near existing levels.

Moody's[7] 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.

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.

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

Also, both the Congressional Budgeting Office (CBO) and the Environmental Protection Agency (EPA) have addressed the necessary future growth in water and wastewater utility infrastructure. In November 2002, the CBO published a study entitled, "Future Investment in Drinking Water and Wastewater Infrastructure" in which it concluded that[8]:

> CBO estimates that for the years 2000 to 2019, annual costs for investment will average between $11.6 billion and $20.1 billion for drinking water systems and between $13.00 billion and $20.9 billion for wastewater systems.

These estimates, over the ten years ending 2019, total from $116.0 - $201.0 billion for drinking water systems and between $130.0 - $209.0 billion for wastewater systems, totaling $246.0 - $410.0 billion for the water and wastewater industry combined.

Similarly, the EPA states the following[9]:

> The survey found that the total nationwide infrastructure need is $334.8 billions for the 20-years period from January 2007 through December 2026. With $200.8 billion in needs over the next 20 years, transmission and distribution projects represent the largest category of need. This result is consistent with the fact that transmission and distribution mains account for most of the nation's water infrastructure. The other categories, in descending order of need are: treatment, storage, source and a miscellaneous category of needs called "other". The large magnitude of the national need reflects the challenges confronting water systems as they deal with an infrastructure network that has aged considerably since these systems were constructed, in many cases, 50 to 100 years ago.

In addition, the water utility industry, as well as the electric and natural gas

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8 "Future Investment in Drinking Water and Wastewater Infrastructure", The Congress of the United States - Congressional Budget Office (November 2002) ix.

9 "Fact Sheet: "EPA's 2007 Drinking Water Infrastructure Needs Survey and Assessment", United States Environmental Protection Agency, Office of Water, February 2009, 1.

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 and low depreciation rates 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 UWNR FACE ADDITIONAL EXTRAORDINARY BUSINESS RISK?

A. Yes. UWNR faces additional extraordinary business risk due to its smaller size relative to the proxy groups, 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, 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 affect upon a small operating water utility than upon the much larger, more geographically diverse holding companies.

Further evidence of the risk effects of size include the fact that investors

demand greater returns to compensate for a lack of marketability and liquidity for the securities of smaller firms. Because UWNR is the regulated utility to whose rate base the Commission's ultimately allowed overall cost of capital will be applied, the relevant risk reflected in the cost of capital must be that of UWNR, including the impact of its small size on common equity cost rate. UWNR is smaller than the average company in either proxy group based upon the results of my study of the market capitalization of the six water companies and eight LDCs as shown on page 3 of Schedule PMA-1 and in Table 3 below as of October 2, 2009.

Table 3

	Market Capitalization(1)	Times Greater than the Company ($ Millions)
Proxy Group of Six AUS Utility Reports Water Companies	$740.972	5.3x
Proxy Group of Eight AUS Utility Reports Gas Distribution Cos.	1,442.236	12.8x
UWNR	141.137 (2) 112.820 (3)	

(1) From page 3 of Schedule PMA-1
(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 eight AUS Utility Reports natural gas distribution companies.

Because UWNR's common stock is not publicly traded, I have assumed that if it were, its the common shares would be selling at the same market-to-book ratio as the average market-to-book ratio for each proxy group, 189.4% and 151.4%, respectively, on October 2, 2009 as shown on page 4 of Schedule

PMA-1. Hence, UWNR's market capitalization is estimated at $141.137 million based upon the average market-to-book ratio of the six water companies and $112.820 million based upon the average market-to-book ratio of the eight LDCs. In contrast, the market capitalization of the average AUS Utility Reports water company was $740.972 million on October 2, 2009, or 5.3 times larger than UWNR's estimated market capitalization and $1.442 billion for the average AUS Utility Reports LDC, or 12.8 times larger than UWNR's estimated market capitalization. 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[10] 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,

[10] Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989) 623.

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.

In November 2007, S&P published its electric, gas, and water utility ratings rankings in a framework consistent with the manner in which it presents is rating conclusions across all other corporate sectors. As S&P stated[11]:

> 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.

S&P expanded its Business Risk / Financial Risk Matrix in May 2009 in an effort to augment its independence, strengthen the rating process and increase S&P's transparency to better serve its markets (see page 11 of Schedule PMA-2).

Pages 1 through 9 of Schedule PMA-2 describe the utility bond rating process. Pages 10 through 15 describe S&P's May 2009 expansion of its Business Risk / Financial Risk Matrix with the new business risk/financial risk matrix shown in Table 1 on page 11 of Schedule PMA-2 and financial risk

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

indicative ratios for utilities shown in Table 2 on page 13. Notwithstanding the metrics published in Table 2, S&P states:

> The rating matrix indicative outcomes are what we typically observe – but are not meant to be precise indications or guarantees of future rating opinions. Positive and negative nuances in our analysis may lead to a notch higher or lower than the outcomes indicated in the various cells of the matrix.

As shown on Schedule PMA-10, page 2, the average S&P bond rating (issuer credit rating), business risk profile and financial risk profile of the six water companies are A+ (A), Excellent and Intermediate, while the average for the eight LDCs are A (A), Excellent and Significant.

Q. CAN ONE NEVERTHELESS 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 and are representative of and financial similar combined business risks, i.e., total risk. Although 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. Risk distinctions within a bond rating category are recognized by a plus or minus. For example, within the A category, an S&P rating can be at A+, A, or A-. Similarly, Moody's ratings within the A category are distinguished by rating gradation of A1, A2 and A3. Moreover, additional risk distinction is reflected by S&P in the assignment of one of six business risk profiles, as shown in Table 1 on PMA-2, Page 11. 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. UNITED WATER NEW ROCHELLE, INC.

Q. PLEASE DESCRIBE UWNR.

A. UWNR provides water service to approximately 31,000 customers in the eleven municipalities in Westchester County. UWNR is a wholly-owned subsidiary of UWW, which is the sole source of UWNR's external capital. UWW is a wholly-owned subsidiary of United Water Resources, Inc. (UWR). Thus, the Company's common stock is not publicly traded.

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 was to select those companies which meet the following criteria: 1) they are included in the Water Company Group of AUS Utility Reports (October 2009); 2) they have Value Line or Reuters consensus five-year EPS growth rate projections; 3) they have a positive Value Line five-year DPS growth rate projection: 4) they have a Value Line adjusted beta; 5) they have not cut or

omitted their common dividends during the five years ending 2008 or through the time of the preparation of this testimony; 6) they have 60% or greater of 2008 total net operating income derived from and 60% or greater of 2008 total assets devoted to regulated water operations; and 7) which, at the time of the preparation of this testimony, had not publicly announced that they were involved in any major merger or acquisition activity.

Q. PLEASE DESCRIBE SCHEDULE PMA-3.

A. Schedule PMA-3 contains comparative capitalization and financial statistics for the six AUS Utility Reports water companies for the years 2004 - 2008. Page 1 contains a summary of the comparative data for the years 2004-2008. 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, while page 3 contains capital structure ratios based upon total permanent capital (excluding short-term debt) by company and on average for the years 2004-2008.

During the five-year period ending 2008, the historically achieved average earnings rate on book common equity for the group averaged 9.91%. The average common equity ratio based upon total permanent capital was 50.60%, and the average dividend payout ratio was 69.21%.

Total debt as a percent of EBITDA for the years 2004-2008 ranged between 2.04 and 3.78 times, averaging 3.32 times, while funds from operations relative to total debt ranged from 16.80% to 21.00%, averaging 19.21%.

Q. PLEASE EXPLAIN HOW YOU CHOSE THE PROXY GROUP OF EIGHT AUS

UTILITY REPORTS NATURAL GAS DISTRIBUTION COMPANIES.

A. Because of the small number of publicly traded water companies available for use as proxies for UWNR as well as the limited availability of comprehensive investment analyst coverage for those companies, I have also utilized a proxy group of gas distribution companies. Like water companies, these gas distribution companies deliver a commodity, i.e., natural gas to customers through a similar distribution system whose service rates of return are set by the regulatory ratemaking process. The basis of selection for the proxy group of eight AUS Utility Reports natural gas distribution companies was to include those companies which meet the following criteria: 1) they are included in the Natural Gas Distribution and Integrated Gas Company Group of AUS Utility Reports (October 2009); 2) they have Value Line or Reuters consensus five-year EPS growth rate projections; 3) they have positive Value Line five-year DPS growth rate projections; 4) they have a Value Line adjusted beta; 5) they have not cut or omitted their common dividends during the five years ending 2008 or to the time of the preparation of this testimony; 6) they have 60% or greater of 2008 total net operating income derived from and 60% or greater of 2008 total assets devoted to regulated gas distribution operations and 7) which, at the time of the preparation of this testimony, had not publicly announced that they were involved in any major merger or acquisition activity.

Q. PLEASE DESCRIBE SCHEDULE PMA-4.

A. Schedule PMA-4 contains comparative capitalization and financial statistics for the eight AUS Utility Reports natural gas distribution companies for the years

2004 - 2008. Page 1 contains a summary of the comparative data for the years 2004-2008. 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, while page 3 contains capital structure ratios based upon total permanent capital (excluding short-term debt) by company and on average for the years 2004-2008.

During the five-year period ending 2008, the historically achieved average earnings rate on book common equity for this group averaged 10.90%. The average common equity ratio based upon total permanent capital was 49.87%, and the average dividend payout ratio was 64.07%.

Total debt as a percent of EBITDA for the years 2004-2008 ranged between 3.41 and 3.67 times, averaging 3.59 times during the five-year period, while funds from operations relative to total debt ranged from 16.41% to 21.24%, and averaging 19.13% during the five-year period.

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 bond/credit risk. In addition, the use of betas to determine the equity risk premium also reflects the market's

assessment of market/systematic 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 and reflect the market's assessment of total risk. 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 EMH, which is the foundation of modern investment theory, was pioneered by Eugene F. Fama[12] in 1970. An efficient market is one in which security prices reflect all relevant information all the time, with the implication that prices adjust instantaneously to new information, thus reflecting the intrinsic fundamental economic value of a security.[13]

As noted by Brealey and Myers[14], the generally accepted "semistrong" form of the EMH, which asserts that all publicly available information is fully reflected in securities prices, i.e., that fundamental analysis cannot enable an investor to "out-perform the market," is generally held to be true because the use of insider information often enables investors to earn excessive returns by "outperforming the market". This means that all perceived risks are taken into

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

[13] Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006) 279-281.

[14] Brealey, Richard A. and Myers, Stewart C., Principles of Corporate Finance 1st Ed., (McGraw-Hill, 1996) 329.

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 discussions of the various common equity cost rate methodologies (models) in the financial literature. In an attempt to emulate investor behavior, no single common equity cost rate model should be relied upon exclusively in determining a cost rate of common equity and the results of multiple costs of common equity models should be taken into account.

Furthermore, there is substantial 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.

Q. PLEASE DESCRIBE THE ACADEMIC LITERATURE SUPPORTING THE USE OF MORE THAN ONE COST OF COMMON EQUITY MODEL.

A. Morin[15] 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'

[15] Morin 428, 430 - 431.

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 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 all 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. Thus 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 underlying 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 investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate). Thus, the dividend yield on market price plus a growth rate equals the capitalization rate, i.e., the total common equity return rate expected by investors.

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

A. The DCF model has a tendency to mis-specify investors' required common equity 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 or 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 in earnings per share (EPS) and dividends per share (DPS), both 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 Schedules PMA-3 and PMA-4 ranging between 205.16% and 276.96% for the six AUS Utility Reports water companies and 159.78% and 173.69% for of eight LDCs.

Under DCF theory, the rate of return investors require is related to the market 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 generally limited to earning on its net book value (depreciated original cost) rate base. Market values can diverge from book values for a myriad of macroeconomic reasons including, but not limited to, EPS and DPS expectations, merger or acquisition expectations, interest rates, investor sentiment, unemployment levels, monetary policy etc.

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 at unity or 1.00. However, there is ample empirical evidence over sustained periods which demonstrate that this is an incorrect presumption. Since market-to-book ratios of unity or 1.00 are rarely the case as discussed above, regulatory allowed ROEs, i.e., earnings, have a limited effect on utilities' market/book ratios as the market prices of utility common stocks are also influenced by factors beyond the direct influence of the regulatory process.

As noted by Phillips:[16]

> 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[17] 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, *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)

Q. IS IT REASONABLE TO EXPECT THE MARKET VALUES OF UTILITIES'

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[16] Phillips 395.

[17] James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates (Public Utilities Reports, Inc., 1988) 334.

COMMON STOCKS TO CONTINUE TO SELL WELL ABOVE THEIR BOOK VALUES?

A. Yes. Although the market-to-book ratios of regulated utilities have been vacillating recently due to the current and continuing economic and capital market turmoil, I believe that the common stocks of utilities will continue to sell substantially above their book values, on average, 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 energy prices, the stressed housing market, the credit crunch in the currently fragile U.S. economy, the current crisis in the capital markets, and agreement among economists that the U.S. has endured an economic recession of an as yet-to-be determined length, the majority of utility stocks, on average, have continued to sell at market prices well above their book value. In addition, as previously discussed, the sustained high market-to-book ratios have been influenced by factors other than fundamentals such as actual and reported growth in EPS and DPS.

Q. HAVE ANY REGULATORY 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 Utilities Commission (PA PUC) recognized this tendency in its order of August 26, 2005 in Docket No. R-00049862, et al re: The City of Lancaster – Sewer Fund when it adopted the Administrative Law Judge's market-to-book adjustment of 65 basis points (0.65%) because such an adjustment was "consistent with our recent orders in *PAWC, Aqua,* and *PPL*" and "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) recognized the tendency of the DCF model to understate the cost of equity when market value exceeds book value noting that[18]:

> [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)

More recently, the PA PUC affirmed the tendency of the DCF model to mis-specify investors' required return in its Order of February 8, 2007 in Docket No. R-00061398, et al re: PPL Gas Utilities Corporation when it stated:

[18] Re: Indiana-American Water Company, Inc. 150 PUR4th 141, 167-168 (IN URC 1994).

The ALJ stated that the OTS and the OCA are correct that the Commission favors the DCF method to determine the cost of equity. However, the ALJ concluded, based on recent precedent, that the Commission consistently has adopted a leverage adjustment to compensate for the difference between market prices and book value (used in ratemaking). (*See, Aqua Pennsylvania*, 204, 234 (2004); *Pa. PUC v. PPL Electric Utilities Corp.*, Docket No. R-00049255, at 70-71 (2004); *Pa. PUC v. Pennsylvania American Water Co.*, 2002 Pa. PUC LEXIS 1; *Pa. PUC v. Phila. Suburban Water Co.*, 219 PUR4TH 272 (2002); *Pa. PUC v. Pennsylvania American Water Co.*, 231 PUR4TH 277 (2004)). According to the ALJ, these cases are persuasive that a leverage adjustment should be employed with the DCF analysis. (R.D. at 62-63).

Q. CAN THE UNDER- OR OVERSTATEMENT OF THE INVESTORS' REQUIRED RATE OF RETURN ON THE MARKET BY THE DCF MODEL BE DEMONSTRATED MATHEMATICALLY?

A. Yes. Schedule PMA-5 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 the investors' required return on market value. As shown, there is no realistic opportunity to earn the expected market-based rate of return on book value. In Column 1, investors expect a 10.00% return on a market price of $24.00. Column 2 shows that 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 is just 2.05% in contrast to the 6.50% growth in market price expected by investors.

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 is 9.00% in contrast to the 6.50% growth in market price expected by investors.

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

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

A. Yes. In my experience, 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:[19]

> 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

[19] Re: U.S. West Communications, Inc. 152 PUR4th 446, 459 (IA UB 1994).

> 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[20] 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)

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

A. Yes. That is why I am not recommending that <u>any</u> of the models be relied upon exclusively, but 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, as noted previously, 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, <u>no model</u>, including the DCF, should be relied upon exclusively.

[20] Re: Hawaiian Electric Company, Inc., 134 PUR4th 418, 479 (HI PUC 1992).

Q. WHICH VERSION OF THE DCF MODEL DO YOU USE?

A. I utilize the single-stage constant growth DCF model because, in my experience, it is the most widely utilized version of the DCF used in public utility rate regulation. In my opinion, it is widely utilized because utilities are generally in the mature stage of their lifecycles and not transitioning from one growth stage to another. This is especially true for water utilities.

All companies, including utilities, go through typical life cycles in their development, initially progressing through a growth stage, moving onto a transition stage and finally assuming a steady-state or constant growth state. However, the U.S. public utility industry is a long-standing industry in the U.S., dating back to approximately 1882[21]. The standards of rate of return regulation of public utilities date back to the previously discussed principles of fair rate of return established in the Hope[22] and Bluefield[23] decisions of 1944 and 1923, respectively. Hence, the public utility industry in the U.S. is a stable and mature industry characterized by the steady-state or constant-growth stage of a multi-stage DCF model. The economics of the utility industry reflect the features of this relative stability and demand maturity. As regulated businesses, their returns on capital investment, i.e., rate base, are set through a ratemaking process and not determined in the competitive markets. This characteristic, taken together with the longevity of the public utility industry, all contribute to the stability and maturity of the industry, including the water utility industry.

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[21] Bonbright, Danielsen and Kamerschen 334.

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

[23] Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1923).

Since there is no basis for applying multi-stage growth versions of the DCF model to determine the common equity cost rates of mature public utility companies the constant growth model is most appropriate.

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 (October 2, 2009) as well as an average of the three months ended September 30, 2009, respectively, which are derived on Schedule PMA-7. The average unadjusted dividend yield is 3.38% and the median is 3.12% for the six water companies and 4.52% and 4.65%, respectively, for the eight LDCs.

Q. PLEASE EXPLAIN THE DIVIDEND GROWTH COMPONENT SHOWN ON SCHEDULE PMA-7, 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 dividend yield component, 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-6 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 GROUPS WHICH YOU USE IN YOUR APPLICATION OF THE DCF MODEL.

A. Schedule PMA-8 shows that approximately 58% of the common shares of the six water companies and 47% of the common shares of the eight LDCs 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 and through public libraries. 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 and ever changing economic and market conditions.

Over the long run, there can be no growth in DPS without growth in EPS. Earnings expectations have a more significant, but not sole, influence on market prices than dividend expectations. Thus, the use of earnings growth rates in a DCF analysis provides a better matching between investors' market price appreciation expectations and the growth rate component of the DCF. Earnings expectations have a significant influence on market prices and their appreciation or "growth" experienced by investors. This should be evident even to relatively unsophisticated investors just by listening to financial new reports on radio, TV or reading the newspapers. In fact, Dr. Morin in his book,

New Regulatory Finance, (2006) states on page 298[24]:

> Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of g. The accuracy of these forecasts in the sense of whether they turn out to be correct is not at issue here, as long as they reflect widely held expectations. As long as the forecasts are typical and/or influential in that they are consistent with current stock price levels, they are relevant. The use of analysts' forecasts in the DCF model is sometimes denounced on the grounds that it is difficult to forecast earnings and dividends for only one year, let alone for longer time periods. This objection is unfounded, however, because it is present investor expectations that are being priced; it is the consensus forecast that is embedded in price and therefore in required return, and not the future as it will turn out to be.
>
> * * *
>
> Published studies in the academic literature demonstrate that growth forecasts made by security analysts represent an appropriate source of DCF growth rates, are reasonable indicators of investor expectations and are more accurate than forecasts based on historical growth. These studies show that investors rely on analysts' forecasts to a greater extent than on historic data only.

In addition, Myron Gordon, the "father" of the standard regulatory version of the DCF model widely utilized throughout the United States in rate base/rate of return regulation has recognized the significance of analysts' forecasts of growth in EPS in a speech he gave in March 1990 before the Institute for Quantitative Research and Finance. He said:

> We have seen that earnings and growth estimates by security analysts were found by Malkiel and Cragg to be superior to data obtained from financial statements for the explanation of

[24] Morin 298.

> variation in price among common stocks. . . . estimates by security analysts available from sources such as IBES are far superior to the data available to Malkiel and Cragg. Eq (7) is not as elegant as Eq (4), but it has a good deal more intuitive appeal. It says that investors buy earnings, but what they will pay for a dollar of earnings increases with the extent to which the earnings are reflected in the dividend or in appreciation through growth.

Professor Gordon recognized that total return is largely affected by the terminal price which is mostly affected by earnings (hence price / earnings multiples). However, while EPS is the most significant factor influencing market prices, it is by no means the only factor that affects market prices, a fact recognized by Bonbright with regard to public utilities as discussed previously.

Studies performed by Cragg and Malkiel[25] demonstrate that analysts' forecasts are superior to historical growth rate extrapolations. Some question the accuracy of analysts' forecast of EPS growth, however, it does not really matter what the level of accuracy of those analysts' forecasts is well after the fact. What is important is that they influence investors and hence the market prices they pay. Moreover, there is no empirical evidence that investors consistent with the EMH, would discount or disregard analysts' estimates of growth in earnings per share. The "semistrong" form of the EMH which is generally held to be true indicates that all perceived risks are taken into account by investors in the prices they pay for securities and investors are aware of all publicly-available information, including bond ratings, discussions about companies by bond rating agencies and investment analysts, as well as

[25] John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices (University of Chicago Press,

the many analysts earnings growth forecasts available. Investors are also aware of the accuracy of past forecasts, whether for EPS or DPS growth or for interest rates levels. Investors have no prior knowledge of the accuracy of any forecasts available at the time they make their investment decisions, as that accuracy only becomes known after some future period of time has elapsed. Therefore, consistent with the EMH upon which the cost of common equity models I utilize are based, since investors have such analysts' earnings growth rate projections available to them and investors are aware of the accuracy of such projections, analysts earnings projections should be relied upon in a cost of common equity analysis.

In addition to the empirical and academic support discussed previously regarding the superiority of analysts' EPS growth forecasts in response to concern about the use of analysts' forecasts, Dr. Burton G. Malkiel, the Chemical Bank Chairman's Professor of Economics at Princeton University and author of the widely read national bestseller book on investing entitled, "A Random Walk Down Wall Street," Professor Malkiel affirmed his belief in the superiority of analysts' earnings forecasts when he testified before the Public Service Commission of South Carolina, in November 2002:

> With all the publicity given to tainted analysts' forecasts and investigations instituted by the New York Attorney General, the National Association of Securities Dealers, and the Securities & Exchange Commission, I believe the upward bias that existed in the late 1990s has indeed diminished. In summary, I believe that current analysts' forecasts are more reliable than they were during the late 1990s. Therefore, analysts' forecasts remain the proper tool to use in performing a Gordon Model DCF analysis.

1982) Chapter 4.

(Rebuttal testimony, South Carolina Electric and Gas Co., pp. 16-17, Docket No. 2002-223-E)

Further confirmation that Professor Malkiel's view is correct can be found in the steps taken by the U.S. Securities and Exchange Commission (SEC) to remove any conflict of interest regarding security analysts" EPS forecasts. In her speech given on May 8, 2002, Lori Richards, Director, Office of Compliance Inspections and Examinations noted that:

> . . . the SEC approved rule changes proposed by the National Association of Securities Dealers, Inc. and the new York Stock Exchange, Inc. regarding analyst conflicts of interest. These rules reflect a dramatic change in the way analysts are regulated.

The new rules include:

1) Limitations on the Relationships and Communications Between Investment Banking and Research Analysts.
2) Analyst Compensation Prohibitions.
3) Firm Compensation.
4) Promises of Favorable Research are Prohibited.
5) Restrictions on Personal Trading by Analysts.
6) Disclosures of Financial Interests in Covered Companies.
7) Disclosures in Research Reports Regarding the Firm's Ratings.
8) Disclosures During Public Appearances by Analysts.

Ms. Richards concluded her speech with:

> This is a time of change for research analysts. In some quarters, they have been vilified. It's important to remember that they perform an important service - - - and they need to do their work in an environment free from conflicts and biases. Investor trust is too critical to their work to allow them to be compromised. The new SRO rules approved by the SEC today, and the other steps we are taking, go a long way to helping analysts regain their

independence.

In addition, on April 28, 2003, the U.S. Securities & Exchange Commission issued the following: "Statement Regarding Global Settlement Related to Analyst Conflicts of Interest", which stated, in part:

> The settlements include important structural requirements designed to insulate research analysts from pressures by investment banking...

Considering that April 2003 was more than six years ago, investors have been fully aware since then of the steps that have been taken to eliminate and prevent analysts' conflict of interest. In view of the foregoing, it is apparent that analysts' forecasts of earnings remain the best predictor of growth for use in the DCF model.

Consequently, I have reviewed analysts' projected growth in EPS, as well as Value Line's projected five-year compound growth rates in EPS for each company in the proxy groups which are summarized on page 1, Schedule PMA-9. As shown in Column 1 on page 1 of Schedule PMA-9, the average projected five-year growth rate in EPS is 8.13% and the median is 8.33% for the six water companies and 4.39% and 4.38%, respectively for the eight LDCs.

Q. PLEASE SUMMARIZE THE DCF MODEL RESULTS.

A. As shown on Schedule PMA-6, the results of the application of the single-stage DCF model are 11.64% using the average and 11.76% when using the median value of the six water company's results. As also shown on Schedule PMA-6, the results of the application of the single-stage DCF model are 9.01% using

the average and 8.71% when using the median value of the eight LDCs' result. In arriving at conclusions of indicated common equity cost rate for the proxy groups, I have relied upon the median of the results of the DCF, due to the wide range of DCF results as well as the currently extremely volatile capital market conditions. 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-9 the indicated common equity cost rate based upon the application of the DCF model is 11.76% for the six water companies and 8.71% for the eight LDCs.

C. <u>The Risk Premium Model (RPM)</u>

Q. PLEASE DESCRIBE THE THEORETICAL BASIS OF THE RPM.

A. The RPM is based upon the basic financial principle of risk and return, namely, that investors require a greater return for bearing greater risk. The RPM recognizes that common equity capital has greater investment risk, than debt capital, as common equity shareholders are last in line in any claim on a company's earnings and assets, with debt holders being first in line. Therefore, investors require higher returns from common stocks than from investment in bonds to compensate them for bearing the additional risk.

While the investors' required common equity return cannot be directly determined or observed, bond returns and yields can. According to RPM theory one can assess a common equity risk premium over bonds, either historically or prospectively, one can use that premium to derive a cost rate of common equity.

In summary with RPM theory, 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 long-term public utility 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 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- or proxy group-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.

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

A. Yes. The results of my application of the RPM are summarized on page 1 of Schedule PMA-10 and detailed on pages 2 through 9. The first step is to determine the expected bond yield.

Q. PLEASE EXPLAIN THE BASIS OF THE EXPECTED BOND YIELDS OF 6.00% AND 6.24% APPLICABLE TO THE PROXY GROUPS OF WATER AND GAS COMPANIES, RESPECTIVELY.

A. Because both ratemaking and the cost of common equity are prospective, a prospective yield on similarly-rated long-term debt is essential. As shown on Schedule PMA-10, page 2, although based upon only one water company, the average Moody's bond rating is A2 for the six water companies while the average Moody's bond rating is A3 for the eight LDCs. 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 first calendar quarter of 2011 as derived from the October 1, 2009 Blue Chip Financial Forecasts (shown on page 7 of Schedule PMA-10). As shown on Line No. 1 of page 1 of Schedule PMA-10, the average expected yield on Moody's Aaa rated corporate bonds is 5.53%. It is necessary to adjust that average yield to be equivalent to a Moody's A2 rated public utility bond. Requiring the adjustment of 0.47%, shown on Line No. 2 and explained in Note 2. After adjustment, the expected bond yield applicable to a Moody's A rated public utility bond is 6.00% as shown on Line No. 3.

The six water companies average Moody's bond rating is A2, therefore, no adjustment is necessary to make the prospective bond yield applicable to an A2 public utility bond. However, because the average Moody's bond rating of the eight LDCs is A3, an adjustment of 24 basis points (0.24%) is necessary to make the prospective bond yield applicable to an A3 public utility bond as shown on line No. 5. Therefore, the expected specific bond yields are 6.00% for the six water companies and 6.24% for the eight LDCs as shown on line No. 6.

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-10. As shown on Line No.3, page 5, the mean equity risk premium is 5.06% applicable to the of six water companies and 4.50% applicable to the of eight LDCs. These estimates are the result of an average of a beta-derived historical equity risk premium as well as the mean historical equity risk premium applicable to public utilities with bonds rated A, respectively, based upon holding period returns.

The basis of the beta-derived equity risk premiums applicable to the proxy groups is shown on page 6 of Schedule PMA-10. The beta-determined equity risk premium 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 7.46% and is based upon an average of the long-term historical market risk premium and forecasted market risk premium as well as an equity risk premium based upon a study of the holding period returns of the S&P Public Utility Index relative to A rated public utility bond yields. To derive the historical market equity risk premium, I used the most recent Morningstar[26] 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 1926-2008. The use of holding period returns over a very long period of time is useful in the beta approach because it is consistent with the long-term investment horizon presumed by the DCF model. As the Ibbotson SBBI – 2009 Valuation Yearbook – Market Results for Stocks, Bonds, Bills and Inflation – 1926-2008, (Ibbotson SBBI) states[27]:

> 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.

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

[27] Ibbotson SBBI – 2009 Valuation Yearbook – Market Results for Stocks, Bonds, Bills and Inflation – 1926 – 2008 (Morningstar, Inc., 2009) 61.

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.

Without an appreciation of the 1920s and 1930s, no one would believe that such events could happen. The 83-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)

Q. WHICH EQUITY RISK PREMIUM IS APPROPRIATE FOR COST OF CAPITAL PURPOSES, ONE BASED UPON ARITHMETIC MEAN HISTORICAL RETURNS OR ONE BASED UPON GEOMETRIC MEAN HISTORICAL RETURNS?

A. An equity risk premium based upon arithmetic mean historical returns over a very long period of time is appropriate because it captures the effect of changing economic conditions on equity risk premia over time.

The financial literature is quite clear that risk is measured by the variability of expected returns, i.e., the probability distribution of returns. Weston and Brigham[28] provide the standard financial textbook definition of the riskiness of an asset when they state:

> The riskiness of an asset is defined in terms of the likely variability of future returns from the asset. (emphasis added)

In addition, Morin states[29]:

> The geometric mean answers the question of what constant return you would have had to achieve in each year to have your investment growth match the return achieved by the stock market. The arithmetic mean answers the question of what growth rate is the best estimate of the future amount of money that will be produced by continually reinvesting in the stock market. It is the rate of return which, compounded over multiple periods, gives the mean of the probability distribution of ending wealth. (emphasis added)

And, Brealey and Myers[30] note:

> The proper uses of arithmetic and compound rates of return from past investments are often misunderstood. . . Thus the arithmetic average of the returns correctly measures the opportunity cost of capital for investments. . . *Moral*: If the cost of capital is estimated from historical returns or risk premiums, use arithmetic averages, not compound annual rates of return. (italics in original)

Ibbotson Associates explains in detail, in pages 59 through 62 of Ibbotson SBBI, and shown in Schedule PMA-11, why the arithmetic mean calculated over a very long period of time is the correct mean to use when estimating the cost of capital.

As Ibbotson SBBI states[31]:

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28 J. Fred Weston and Eugene F. Brigham, Essentials of Managerial Finance, 3rd Ed., (The Dryden Press, 1974) 272.
29 Morin 133.
30 Brealey, R.A. and Myers, S.C., Principles of Corporate Finance, 5th Ed., (McGraw-Hill Publications, Inc., 1996) 146-147.

> 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 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[32] state 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)

As previously discussed, investors gain insight into relative riskiness by analyzing expected future variability. Ex-post (historical) total returns and

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[31] Ibbotson SBBI 59.

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 and rate of return analysts alike to estimate expected risk of common stocks. Absent such valuable insight into the potential variance of returns, investors and rate of return analysts cannot meaningfully evaluate prospective risk. 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*. To put it even more simply, using the geometric mean to estimate the equity risk premium is tantamount to reading the first and last page of a complete history of the Civil War and presuming to know what occurred during the Civil War.

Q. CAN IT BE DEMONSTRATED THAT THE ARITHMETIC MEAN TAKES INTO ACCOUNT ALL OF THE RETURNS AND THEREFORE IS THE APPROPRIATE MEAN TO USE WHEN ESTIMATING THE OPPORTUNITY COST OF CAPITAL?

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

A. Yes. Schedule PMA-12, which consists of three pages, graphically demonstrates this premise. Page 1 charts the returns on large company stocks for each and every year, 1926 through 2008 from Morningstar's Ibbotson SBBI. It is clear from the variation of these returns that stock market returns, and hence, equity risk premia, vary for the entire period from 1926 through 2008, as shown on page 2.

The clear bell-shaped pattern to the probability distribution of returns, shown on page 2 indicates that they are randomly generated. Because the arithmetic mean of this distribution of returns considers each and every return in the distribution, it takes into account the standard deviation or likely variance which may be experienced in the future when estimating the rate of return based upon such historical returns. In contrast, page 3 of Schedule PMA-12 Rebuttal demonstrates that when the geometric mean is calculated, only two of the returns are considered, namely those for the initial and terminal years, which, in this case, are 1926 and 2008. Based upon only those two years, a constant rate of return is calculated by the geometric average. That constant return, when represented graphically, would be a flat line over the entire 1926 to 2008 time period which is obviously far different from reality, based upon the probability distribution of returns shown on page 2 and demonstrated on page 1.

In view of all the foregoing, it should be clear that the arithmetic mean long-term historical risk premium takes the standard deviation of returns which is critical to risk analysis into account. The geometric mean is appropriate only

when measuring historical performance and should not be used to estimate the investors' required rate of return.

Consequently, the long-term historical arithmetic mean total return rates on the market as a whole of 11.70% 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-10. As shown on Line No. 3 of page 6, the resultant long-term historical equity risk premium on the market as a whole is 5.60%.

In addition, I used arithmetic mean return rates and yields (income returns) because they are appropriate for cost of capital purposes as noted in the Ibbotson SBBI – 2009 Valuation Yearbook.

> Arithmetic mean return rates and yields are appropriate because ex-post (historical) total returns and equity risk premiums differ in size and direction over time, providing insight into the variance and standard deviation of returns. Because the arithmetic mean captures the prospect for variance in returns and equity risk premiums, it provides the valuable insight needed by investors in estimating future risk when making a current investment. Absent such valuable insight into the potential variance of returns, investors cannot meaningfully evaluate prospective risk. If investors alternatively relied upon the geometric mean of ex-post equity risk premiums, 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.*

Q. HOW DID YOU INCORPORATE VALUE LINE'S FORECASTED TOTAL ANNUAL MARKET RETURN IN EXCESS OF THE PROSPECTIVE YIELD ON HIGH RATED CORPORATE BONDS IN YOUR DEVELOPMENT OF AN EQUITY RISK PREMIUM FOR YOUR RPM ANALYSIS?

A. The basis of the forecasted market equity risk premium can be found on Line

Nos. 4 through 6 on page 6 of Schedule PMA-10. It is derived from an average of the most recent 3-month (using the months of July 2009 through September 2009) and a recent spot (October 9, 2009) 3-5 year median market price appreciation potentials by Value Line plus an average of the median estimated dividend yield for the common stocks of the 1,700 firms covered in Value Line's Standard Edition as explained in detail in Note 1 on page 3 of Schedule PMA-14.

The average median expected price appreciation is 61% which translates to 12.64% per annum and, when added to the average (similarly calculated) median dividend yield of 2.20% equates to a forecasted annual total return rate on the market as a whole of 14.84%. 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 9.31% shown on Schedule PMA-10, page 6, Line No. 6, the September 1, 2009 forecast of about 50 economists of the expected yield on Moody's Aaa rated corporate bonds for the six calendar quarters ending with the first calendar quarter 2011 of 5.53% from Blue Chip Financial Forecasts was deducted from the forecasted total market return of 14.84%. The calculation resulted in an expected market risk premium of 9.31%.

Q. WHY DO YOU GIVE EQUAL WEIGHT TO THE HISTORICAL AND FORECASTED EQUITY RISK PREMIUM?

A. Both the cost of capital and ratemaking are expectational. As such investors' expectations are, in large measure, influenced by forecasts of the future

performance of the market as well as specific companies and industries.

The recent recession, which may or may not yet be over, and capital market crisis resulted in a substantial decline in market values with a concurrent flight to quality, i.e., greater investment in U.S. government securities and better quality debt such as that rated Aaa and/or Aa in the corporate and utility sectors. Schedule PMA-13 shows that the yield spreads between Moody's A and Baa rated utility bonds from October 1989 through September 2009 have averaged 34 basis points which is in contrast to more recent spreads attributable to the recent global recession which were significantly greater than 100 basis points. Currently, the cost of debt capital is stabilizing somewhat to levels experienced prior to the beginning of the recession in late 2007. The potential for market price appreciation is still significant despite a huge increase in the Dow Jones Industrial Average (DJI) between March 9, 2009 (the low) and October 2, 2009. Over that time, the DJI increased by nearly 45% from 6,547.05 to 9,487.67. Nonetheless, there is still considerable upside potential, considering that the DJI's all-time high was 14,164.53 on October 9, 2007, or approximately 50% above levels just prior to the beginning of the current recession. Exclusive reliance upon historical data will not properly reflect the significant increase in risk which has affected both debt and common equity capital due to the recent turmoil in the capital markets. Thus, it is appropriate to give equal weight to the current level of expected market appreciation as well as historical market returns.

In an interview at the height of the crisis, Roger Ibbotson, the founder of

Ibbotson Associates, now a wholly-owned subsidiary of Morningstar, Inc. and Professor of Finance at the Yale School of Management, stated that reliance upon historical statistics including the standard deviation of returns are not reflective of current and prospective risk.

The following exchange occurred between Paul D. Kaplan of *Morningstar* and Professor Ibbotson on December 17, 2008[33]:

> **Kaplan**: Dr. Ibbotson, is the economy fundamentally unstable or does it self-stabilize? It is curious that economists of every stripe right now are calling for aggressive government action regardless of what theory they normally subscribe to.
>
> **Ibbotson**: The economy has lots of self-stabilizing features, and it has other features that are destabilizing. Most of the time the economy is stabilizing, but certainly, I won't argue that the situation is stable now; instead, we have discontinuities here of an extreme sort.
>
> But there are also behavioral aspects of this. *I think the risks are definitely much higher than you might think of just looking at standard deviation, not only from the mathematical aspects of other measures of risk, but also from the way people react when they have the bad result. People often have the bad result at the same time they are losing their human capital income. They're losing all of their wealth at the same time, so they tend to be much more risk-averse than standard economics would show them to be. There is a lot of risk, and there's more risk than we think.* (Emphasis added)
>
> * * *
>
> **Kaplan**: Our readers are getting a lot of questions from their clients about what they should do. What kinds of things should advisors be discussing with their clients?
>
> **Ibbotson**: *I would be saying that when markets pull out of*

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[33] Morningstar Advisor, February 2, 2009.

> *calamities, they often have their highest returns.* We had the highest return ever in 1933 in the midst of a severe depression. You get the extreme pullout when things start to get a bit better. The markets in general move ahead of what's actually happening in the economy. *The risk premium on stocks has gone way up because of the fact that investors now recognize that there is much more risk in the market than they had recognized.* Stocks may not be done dropping, especially in light of what's happened to the financial system, and I don't know when it's going to start to straighten out, but ultimately, in the long run, stocks are a good investment. (Emphasis added)

Thus, since we are still in the recession, or just now beginning to emerge from the recession, and the market, while recovering from the lows of early 2009, still has not recovered to its pre-recession high, there is still greater current and prospective risk for investors. This requires an equity risk premium commensurate with the greater perceived risk, certainly exceeding an equity risk premium based exclusively on historical indicators. Therefore, I have given equal weight to the historical equity risk premium and the forecasted equity risk premium.

Consequently, in arriving at my conclusion of equity risk premium of on Line No. 7 on page 6 of Schedule PMA-10, I have given equal weight to the historical equity risk premium of 5.60% and the forecasted equity risk premium of 9.31% shown on Line Nos. 3 and 6, respectively (7.46% = (5.60% + 9.31%)/2).

Q. WHAT IS YOUR CONCLUSION OF AN EQUITY RISK PREMIUM FOR USE IN YOUR RPM ANALYSIS?

A. On page 9 of Schedule PMA-10, the most current Value Line betas for the companies in the proxy groups are shown. Applying the median beta of the

proxy groups, consistent with my reliance upon the median DCF results as previously discussed, to the market equity risk premium of results in a beta adjusted equity risk premium of 5.96% for the proxy group of six water companies and 4.85% for the proxy group of eight LDCs as shown on page 6, Line No. 9.

A mean equity risk premium of 4.15% applicable to utilities with A rated public utility bonds such as the proxy group of six water companies and the proxy group of eight LDCs was calculated based upon holding period returns from a study using public utilities, as shown on Line No. 2, page 5 of Schedule PMA-10 and is detailed on page 8.

The equity risk premiums applicable to the proxy group of six water companies and eight LDCs are the averages of the beta-derived premiums and those based upon the holding period returns of public utilities with A rated bonds, as summarized on Schedule PMA-10, page 5, i.e., 5.06% and 4.50%, respectively.

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

A. They are 11.06% for the six water companies and 10.74% for the eight LDCs as shown on Schedule PMA-10, 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. The 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 or later. This implies that "g" does change, although in the application of the standard DCF model, "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, "g" and the equity risk premium both change.

As Morin[34] 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 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

[34] Morin 256.

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. In addition the CAPM presumes that investors require compensation for these systematic risks which are caused by macroeconomic and other events that affect the returns on all assets. The model is applied by adding a risk-free rate of return to a market risk premium, which 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 measured the extent to which security returns and betas are related as predicted by the CAPM and have confirmed its validity. However, Morin observes that while the results of these tests support the notion that beta is related to security returns, the empirical Security Market Line (SML) described by the CAPM formula is not as steeply sloped as the

predicted SML. Morin[35] 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:
>
> $$K = R_F + 0.25(R_M - R_F) + 0.75\,\beta(R_M - R_F)$$[36]

In view of theory and practical research, I have applied both the traditional CAPM and the empirical CAPM/ECAPM 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-14, the risk-free rate adopted for both applications of the CAPM is 4.72%. It is based upon the average consensus forecast of the reporting economists in the October 1, 2009 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 first calendar quarter 2011 of 4.72% as derived in Note 2 on page 3.

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[35] Morin 175.

[36] Morin 190.

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 U.S. Treasury 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. Hence, it is consistent with the long-term investment horizon inherent in utilities' common stocks, as well as the long-term investment horizon presumed in the standard DCF model employed in regulatory ratemaking. Moreover, it is also consistent with the long-term life of the jurisdictional rate base to which the allowed fair rate of return, i.e., cost of capital will be applied. Morin[37] discusses several reasons why the yield on long-term U.S. Treasury T-bonds is appropriate as the risk-free rate:

- Common stock is a long-term investment with the dividend cash flows to investors lasting indefinitely. Hence, the yield on very long-term government bonds, such as, the yield on 30-year Treasury bonds, is the best measure of the risk-free rate for use in the CAPM.
- The expected common stock return is based on long-term cash flows, regardless of an individual's holding time period.
- Stability and consistency, i.e., the yields on long-term Treasury bonds match more closely with expected common stock returns.
- Yields on 90-day Treasury Bills typically do not match the investor's planning horizons. Investors in common stocks, typically, have an investment horizon greater than 90 days.
- Short-term rates are volatile, fluctuating widely, and subject to more random disturbances than are long-term rates, resulting in volatile and unreliable common equity return estimates.
- Short-term rates are also largely "administered" rates, and used by the Federal Reserve as a policy vehicle for economic stimulation and money supply control. Foreign governments, companies, and individuals also use them as a temporary safe harbor for money.

In addition, as noted in the Ibbotson SBBI[38]:

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[37] Morin 151.

[38] Ibbotson SBBI 59.

> Although the equity risk premia of several horizons are available, the long-horizon equity risk premium is preferable for use in most business-valuation settings, even if an investor has a shorter time horizon. Companies are entities that generally have no defined life span; when determining a company's value, it is important to use a long-term discount rate because the life of the company is assumed to be infinite. For this reason, it is appropriate in most cases to use the long-horizon equity risk premium for business valuation.

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

A. The basis of the market equity risk premium is explained in detail in Note 1 on page 3 of Schedule PMA-14. It is derived from an average of the most recent 30month (using the months of July 2009 through September 2009) and a recent spot (October 9, 2009) 3-5 years median total market price appreciation projects from Value Line, of total return of 14.84%, discussed previously, and the long-term historical arithmetic mean total returns for the years 1926 – 2008 on large company stocks from Ibbotson – SBBI of 11.70%. From these returns, I then subtracted the appropriate projected and historical risk-free rates to arrive at a projected and historical equity risk premium for the market.

For example, from the Value Line projected total market return of 14.84%, the forecasted average risk-free rate of 4.72% was deducted indicating a forecasted market risk premium of 10.12%. From the Ibbotson – SBBI historical total market return of 11.70%, the long-term income return on U.S. Government Securities of 5.20% was deducted indicating, an historical equity risk premium of 6.50%. Thus, the projected and historical total market risk premiums are 10.12% and 6.50%, averaging 8.31%. As a measure of risk

relative to the market as a whole, it is appropriate to use beta to apportion the market risk premium to a specific company or group. Therefore, I applied the proxy groups' respective betas to the average 8.31% market risk premium to arrive at proxy group specific risk premiums.

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

A. As shown on Schedule PMA-14, Line No. 1 of page 1, the traditional CAPM cost rates are 11.37% for the proxy group of six water companies and 10.12% for the proxy group of eight LDCs. And, as shown on Line No. 2 of page 1, the empirical CAPM cost rates are 11.78% for the six water companies and 10.85% for the eight LDCs. The traditional and empirical CAPM cost rates are shown individually by company on page 2. As with the DCF results discussed previously, and for the same reasons, namely the range of results and the current extremely volatile capital markets, I rely upon the median results of the traditional CAPM and ECAPM for the proxy groups. As shown on Line No. 3 on page 1, the CAPM cost rate applicable to the proxy group of six water companies is 11.58%, and the CAPM cost rate applicable to the proxy group of eight LDCs is 10.49% based upon the traditional and empirical CAPM.

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[39] 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 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[40] :

> 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,

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39 Morin 191.

40 Eugene F. Brigham, Financial Management – Theory and Practice, 4th Ed. (The Dryden Press, 1985) 203.

> 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. Also, the Regulatory Commission of Alaska (RCA) in its Order No. 151 in Docket No. P-97-4 (Order entered 11/27/02) 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 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.

Thus, using adjusted betas in an ECAPM analysis is not incorrect, nor inconsistent with either their financial literature or regulatory precedent. Notwithstanding empirical regulatory and 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 four pages. Pages 1 through 2 show the CEM results for the proxy group of six water companies and page 3 shows the CEM results for the proxy group of eight LDCs. Page 4 contains notes related to pages 1 through 3.

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, net worth, or partners' capital 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 as achieved returns are a function of authorized ROEs and inconsistent with the principle of equality of risk with non-price regulated firms.

Consequently, the first step in determining a cost of common equity using the comparable earnings model is to choose an appropriate proxy group or groups of non-price regulated firms similar in risk to the proxy group of price regulated utilities. The proxy group(s) 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. As stated previously, my application of the CEM is market-based in that the selection criteria for the non-price regulated firms of comparable risk are 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, equaling total risk, of the proxy groups of six water companies and eight LDCs, respectively. The proxy group of one hundred sixteen non-utility companies similar in risk to the proxy group of six water companies and twenty-eight non-utility companies similar in total investment risk to the proxy group of eight LDCs are listed on pages 1 through 3, Schedule PMA-15. 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 common equity, net worth, or partners' capital reported in Value Line (Std. Ed.) projected for 2012-2014. 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 with the standard error of the regression reflecting the extent to which events specific to a company's operations will affect its stock price. 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. 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 September 15, 2009, proxy groups of one hundred sixteen and twenty-eight non-price regulated companies were chosen based upon ranges of unadjusted beta and standard error of the regression. The ranges were based upon the standard deviations of the unadjusted beta and the average standard error of the regression for the proxy group of six water companies and the proxy group of eight LDCs as explained in Notes 1 and 7 on page 4 of Schedule PMA-15.

In my opinion this selection methodology is meaningful and effectively

responds to the criticisms normally associated with the selection of non-regulated 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 total risk, (i.e.) both systematic and unsystematic risks.

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 group. These are measured using the rate of return on common equity, net worth or partners' capital by Value Line (Std. Ed.) projected for the next five years consistent with the use of five-year projected EPS growth rates in the DCF model.

Q. WHAT ARE YOUR CONCLUSIONS OF CEM COST RATE?

A. For the proxy group of six water companies, my conclusion. based upon the average of the median of all of the five-year projected returns on book common equity, net worth or partners' capital is 14.25% as shown on page 2 of Schedule PMA-15. And my conclusion for the proxy group of eight LDCs based upon the median of all of the five-year projected returns on book common equity, net worth or partners' capital is 22.50% as shown on page 3.

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 rate is 13.50% for the six water companies and 22.00% for the eight gas distribution companies. In my opinion, the 22.00% CEM result for the eight LDCs is an outlier when compared with the six water companies' 13.50% CEM result and with the results of the other cost of common equity models for the eight LDCs. Therefore, I will not rely upon it in determining a common equity cost rate based upon the eight LDCs.

IX. CONCLUSION OF COMMON EQUITY COST RATE

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

A. It is 11.35% 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 UWNR's greater business risk.

Moreover, absent empirical evidence to the contrary, it is reasonable to assume that investors rely equally upon multiple cost of common equity models in arriving at their required returns on common equity. Therefore, in formulating my recommended common equity cost rate of 11.35%, 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 because; 1) no single model is so inherently precise that it can be relied upon solely, to the exclusion of other theoretically sound models; 2) all four models have application problems associated with them; 3) all four models are based upon the Efficient Market Hypothesis (EMH), which as previously discussed, requires the assumption that investors rely upon multiple cost of common equity models; and 4) as demonstrated previously, 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.

The results of the four cost of common equity models applied to the proxy groups of six water companies and the proxy group of eight LDCs 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 Eight AUS Utility Rpts. Gas Distribution Companies
Discounted Cash Flow Model	11.76%	8.71%
Risk Premium Model	11.06	10.74
Capital Asset Pricing Model	11.58	10.49
Comparable Earnings Model	13.50	NMF
Indicated Common Equity Cost Rate Before Adjustment for Business Risk	12.15%	10.00%
Business Risk Adjustment	0.25	0.30
Indicated Common Equity Cost Rate After Adjustment for Business Risk	12.40%	10.30%
Recommended Common Equity Cost Rate	11.35%	

Based upon these common equity cost rate results, I conclude that common equity cost rates of 12.15% and 10.00% are indicated for the water and gas distribution proxy groups, respectively before the business risk adjustments as shown on Line No. 5, page 2 of Schedule PMA-1. However, these indicated common equity cost rates are applicable to the larger, less business risky proxy groups and less financial/credit risk.

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

A. Yes. As discussed previously, UWNR has greater business risk than the average proxy group company because of its smaller size relative to the proxy groups, whether measured by book capitalization or the market capitalization of

common equity (estimated market value for UWNR, whose common stock is not traded). Therefore, it is necessary to upwardly adjust the common equity cost rates of 12.15% and 10.00% based upon the two proxy groups. The adjustments are based upon data contained in Ibbotson - SBBI. The determinations are based on the size premiums for decile portfolios of New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and NASDAQ listed companies for the 1926-2008 period and related data shown on pages 3 through 14 of Schedule PMA-1. The average size premium for the decile in which each proxy group falls has been compared to the average size premium for the 9th and 10th and 10th deciles in and between which UWNR would fall if its stock were traded and sold at the October 2, 2009 average market/book ratio of 189.4% and 151.4% experienced by each proxy group, respectively. As shown on page 4, the size premium spread between UWNR and the six AUS Utility Reports water companies is 2.28% (228 basis points) and between UWNR and the eight AUS Utility Reports natural gas distribution companies is 4.18% (418 basis points).

Although business risk adjustments of 2.28% and 4.18% are indicated based upon the six water companies, and the eight LDCs, respectively, I will make conservatively reasonable business risk adjustments of 0.25% (25 basis points) relative to the six water companies and 0.30% (30 basis points) relative to the eight LDCs as shown on Line No. 6 on page 2 of Schedule PMA-1 to the indicated common equity cost rates for each group to reflect UWNR's greater relative business risk as discussed previously.

Therefore, as shown on Line No. 7 page 2 and in Table 4 above, the business risk-adjusted indicated common equity cost rates are 12.40% for the six water companies and 10.30% for the eight LDCs, with a midpoint of 11.35% which is my recommendation.

A common equity cost rate of 11.35%, when applied to the consolidated common equity ratio of 51.12% at June 30, 2009 results in an overall rate of return of 8.91%, which, in my opinion, is both reasonable and conservative and will provide UWNR with sufficient earnings to enable it to attract necessary new capital.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

PAULINE M. AHERN, CRRA
PRINCIPAL

AUS CONSULTANTS

PROFESSIONAL QUALIFICATIONS
OF
PAULINE M. AHERN, CRRA
PRINCIPAL
AUS CONSULTANTS

PROFESSIONAL EXPERIENCE

1994-Present

In 1996, I became a Principal of AUS Consultants, continuing to offer testimony as an expert witness on the subjects of fair rate of return and cost of capital before state public utility commissions. I provide assistance and support to clients throughout the entire ratemaking litigation process.

As the Publisher of AUS Utility Reports (formerly C. A. Turner Utility Reports), I am responsible for the production, publishing, and distribution of the reports. AUS Utility Reports provides financial data and related ratios for about 125 public utilities, i.e., electric, combination gas and electric, natural gas distribution, natural gas transmission, telephone, and water utilities, on a monthly, quarterly and annual basis. Among the subscribers of AUS Utility Reports are utilities, many state regulatory commissions, federal agencies, individuals, brokerage firms, attorneys, as well as public and academic libraries. The publication has continuously provided financial statistics on the utility industry since 1930.

As the Publisher of AUS Utility Reports, I supervise the production, publishing, and distribution of the AGA Rate Service publications under license from the American Gas Association. I am also responsible for maintaining and calculating the performance of the AGA Index, a market capitalization weighted index of the common stocks of the approximately 70 corporate members of the AGA. In addition, I supervise the production of a quarterly survey of investor-owned water company rate case activity on behalf of the National Association of Water Companies.

As an Assistant Vice President from 1994 - 1996, I prepared fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. These supporting exhibits include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital. The exhibits also support the determination of a recommended return on common equity through the use of various market models, such as, but not limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility. I also assisted in the preparation of responses to any interrogatories received regarding such testimonies filed on behalf of client utilities. Following the filing of fair rate of return testimonies, I assisted in the evaluation of opposition testimony in order to prepare interrogatory questions, areas of cross-examination, and rebuttal testimony. I also evaluated and assisted in the preparation of briefs and exceptions following the hearing process. I have submitted testimony before state public utility commissions regarding appropriate capital structure ratios and fixed capital cost rates.

1990-1994

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

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

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

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

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

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

1988-1990

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

1973-1975

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

1972

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

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

Clients Served

I have offered expert testimony before the following commissions:

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

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

California-American Water Company
New Jersey-American Water Company

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

Alpena Power Company
Applied Wastewater Management, Inc.
Aqua Illinois, Inc.
Aqua New Jersey, Inc.
Aqua Virginia, Inc.
Artesian Water Company
The Atlantic City Sewerage Company
Audubon Water Company
The Borough of Hanover, PA
Carolina Pines Utilities, Inc.
Carolina Water Service, Inc. of NC
Carolina Water Service, Inc. of SC
The Columbia Water Company
Consumers Illinois Water Company
Consumers Maine Water Company
Consumers New Jersey Water Company
City of DuBois, Pennsylvania
Elizabethtown Water Company
Emporium Water Company
GTE Hawaiian Telephone Inc.
Greenridge Utilities, Inc.
Illinois American Water Company
Iowa American Water Company
Land'Or Utility Company
Long Neck Water Company
Louisiana Water Service, Inc.
Massanutten Public Service Company
Middlesex Water Company
Missouri-American Water Company
Mt. Holly Water Company
Nero Utility Services, Inc.
New Jersey-American Water Company
The Newtown Artesian Water Company
NRG Energy Center Pittsburgh LLC
NRG Energy Center Harrisburg LLC
Ohio-American Water Company
Penn Estates Utilities
Pinelands Water Company
Pinelands Waste Water Company
Pittsburgh Thermal
San Jose Water Company
Southland Utilities, Inc.
Spring Creek Utilities, Inc.
Sussex Shores Water Company
Tega Cay Water Service, Inc.
Total Environmental Services, Inc.
Treasure Lake Water & Sewer Divisions
Thames Water Americas
Tidewater Utilities, Inc.
Transylvania Utilities, Inc
Trigen-Philadelphia Energy Corporation
Twin Lakes Utilities, Inc.
United Utility Companies
United Water Arkansas, Inc.
United Water Arlington Hills Sewerage, Inc.
United Water Connecticut, Inc.
United Water Delaware, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Jersey, Inc.
United Water New Rochelle, Inc.
United Water New York, Inc.
United Water Owego / Nichols, Inc.
United Water Pennsylvania, Inc.
United Water South County, Inc.
United Water Toms River, Inc.
United Water Virginia, Inc.
United Water West Lafayette, Inc.
United Water West Milford, Inc.
Utilities, Inc.
Utilities Inc. of Central Nevada
Utilities, Inc. of Florida
Utilities, Inc. of Louisiana
Utilities Inc. of Nevada
Utilities, Inc. of Pennsylvania
Utilities, Inc. - Westgate
Utilities Services of South Carolina
Utility Center, Inc.
Valley Energy, Inc.
Water Services Corp. of Kentucky
Wellsboro Electric Company
Western Utilities, Inc.

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

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

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

Algonquin Gas Transmission Company
Anadarko Petroleum Corporation
Arkansas-Louisiana Gas Company
Arkansas Western Gas Company
Artesian Water Company
Associated Natural Gas Company
Atlantic City Electric Company
Bridgeport-Hydraulic Company
Cambridge Electric Light Company
Carolina Power & Light Company
Citizens Gas and Coke Utility
City of Vernon, CA
Columbia Gas/Gulf Transmission Cos.
Commonwealth Electric Company
Commonwealth Telephone Company
Conestoga Telephone & Telegraph Co.
Connecticut Natural Gas Corporation
Consolidated Gas Transmission Company
Consumers Power Company
CWS Systems, Inc.
Delmarva Power & Light Company
East Honolulu Community Services, Inc.
Equitable Gas Company
Equitrans, Inc.
Florida Power & Light Company
Gary Hobart Water Company
Gasco, Inc.
GTE Arkansas, Inc.
GTE California, Inc.
GTE Florida, Inc.
GTE Hawaiian Telephone
GTE North, Inc.
GTE Northwest, Inc.
GTE Southwest, Inc.
Great Lakes Gas Transmission L.P.
Hawaiian Electric Company
Hawaiian Electric Light Company
IES Utilities Inc.
Illinois Power Company
Interstate Power Company
Interstate Power & Light Co.
Iowa Electric Light and Power Company
Iowa Southern Utilities Company
Kentucky-West Virginia Gas Company
Lockhart Power Company
Middlesex Water Company
Milwaukee Metropolitan Sewer District
Mountaineer Gas Company
National Fuel Gas Distribution Corp.
National Fuel Gas Supply Corp.
Newco Waste Systems of NJ, Inc.
New Jersey Natural Gas Company
New Jersey-American Water Company
New York-American Water Company
North Carolina Natural Gas Corp.
Northumbrian Water Company
Ohio-American Water Company
Oklahoma Natural Gas Company
Orange and Rockland Utilities
Paiute Pipeline Company
PECO Energy Company
Penn Estates Utilities, Inc
Penn-York Energy Corporation
Pennsylvania-American Water Co.
PG Energy Inc.
Philadelphia Electric Company
Providence Gas Company
South Carolina Pipeline Company
Southwest Gas Corporation
Stamford Water Company
Tesoro Alaska Petroleum Company
Tesoro Refining & Marketing Co.
United Telephone of New Jersey
United Utility Companies
United Water Arkansas, Inc.
United Water Delaware, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Jersey, Inc.
United Water New York, Inc.
United Water Pennsylvania, Inc.
United Water Virginia, Inc.
United Water West Lafayette, Inc.
Utilities, Inc of Pennsylvania
Utilities, Inc - Westgate
Vista-United Telecommunications Corp.
Washington Gas Light Company
Washington Natural Gas Company
Washington Water Power Corporation
Waste Management of New Jersey – Transfer Station A
Wellsboro Electric Company
Western Reserve Telephone Company
Western Utilities, Inc.
Wisconsin Power and Light Company

EDUCATION:

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

PROFESSIONAL AFFILIATIONS:

American Finance Association
Financial Management Association
Society of Utility and Regulatory Financial Analysts
President – 2006-2008 and 2008-2010
Secretary/Treasurer – 2004-2006
Energy Association of Pennsylvania
National Association of Water Companies – Member of the Finance Committee

SPEAKING ENGAGEMENT:

"New Approach to Estimating the Cost of Common Equity Capital for Public Utilities" (co-presenter with Richard A. Michelfelder, Ph.D. - Advanced Workshop in Regulation and Competition, 28th Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI) at Rutgers University, May 14, 2009.

Moderator: Society of Utility and Regulatory Financial Analysis: 41st Financial Forum – "Estimating the Cost of Capital in Today's Economic and Capital Market Environment" April 16-17, 2009, Washington, DC

AWWA Pre-Conference Workshop – Water Utility Ratemaking – March 25, 2008, Atlantic City, NJ
Topic: "Water Utility Financing: Where Does All That Cash Come From?"

PAPERS:

"New Approach to Estimating the Cost of Common Equity Capital for Public Utilities", co-authored with Frank J. Hanley and Richard A. Michelfelder, forthcoming.

"Comparable Earnings: New Life for an Old Precept" co-authored with Frank J. Hanley, Financial Quarterly Review, (American Gas Association), Summer 1994.

BEFORE THE

NEW YORK PUBLIC SERVICE COMMISSION

EXHIBIT

TO ACCOMPANY THE

PREPARED DIRECT TESTIMONY

OF

PAULINE M. AHERN, CRRA
PRINCIPAL
AUS CONSULTANTS

CONCERNING

FAIR RATE OF RETURN

RE: UNITED WATER NEW ROCHELLE, INC.

NOVEMBER 2009

United Water New Rochelle, Inc.
Table of Contents
to the Financial Supporting Exhibit
of Pauline M. Ahern, CRRA

United Water New Rochelle, Inc.
Summary of Cost of Capital and Fair Rate of Return
Based upon the Consolidated Capital Structure of United Waterworks at June 30, 2009

Type of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate
Long-Term Debt	48.87%	6.37% (1)	3.11%
Customer Deposits	0.02%	4.85% (1)	0.00%
Common Equity	51.12%	11.35% (2)	5.80%
Total	100.01% *		8.91%

* Does not add to 100% due to rounding.

(1) Company-provided.

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

United Water New Rochelle, Inc.
Brief Summary of Common Equity Cost Rate

No.	Principal Methods	Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Eight AUS Utility Reports Gas Distribution Companies
1.	Discounted Cash Flow Model (DCF) (1)	11.76 %	8.71 %
2.	Risk Premium Model (RPM) (2)	11.06	10.74
3.	Capital Asset Pricing Model (CAPM) (3)	11.58	10.49
4.	Comparable Earnings Model (CEM) (4)	13.50	NMF
5.	Indicated Common Equity Cost Rate before Adjustment for Business Risk	12.15 %	10.00 %
6.	Business Risk Adjustment (5)	0.25	0.30
7.	Range of Indicated Common Equity Cost Rate After Adjustment for Business Risk	12.40 %	10.30 %
8	Recommended Common Equity Cost Rate	11.35%	

Notes: (1) From Schedule PMA-6.
(2) From page 1 of Schedule PMA-10.
(3) From page 1 Schedule PMA-14.
(4) From pages 2 and 3 of Schedule PMA-15 of this Exhibit.
(5) Business risk adjustment to reflect United Water New Rochelle Inc.'s greater business risk due to its small size relative to the proxy groups as detailed in Ms. Ahern's accompanying direct testimony.

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

Line No.		1 Market Capitalization on October 2, 2009 (1) (millions)	(times larger)	2 Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	3 Applicable Size Premium (3)	4 Spread from Applicable Size Premium for (4)
1.	United Water New Rochelle, Inc.					
	a. Based Upon the Proxy Group of Six AUS Utility Reports Water Companies	$ 141.137		9 - 10	4.26%	
	b. Based Upon the Proxy Group of Eight AUS Utility Reports Gas Distribution Companies	$ 112.820		10	5.81%	
2.	Proxy Group of Six AUS Utility Reports Water Companies	$ 740.972	5.3 x	7 - 8	1.99%	2.28%
3.	Proxy Group of Eight AUS Utility Reports Gas Distribution Companies	$ 1,442.236	12.8 x	6	1.63%	4.18%

(A) Decile	(B) Number of Companies (millions)	(C) Recent Total Market Capitalization (millions)	(D) Recent Average Market Capitalization (millions)	(E) Size Premium (Return in Excess of CAPM) (2)
1 - Largest	165	$ 8,530,554.000	$ 51,700.327	-0.36%
2	175	1,682,132.000	$ 9,612.183	0.62%
3	183	804,806.000	$ 4,397.847	0.74%
4	189	540,900.000	$ 2,861.905	0.97%
5	211	409,557.000	$ 1,941.028	1.54%
6	243	342,820.000	$ 1,410.782	1.63%
7	319	283,476.000	$ 888.639	1.62%
8	393	241,137.000	$ 613.580	2.35%
9	603	181,013.000	$ 300.187	2.71%
10 - Smallest	1626	128,780.000	$ 79.200	5.81%

*From pages 7 and 11 of this Schedule

Notes:
(1) From Page 4 of this Schedule.
(2) Gleaned from Column (D) on the bottom of this page. The appropriate decile (Column (A)) corresponds to the market capitalization of the proxy group, which is found in Column 1.
(3) Corresponding risk premium to the decile is provided on Column (E) on the bottom of this page.
(4) Line No. 1a Column 3 – Line No. 2 Column 3 and Line No. 1b, Column 3 – Line No. 3 of Column 3 etc.. For example, the 2.28% in Column 4, Line No. 2 is derived as follows 2.28% = 4.26% - 1.99%.

Exhibit No. ___
Schedule PMA-1
Page 3 of 14

United Water New Rochelle, Inc.
Market Capitalization of United Water New Rochelle, Inc.
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natural Gas Distribution Companies

Company	Exchange	1 Common Stock Shares Outstanding at December 31, 2008 (millions)	2 Book Value per Share at December 31, 2008 (1)	3 Total Common Equity at December 31, 2008 (millions)	4 Closing Stock Market Price on October 2, 2009	5 Market-to-Book Ratio on October 2, 2009 (2)	6 Market Capitalization on October 2, 2009 (3) (millions)
United Water New Rochelle, Inc.		NA	NA	$ 74.518 (4)	NA		
Based Upon the Proxy Group of Six AUS Utility Reports Water Companies						189.4 % (5)	$ 141.137 (6)
Based Upon the Proxy Group of Eight AUS Utility Reports Gas Distribution Companies						151.4 % (7)	$ 112.820 (8)
Proxy Group of Six AUS Utility Reports Water Companies							
American States Water Co.	NYSE	17.301	$ 17.947	$ 310.503	$ 35.320	196.8 %	$ 611.073
Aqua America, Inc.	NYSE	138.053	7.780	1,058.448	16.770	215.6	2,281.617
California Water Service Group	NYSE	20.723	19.445	402.949	38.610	198.5	800.115
Middlesex Water Company	NASDAQ	13.404	10.281	137.803	14.870	144.6	199.317
SJW Corporation	NYSE	18.452	13.783	254.326	21.500	156.0 %	396.728
York Water Company	NASDAQ	11.367	6.137	69.768	13.810	225.0	156.992
Average		39.217	$ 12.562	$ 372.299	$ 23.480	189.4 %	$ 740.972
Proxy Group of Eight AUS Utility Reports Gas Distribution Companies							
AGL Resources, Inc.	NYSE	78.900	$ 21.482	$ 1,652.000	$ 34.840	162.2 %	$ 2,679.198
Atmos Energy Corp.	NYSE	90.815	22.601	2,052.492	27.680	122.5	2,513.750
Delta Natural Gas Company	NYSE	3.296	17.475	57.594	26.500	151.6	87.338
Laclede Group, Inc.	NYSE	21.993	22.119	486.479	31.900	144.2	701.582
Northwest Natural Gas Company	NYSE	26.594	23.628	628.373	40.940	173.3	1,088.758
Piedmont Natural Gas Co., Inc.	NYSE	73.248	12.113	887.244	23.380	193.0	1,712.491
Southwest Gas Corporation	NYSE	44.192	23.485	1,037.841	25.310	107.8	1,118.458
WGL Holdings, Inc.	NYSE	49.917	20.986	1,047.564	32.780	156.2	1,636.275
Average		48.369	$ 20.486	$ 931.198	$ 30.416	151.4 %	$ 1,442.236

NA = Not Available

Notes:
(1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 4 * Column 1.
(4) Based upon allocating United Water New Rochelle, Inc.'s total capital of $145.743 at December 31, 2008 and by United Water Works, Inc.'s common equity ratio based upon total investor provided capital at June 30, 2009 of 51.13% as derived below. $74.518 = $145.743 * 51.13%.

United Waterworks Inc.
Consolidated Capital Structure Based upon Investor Provided Capital at June 30, 2009

Type of Capital	Amount	Ratio
Long-term Debt	$ 293,015,000	48.87%
Common Equity	306,516,215	51.13%
Total	$ 599,531,215	100.00%

(5) The market-to-book ratio of United Water New Rochelle, Inc. on October 2, 2009 is assumed to be equal to the average market-to-book ratio at October 2, 2009 of the proxy group of six AUS Utility Reports water companies.

(6) United Water New Rochelle, Inc.'s common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at October 2, 2009 of the proxy group of six AUS Utility Reports water companies, 207.0%, and United Water New Rochelle, Inc.'s market capitalization on October 2, 2009 would therefore have been $112.778 million. ($112.778 = $54.482 * 207.0%).

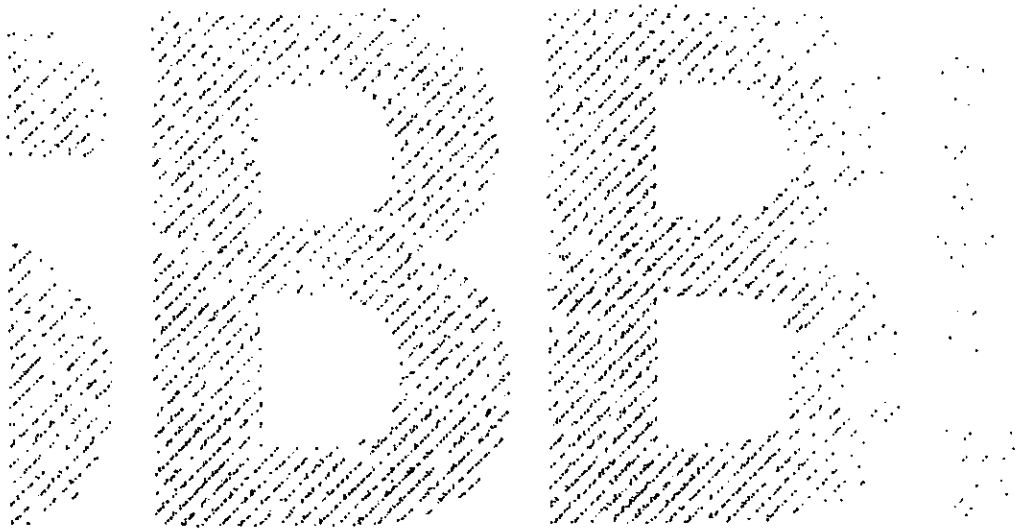
(7) The market-to-book ratio of United Water New Rochelle, Inc. on October 2, 2009 is assumed to be equal to the average market-to-book ratio at October 2, 2009 of the proxy group of eight AUS Utility Reports gas distribution companies.

(8) United Water New Rochelle, Inc.'s common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at October 2, 2009 of the proxy group of eight AUS Utility Reports gas distribution companies, 151.4%, and United Water New Rochelle, Inc.'s market capitalization on October 2, 2009 would therefore have been $112.820 million. ($112.820 = $74.518 * 151.4%).

Source of Information: 2008 Annual Forms 10K
yahoo.finance.com

Ibbotson® SBBI®
2009 Valuation Yearbook

Market Results for
Stocks, Bonds, Bills, and Inflation
1926–2008



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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.

Size and Liquidity

Capitalization is not necessarily the underlying cause of the higher returns for smaller companies. While smaller companies are usually less liquid, with fewer shares traded on any given day, not all companies of the same size have the same liquidity. Stocks that are more liquid have higher valuations for the same cash flows because they have a lower cost of capital and commensurately lower returns on average. Stocks that are less liquid have a higher cost of capital and higher returns on average.[2]

While it would be very useful to estimate the equity cost of capital of companies that are not publicly traded, there is not a direct measure of liquidity for these companies because there are no public trades. Thus, there is usually no share turnover, no bid/ask spreads, etc. in which to measure liquidity. Even though liquidity is not directly observable, capitalization is; thus the size premium can serve as a partial measure of the increased cost of capital of a less liquid stock.

Size premiums presented in this book are measured from publicly traded companies of various sizes and therefore do not represent the full cost of capital for non-traded companies. The valuation for a non-publicly traded company should also reflect a discount for the very fact that it is not traded. This would be an illiquidity discount and could be applied to the valuation directly, or alternatively reflected as an illiquidity premium in the cost of capital.

This chapter does not tell you how to estimate this incremental illiquidity valuation discount (or cost of capital illiquidity premium) that is not covered by the size premium. At the end of this chapter, we show some empirical results on the impact of liquidity on stock returns.

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.

Table 7-1: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Bounds, Size, and Composition

Decile	Historical Average Percentage of Total Capitalization	Recent Number of Companies	Recent Decile Market Capitalization (in Thousands)	Recent Percentage of Total Capitalization
1-Largest	63.22	165	$8,530,554	64.89
2	13.96	175	1,682,132	12.80
3	7.56	183	804,806	6.12
4	4.72	189	540,800	4.11
5	3.24	211	409,557	3.12
6	2.39	243	342,820	2.61
7	1.75	319	283,476	2.16
8	1.30	393	241,137	1.83
9	1.02	603	181,013	1.38
10-Smallest	0.83	1626	128,760	0.98
Mid-Cap 3–5	15.52	583	1,755,263	13.35
Low-Cap 6–8	5.44	955	867,434	6.60
Micro-Cap 9–10	1.85	2229	309,793	2.36

Data from 1926–2008. Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Historical average percentage of total capitalization shows the average, over the last 83 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, 2008.

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

Decile	Recent Market Capitalization (in Thousands)	Company Name
1-Largest	465,651,838	Exxon Mobil Corp.
2	18,503,467	Waste Management Inc. Del
3	7,360,271	Reliant Energy Inc.
4	4,225,152	IMS Health Inc.
5	2,785,538	Family Dollar Stores Inc.
6	1,848,961	Bally Technologies Inc.
7	1,197,133	Temple Inland Inc.
8	753,448	Kronos Worldwide Inc.
9	453,254	SWS Group Inc.
10-Smallest	218,533	Beazer Homes USA Inc.

Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.
Market capitalization and name of largest company in each decile as of September 30, 2008.

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 165 stocks, while the smallest decile accounts for just over one percent of the market value. The data in the second column of Table 7-1 are averages across all 83 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 2008.

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 $7,360,271,000 but greater than $1,848,961,000. Low-cap stocks include deciles 6–8 and currently include all companies in the NYSE/AMEX/NASDAQ with market capitalizations at or below $1,848,961,000 but greater than $453,254,000. Micro-cap stocks include deciles 9–10 and include companies with market capitalizations at or below $453,254,000. The market capitalization of the smallest company included in the micro-capitalization group is currently $1,575,000.

Presentation of the Decile Data

Summary statistics of annual returns of the 10 deciles over 1926–2008 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 deciles. Serial correlations and their significance will be discussed in detail later in this chapter.

Table 7-3
Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Largest and Smallest Company by Size Group

1926–1965

Date	Capitalization of Largest Company (In Thousands)			Capitalization of Smallest Company (In Thousands)		
	Mid-Cap	Low-Cap	Micro-Cap	Mid-Cap	Low-Cap	Micro-Cap
(Sept 30)	3–5	6–8	9–10	3–5	6–8	9–10
1926	$60,103	$13,785	$4,213	$13,800	$4,263	$43
1927	64,820	14,491	4,415	14,522	4,450	65
1928	80,910	18,761	5,074	18,768	5,119	135
1929	103,054	24,328	5,862	24,480	5,873	116
1930	66,750	12,916	3,359	13,050	3,369	30
1931	42,607	8,142	1,927	8,222	1,944	15
1932	12,212	2,209	468	2,223	469	19
1933	40,288	7,210	1,830	7,280	1,875	120
1934	38,019	6,836	1,673	6,669	1,691	69
1935	37,631	6,549	1,350	6,605	1,383	38
1936	46,863	11,505	2,754	11,526	2,800	98
1937	51,750	13,535	3,539	13,793	3,563	69
1938	35,019	8,372	2,195	8,400	2,200	60
1939	35,409	7,478	1,819	7,500	1,854	75
1940	29,903	7,990	1,661	8,007	1,972	51
1941	30,352	8,316	2,086	8,336	2,057	72
1942	26,037	6,868	1,770	6,870	1,779	82
1943	42,721	11,403	3,647	11,475	3,803	395
1944	46,221	13,068	4,812	13,068	4,820	309
1945	65,125	17,825	6,413	17,575	6,428	225
1946	77,784	24,192	10,148	24,195	10,168	829
1947	57,830	17,719	6,373	17,735	6,380	508
1948	67,238	18,632	7,329	18,651	7,348	663
1949	56,092	14,549	5,037	14,577	5,108	378
1950	66,143	18,675	6,225	18,700	6,243	303
1951	82,517	22,750	7,598	22,850	7,600	668
1952	95,636	25,405	8,428	25,452	8,480	480
1953	98,218	25,340	8,156	25,374	8,169	459
1954	125,834	29,707	9,488	29,791	8,502	463
1955	170,828	41,445	12,366	41,691	12,444	553
1956	183,792	46,805	13,524	46,888	13,623	1,122
1957	194,300	47,658	13,844	48,609	13,848	925
1958	195,536	46,774	13,769	46,871	13,816	550
1959	256,283	64,110	19,548	64,221	19,701	1,804
1960	252,292	61,485	19,293	61,529	19,344	831
1961	298,261	77,883	23,562	77,896	23,613	2,455
1962	250,766	68,785	18,852	68,869	18,988	1,018
1963	308,903	71,846	23,927	71,971	24,058	298
1964	349,675	79,508	25,695	79,937	25,607	223
1965	365,676	84,600	28,483	85,065	28,543	250

Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

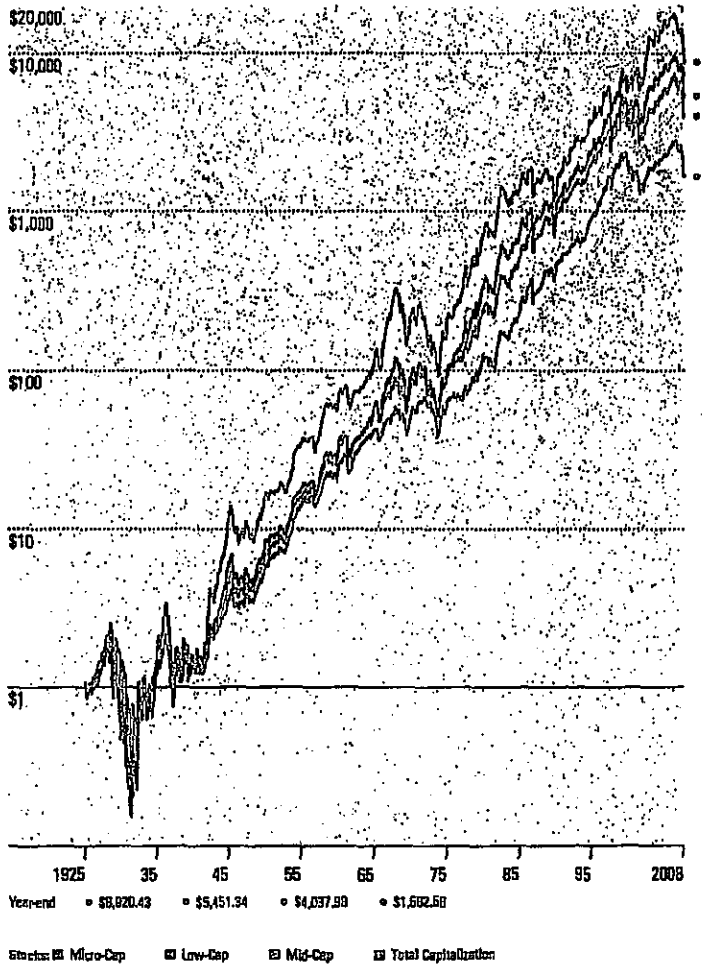
Table 7-3 (Continued)
Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Largest and Smallest Company by Size Group

1966–2008

Date (Sept 30)	Capitalization of Largest Company (in Thousands) Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10	Capitalization of Smallest Company (in Thousands) Mid-Cap 3-5	Low-Cap 6-8	Micro-Cap 9-10
1966	$403,137	$99,960	$34,884	$100,107	$34,866	$381
1967	459,438	118,989	42,188	119,635	42,237	391
1968	531,308	150,893	60,543	151,260	60,719	592
1969	618,485	146,792	54,353	147,311	54,503	2,119
1970	382,884	94,754	29,915	94,845	29,932	822
1971	551,690	147,426	45,570	147,810	45,571	655
1972	557,181	143,835	46,728	144,263	46,757	1,031
1973	431,354	98,699	29,352	98,710	29,430	561
1974	356,876	79,678	23,355	80,260	23,400	444
1975	477,054	102,313	30,353	103,283	30,394	540
1976	566,298	121,717	34,884	121,932	34,901	664
1977	584,577	139,188	40,700	139,620	40,765	513
1978	580,681	164,093	47,927	164,455	48,038	830
1979	665,019	177,378	51,197	177,769	51,274	848
1980	762,195	199,312	59,496	199,315	59,544	649
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	104,392	356,239	104,588	2,025
1984	1,076,436	315,955	91,004	316,109	91,185	2,033
1985	1,440,436	370,224	94,875	370,729	94,887	760
1986	1,857,621	449,015	110,617	449,482	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	2,145,847	480,975	100,265	483,623	100,384	96
1990	2,171,217	474,055	93,750	474,477	93,780	132
1991	2,129,863	457,958	87,598	458,853	87,733	278
1992	2,428,871	500,327	103,352	500,346	103,500	510
1993	2,705,192	603,568	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	751,318	193,001	751,680	193,018	1,043
1997	3,484,440	813,923	228,900	814,356	229,058	665
1998	4,216,707	925,688	252,653	926,215	253,031	1,871
1999	4,251,741	875,309	220,397	875,582	220,456	1,602
2000	4,143,802	840,000	192,083	840,730	192,439	1,393
2001	5,156,315	1,108,224	265,734	1,108,959	265,738	443
2002	4,930,326	1,118,525	308,980	1,124,331	309,245	501
2003	4,744,580	1,163,369	329,080	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	1,728,888	586,393	1,728,364	587,243	1,079
2006	7,777,183	1,946,688	626,655	1,947,240	627,017	2,247
2007	9,206,713	2,411,794	723,256	2,413,583	725,267	1,922
2008	7,360,271	1,848,861	453,254	1,849,950	453,398	1,575

Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Graph 7-1: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Wealth Indices of Investments in Mid-, Low-, Micro-, and Total Capitalization Stocks
Index (Year-End 1925 = $1.00)



Data from 1925–2008.

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 218 percent. This divergence in the performance of small and large company stocks is a common occurrence.

Table 7-4: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Summary Statistics of Annual Returns

Decile	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Correlation
1-Largest	8.9	10.8	19.48	0.09
2	10.1	12.5	22.33	0.04
3	10.4	13.1	23.89	-0.01
4	10.4	13.4	26.13	0.00
5	10.9	14.2	26.80	-0.02
6	10.9	14.5	27.59	0.04
7	10.8	14.8	28.82	0.02
8	11.0	16.0	34.44	0.06
9	11.1	16.6	36.70	0.05
10-Smallest	12.5	20.1	44.95	0.17
Mid Cap	10.5	13.4	24.93	-0.01
Low Cap	10.9	14.9	28.41	0.04
Micro	11.8	17.7	39.16	0.09
NYSE/AMEX/ NASDAQ Total Value Weighted Index	8.4	11.4	20.53	0.04

Data from 1926–2008. Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Results are for quarterly re-ranking for the deciles. The small company stock summary statistics presented in earlier chapters comprise a re-ranking of the portfolios every five years prior to 1982.

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.

Table 7-5: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Long-Term Returns in Excess of CAPM

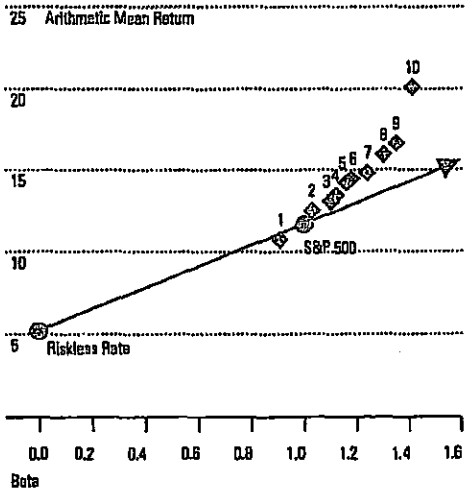
Decile	Beta*	Arithmetic Mean Return (%)	Actual Return in Excess of Riskless Rate** (%)	CAPM Return in Excess of Riskless Rate† (%)	Size Premium (Return in Excess of CAPM) (%)
1-Largest	0.91	10.75	5.56	5.91	-0.36
2	1.03	12.51	7.31	6.69	0.62
3	1.10	13.06	7.87	7.13	0.74
4	1.12	13.45	8.25	7.28	0.97
5	1.16	14.23	9.03	7.49	1.54
6	1.18	14.48	9.28	7.65	1.63
7	1.24	14.84	9.65	8.03	1.62
8	1.30	15.95	10.76	8.41	2.35
9	1.35	16.62	11.42	8.71	2.71
10-Smallest	1.41	20.13	14.93	9.12	5.81
Mid-Cap, 3–5	1.12	13.37	8.18	7.24	0.94
Low-Cap, 6–8	1.22	14.86	9.66	7.92	1.74
Micro-Cap, 9–10	1.38	17.72	12.52	8.79	3.74

Data from 1926–2009.
*Betas are estimated from monthly returns in excess of the 30-day U.S. Treasury bill total return, January 1926–December 2009.

**Historical riskless rate measured by the 83-year arithmetic mean income return component of 20-year government bonds (5.20).

†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 (11.67 percent) minus the arithmetic mean income return component of 20-year government bonds (5.20 percent) from 1926–2009.

Graph 7-2: Security Market Line Versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ‡



Data from 1926–2009.

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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.

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 83 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).[3] Beta measures the extent to which a security or portfolio is exposed to systematic risk.[4] 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.

Table 7-6: Size-Decile Portfolios 10a and 10b of the NYSE/AMEX/NASDAQ

Decile	Recent Number of Companies	Recent Decile Market Capitalization (in Thousands)	Market Capitalization of Largest Company (in Thousands)	Company Name
10a	409	$77,080,249	$218,533,000	Beazer Homes U.S.A. Inc.
10b	1182	75,412,545	136,600,000	Great Northern Iron Ore

Note: These numbers may not aggregate to equal decile 10 figures.

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Market capitalization and name of largest company in each decile as of September 30, 2008.

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.

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 7-7: Long-Term Returns in Excess of CAPM Estimation for Decile Portfolios of the NYSE/AMEX/NASDAQ, with 10th Decile Split

	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	10.75	5.55	5.91	-0.36
2	1.03	12.51	7.31	6.69	0.62
3	1.10	13.06	7.87	7.13	0.74
4	1.12	13.45	8.25	7.28	0.97
5	1.16	14.23	9.03	7.49	1.54
6	1.18	14.48	9.28	7.65	1.63
7	1.24	14.84	9.65	8.03	1.62
8	1.30	15.95	10.76	8.41	2.35
9	1.35	16.62	11.42	8.71	2.71
10a	1.42	18.49	13.29	9.19	4.11
10b-Smallest	1.38	23.68	18.48	8.95	8.53
Mid-Cap, 3–5	1.12	13.37	8.18	7.24	0.94
Low-Cap, 6–8	1.22	14.86	9.66	7.92	1.74
Micro-Cap, 9–10	1.36	17.72	12.52	8.79	3.74

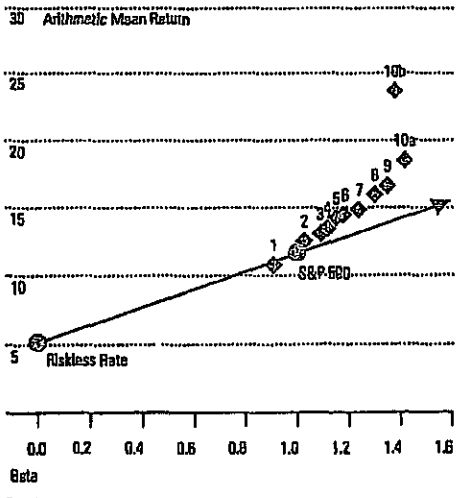
Data from 1926–2008. Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

*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 2008.

**Historical riskless rate is measured by the 83-year arithmetic mean income return component of 20-year government bonds (5.20 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 (11.67 percent) minus the arithmetic mean income return component of 20-year government bonds (5.20 percent) from 1926–2008.

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



Data from 1926–2008.

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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	1,827
2005	1,746
2006	1,744
2007	1,775
2008	1,626

Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

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

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.[9]

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.

Table 7-9: Long-Term Returns in Excess of CAPM Estimation for Decile Portfolios of the NYSE/AMEX/NASDAQ, with NYSE Market Benchmarks

	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	0.99	10.75	5.66	5.72	-0.16
2	1.11	12.51	7.31	6.45	0.86
3	1.18	13.06	7.87	6.81	1.05
4	1.20	13.45	8.25	6.97	1.28
5	1.23	14.23	9.03	7.14	1.89
6	1.26	14.48	9.28	7.28	2.00
7	1.32	14.84	9.65	7.63	2.01
8	1.38	15.95	10.76	8.00	2.76
9	1.42	16.62	11.42	8.25	3.17
10-Smallest	1.48	20.13	14.93	8.60	6.33
Mid-Cap, 3–5	1.19	13.37	8.18	6.92	1.26
Low-Cap, 6–8	1.30	14.88	9.66	7.54	2.12
Micro-Cap, 9–10	1.43	17.72	12.52	8.32	4.21

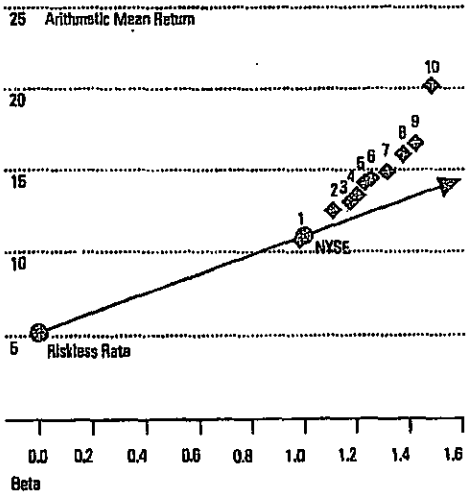
Data from 1926–2008. Source: Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2009 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

*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 2008.

**Historical riskless rate is measured by the 83-year arithmetic mean income return component of 20-year government bonds (5.20 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 (11.67 percent) minus the arithmetic mean income return component of 20-year government bonds (5.20 percent) from 1926–2008.

Graph 7-4: Security Market Line versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ, with NYSE Market Benchmarks*



Data from 1926–2008.

For the entire period analyzed, 1926–2008, 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 5.80, as opposed to 6.47 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 7-8 are slightly higher than those resulting from the original study.

Measuring Beta with Sum Beta

The sum beta method attempts to provide a better measure of beta for small stocks by taking into account their lagged price reaction to movements in the market. (See Chapter 6.) Table 7-10 shows that using this method of beta estimation results in larger betas for the smaller size deciles of the NYSE/AMEX/NASDAQ while those of the larger size deciles remain relatively stable. From these results, it appears that the sum beta method corrects for possible errors that are made when estimating small company betas without adjusting for the lagged price reaction of small stocks. However, the sum beta, when applied to the CAPM, still does not account for all of the returns in excess of the riskless rate historically found for small stocks. Table 7-10 demonstrates that a size premium is still necessary to estimate the expected returns using sum beta in conjunction with the CAPM, though the premium is smaller than that needed when using the typical calculation of beta.

Graph 7-5 compares the 10 deciles of the NYSE/AMEX/NASDAQ to the security market line. There are two sets of decile portfolios—one set is plotted using the single variable regression method of calculating beta, as in Graph 7-2, and the second set uses the sum beta method. The portfolios plotted using sum beta more closely resemble the security market line. Again, this demonstrates that the sum beta method results in the desired effect: a higher estimate of returns for small companies. Yet the smaller portfolios still lie above the security market line, indicating that an additional premium may be required.

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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.

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-

fly 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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May 27, 2009

Criteria | Corporates | General:

Criteria Methodology: Business Risk/Financial Risk Matrix Expanded

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Criteria | Corporates | General:

Criteria Methodology: Business Risk/Financial Risk Matrix Expanded

(Editor's Note: In the previous version of this article published on May 26, certain of the rating outcomes in the table 1 matrix were missated. A corrected version follows.)

Standard & Poor's Ratings Services is refining its methodology for corporate ratings related to its business risk/financial risk matrix, which we published as part of 2008 Corporate Ratings Criteria on April 15, 2008, on RatingsDirect at www.ratingsdirect.com and Standard & Poor's Web site at www.standardandpoors.com.

This article amends and supersedes the criteria as published in Corporate Ratings Criteria, page 21, and the articles listed in the "Related Articles" section at the end of this report.

This article is part of a broad series of measures announced last year to enhance our governance, analytics, dissemination of information, and investor education initiatives. These initiatives are aimed at augmenting our independence, strengthening the rating process, and increasing our transparency to better serve the global markets.

We introduced the business risk/financial risk matrix four years ago. The relationships depicted in the matrix represent an essential element of our corporate analytical methodology.

We are now expanding the matrix, by adding one category to both business and financial risks (see table 1). As a result, the matrix allows for greater differentiation regarding companies rated lower than investment grade (i.e., 'BB' and below).

Table 1

Business And Financial Risk Profile Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	Significant	Aggressive	Highly Leveraged
Excellent	AAA	AA	A	A-	BBB	–
Strong	AA	A	A-	BBB	BB	BB-
Satisfactory	A-	BBB+	BBB	BB+	BB-	B+
Fair	–	BBB-	BB+	BB	BB-	B
Weak	–	–	BB	BB-	B+	B-
Vulnerable	–	–	–	B+	B	CCC+

These rating outcomes are shown for guidance purposes only. Actual rating should be within one notch of indicated rating outcomes.

The rating outcomes refer to issuer credit ratings. The ratings indicated in each cell of the matrix are the midpoints of a range of likely rating possibilities. This range would ordinarily span one notch above and below the indicated rating.

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Business Risk/Financial Risk Framework

Our corporate analytical methodology organizes the analytical process according to a common framework, and it divides the task into several categories so that all salient issues are considered. The first categories involve fundamental business analysis; the financial analysis categories follow.

Our ratings analysis starts with the assessment of the business and competitive profile of the company. Two companies with identical financial metrics can be rated very differently, to the extent that their business challenges and prospects differ. The categories underlying our business and financial risk assessments are:

Business risk
- Country risk
- Industry risk
- Competitive position
- Profitability/Peer group comparisons

Financial risk
- Accounting
- Financial governance and policies/risk tolerance
- Cash flow adequacy
- Capital structure/asset protection
- Liquidity/short-term factors

We do not have any predetermined weights for these categories. The significance of specific factors varies from situation to situation.

Updated Matrix

We developed the matrix to make explicit the rating outcomes that are typical for various business risk/financial risk combinations. It illustrates the relationship of business and financial risk profiles to the issuer credit rating.

We tend to weight business risk slightly more than financial risk when differentiating among investment-grade ratings. Conversely, we place slightly more weight on financial risk for speculative-grade issuers (see table 1, again). There also is a subtle compounding effect when both business risk and financial risk are aligned at extremes (i.e., excellent/minimal and vulnerable/highly leveraged.)

The new, more granular version of the matrix represents a refinement--not any change in rating criteria or standards--and, consequently, holds no implications for any changes to existing ratings. However, the expanded matrix should enhance the transparency of the analytical process.

Financial Benchmarks

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Table 2

Financial Risk Indicative Ratios (Corporates)

	FFO/Debt (%)	Debt/EBITDA (x)	Debt/Capital (%)
Minimal	greater than 60	less than 1.5	less than 25
Modest	45-60	1.5-2	25-35
Intermediate	30-45	2-3	35-45
Significant	20-30	3-4	45-50
Aggressive	12-20	4-5	50-60
Highly Leveraged	less than 12	greater than 5	greater than 60

How To Use The Matrix--And Its Limitations

The rating matrix indicative outcomes are what we typically observe--but are not meant to be precise indications or guarantees of future rating opinions. Positive and negative nuances in our analysis may lead to a notch higher or lower than the outcomes indicated in the various cells of the matrix.

In certain situations there may be specific, overarching risks that are outside the standard framework, e.g., a liquidity crisis, major litigation, or large acquisition. This often is the case regarding credits at the lowest end of the credit spectrum--i.e., the 'CCC' category and lower. These ratings, by definition, reflect some impending crisis or acute vulnerability, and the balanced approach that underlies the matrix framework just does not lend itself to such situations.

Similarly, some matrix cells are blank because the underlying combinations are highly unusual--and presumably would involve complicated factors and analysis.

The following hypothetical example illustrates how the tables can be used to better understand our rating process (see tables 1 and 2).

We believe that Company ABC has a satisfactory business risk profile, typical of a low investment-grade industrial issuer. If we believed its financial risk were intermediate, the expected rating outcome should be within one notch of 'BBB'. ABC's ratios of cash flow to debt (35%) and debt leverage (total debt to EBITDA of 2.5x) are indeed characteristic of intermediate financial risk.

It might be possible for Company ABC to be upgraded to the 'A' category by, for example, reducing its debt burden to the point that financial risk is viewed as minimal. Funds from operations (FFO) to debt of more than 60% and debt to EBITDA of only 1.5x would, in most cases, indicate minimal.

Conversely, ABC may choose to become more financially aggressive--perhaps it decides to reward shareholders by borrowing to repurchase its stock. It is possible that the company may fall into the 'BB' category if we view its financial risk as significant. FFO to debt of 20% and debt to EBITDA 4x would, in our view, typify the significant financial risk category.

Still, it is essential to realize that the financial benchmarks are guidelines, neither gospel nor guarantees. They can vary in nonstandard cases: For example, if a company's financial measures exhibit very little volatility, benchmarks may be somewhat more relaxed.

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Moreover, our assessment of financial risk is not as simplistic as looking at a few ratios. It encompasses:

- a view of accounting and disclosure practices;
- a view of corporate governance, financial policies, and risk tolerance;
- the degree of capital intensity, flexibility regarding capital expenditures and other cash needs, including acquisitions and shareholder distributions; and
- various aspects of liquidity--including the risk of refinancing near-term maturities.

The matrix addresses a company's standalone credit profile, and does not take account of external influences, which would pertain in the case of government-related entities or subsidiaries that in our view may benefit or suffer from affiliation with a stronger or weaker group. The matrix refers only to local-currency ratings, rather than foreign-currency ratings, which incorporate additional transfer and convertibility risks. Finally, the matrix does not apply to project finance or corporate securitizations.

Related Articles

Industrials' Business Risk/Financial Risk Matrix--A Fundamental Perspective On Corporate Ratings, published April 7, 2005, on RatingsDirect.

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Proxy Group of Six AUS Utility Reports Water Companies
Capitalization and Financial Statistics (1)
2004 - 2008, Inclusive

	2008	2007	2006	2005	2004	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$748.685	$721.911	$653.390	$583.318	$547.791	
SHORT-TERM DEBT	$40.928	$18.061	$27.775	$29.466	$23.519	
TOTAL CAPITAL EMPLOYED	$789.613	$739.973	$681.165	$612.784	$571.310	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	5.86 %	6.24 %	6.50 %	6.26 %	6.28 %	
PREFERRED STOCK	2.98	5.34	5.34	5.33	3.56	
						5 YEAR AVERAGE
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	48.80 %	49.03 %	47.38 %	50.03 %	50.00 %	49.05 %
PREFERRED STOCK	0.22	0.34	0.35	0.40	0.44	0.35
COMMON EQUITY	50.98	50.63	52.27	49.57	49.56	50.60
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	51.95 %	50.21 %	48.69 %	51.69 %	51.49 %	50.81 %
PREFERRED STOCK	0.20	0.34	0.35	0.40	0.42	0.34
COMMON EQUITY	47.85	49.45	50.96	47.91	48.09	48.85
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	4.39 %	3.65 %	3.95 %	4.18 %	4.63 %	4.16 %
MARKET / AVERAGE BOOK RATIO	205.16	253.37	276.96	251.23	229.28	245.20
DIVIDEND YIELD	3.16	2.61	2.51	2.77	3.17	2.84
DIVIDEND PAYOUT RATIO	71.25	70.28	67.76	66.71	70.07	69.21
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	8.98 %	9.09 %	10.64 %	10.53 %	10.32 %	9.91 %
TOTAL DEBT / EBITDA (3)	2.04 X	3.65 X	3.52 X	3.62 X	3.76 X	3.32 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	18.49 %	16.80 %	21.00 %	19.35 %	20.42 %	19.21 %
TOTAL DEBT / TOTAL CAPITAL	51.95 %	50.21 %	48.69 %	51.69 %	51.49 %	50.81 %

See Page 2 for notes.

Proxy Group of Six AUS Utility Reports Water Companies
Capitalization and Financial Statistics
2004-2008, 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) Total debt as a percentage of EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).

(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 (October 2009); 2) which have Value Line five-year EPS growth rate projections or Reuters consensus five-year EPS growth rate projections; 3) which have positive Value Line five-year DPS growth rate projections; 4) which have a Value Line adjusted beta as published in Value Line Investment Survey; 5) which have not cut or omitted their common dividends during the five years ending 2008 or through the time of the preparation of this testimony; 6) which have 60% or greater of 2008 total net operating income derived from and 60% or greater of 2008 total assets devoted to regulated water operations; and 7) which at the time of the preparation of Ms. Ahern's accompanying direct testimony, had not publicly announced that they were involved in any major merger or acquisition activity.

The following six water companies met the above criteria:

American States Water Co.
Aqua America, Inc.
California Water Service Group
Middlesex Water Company
SJW Corporation
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
AUS Merger and Acquisition Quarterly Report, June 30, 2009

Capital Structure Based upon Total Permanent Capital for
the Proxy Group of Six AUS Utility Reports Water Companies
2004 - 2008, Inclusive

	2008	2007	2006	2005	2004	5 Year Average
American States Water Co.						
Long-Term Debt	46.25 %	46.99 %	48.61 %	50.46 %	48.93 %	48.25 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	53.75	53.01	51.39	49.54	51.07	51.75
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Aqua America, Inc.						
Long-Term Debt	54.21 %	56.88 %	51.56 %	52.61 %	52.72 %	53.40 %
Preferred Stock	0.09	0.09	0.09	0.09	0.08	0.09
Common Equity	45.70	44.03	48.35	47.30	47.20	46.51
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	41.88 %	42.86 %	43.47 %	48.07 %	48.66 %	44.99 %
Preferred Stock	0.00	0.51	0.52	0.61	0.61	0.45
Common Equity	58.12	56.63	56.01	51.32	50.73	54.56
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Middlesex Water Company						
Long-Term Debt	49.10 %	49.48 %	49.98 %	55.68 %	53.99 %	51.65 %
Preferred Stock	1.22	1.46	1.49	1.70	1.88	1.55
Common Equity	49.68	49.06	48.53	42.62	44.13	46.80
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
SJW Corporation						
Long-Term Debt	46.08 %	47.79 %	41.83 %	42.63 %	43.77 %	44.42 %
Preferred Stock	0.00	0.01	0.01	0.02	0.04	0.02
Common Equity	53.92	52.20	58.16	57.35	56.19	55.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
York Water Company						
Long-Term Debt	55.31 %	51.17 %	48.82 %	50.71 %	51.94 %	51.59 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	44.69	48.83	51.18	49.29	48.06	48.41
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Average for the Proxy Group of Six AUS Utility Reports Water Companies						
Long-Term Debt	48.80 %	49.03 %	47.38 %	50.03 %	50.00 %	49.05 %
Preferred Stock	0.22	0.34	0.35	0.40	0.44	0.35
Common Equity	50.98	50.63	52.27	49.57	49.56	50.60
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
EDGAR Online's I-Metrix Database
Annual Forms 10-K

Proxy Group of Eight AUS Utility Reports Gas Distribution Companies
Capitalization and Financial Statistics (1)
2004 - 2008, Inclusive

	2008	2007	2006	2005	2004	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$1,920.515	$1,908.259	$1,846.585	$1,771.278	$1,502.998	
SHORT-TERM DEBT	$319.296	$184.755	$197.905	$136.681	$102.219	
TOTAL CAPITAL EMPLOYED	$2,239.811	$2,093.013	$2,044.489	$1,907.959	$1,605.217	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	5.68 %	6.21 %	6.52 %	6.54 %	6.06 %	
PREFERRED STOCK	6.79	4.83	4.80	4.78	4.82	
						5 YEAR AVERAGE
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	47.65	49.29 %	50.81 %	50.95 %	50.02 %	49.74 %
PREFERRED STOCK	0.33	0.40	0.40	0.40	0.40	0.39
COMMON EQUITY	52.02	50.31	48.79	48.65	49.58	49.87
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	55.37 %	54.18 %	55.70 %	54.44 %	53.04 %	54.55 %
PREFERRED STOCK	0.27	0.35	0.35	0.36	0.37	0.34
COMMON EQUITY	44.36	45.47	43.95	45.20	46.59	45.11
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	7.43 %	6.38 %	6.37 %	6.02 %	6.34 %	6.51 %
MARKET / AVERAGE BOOK RATIO	159.78	173.69	171.91	171.08	165.73	168.44
DIVIDEND YIELD	4.28	3.81	4.00	4.02	4.10	4.04
DIVIDEND PAYOUT RATIO	59.09	61.50	63.34	67.34	69.07	64.07
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	11.58 %	11.08 %	10.93 %	10.50 %	10.40 %	10.90 %
TOTAL DEBT / EBITDA (3)	3.62 X	3.41 X	3.63 X	3.67 X	3.64 X	3.59 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	18.41 %	19.87 %	19.09 %	19.05 %	21.24 %	19.13 %
TOTAL DEBT / TOTAL CAPITAL	55.37 %	54.18 %	55.70 %	54.44 %	53.04 %	54.55 %

See Page 2 for notes.

Proxy Group of Eight AUS Utility Reports Natural Gas Distribution Companies
Capitalization and Financial Statistics
2004-2008, 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) Total debt as a percentage of EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).

(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 gas distribution companies: 1) which are included in the Natural Gas Distribution & Integrated Natural Gas Company Group of AUS Utility Reports (October 2009); 2) which have Value Line five-year EPS growth rate projections or Reuters consensus five-year EPS growth rate projections; 3) which have positive Value Line five-year DPS growth rate projections, 4) which have a Value Line adjusted beta as published in Value Line Investment Survey; 5) which have not cut or omitted their common dividends during the five years ending 2008 or through the time of the preparation of this testimony; 6) which have 60% or greater of 2008 total net operating income derived from and 60% or greater of 2008 total assets devoted to regulated gas distribution operations; and 7) which at the time of the preparation of Ms. Ahern's accompanying direct testimony, had not publicly announced that they were involved in any major merger or acquisition activity.

The following eight gas distribution companies met the above criteria:

AGL Resources, Inc.
Atmos Energy Corp.
Delta Natural Gas Company
Laclede Group, Inc.
Northwest Natural Gas Company
Piedmont Natural Gas Co., Inc.
Southwest Gas Corporation
WGL Holdings, Inc.

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus / Research Insight Database
EDGAR Online's I-Metrix Database
Company Annual Forms 10K
AUS Merger and Acquisition Quarterly Report, June 30, 2009

Capital Structure Based upon Permanent Capital for
the Proxy Group of Eight AUS Utility Reports Natural Gas Distribution Companies
for the Years 2004 through 2008

	2008	2007	2006	2005	2004	5 YEAR AVERAGE
AGL Resources, Inc.						
Long-Term Debt	49.87 %	49.50 %	49.56 %	51.24 %	53.32 %	50.70 %
Preferred Stock	0.95	1.39	1.26	1.20	1.18	1.20
Common Equity	49.18	49.11	49.18	47.56	45.50	48.10
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Atmos Energy Corp.						
Long-Term Debt	50.82 %	52.01 %	56.99 %	57.71 %	43.35 %	52.17 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	49.18	47.99	43.01	42.29	56.65	47.83
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Delta Natural Gas Company						
Long-Term Debt	50.82 %	52.36 %	53.28 %	51.69 %	52.83 %	52.20 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	49.18	47.64	46.72	48.31	47.17	47.80
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Laclede Group, Inc.						
Long-Term Debt	44.42 %	47.86 %	49.48 %	50.86 %	53.16 %	49.18 %
Preferred Stock	0.07	0.10	0.12	0.14	0.16	0.12
Common Equity	55.51	51.94	50.39	49.00	46.68	50.70
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Northwest Natural Gas Company						
Long-Term Debt	44.90 %	46.50 %	47.69 %	47.43 %	46.76 %	46.65 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	55.10	53.50	52.31	52.57	53.25	53.35
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Piedmont Natural Gas Co., Inc.						
Long-Term Debt	48.16 %	48.43 %	48.30 %	42.74 %	43.57 %	46.24 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	51.84	51.57	51.70	57.26	56.43	53.76
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Southwest Gas Corporation						
Long-Term Debt	53.48 %	58.80 %	61.07 %	65.21 %	64.69 %	60.65 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	46.52	41.20	38.93	34.79	35.31	39.35
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
WGL Holdings, Inc.						
Long-Term Debt	38.72 %	38.72 %	40.14 %	40.75 %	42.47 %	40.16 %
Preferred Stock	1.61	1.71	1.78	1.81	1.84	1.75
Common Equity	59.67	59.57	58.08	57.44	55.68	58.09
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Average for the Proxy Group of Eight AUS Natural Gas Distribution Companies						
Long-Term Debt	47.65 %	49.29 %	50.81 %	50.95 %	50.02 %	49.74 %
Preferred Stock	0.33	0.40	0.40	0.40	0.40	0.39
Common Equity	52.02	50.31	48.79	48.65	49.58	49.87
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
EDGAR Online's I-Metrix Database
Annual Forms 10-K

Exhibit No.__
Schedule PMA-5

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

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

Exhibit No.__
Schedule PMA-6

United Water New Rochelle, Inc.
Indicated Common Equity Cost Rate Through Use of the
Single Stage Discounted Cash Flow Model for
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natrual Gas Distribution Companies

	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.	2.84 %	0.12 %	2.96 %	8.25 %	11.21 %
Aqua America, Inc.	3.15	0.14	3.29	9.10	12.39
California Water Service Group	3.08	0.13	3.21	8.40	11.61
Middlesex Water Company	4.74	0.17	4.91	7.00	11.91
SJW Corporation	3.01	0.15	3.16	10.00	13.16
York Water Company	3.44	0.10	3.54	6.00	9.54
Average	3.38 %	0.14 %	3.51 %	8.13 %	11.64 %
Median	3.12 %	0.14 %	3.25 %	8.33 %	11.76 %
Proxy Group of Eight AUS Utility Reports Gas Distribution Companies					
AGL Resources, Inc.	4.99 %	0.11 %	5.10 %	4.35 %	9.45 %
Atmos Energy Corp.	4.78	0.11	4.89	4.40	9.29
Delta Natural Gas Company	5.02	0.08	5.10	3.00	8.10
Laclede Group, Inc.	4.76	0.08	4.84	3.50	8.34
Northwest Natural Gas Company	3.78	0.09	3.87	4.90	8.77
Piedmont Natural Gas Co., Inc.	4.54	0.14	4.68	6.25	10.93
Southwest Gas Corporation	3.81	0.09	3.90	4.75	8.65
WGL Holdings, Inc.	4.47	0.09	4.56	4.00	8.56
Average	4.52 %	0.10 %	4.62 %	4.39 %	9.01 %
Median	4.65 %	0.09 %	4.76 %	4.38 %	8.71 %

Notes:

(1) From Schedule PMA-7.
(2) This reflects a growth rate component equal to one-half the conclusion of growth rate (from Schedule PMA-9) x Column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for American States Water Co., 2.81% x (1/2 x 8.25%) = 0.12%.
(3) Column 1 + Column 2.
(4) From page 1 Schedule PMA-9.
(5) Column 3 + Column 4.

Exhibit No.__
Schedule PMA-7

United Water New Rochelle, Inc.
Derivation of Dividend Yield for Use in the
Discounted Cash Flow Model

	Dividend Yield		
	Spot (10/2/2009)(1)	Average of Last 3 Months (2)	Average Dividend Yield (3)
Proxy Group of Six AUS Utility Reports Companies			
American States Water Co.	2.83 %	2.85 %	2.84 %
Aqua America, Inc.	3.22	3.09	3.15
California Water Service Group	3.06	3.11	3.08
Middlesex Water Company	4.79	4.69	4.74
SJW Corporation	3.07	2.94	3.01
York Water Company	3.65	3.23	3.44
Average	3.44 %	3.32 %	3.38 %
Median	3.14 %	3.10 %	3.12 %
Proxy Group of Eight AUS Utility Reports Companies			
AGL Resources Inc.	4.94 %	5.04 %	4.99 %
Atmos Energy Corporation	4.77	4.80	4.78
Delta Natural Gas Company	4.91	5.13	5.02
Laclede Group, Inc.	4.83	4.70	4.76
Northwest Natural Gas Co.	3.86	3.70	3.78
Piedmont Natural Gas Co., Inc.	4.62	4.46	4.54
Southwest Gas Corporation	3.76	3.85	3.81
WGL Holdings, Inc.	4.49	4.45	4.47
Average	4.52 %	4.52 %	4.52 %
Median	4.69 %	4.58 %	4.65 %

Notes: (1) The spot dividend yield is the current annualized dividend per share divided by the spot market price on 10/2/2009.
(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 9/30/2009.
(3) Equal weight has been given to the 3-month average and spot dividend yield.

Source of Information: yahoo.finance.com

Exhibit No.__
Schedule PMA-8

United Water New Rochelle, Inc.
Current Institutional Holdings and Individual Holdings for
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natrual Gas Distribution Companies

	1 October 5, 2009 Percentage of Institutional Holdings	2 October 5, 2009 Percentage of Individual Holdings (1)
Proxy Group of Six AUS Utility Reports Water Companies		
American States Water Co.	57.14 %	42.86 %
Aqua America, Inc.	44.68	55.32
California Water Service Group	47.91	52.09
Middlesex Water Company	36.45	63.55
SJW Corporation	47.03	52.97
York Water Company	20.16	79.84
Average	42.23 %	57.77 %
Proxy Group of Eight AUS Utility Reports Gas Distribution Companies		
AGL Resources, Inc.	59.32 %	40.68 %
Atmos Energy Corp.	58.53	41.47
Delta Natural Gas Company	17.54	82.46
Laclede Group, Inc.	47.52	52.48
Northwest Natural Gas Company	58.10	41.90
Piedmont Natural Gas Co., Inc.	46.30	53.70
Southwest Gas Corporation	73.24	26.76
WGL Holdings, Inc.	61.76	38.24
Average	52.79 %	47.21 %

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

Source of Information: pro.edgar-online.com, 10/5/09

United Water New Rochelle, Inc.
Historical and Projected Growth

	1	2		3
	Value Line Projected 2008-'08 to 2012-'14 Growth Rate (1)	Reuters Mean Consensus Projected Five Year EPS Growth Rate		Average Projected Five Year Growth Rate in EPS (2)
	EPS	EPS	No. of Est.	
Proxy Group of Six AUS Utility Reports				
Water Companies				
American States Water Co.	9.50 %	7.00 %	[2]	8.25 %
Aqua America, Inc.	10.00	8.20	[6]	9.10
California Water Service Group	9.00	7.80	[4]	8.40
Middlesex Water Company	7.00	NA	[NA]	7.00
SJW Corporation	10.00	NA	[NA]	10.00
York Water Company	6.00	6.00	[1]	6.00
Average	8.58 %	7.25 %		8.13 %
Median	9.25 %	7.40 %		8.33 %
Proxy Group of Eight AUS Utility Reports				
Gas Distribution Companies				
AGL Resources, Inc.	3.50 %	5.20 %	[3]	4.35 %
Atmos Energy Corp.	4.00	4.80	[6]	4.40
Delta Natural Gas Company	3.00	3.00	[1]	3.00
Laclede Group, Inc.	3.50	NA	[NA]	3.50
Northwest Natural Gas Company	5.00	4.80	[2]	4.90
Piedmont Natural Gas Co., Inc.	5.50	7.00	[2]	6.25
Southwest Gas Corporation	4.50	5.00	[3]	4.75
WGL Holdings, Inc.	4.00	4.00	[1]	4.00
Average	4.13 %	4.83 %		4.39 %
Median	4.00 %	4.80 %		4.38 %

NA= Not Available

Notes: (1) As shown on pages 2 through 15 of this Schedule.
(2) Average of Columns 1 and 2.

Source of Information: Value Line Investment Survey, July 24, and September 11, 2009
Reuters Company Research (Printed October 5, 2009)

AMER. STATES WATER NYSE-AWR

RECENT PRICE 35.93 | P/E RATIO 21.1 (Trailing: 24.0 / Median: 22.0) | RELATIVE P/E RATIO 1.40 | DIV'D YLD 2.8% | VALUE LINE

TIMELINESS 3 Lowered 6/5/09
SAFETY 3 Raised 7/10/09
TECHNICAL 3 Raised 7/10/09
BETA .80 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+80%)	16%
Low	45	(+25%)	9%

Insider Decisions

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

Institutional Decisions

	3Q2008	4Q2008	1Q2009
to Buy	48	64	55
to Sell	54	52	69
Hld's(000)	9411	8980	9283

High: 19.5 26.5 25.3 26.4 29.0 29.0 26.8 34.6 43.8 46.1 42.0 38.8
Low: 14.1 14.8 16.7 19.0 20.3 21.6 20.8 24.3 30.3 33.6 27.0 29.6

LEGENDS
1.25 x Dividends p sh divided by Interest Rate
Relative Price Strength
3-for-2 split 6/02
Options: No
Shaded area: prior recession
Latest recession began 12/07

3-for-2

Target Price Range 2012 | 2013 | 2014
128
96
80
64
48
40
32
24
16
12

% TOT. RETURN 6/09

	This Stock	Vl. Arith. Index
1 yr.	2.0	-14.0
3 yr.	6.2	-11.4
5 yr.	71.9	6.1

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	© VALUE LINE PUB., INC.	12-14
9.27	10.43	11.03	11.37	11.44	11.02	12.91	12.17	13.05	13.76	13.98	13.61	14.06	15.76	17.48	18.42	18.65	19.20	Revenues per sh	21.75
1.67	1.56	1.75	1.75	1.85	2.04	2.28	2.20	2.53	2.54	2.09	2.23	2.64	2.89	3.31	3.37	3.60	3.75	"Cash Flow" per sh	4.65
1.11	.85	1.03	1.13	1.04	1.08	1.19	1.28	1.35	1.34	.78	1.05	1.32	1.33	1.62	1.55	1.70	1.90	Earnings per sh A	2.60
.79	.80	.81	.82	.83	.84	.85	.86	.87	.87	.88	.89	.90	.91	.96	1.00	1.04	1.10	Div'd Decl'd per sh B■	1.28
1.90	2.43	2.19	2.40	2.59	3.11	4.30	3.03	3.18	2.68	3.76	6.03	4.24	3.91	2.69	4.45	4.25	4.30	Cap'l Spending per sh	4.50
9.95	10.07	10.28	11.01	11.24	11.48	11.82	12.74	13.22	14.05	13.97	15.01	15.72	16.64	17.53	17.95	18.80	18.95	Book Value per sh	22.00
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	17.23	17.30	18.50	18.75	Common Shs Outst'g C	20.00
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	24.0	22.6	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	21.0
.79	.84	.76	.79	.84	.81	.97	1.03	.86	1.00	1.82	1.23	1.17	1.50	1.27	1.37			Relative P/E Ratio	1.40
5.3%	6.5%	6.7%	5.8%	5.5%	5.0%	4.2%	4.2%	3.9%	3.6%	3.5%	3.6%	3.1%	2.6%	2.5%	2.9%			Avg Ann'l Div'd Yield	2.2%
173.4	184.0	197.5	209.2	212.7	228.0	236.2	269.6	301.4	318.7	345	360	Revenues ($mill)	435
16.1	18.0	20.4	20.3	11.9	16.5	22.5	23.1	28.0	28.8	32.0	36.0	Net Profit ($mill)	53.0
48.0%	45.7%	43.0%	39.9%	43.5%	37.4%	47.0%	40.5%	42.6%	37.8%	35.0%	37.5%	Income Tax Rate	40.0%
--	--	--	--	--	--	--	12.2%	8.5%	6.9%	5.0%	5.0%	AFUDC % to Net Profit	5.0%
51.0%	47.5%	54.9%	52.0%	52.0%	47.7%	50.4%	48.6%	46.9%	46.2%	46.5%	47.5%	Long-Term Debt Ratio	46.5%
49.4%	51.9%	44.7%	48.0%	48.0%	52.3%	49.6%	51.4%	53.1%	53.8%	53.5%	52.5%	Common Equity Ratio	53.5%
328.2	371.1	447.6	444.4	442.3	480.4	532.5	551.6	569.4	577.0	650	680	Total Capital ($mill)	825
449.8	509.1	539.8	563.3	602.3	664.2	713.2	750.6	776.4	825.3	870	915	Net Plant ($mill)	1025
6.6%	6.4%	6.1%	6.5%	4.6%	5.2%	5.4%	6.0%	6.7%	6.4%	6.5%	7.5%	Return on Total Cap'l	8.5%
10.0%	9.2%	10.1%	9.5%	5.6%	6.6%	8.5%	8.1%	9.3%	8.6%	9.0%	10.0%	Return on Shr. Equity	12.0%
10.1%	9.3%	10.1%	9.5%	5.6%	6.6%	8.5%	8.1%	9.3%	8.6%	9.0%	10.0%	Return on Com Equity	12.0%
2.9%	3.0%	3.6%	3.3%	NMF	1.0%	2.8%	2.7%	3.9%	3.1%	3.5%	4.5%	Retained to Com Eq	6.0%
72%	68%	65%	65%	113%	84%	67%	67%	58%	64%	60%	57%	All Div'ds to Net Prof	48%

CAPITAL STRUCTURE as of 3/31/09
Total Debt $381.5 mill. Due in 5 Yrs $33.0 mill.
LT Debt $308.5 mill. LT Interest $21.0 mill.
(LT interest earned: 3.6x; total interest coverage: 3.4x) (50% of Cap'l)

Leases, Uncapitalized: Annual rentals $2.9 mill.
Pension Assets-12/08 $64.2 mill.
Oblig. $94.5 mill.
Pfd Stock None.

Common Stock 17,328,742 shs.
MARKET CAP: $625 million (Small Cap)

CURRENT POSITION ($MILL)	2007	2008	3/31/09
Cash Assets	1.7	7.3	24.9
Receivables	16.1	14.3	13.6
Inventory (Avg Cst)	1.6	2.1	1.9
Other	43.7	66.9	66.9
Current Assets	63.1	90.6	107.3
Accts Payable	29.1	36.6	36.0
Debt Due	37.6	76.3	55.0
Other	27.4	25.5	40.3
Current Liab.	94.3	137.4	131.3
Fix. Chg. Cov.	314%	283%	

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'08 to '12-'14
Revenues	4.5%	5.0%	4.0%
"Cash Flow"	5.5%	6.0%	6.5%
Earnings	3.5%	5.5%	9.5%
Dividends	1.5%	2.0%	5.0%
Book Value	4.5%	6.0%	4.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2006	64.3	69.0	75.0	66.3	268.6
2007	72.3	79.9	75.6	74.0	301.4
2008	68.9	80.3	85.3	84.2	318.7
2009	79.6	86.4	90.0	89.0	345
2010	82.0	89.0	95.0	94.0	360

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2006	.35	.36	.32	.30	1.33
2007	.40	.42	.44	.35	1.62
2008	.30	.53	.28	.43	1.55
2009	.28	.48	.50	.44	1.70
2010	.30	.50	.65	.45	1.90

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.225	.225	.225	.225	.90
2006	.225	.225	.225	.235	.91
2007	.235	.235	.235	.250	.96
2008	.250	.250	.250	.250	1.00
2009	.250	.250			

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 675 employees. Officers & directors own 2.5% of common stock (4/09 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.

American States Water has received some favorable backing from California's regulatory board. The water utility provider posted a 15% top-line gain in the first quarter, benefiting from the California Public Utilities Commission's (CPUC) November decision to implement the water revenue adjustment mechanism, modified cost balancing accounting methodology, and tiered rates laid out in the Water Action Plan. The use of these mechanisms is expected to produce smoother and more predictable growth, while stabilizing costs via removing outside influences, such as weather, on demand.

Nevertheless, the benefits were not enough. The water utility provider reported earnings of $0.28 a share, a couple of pennies off last year's mark. Despite the top-line improvement and a tax benefit, which added roughly $0.08 to the bottom line, the company was unable to offset higher operating costs specifically those associated with the expansion of its nonregulated business. Construction projects at Fort Bliss and military bases in Virginia cost American $0.05 a share.

We've trimmed our full-year earnings estimate by a dime, to $1.70 a share ... Operating costs are expected to continue mounting in the months ahead, as aging infrastructure requires heavier investment in order to meet increasingly stringent FDA codes.

... and our 2010 figure by a nickel, to $1.90. With infrastructures growing older, higher expenses are not a passing fad. The cash-strapped company will have to seek help to make many of the needed improvements, opening up its bottom line to dilution, whether by higher share counts or increased interest rate costs. American recently made a stock offering of 1.15 million shares, netting nearly $35 million. Even still, similar financing activity will probably be required based on our forecasts.

These shares do not stand out for appreciation potential. Infrastructure costs limit their six- to 12- month allure as well as their 3- to 5-year appeal. Nevertheless, the stock may well interest risk-averse investors looking to add a steady stream of income to their portfolios.

Andre J. Costanza *July 24, 2009*

Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	75
Earnings Predictability	65

(A) Primary earnings. Excludes nonrecurring gains/(losses): '04, 14¢; '05, 25¢; '06, 6¢; '08, (27¢). Next earnings report due early Aug. May not add due to rounding.

(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for splits.

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AQUA AMERICA NYSE-WTR

RECENT PRICE 17.47 | P/E RATIO 20.6 (Trailing: 23.9 / Median: 25.0) | RELATIVE P/E RATIO 1.36 | DIV'D YLD 3.1% | VALUE LINE

TIMELINESS 3 Lowered 6/26/09
SAFETY 3 Lowered 6/1/01
TECHNICAL 4 Raised 7/10/09
BETA .65 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	40	(+130%)	26%
Low	25	(+45%)	73%

Insider Decisions

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

Institutional Decisions

	3Q2008	4Q2008	1Q2009
to Buy	103	131	130
to Sell	108	131	134
Hld's(000)	62160	60996	63551

High: 11.5 11.5 12.0 14.8 15.0 16.8 18.5 29.2 29.8 26.8 22.0 21.5
Low: 7.2 7.6 8.3 9.4 9.8 11.8 14.2 17.5 20.1 16.9 12.2 16.1

LEGENDS
1.65 x Dividends p sh divided by Interest Rate
Relative Price Strength
3-for-2 split 7/95
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: prior recession
Latest recession began 12/07

Target Price Range 2012 | 2013 | 2014

% TOT. RETURN 6/09

	THIS STOCK	VL ARITH. INDEX
1 yr.	15.3	-14.0
3 yr.	-13.5	-14.4
5 yr.	32.7	5.1

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	© VALUE LINE PUB., INC	12-14
1.70	1.82	1.84	1.88	2.02	2.09	2.41	2.46	2.70	2.85	2.97	3.48	3.85	4.03	4.52	4.63	5.00	5.30	Revenues per sh	6.50
.42	.42	.47	.50	.56	.61	.72	.76	.86	.94	.98	1.09	1.21	1.28	1.37	1.42	1.55	1.65	"Cash Flow" per sh	2.10
.24	.25	.29	.30	.34	.40	.42	.47	.51	.54	.57	.64	.71	.70	.71	.73	.85	.90	Earnings per sh A	1.25
.21	.21	.22	.23	.24	.28	.27	.28	.30	.32	.35	.37	.40	.44	.48	.51	.54	.56	Div'd Decl'd per sh B=	.65
.47	.48	.52	.48	.58	.62	.90	1.16	1.09	1.20	1.32	1.54	1.84	2.05	1.79	1.99	2.10	2.20	Cap'l Spending per sh	2.75
2.29	2.41	2.48	2.69	2.84	3.21	3.42	3.85	4.15	4.38	5.34	5.69	6.30	6.98	7.32	7.82	8.05	8.35	Book Value per sh	10.60
59.40	59.77	63.74	65.75	67.47	72.20	106.60	111.82	113.97	115.19	123.45	127.16	128.97	132.33	133.40	135.37	136.00	135.50	Common Shs Outst'g C	138.00
14.4	13.5	12.0	15.6	17.8	22.5	21.2	16.2	23.6	23.8	24.5	25.1	31.8	34.7	32.0	24.9	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	25.0
.85	.69	.80	.98	1.03	1.17	1.21	1.18	1.21	1.29	1.40	1.33	1.69	1.87	1.70	1.50			Relative P/E Ratio	1.55
6.9%	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%	2.8%			Avg Ann'l Div'd Yield	2.0%
						257.3	276.5	307.3	322.0	367.2	442.0	496.8	533.6	602.6	627.0	690	725	Revenues ($mill)	900
						45.0	50.7	58.5	62.7	67.3	80.0	91.2	92.0	95.0	97.9	115	125	Net Profit ($mill)	170
						38.4%	38.9%	39.3%	38.5%	39.3%	39.4%	38.4%	39.6%	38.9%	39.7%	39.0%	39.0%	Income Tax Rate	39.0%
						--	--	--	--	--	--	--	--	2.9%	3.1%	3.5%	3.2%	AFUDC % to Net Profit	2.5%
						52.9%	52.0%	52.2%	54.2%	51.4%	50.0%	52.0%	51.6%	55.4%	54.1%	54.0%	54.0%	Long-Term Debt Ratio	45.0%
						46.7%	47.8%	47.7%	45.6%	48.6%	50.0%	48.0%	48.4%	44.6%	45.9%	46.0%	46.0%	Common Equity Ratio	51.0%
						782.7	901.1	990.4	1076.2	1355.7	1497.3	1690.4	1804.4	2191.4	2306.6	2385	2470	Total Capital ($mill)	2865
						1135.4	1261.4	1368.1	1490.8	1824.3	2069.8	2280.0	2506.0	2792.8	2997.4	3150	3300	Net Plant ($mill)	3600
						7.6%	7.4%	7.6%	7.6%	6.4%	6.7%	6.9%	6.4%	5.9%	5.7%	6.5%	6.5%	Return on Total Cap'l	6.5%
						12.2%	11.7%	12.3%	12.7%	10.2%	10.7%	11.2%	10.0%	9.7%	9.3%	10.5%	11.0%	Return on Shr. Equity	11.5%
						12.3%	11.7%	12.4%	12.7%	10.2%	10.7%	11.2%	10.0%	9.7%	9.3%	10.5%	11.0%	Return on Com Equity	11.5%
						4.3%	4.7%	5.1%	5.2%	4.2%	4.6%	4.9%	3.7%	3.2%	2.8%	4.0%	4.5%	Retained to Com Eq D	5.5%
						65%	60%	59%	59%	69%	57%	56%	63%	67%	70%	64%	61%	All Div'ds to Net Prof	61%

CAPITAL STRUCTURE as of 3/31/09
Total Debt $1338.1 mill. Due in 5 Yrs $243.9 mill.
LT Debt $1228.2 mill. LT Interest $65.0 mill.
(LT Interest earned: 3.4x; total interest coverage: 3.4x) (54% of Cap'l)

Pension Assets-12/08 $112.2 mill. Oblig. $204.7 mill.

Pfd Stock None

Common Stock 135,649,486 shares as of 4/24/09

MARKET CAP: $2.4 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2007	2008	3/31/09
Cash Assets	14.6	14.9	16.7
Receivables	82.9	84.5	77.3
Inventory (AvgCst)	8.8	9.8	9.4
Other	9.3	11.8	11.3
Current Assets	115.5	121.0	114.7
Accts Payable	45.8	50.0	27.2
Debt Due	60.8	87.9	111.9
Other	56.6	55.3	52.9
Current Liab.	183.2	193.2	192.0
Fix. Chg. Cov.	323%	329%	325%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'08 to '12-'14
Revenues	8.0%	9.0%	6.5%
"Cash Flow"	9.5%	6.0%	7.5%
Earnings	7.5%	5.5%	10.0%
Dividends	7.0%	8.0%	4.5%
Book Value	9.5%	10.0%	6.5%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	117.9	131.7	147.0	136.9	533.5
2007	137.3	150.8	165.5	149.1	602.5
2008	139.3	151.0	177.1	159.6	627.0
2009	154.5	167	185	173.5	680
2010	168	181	195	181	725

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	.13	.17	.21	.19	.70
2007	.13	.17	.22	.19	.71
2008	.11	.17	.26	.19	.73
2009	.14	.20	.28	.23	.85
2010	.15	.22	.30	.23	.90

Calendar	QUARTERLY DIVIDENDS PAID B= Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.098	.098	.098	.107	.40
2006	.107	.107	.115	.115	.44
2007	.115	.115	.125	.125	.48
2008	.125	.125	.125	.135	.51
2009	.135	.135			

BUSINESS: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately three 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 '08: residential, 60%; commercial, 14%; industrial & other, 26%. Officers and directors own 1.3% of the common stock (4/09 Proxy). Chairman & Chief Executive Officer: Nicholas DeBenedictis. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Telephone: 610-525-1400. Internet: www.aquaamerica.com.

Aqua America has posted good results thus far in 2009. That can be attributed partly to the completion of key rate cases over the past year. An expanded customer base, made possible by acquisitions, has also helped the water provider (although the slowdown in the housing industry and the sale of two operations in 2008 have provided a bit of an offset). At this juncture, share net stands to climb around 16%, to $0.85, this year. Further expansion in operating margins ought to enable the bottom line to advance another 6%, to $0.90 a share, in 2010.

The company remains an active participant in the ongoing consolidation within the water-service industry. The cost and technical expertise required for compliance with quality standards for drinking water have risen to the point where a number of the many small water suppliers in the United States have been struggling financially. This has resulted in a buyer's market whereby a well-capitalized company, like Aqua America, can enlarge its customer base at relatively low cost. The latest additions to its portfolio include Clarendon Water Company, serving 1,200 residents in Warren County, Pennsylvania; the water and wastewater assets of W.P. Water Company and W.P. Sanitary Company, which serve roughly 550 customers, combined, in Wyoming County and Luzerne County, Pennsylvania; and the Kratzerville Municipal Authority water system, serving roughly 400 residents in Snyder County, Pennsylvania. Even excluding future acquisitions (because of the many uncertainties associated with that strategy), we think Aqua America is capable of registering healthy, annual bottom-line gains over the 2012-2014 horizon.

The stock's risk-adjusted, total return possibilities are decent, reflecting the steady (albeit unspectacular) dividend growth we envision for the company going forward. Note, also, the high Price Stability rating and lower-than-market Beta coefficient. Conservative investors may want to take a look here.

But for the coming six to 12 months, these shares are ranked to perform only in line with the broader market averages.

Frederick L. Harris, III *July 24, 2009*

(A) Primary shares outstanding through '98; diluted thereafter. Excl. nonrec. gains (losses): '99, (11¢); '00, 2¢; '01, 2¢; '02, 5¢; '03, 4¢. Excl. gain from disc. operations: '99, 2¢. Next earnings report due early Aug. (B) Dividends historically paid in early March, June, Sept. & Dec. = Div'd. reinvestment plan available (5% discount). (C) In millions, adjusted for stock splits.

Company's Financial Strength	B+
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	100

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CALIFORNIA WATER NYSE-CWT

RECENT PRICE 36.27 | P/E RATIO 17.3 (Trailing: 18.0 Median: 22.0) | RELATIVE P/E RATIO 1.15 | DIV'D YLD 3.3% | VALUE LINE

TIMELINESS 3 Lowered 7/17/09
SAFETY 3 Lowered 12/27/07
TECHNICAL 4 Raised 2/13/09
BETA .60 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+80%)	16%
Low	45	(+25%)	5%

Insider Decisions

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

Institutional Decisions

	3Q2008	4Q2008	1Q2009
to Buy	49	107	83
to Sell	58	46	61
Hld's(000)	9891	9769	10000

High: 33.8 32.0 31.4 28.8 26.9 31.4 37.9 42.1 45.8 46.4 46.8 48.3
Low: 20.8 22.6 21.5 22.8 20.5 23.7 26.1 31.2 32.8 34.2 27.7 33.5

LEGENDS
133 x Dividends p sh divided by Interest Rate
Relative Price Strength
2-for-1 split 1/08
Options: Yes
Shaded area: prior recession
Latest recession began 12/07

Target Price Range 2012 | 2013 | 2014

% TOT. RETURN 6/09

	THIS STOCK	VS. AGEN'L EQUITY
1 yr.	15.9	-14.0
3 yr.	12.2	-14.4
5 yr.	55.3	5.1

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	©VALUE LINE PUB., INC.	12-14
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	18.20	17.76	19.60	21.45	22.10	Revenues per sh	24.45
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	3.12	3.72	4.15	4.35	"Cash Flow" per sh	4.65
1.35	1.22	1.17	1.51	1.63	1.45	1.53	1.31	.94	1.25	1.21	1.46	1.47	1.34	1.50	1.90	2.10	2.20	Earnings per sh A	2.65
.95	.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	1.18	1.19	Div'd Decl'd per sh B ■	1.34
2.53	2.26	2.17	2.63	2.81	2.74	3.44	2.45	4.09	5.82	4.39	3.73	4.01	4.28	3.68	4.82	4.75	4.80	Cap'l Spending per sh	5.00
10.90	11.56	11.72	12.22	13.00	13.38	13.43	12.90	12.85	13.12	14.44	15.66	15.79	16.15	16.50	19.44	19.95	20.60	Book Value per sh C	22.20
11.38	12.49	12.54	12.62	12.62	12.62	12.94	15.15	15.16	15.16	16.93	16.37	16.39	20.66	20.67	20.72	21.00	21.25	Common Shs Outst'g D	22.60
13.6	14.1	13.7	11.9	12.6	17.8	17.8	19.8	27.1	19.8	22.1	20.1	24.9	28.2	28.1	19.8	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	21.0
.80	.92	.92	.75	.73	.93	1.01	1.27	1.39	1.03	1.26	1.06	1.33	1.58	1.39	1.20			Relative P/E Ratio	1.40
5.2%	5.6%	6.4%	5.6%	4.6%	4.2%	4.0%	4.3%	4.4%	4.5%	4.2%	3.5%	3.1%	2.9%	3.0%	3.1%			Avg Ann'l Div'd Yield	2.4%
208.4	244.8	246.8	253.2	277.1	315.6	320.7	334.7	367.1	410.3	450	470	Revenues ($mill) E	550
19.9	20.0	14.4	19.1	19.4	26.0	27.2	25.8	31.2	39.6	45.0	47.0	Net Profit ($mill)	60.0
37.9%	42.2%	39.4%	39.7%	39.9%	39.6%	42.4%	37.4%	39.9%	37.7%	37.5%	38.0%	Income Tax Rate	39.0%
--	--	--	--	10.3%	3.2%	3.3%	10.6%	8.3%	8.6%	8.5%	8.5%	AFUDC % to Net Profit	8.5%
46.6%	46.9%	50.3%	55.3%	50.2%	48.6%	48.3%	43.5%	42.9%	41.6%	48.0%	47.5%	Long-Term Debt Ratio	45.0%
52.0%	50.2%	48.6%	44.0%	49.1%	50.8%	51.1%	55.9%	56.6%	58.4%	52.0%	52.5%	Common Equity Ratio	55.0%
333.8	388.8	402.7	453.1	496.4	555.9	568.1	670.1	674.9	690.4	805	825	Total Capital ($mill)	950
515.4	562.0	624.3	697.0	759.5	800.3	892.7	941.5	1010.2	1112.4	1175	1235	Net Plant ($mill)	1425
7.8%	8.6%	5.3%	5.9%	5.6%	6.1%	6.3%	5.2%	5.9%	7.1%	7.0%	7.0%	Return on Total Cap'l	8.0%
11.2%	10.0%	7.2%	9.4%	7.8%	8.9%	9.3%	6.8%	6.1%	9.8%	10.5%	10.5%	Return on Shr. Equity	12.0%
11.4%	10.1%	7.2%	9.5%	7.9%	8.0%	9.3%	6.8%	6.1%	9.5%	10.5%	10.5%	Return on Com Equity	12.0%
3.5%	1.6%	NMF	1.0%	.7%	2.1%	2.1%	1.0%	1.6%	3.8%	6.0%	6.0%	Retained to Com Eq	6.0%
70%	82%	119%	90%	91%	77%	78%	86%	77%	61%	55%	54%	All Div'ds to Net Prof	50%

CAPITAL STRUCTURE as of 3/31/09
Total Debt $342.1 mill. Due in 5 Yrs $60.0 mill.
LT Debt $287.2 mill. LT Interest $21.0 mill.

(LT interest earned: 4.6x; total int. cov.: 4.4x)

Pension Assets-12/08 $56.9 mill.
Oblig. $192.9 mill.

Pfd Stock None

Common Stock 20,744,952 shs.
as of 5/1/09

MARKET CAP: $750 million (Small Cap)

CURRENT POSITION ($MILL.)	2007	2008	3/31/09
Cash Assets	8.7	13.9	5.3
Other	63.3	65.9	67.0
Current Assets	60.0	79.8	72.3
Accts Payable	36.7	41.8	38.0
Debt Due	2.7	42.8	64.9
Other	30.3	35.8	37.2
Current Liab.	69.7	123.2	130.1
Fix. Chg. Cov.	333%	398%	402%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '08-'08 to '12-'14
Revenues	2.0%	1.5%	5.5%
"Cash Flow"	2.0%	5.5%	6.5%
Earnings	--	7.0%	9.0%
Dividends	1.0%	0.5%	2.5%
Book Value	4.0%	6.5%	3.0%

Calendar	QUARTERLY REVENUES ($ mill) E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	65.2	81.1	107.8	80.6	334.7
2007	71.6	95.8	113.8	85.9	367.1
2008	72.9	105.6	131.7	100.1	410.3
2009	88.7	115.3	140	108	450
2010	90.0	120	145	115	470

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	.04	.31	.68	.31	1.34
2007	.07	.37	.67	.39	1.50
2008	.01	.48	1.06	.35	1.90
2009	.12	.54	1.05	.39	2.10
2010	.13	.56	1.09	.42	2.20

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.285	.285	.285	.285	1.14
2006	.2875	.2875	.2875	.2875	1.15
2007	.290	.290	.290	.290	1.16
2008	.293	.293	.293	.293	1.17
2009	.295	.295			

BUSINESS: California Water Service Group provides regulated and nonregulated water service to roughly 463,600 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 Rio Grande Corp; West Hawaii Utilities (9/08). Revenue breakdown, '08: residential, 68%; business, 16%; public authorities, 5%; industrial, 5%; other, 3%. '08 reported depreciation rate: 2.4%. Has roughly 929 employees. Chairman: Robert W. Foy. President & CEO: Peter C. Nelson (4/09 Proxy). Inc.: Delaware. Address: 1720 North First Street, San Jose, California 95112-4598. Telephone: 408-367-8200. Internet: www.calwatergroup.com.

Recent changes on the regulatory front are already benefiting California Water Service Group. Late last year, the California Public Utilities Commission (CPUC), which oversees the actions of utilities in the Golden State to ensure fair business practices, implemented some guidelines proposed in the Water Action Plan that essentially create a more business-friendly landscape. The board established a water revenue adjustment mechanism (WRAM), implemented a modified cost-balancing account (MCBA) methodology, and introduced tiered rates. These moves ought to streamline the review process of general rate cases and remove many unexpected costs of doing business due to outside factors, such as weather, beyond the companies' control such. In its first full quarter with such initiatives in place, CWT posted earnings of $0.12 a share, far better than the penny earned last year. Revenues rose roughly 19% to $86.6 million, with 83% of the increase coming from rate increases.

Growth is likely to slow in the months ahead, however. Despite the more favorable regulatory climate, operating expenses are likely to continue escalating as deteriorating infrastructures and increasingly stringent EPA requirements result in higher maintenance costs. Meanwhile, the debt-riddled company is light on cash, and will probably need to look to outside financiers to make some of the necessary improvements. Thus, the increased interest expense and higher share count are likely to thwart earnings growth heading forward.

The stock has lost some appeal since our April review. It has slipped a notch for Timeliness and is now pegged to mirror the broad market for the coming six to 12 months. Its longer-term lure, meanwhile, remains below average, as the aforementioned financing costs are likely to limit shareholder gains out to 2012-2014.

It may pique the interest of conservative investors with a penchant for income, though. The company has a long-standing history of delivering steady dividend growth, which is an attractive attribute in times of economic volatility. WRAM and MCBA ought to make for more predictable earnings growth too.

Andre J. Costanza *July 24, 2009*

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

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

(C) Incl. deferred charges. In '08: $3.0 mill., $.19/sh.

(D) In millions, adjusted for split.

(E) Excludes non-reg. rev.

Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	70
Earnings Predictability	75

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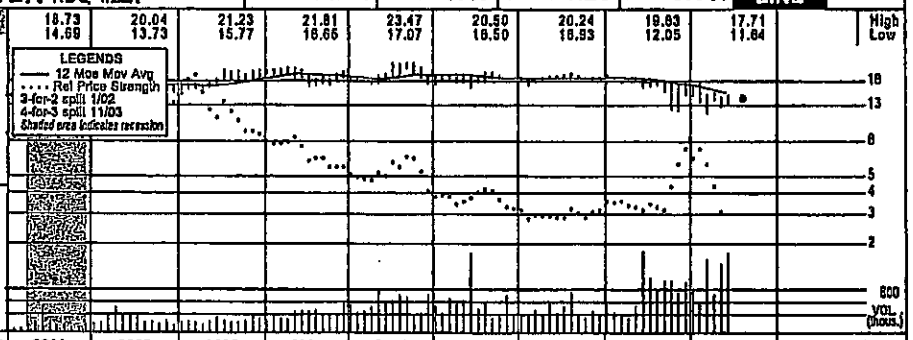
MIDDLESEX WATER NDQ--MSEX

RECENT PRICE 14.24 | TRAILING P/E RATIO 17.0 | RELATIVE P/E RATIO 1.23 | DIV'D YLD 5.0% | VALUE LINE

RANKS

PERFORMANCE 3 Average
Technical 3 Average
SAFETY 2 Above Average
BETA .60 (1.00 = Market)

Financial Strength B+
Price Stability 85
Price Growth Persistence 45
Earnings Predictability 90



© VALUE LINE PUBLISHING, INC.	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010/2011
SALES PER SH	5.87	5.98	6.12	6.25	6.44	6.18	6.50	6.79	--	
"CASH FLOW" PER SH	1.18	1.20	1.15	1.28	1.33	1.33	1.49	1.53	--	
EARNINGS PER SH	.66	.73	.61	.73	.71	.82	.87	.89	.76[A,B]	.78[C]/NA
DIV'DS DECL'D PER SH	.62	.63	.65	.66	.67	.68	.69	.70	--	
CAP'L SPENDING PER SH	1.25	1.59	1.87	2.64	2.18	2.31	1.66	2.12	--	
BOOK VALUE PER SH	7.11	7.39	7.60	8.38	8.60	9.82	10.05	10.28	--	
COMMON SHS OUTST'G (MILL)	10.17	10.36	10.48	11.36	11.58	13.17	13.25	13.40	--	
AVG ANN'L P/E RATIO	24.6	23.5	30.0	28.4	27.4	22.7	21.6	19.8	18.7	18.3/NA
RELATIVE P/E RATIO	1.26	1.26	1.71	1.39	1.45	1.23	1.15	1.19	--	
AVG ANN'L DIV'D YIELD	3.8%	3.7%	3.5%	3.4%	3.5%	3.7%	3.7%	4.0%	--	
SALES ($MILL)	59.6	61.9	64.1	71.0	74.6	81.1	86.1	91.0	--	
OPERATING MARGIN	47.2%	47.1%	44.0%	44.4%	44.4%	47.4%	47.0%	46.9%	--	
DEPRECIATION ($MILL)	5.3	5.0	5.6	6.4	7.2	7.8	8.2	8.6	--	
NET PROFIT ($MILL)	7.0	7.6	6.8	8.4	8.5	10.0	11.8	12.2	--	
INCOME TAX RATE	34.8%	33.3%	32.6%	31.1%	27.6%	33.4%	32.6%	33.2%	--	
NET PROFIT MARGIN	11.7%	12.5%	10.3%	11.9%	11.4%	12.4%	13.8%	13.4%	--	
WORKING CAP'L ($MILL)	d.9	d9.3	d13.3	d11.8	d4.5	2.8	d9.6	d40.9	--	
LONG-TERM DEBT ($MILL)	88.1	87.5	97.4	115.3	128.2	130.7	131.6	118.2	--	
SHR. EQUITY ($MILL)	76.4	80.6	83.7	99.2	103.8	133.3	137.1	141.2	--	
RETURN ON TOTAL CAP'L	5.6%	6.0%	6.0%	5.1%	5.0%	5.1%	5.6%	5.8%	--	
RETURN ON SHR. EQUITY	9.1%	9.6%	7.9%	8.5%	8.2%	7.6%	8.6%	8.6%	--	
RETAINED TO COM EQ	.5%	1.3%	NMF	.9%	.5%	1.2%	1.8%	1.9%	--	
ALL DIV'DS TO NET PROF	94%	87%	106%	90%	94%	84%	79%	78%	--	

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

[A] No. of analysts changing earn. est. in last 11 days: 0 up, 0 down, consensus 5-year earnings growth 7.0% per year. [B] Based upon 2 analysts' estimates. [C] Based upon 2 analysts' estimates.

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Sales	1.5%	4.5%
"Cash Flow"	4.5%	2.5%
Earnings	6.5%	2.5%
Dividends	2.0%	1.5%
Book Value	6.5%	2.5%

Fiscal Year	QUARTERLY SALES ($mill.) 1Q	2Q	3Q	4Q	Full Year
12/31/07	19.0	21.8	24.1	21.2	86.1
12/31/08	20.8	23.0	25.7	21.5	91.0
12/31/09	20.6				
12/31/10					

Fiscal Year	EARNINGS PER SHARE 1Q	2Q	3Q	4Q	Full Year
12/31/08	.15	.25	.28	.14	.82
12/31/07	.13	.24	.31	.19	.87
12/31/06	.15	.26	.35	.13	.89
12/31/09	.10	.24	.31	.12	
12/31/10					

Cal-endar	QUARTERLY DIVIDENDS PAID 1Q	2Q	3Q	4Q	Full Year
2006	.17	.17	.17	.173	.68
2007	.173	.173	.173	.176	.69
2008	.175	.175	.175	.178	.70
2009	.178	.178			

INSTITUTIONAL DECISIONS

	3Q'08	4Q'08	1Q'09
to Buy	36	35	41
to Sell	30	24	27
Hld's(000)	5083	4997	4505

ASSETS ($mill.)	2007	2008	3/31/09
Cash Assets	2.0	3.3	3.2
Receivables	12.8	14.3	13.3
Inventory (Avg cost)	1.2	1.5	1.5
Other	1.4	1.5	1.0
Current Assets	17.4	20.6	19.0
Property, Plant & Equip, at cost	398.6	436.8	--
Accum Depreciation	64.7	70.5	--
Net Property	333.9	366.3	371.5
Other	41.4	53.1	52.9
Total Assets	392.7	440.0	443.4
LIABILITIES ($mill.)			
Accts Payable	6.5	5.7	5.0
Debt Due	9.0	43.9	40.3
Other	11.5	11.9	12.7
Current Liab	27.0	61.5	58.0

LONG-TERM DEBT AND EQUITY as of 3/31/09

Total Debt $184.7 mill. Due in 5 Yrs. NA
LT Debt $124.4 mill. Including Cap. Leases NA (47% of Cap'l)
Leases, Uncapitalized Annual rentals NA

Pension Liability $25.5 mill. in '08 vs. $13.3 mill. in '07

Pfd Stock None Pfd Div'd Paid None

Common Stock 13,425,000 shares (53% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey (NJ) and Delaware, and a regulated wastewater utility in NJ. It offers contract operations services and a service line maintenance program through its nonregulated subsidiary, Utility Service Affiliates, Inc. Its water utility system treats, stores, and distributes water for residential, commercial, industrial, and fire prevention purposes. It also provides water treatment and pumping services to the Township of East Brunswick. Its other NJ subsidiaries offer water and wastewater services to residents in Southampton Township. Its Delaware subsidiaries provide water services to retail customers in New Castle, Kent, and Sussex counties. In July, it was approved to implement a Purchased Water Adjustment Clause, which is a pass-through charge that enables the company to recover the increased unit cost of raw or finished water purchased from external sources. Has 269 employees. Chairman: J. Richard Tompkins. Address: 1500 Ronson Rd, P.O. BOX 1500, Iselin, NJ 08830. Tel.: 732-634-1500. Internet: http://www.middlesexwater.com. *M.W.*

July 24, 2009

TOTAL SHAREHOLDER RETURN
Dividends plus appreciation as of 6/30/2009

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
1.69%	-14.10%	-8.68%	-14.84%	-10.85%

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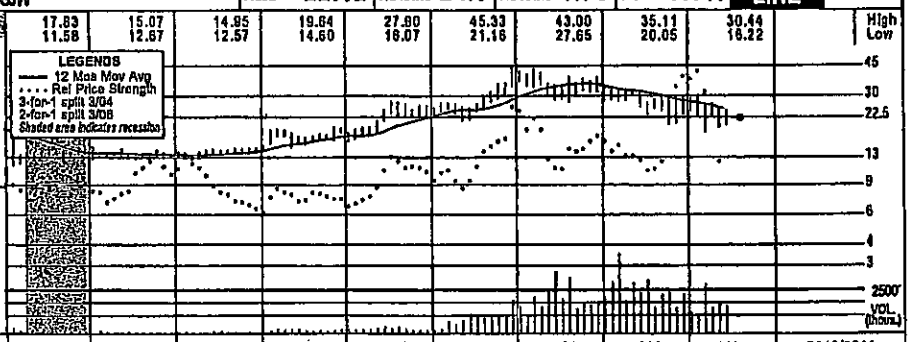
SJW CORP. NYSE-SJW

RECENT PRICE 22.12 | TRAILING P/E RATIO 24.0 | RELATIVE P/E RATIO 1.75 | DIV'D YLD 3.0% | VALUE LINE

RANKS

PERFORMANCE 4 Below Average
Technical 4 Below Average
SAFETY 3 Average
BETA 1.00 (1.00 = Market)

Financial Strength B+
Price Stability 65
Price Growth Persistence 75
Earnings Predictability 90



© VALUE LINE PUBLISHING, INC.	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010/2011
SALES PER SH	7.45	7.97	8.20	9.14	9.65	10.35	11.25	12.12	--	
"CASH FLOW" PER SH	1.49	1.55	1.75	1.89	2.21	2.36	2.30	2.44	--	
EARNINGS PER SH	.77	.78	.91	.87	1.12	1.19	1.04	1.08	.99[A,B]	1.31[C]/NA
DIV'DS DECL'D PER SH	.43	.46	.48	.51	.53	.57	.61	.65	--	
CAP'L SPENDING PER SH	2.63	2.08	3.41	2.31	2.83	3.87	6.62	3.79	--	
BOOK VALUE PER SH	8.17	8.40	9.11	10.11	10.72	12.48	12.80	13.99	--	
COMMON SHS OUTST'G (MILL)	16.27	16.27	16.27	16.27	16.27	16.28	16.36	16.16	--	
AVG ANN'L P/E RATIO	18.5	17.3	15.4	19.8	19.7	23.5	33.4	26.2	22.3	16.9/NA
RELATIVE P/E RATIO	.95	.94	.88	1.04	1.04	1.27	1.77	1.58	--	
AVG ANN'L DIV'D YIELD	3.0%	3.4%	3.5%	3.0%	2.4%	2.0%	1.7%	2.3%	--	
SALES ($MILL)	138.1	145.7	149.7	168.9	180.1	189.2	206.6	220.3	--	
OPERATING MARGIN	64.4%	63.7%	66.0%	66.4%	66.8%	57.0%	41.8%	42.4%	--	
DEPRECIATION ($MILL)	13.2	14.0	15.2	16.5	19.7	21.3	22.9	24.0	--	
NET PROFIT ($MILL)	14.0	14.2	16.7	16.0	20.7	22.2	19.3	20.2	--	
INCOME TAX RATE	34.5%	40.4%	36.2%	42.1%	41.6%	40.8%	39.4%	39.5%	--	
NET PROFIT MARGIN	10.3%	9.8%	11.2%	9.6%	11.5%	11.7%	9.4%	9.2%	--	
WORKING CAP'L ($MILL)	d3.8	d4.9	12.0	13.0	10.8	22.2	d1.4	d11.3	--	
LONG-TERM DEBT ($MILL)	110.0	110.0	139.8	143.6	146.3	163.6	216.3	216.8	--	
SHR. EQUITY ($MILL)	149.4	153.6	166.4	184.7	195.9	226.2	238.9	254.3	--	
RETURN ON TOTAL CAP'L	6.7%	6.9%	6.9%	6.5%	7.6%	7.0%	5.7%	6.8%	--	
RETURN ON SHR. EQUITY	9.4%	9.3%	10.0%	8.7%	10.6%	9.7%	8.2%	8.0%	--	
RETAINED TO COM EQ	4.1%	3.8%	4.7%	3.6%	5.6%	5.2%	3.5%	3.3%	--	
ALL DIV'DS TO NET PROF	56%	59%	53%	58%	47%	46%	57%	59%	--	

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

[A]No. of analysts changing earn. est. in last 11 days: 0 up, 0 down, consensus 5-year earnings growth 10.0% per year. [B]Based upon 2 analysts' estimates. [C]Based upon 2 analysts' estimates.

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Sales	7.5%	7.5%
"Cash Flow"	8.5%	8.0%
Earnings	6.0%	4.0%
Dividends	5.5%	6.6%
Book Value	9.0%	8.5%

Fiscal Year	QUARTERLY SALES ($mill.) 1Q	2Q	3Q	4Q	Full Year
12/31/07	39.0	55.1	64.9	47.6	206.6
12/31/08	41.3	60.0	69.5	49.5	220.3
12/31/09	40.0				
12/31/10					

Fiscal Year	EARNINGS PER SHARE 1Q	2Q	3Q	4Q	Full Year
12/31/06	.14	.35	.48	.22	1.19
12/31/07	.12	.29	.43	.20	1.04
12/31/08	.15	.34	.44	.15	1.08
12/31/09	d.01	.36	.44	.18	
12/31/10					

Cal-endar	QUARTERLY DIVIDENDS PAID 1Q	2Q	3Q	4Q	Full Year
2006	.141	.141	.141	.141	.56
2007	.151	.151	.151	.151	.60
2008	.161	.161	.161	.161	.64
2009	.165	.165			

INSTITUTIONAL DECISIONS

	3Q'08	4Q'08	1Q'09
to Buy	35	34	45
to Sell	38	39	32
Hld's(000)	8389	8286	8505

ASSETS ($mill.)	2007	2008	3/31/09
Cash Assets	2.4	3.4	2.4
Receivables	23.0	24.5	21.7
Inventory	.8	.9	1.0
Other	5.4	3.2	4.3
Current Assets	31.6	32.0	29.4
Property, Plant & Equip, at cost	904.3	958.7	--
Accum Depreciation	258.8	274.5	--
Net Property	645.5	684.2	699.6
Other	90.2	134.7	125.4
Total Assets	767.3	850.9	854.4
LIABILITIES ($mill.)			
Accts Payable	9.3	5.8	7.7
Debt Due	5.8	19.1	17.4
Other	18.1	18.4	15.6
Current Liab	33.0	43.3	40.7

LONG-TERM DEBT AND EQUITY as of 3/31/09

Total Debt $243.8 mill. Due in 5 Yrs. NA
LT Debt $228.4 mill.
Including Cap. Leases NA (48% of Cap'l)

Leases, Uncapitalized Annual rentals NA

Pension Liability $42.3 mill. in '08 vs. $23.4 mill. in '07

Pfd Stock None Pfd Div'd Paid None

Common Stock 16,475,697 shares (52% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: SJW Corporation, through its subsidiaries, engages in the production, purchase, storage, purification, distribution, and retail sale of water. The company offers nonregulated water-related services, including water system operations, cash remittances, and maintenance contract services. SJW also owns undeveloped land; a 70% limited partnership interest in 444 West Santa Clara Street, L.P.; and operates commercial buildings in Arizona, California, Connecticut, Florida, Tennessee, and Texas. As of December 31, 2008, SJW provided water service to approximately 226,000 connections that served a population of approximately one million people in the San Jose area. It also provides water service to approximately 8,700 connections that serve approximately 36,000 residents in a service area in the region between San Antonio and Austin, Texas. Has 379 employees. Chairman: Charles J. Toeniskoetter. Inc.: CA. Address: 110 W. Taylor Street, San Jose, CA 95110. Tel.: (408) 279-7800. Internet: http://www.sjwater.com.

M.W.

July 24, 2009

TOTAL SHAREHOLDER RETURN

Dividends plus appreciation as of 6/30/2009

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
-10.04%	-23.14%	-11.75%	-4.83%	50.09%

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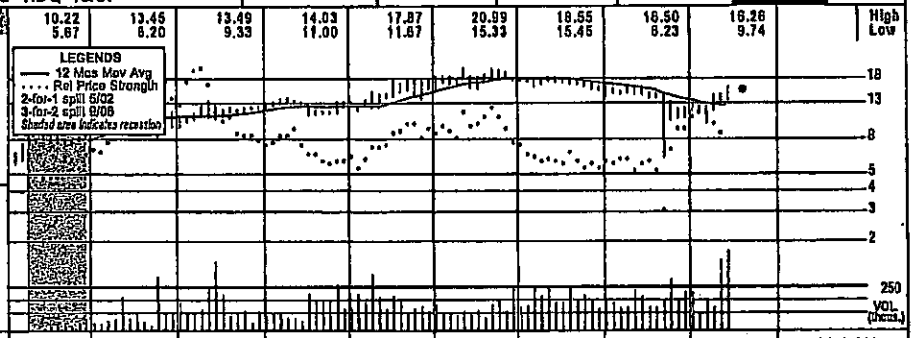
YORK WATER CO NDQ-YORW

RECENT PRICE 15.62 | TRAILING P/E RATIO 26.5 | RELATIVE P/E RATIO 1.92 | DIV'D YLD 3.2% | VALUE LINE

RANKS

PERFORMANCE 3 Average
Technical 3 Average
SAFETY 3 Average
BETA .65 (1.00 = Market)

Financial Strength B+
Price Stability 80
Price Growth Persistence 65
Earnings Predictability 95



© VALUE LINE PUBLISHING, INC.	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010/2011
REVENUES PER SH	2.05	2.05	2.17	2.18	2.58	2.56	2.79	2.89	–	
"CASH FLOW" PER SH	.59	.57	.65	.65	.79	.77	.86	.88	–	
EARNINGS PER SH	.43	.40	.47	.49	.59	.58	.57	.57	.66[A,B]	.68[C]/NA
DIV'D DECL'D PER SH	.34	.36	.37	.39	.42	.46	.48	.49	–	
CAP'L SPENDING PER SH	.75	.66	1.07	2.50	1.69	1.85	1.69	2.17	–	
BOOK VALUE PER SH	3.79	3.90	4.08	4.65	4.85	5.84	5.97	6.14	–	
COMMON SHS OUTST'G (MILL)	9.46	9.55	9.63	10.33	10.40	11.20	11.27	11.37	–	
AVG ANN'L P/E RATIO	17.9	26.9	24.5	25.7	26.3	31.2	30.3	24.6	23.7	23.0/NA
RELATIVE P/E RATIO	.92	1.47	1.40	1.36	1.39	1.68	1.61	1.48	–	
AVG ANN'L DIV'D YIELD	4.3%	3.3%	3.2%	3.1%	2.9%	2.5%	2.8%	3.5%	–	
REVENUES ($MILL)	19.4	19.6	20.9	22.6	26.8	28.7	31.4	32.8	–	
NET PROFIT ($MILL)	4.0	3.8	4.4	4.8	6.8	6.1	6.4	6.4	–	
INCOME TAX RATE	35.6%	34.8%	34.8%	36.7%	36.7%	34.4%	36.5%	36.1%	–	
AFUDC % TO NET PROFIT	2.2%	3.7%	–	–	–	7.2%	3.6%	10.1%	–	
LONG-TERM DEBT RATIO	47.7%	46.7%	43.4%	42.5%	44.1%	46.3%	46.5%	54.5%	–	
COMMON EQUITY RATIO	52.3%	53.3%	56.6%	57.5%	55.9%	51.7%	53.5%	45.5%	–	
TOTAL CAPITAL ($MILL)	66.6	69.9	69.0	83.6	90.3	126.5	125.7	153.4	–	
NET PLANT ($MILL)	102.3	106.7	116.5	140.0	155.3	174.4	191.6	211.4	–	
RETURN ON TOTAL CAP'L	7.9%	7.4%	8.5%	7.8%	8.4%	6.2%	6.7%	6.7%	–	
RETURN ON SHR. EQUITY	11.2%	10.2%	11.4%	10.0%	11.6%	9.3%	9.5%	9.2%	–	
RETURN ON COM EQUITY	11.2%	10.2%	11.4%	10.0%	11.6%	9.3%	9.5%	9.2%	–	
RETAINED TO COM EQ	2.5%	1.3%	2.6%	2.1%	3.0%	2.2%	1.7%	1.4%	–	
ALL DIV'DS TO NET PROF	78%	88%	77%	79%	74%	77%	82%	85%	–	

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

[A] No. of analysts changing earn. est. in last 11 days: 0 up, 0 down, consensus 5-year earnings growth 5.0% per year. [B] Based upon 4 analysts' estimates. [C] Based upon 4 analysts' estimates.

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Revenues	5.5%	3.5%
"Cash Flow"	7.0%	3.5%
Earnings	6.0%	–
Dividends	6.0%	3.0%
Book Value	9.0%	3.0%

Fiscal Year	QUARTERLY SALES ($mill.) 1Q	2Q	3Q	4Q	Full Year
12/31/07	7.4	7.9	8.3	7.8	31.4
12/31/08	7.5	7.8	8.6	8.9	32.8
12/31/09	8.8				
12/31/10					

Fiscal Year	EARNINGS PER SHARE 1Q	2Q	3Q	4Q	Full Year
12/31/06	.12	.14	.17	.15	.58
12/31/07	.12	.15	.15	.15	.57
12/31/08	.11	.13	.15	.18	.57
12/31/09	.13	.16	.19	.18	
12/31/10					

Cal-endar	QUARTERLY DIVIDENDS PAID 1Q	2Q	3Q	4Q	Full Year
2006	.112	.112	.112	.112	.45
2007	.118	.118	.118	.118	.47
2008	.121	.121	.121	.121	.48
2009	.126	.126	.126		

INSTITUTIONAL DECISIONS

	3Q'08	4Q'08	1Q'09
to Buy	19	15	17
to Sell	12	8	10
Hld's(000)	1974	1979	1958

ASSETS ($mill.)	2007	2008	3/31/09
Cash Assets	.0	.0	.0
Receivables	5.2	5.9	5.6
Inventory (Avg cost)	.8	.7	.8
Other	.8	.7	.9
Current Assets	6.8	7.3	7.3
Property, Plant & Equip. at cost	223.1	246.0	--
Accum Depreciation	31.5	34.8	--
Net Property	191.6	211.4	216.1
Other	12.8	21.7	22.0
Total Assets	211.0	240.4	245.4
LIABILITIES ($mill.)			
Accts Payable	3.2	2.0	2.4
Debt Due	15.0	8.7	2.7
Other	3.2	3.5	4.1
Current Liab	21.4	14.2	9.2

LONG-TERM DEBT AND EQUITY as of 3/31/09

Total Debt $94.5 mill. Due in 5 Yrs. NA
LT Debt $91.8 mill.
Including Cap. Leases NA (57% of Cap'l)

Leases, Uncapitalized Annual rentals NA

Pension Liability $9.8 mill. in '08 vs. $4.0 mill. in '07

Pfd Stock None Pfd Div'd Paid None

Common Stock 11,407,184 shares (43% 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. The company supplies water for residential, commercial, industrial, and other customers. It has two reservoirs, Lake Williams, which is 700 feet long and 58 feet high, and creates a reservoir covering approximately 165 acres containing about 870 million gallons of water; and Lake Redman, which is 1,000 feet long and 52 feet high and creates a reservoir covering approximately 290 acres containing about 1.3 billion gallons of water. The company also has a 15-mile pipeline from the Susquehanna River to Lake Redman that provides access to an additional supply of water. As of December 31, 2008, the company served approximately 176,000 residential, commercial, industrial, and other customers in 39 municipalities in York County and seven municipalities in Adams County. As of June 29, it was added to the broad-market Russell 3000 Index. Has 110 employees. C.E.O. & President: Jeffrey R. Hines. Inc.: PA. Address: 130 East Market Street, York, PA 17401. Tel.: (717) 845-3601. Internet: http://www.yorkwater.com. *M.W.*

July 24, 2009

TOTAL SHAREHOLDER RETURN
Dividends plus appreciation as of 6/30/2009

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
25.09%	29.15%	9.33%	5.77%	45.02%

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AGL RESOURCES NYSE-AGL

RECENT PRICE 33.35 | P/E RATIO 13.1 (Trailings: 10.9 / Medians: 14.0) | RELATIVE P/E RATIO 0.81 | DIV'D YLD 5.2% | VALUE LINE

TIMELINESS 3 Lowered 6/12/09
SAFETY 2 New 7/12/13
TECHNICAL 5 Lowered 9/11/09
BETA .75 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+65%)	17%
Low	40	(+20%)	10%

Insider Decisions

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

Institutional Decisions

	4Q2008	1Q2009	2Q2009
to Buy	107	110	124
to Sell	111	107	96
Hld's(000)	46113	45714	45662

LEGENDS
— 1.25 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area: prior recession
Latest recession began 12/07

Target Price Range 2012 | 2013 | 2014

% TOT. RETURN 8/09

	THIS STOCK	VL ARITH. INDEX
1 yr.	7.4	-4.4
3 yr.	6.4	0.4
5 yr.	37.2	32.3

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	© VALUE LINE PUB., INC.	12-14
	22.73	23.59	19.32	21.91	22.75	23.38	18.71	11.25	19.04	15.32	15.25	23.69	34.68	33.73	32.64	36.41	32.20	34.50	Revenues per sh A	39.80
	2.25	2.24	2.33	2.49	2.42	2.65	2.29	2.86	3.31	3.39	3.47	3.29	4.20	4.50	4.65	4.58	4.70	4.95	"Cash Flow" per sh	5.40
	1.08	1.17	1.33	1.37	1.37	1.41	.91	1.29	1.50	1.62	2.08	2.28	2.48	2.72	2.72	2.71	2.70	2.90	Earnings per sh A B	3.30
	1.04	1.04	1.04	1.06	1.08	1.08	1.08	1.08	1.08	1.08	1.11	1.15	1.30	1.48	1.64	1.68	1.72	1.76	Div'ds Decl'd per sh C=	1.88
	2.49	2.37	2.17	2.37	2.59	2.05	2.51	2.92	2.83	3.30	2.46	3.44	3.44	3.26	3.39	4.84	5.15	5.30	Cap'l Spending per sh	5.60
	9.90	10.19	10.12	10.55	10.89	11.42	11.59	11.50	12.19	12.52	14.66	16.05	19.29	20.71	21.74	21.48	23.10	23.40	Book Value per sh D	23.55
	49.72	50.86	55.02	55.70	56.60	57.30	57.10	54.00	55.10	56.70	64.50	76.70	77.70	77.70	76.40	76.50	78.00	79.00	Common Shs Outst'g E	85.00
	17.9	15.1	12.6	13.8	14.7	13.9	21.4	13.6	14.6	12.5	12.5	13.1	14.3	13.5	14.7	12.3	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	15.0
	1.08	.99	.84	.86	.85	.72	1.22	.88	.75	.68	.71	.69	.76	.73	.78	.74			Relative P/E Ratio	1.00
	6.4%	5.9%	6.2%	5.6%	6.4%	5.6%	5.6%	6.2%	4.9%	4.7%	4.3%	3.9%	3.7%	4.0%	4.1%	5.0%			Avg Ann'l Div'd Yield	3.8%
							1068.6	607.4	1049.3	868.9	983.7	1632.0	2718.0	2621.0	2494.0	2800.0	2510	2725	Revenues ($mill) A	3300
							52.1	71.1	82.3	103.0	132.4	153.0	193.0	212.0	211.0	207.6	155	160	Net Profit ($mill)	180
							33.1%	34.3%	40.7%	36.0%	35.9%	37.0%	37.7%	37.8%	37.6%	40.5%	35.0%	38.0%	Income Tax Rate	38.0%
							4.9%	11.7%	7.8%	11.9%	13.5%	8.4%	7.1%	8.1%	8.5%	7.4%	6.4%	6.4%	Net Profit Margin	6.5%
							45.3%	45.9%	61.3%	58.3%	60.3%	54.0%	51.9%	50.2%	50.2%	50.3%	49.0%	45.0%	Long-Term Debt Ratio	43.0%
							49.2%	48.3%	38.7%	41.7%	39.7%	46.0%	48.1%	49.8%	49.8%	49.7%	52.0%	55.0%	Common Equity Ratio	57.0%
							1345.8	1286.2	1736.3	1704.9	1901.4	3009.0	3114.0	3231.0	3335.0	3327.0	3475	3350	Total Capital ($mill)	3500
							1598.9	1637.5	2056.9	2194.2	2352.4	3178.0	3271.0	3436.0	3568.0	3816.0	4000	4150	Net Plant ($mill)	4400
							6.7%	7.4%	6.5%	8.1%	6.9%	6.3%	7.9%	8.0%	7.7%	7.4%	7.5%	8.0%	Return on Total Cap'l	9.0%
							7.1%	10.2%	12.3%	14.5%	14.0%	11.0%	12.9%	13.2%	12.7%	12.6%	11.5%	12.5%	Return on Shr. Equity	14.0%
							7.9%	11.5%	12.3%	14.5%	14.0%	11.0%	12.9%	13.2%	12.7%	12.6%	11.5%	12.5%	Return on Com Equity	14.0%
							NMF	3.2%	4.2%	7.0%	6.6%	5.6%	6.2%	6.3%	5.9%	5.1%	4.0%	5.0%	Retained to Com Eq	6.0%
							101%	72%	65%	52%	53%	49%	52%	52%	56%	60%	64%	60%	All Div'ds to Net Prof	57%

CAPITAL STRUCTURE as of 6/30/09
Total Debt $2093.0 mill. Due in 5 Yrs $962.0 mill.
LT Debt $1675.0 mill. LT Interest $90.0 mill.
(Total interest coverage: 3.8x)

Leases, Uncapitalized Annual rentals $30.0 mill.
Pension Assets-12/08 $242.0 mill.
Oblig. $442.0 mill.

Pfd Stock None

Common Stock 77,276,942 shs.
as of 7/24/09
MARKET CAP: $2.6 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2007	2008	6/30/09
Cash Assets	21.0	16.0	12.0
Other	1790.0	2026.0	1304.0
Current Assets	1811.0	2042.0	1316.0
Accts Payable	172.0	202.0	167.0
Debt Due	580.0	866.0	419.0
Other	893.0	915.0	696.0
Current Liab.	1645.0	1983.0	1281.0
Fix. Chg. Cov.	391%	416%	527%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'08 to '12-'14
Revenues	4.0%	15.5%	2.0%
"Cash Flow"	6.0%	6.5%	2.5%
Earnings	7.0%	8.5%	3.5%
Dividends	4.0%	8.0%	2.5%
Book Value	7.0%	10.0%	1.5%

Calendar	QUARTERLY REVENUES ($ mill) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	1044	436	434	707	2621
2007	973	467	369	685	2494
2008	1012	444	539	805	2800
2009	895	377	440	698	2510
2010	1020	450	480	775	2725

Calendar	EARNINGS PER SHARE B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	1.41	.25	.46	.60	2.72
2007	1.29	.40	.17	.66	2.72
2008	1.16	.30	.28	.97	2.71
2009	1.55	.26	.20	.69	2.70
2010	1.40	.30	.30	.90	2.90

Calendar	QUARTERLY DIVIDENDS PAID C= Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.31	.31	.31	.37	1.30
2006	.37	.37	.37	.37	1.48
2007	.41	.41	.41	.41	1.64
2008	.42	.42	.42	.42	1.68
2009	.43	.43	.43		

BUSINESS: AGL Resources Inc. is a public utility holding company. Its distribution subsidiaries include Atlanta Gas Light, Chattanooga Gas, Elizabethtown Gas and Virginia Natural Gas. The utilities have more than 2.2 million customers in Georgia, Virginia, Tennessee, New Jersey, Florida, and Maryland. Engaged in nonregulated natural gas marketing and other allied services. Deregulated subsidiaries: Georgia Natural Gas markets natural gas at retail. Sold Utilipro, 3/01. Acquired Compass Energy Services, 10/07. Franklin Resources owns 7.7% of common stock; off./dir., less than 1.0% (3/09 Proxy). Pres. & CEO: John W. Somerhalder II. Inc.: GA. Addr.: Ten Peachtree Place N.E., Atlanta, GA 30309. Telephone: 404-584-4000. Internet: www.aglresources.com.

We do not expect 2009 to be a banner year for AGL Resources. The company reported healthy results in the first quarter. However, performance was less favorable in the recent interim. The Wholesale services business posted an operating loss of $11 million, while the Retail Energy Operations and Energy Investments units reported lower earnings. On the bright side, the Distribution Operations business posted moderate growth in operating earnings. This was primarily due to higher fees to marketers in Georgia for the storage of natural gas inventory and greater pipeline replacement revenues at Atlanta Gas Light. Overall, revenues and share earnings declined in the June period. Looking forward, comparisons will likely also prove unfavorable for the second half of the year. Thus, we anticipate lower revenues and relatively flat share earnings for full-year 2009.

Subsidiary Atlanta Gas Light has announced a system infrastructure investment project. This $400 million program will be completed over a 10-year period. Infrastructure improvements include upgrading the utility's distribution system and its liquefied natural gas facilities. This project will improve system reliability, increase operational flexibility, and allow Atlanta Gas Light to meet its forecasted growth objectives.

Elizabethtown Gas has modified its rate case filing. It had originally requested a $25 million rate hike, but has since lowered this amount to $17 million. The proposed increase would become effective at the beginning of 2010. Meanwhile, Atlanta Gas Light has requested to postpone a rate case filing, which had originally been scheduled for November 1st of this year. However, it does plan to file sometime after that (June 1, 2010 at the latest). Virginia Natural Gas and Chattanooga Gas also intend to file rate cases in 2010.

We anticipate higher revenues and share earnings at the company by 2012-2014, on better operating conditions. Moreover, AGL has a healthy dividend yield and earns high marks for Safety, Price Stability, and Earnings Predictability. **From the present quotation, this issue features decent risk-adjusted total return potential.**

Michael Napoli, CPA *September 11, 2009*

(A) Fiscal year ends December 31st. Ended September 30th prior to 2002.
(B) Diluted earnings per share. Excl. nonrecurring gains (losses): '05, ($0.83); '99, $0.39; '00, $0.13; '01, $0.13; '03, ($0.07); '08, $0.13. Next earnings report due late October. (C) Dividends historically paid early March, June, Sept., and Dec. ■ Div'd reinvest. plan available. (D) Includes intangibles. In 2008: $418 million, $5.44/share. (E) In millions.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	75
Earnings Predictability	90

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ATMOS ENERGY CORP. NYSE-ATO

RECENT PRICE 27.06 | P/E RATIO 12.1 (Trailing: 11.9 / Median: 16.0) | RELATIVE P/E RATIO 0.75 | DIV'D YLD 5.0% | VALUE LINE

TIMELINESS 3 Lowered 9/11/09
SAFETY 2 Raised 12/15/06
TECHNICAL 4 Lowered 9/4/09
BETA .65 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	40	(+50%)	14%
Low	30	(+10%)	7%

Insider Decisions

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

Institutional Decisions

	4Q2008	1Q2009	2Q2009
to Buy	141	103	107
to Sell	103	122	115
Hld's(000)	53878	53874	54205

High: 32.3 33.0 26.3 25.8 24.5 25.6 27.6 30.0 33.1 33.6 29.3 28.6
Low: 24.8 19.6 14.3 19.5 17.6 20.8 23.4 25.0 25.5 23.9 19.7 20.1

LEGENDS
1.00 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded area: prior recession
Latest recession began 12/07

Percent shares traded 12 8 4

Target Price Range 2012 | 2013 | 2014

% TOT. RETURN 8/09

	THIS STOCK	VS. ARITH. INDEX
1 yr.	4.3	-4.4
3 yr.	8.1	0.4
5 yr.	35.1	32.3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	© VALUE LINE PUB., INC.	12-14
	22.09	28.61	35.38	22.82	54.39	48.50	61.75	75.27	66.03	79.52	54.25	58.45	Revenues per sh A	88.35
	2.62	3.01	3.03	3.39	3.23	2.91	3.90	4.26	4.14	4.19	4.40	4.55	"Cash Flow" per sh	4.80
	.81	1.03	1.47	1.45	1.71	1.56	1.72	2.00	1.94	2.00	2.10	2.20	Earnings per sh A B	2.50
	1.10	1.14	1.16	1.18	1.20	1.22	1.24	1.26	1.28	1.30	1.32	1.34	Div'ds Decl'd per sh C=	1.40
	3.53	2.36	2.77	3.17	3.10	3.03	4.14	5.20	4.39	5.20	5.50	5.75	Cap'l Spending per sh	6.50
	12.09	12.28	14.31	13.75	16.68	18.05	19.80	20.16	22.01	22.60	24.10	24.40	Book Value per sh	28.90
	31.25	31.85	40.79	41.68	51.48	62.80	80.54	81.74	89.33	90.81	92.50	93.50	Common Shs Outst'g D	110.00
	33.0	18.9	15.6	15.2	13.4	15.9	18.1	13.5	15.9	13.8	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	14.0
	1.88	1.23	.80	.83	.78	.84	.86	.73	.84	.84			Relative P/E Ratio	.95
	4.1%	5.9%	5.1%	5.4%	5.2%	4.9%	4.5%	4.7%	4.2%	4.6%			Avg Ann'l Div'd Yield	4.0%
	690.2	650.2	1442.3	950.6	2799.9	2920.0	4973.3	6152.4	5898.4	7221.3	5020	6400	Revenues ($mill) A	9500
	25.0	32.2	58.1	59.7	79.6	86.2	135.8	182.3	170.5	180.3	195	205	Net Profit ($mill)	275
	35.0%	36.1%	37.3%	37.1%	37.1%	37.4%	37.7%	37.6%	35.6%	38.4%	35.0%	37.0%	Income Tax Rate	40.5%
	3.6%	3.8%	3.9%	6.3%	2.8%	3.0%	2.7%	2.6%	2.9%	2.5%	3.9%	3.2%	Net Profit Margin	3.0%
	50.0%	48.1%	54.3%	53.9%	50.2%	43.2%	57.7%	57.0%	52.0%	50.8%	50.0%	50.5%	Long-Term Debt Ratio	49.0%
	50.0%	51.5%	45.7%	46.1%	49.8%	56.8%	42.3%	43.0%	48.0%	49.2%	50.0%	49.5%	Common Equity Ratio	51.0%
	755.1	755.7	1276.3	1243.7	1721.4	1994.8	3785.5	3828.5	4092.1	4172.3	4430	4580	Total Capital ($mill)	5800
	965.8	982.3	1335.4	1300.3	1516.0	1722.5	3374.4	3629.2	3838.8	4136.9	4365	4575	Net Plant ($mill)	5850
	5.1%	6.5%	6.9%	6.8%	6.2%	5.6%	5.3%	6.1%	6.0%	6.0%	6.0%	6.0%	Return on Total Cap'l	6.0%
	6.5%	8.2%	9.6%	10.4%	9.3%	7.6%	8.5%	9.8%	8.7%	8.8%	9.0%	9.0%	Return on Shr. Equity	9.5%
	6.6%	8.2%	9.6%	10.4%	9.3%	7.6%	8.5%	9.8%	8.7%	8.8%	9.0%	9.0%	Return on Com Equity	9.5%
	NMF	NMF	2.1%	1.9%	2.8%	1.7%	2.3%	3.6%	3.0%	3.1%	3.5%	3.5%	Retained to Com Eq	4.0%
	NMF	112%	79%	82%	70%	77%	73%	63%	65%	65%	63%	61%	All Div'ds to Net Prof	55%

Atmos Energy's history dates back to 1906 in the Texas Panhandle. Over the years, through various mergers, it became part of Pioneer Corporation, and, in 1981, Pioneer named its gas distribution division Energas. In 1983, Pioneer organized Energas as a separate subsidiary and distributed the outstanding shares of Energas to Pioneer shareholders. Energas changed its name to Atmos in 1988. Atmos acquired Trans Louisiana Gas in 1986, Western Kentucky Gas Utility in 1987, Greeley Gas in 1993, United Cities Gas in 1997, and others.

CAPITAL STRUCTURE as of 6/30/09
Total Debt $2168.5 mill. Due in 5 Yrs $1350.0 mill.
LT Debt $2169.4 mill. LT Interest $115.0 mill.
(LT Interest earned: 2.9x; total interest coverage: 2.8x)
Leases, Uncapitalized Annual rentals $18.4 mill.
Pfd Stock None
Pension Assets-9/08 $341.4 mill.
Oblig. $337.6 mill.
Common Stock 92,272,478 shs.
as of 7/31/09
MARKET CAP: $2.5 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2007	2008	6/30/09
Cash Assets	60.7	48.7	125.7
Other	1008.2	1238.4	670.3
Current Assets	1068.9	1285.1	796.0
Accts Payable	355.3	395.4	222.0
Debt Due	154.4	361.3	.1
Other	410.0	460.4	422.2
Current Liab.	919.7	1207.1	644.3
Fix. Chg. Cov.	405%	450%	446%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'08 to '12-'14
Revenues	9.5%	14.5%	3.0%
"Cash Flow"	3.5%	5.5%	2.5%
Earnings	2.5%	5.0%	4.0%
Dividends	2.5%	1.5%	1.5%
Book Value	6.5%	7.5%	4.0%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2006	2283.8	2033.8	863.2	971.6	6152.4
2007	1602.6	2075.6	1218.2	1002.0	5898.4
2008	1657.5	2484.0	1639.1	1440.7	7221.3
2009	1716.3	1821.4	780.8	701.5	5020
2010	1465	2435	1345	1155	6400

Fiscal Year Ends	EARNINGS PER SHARE A B E Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2006	.88	1.10	d.22	.25	2.00
2007	.97	1.20	d.15	d.05	1.94
2008	.82	1.24	d.07	.02	2.00
2009	.83	1.29	.02	d.04	2.10
2010	.90	1.35	d.04	d.01	2.20

Calendar	QUARTERLY DIVIDENDS PAID C= Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.31	.31	.31	.315	1.25
2006	.315	.315	.315	.32	1.27
2007	.32	.32	.32	.325	1.29
2008	.325	.325	.325	.33	1.31
2009	.33	.33	.33		

BUSINESS: Atmos Energy Corporation is engaged primarily in the distribution and sale of natural gas to 3.2 million customers via six regulated natural gas utility operations: Louisiana Division, West Texas Division, Mid-Tex Division, Mississippi Division, Colorado-Kansas Division, and Kentucky/Mid-States Division. Combined 2008 gas volumes: 283 MMcf. Breakdown: 56%, residential; 32%, commercial; 7%, industrial; and 5% other. 2008 depreciation rate 3.5%. Has around 4,560 employees. Officers and directors own approximately 1.9% of common stock (12/08 Proxy). Chairman and Chief Executive Officer: Robert W. Best. Incorporated: Texas. Address: P.O. Box 650205, Dallas, Texas 75265. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

Atmos Energy's core natural gas utility has generated healthy earnings of late. That is largely because of an increase in rates, primarily for the Mid-Tex, Louisiana, and West Texas divisions. But throughput is being constrained some by diminished consumption from residential and commercial customers (reflecting difficult economic conditions).

The pipeline and storage, and regulated transmission and storage units are performing nicely, as well. The former segment is enjoying expanded margins arising from gains from the settlement of financial positions associated with storage and trading activities. Meanwhile, results for the regulated transmission and storage operation are being boosted by higher transportation fees on through-system deliveries, due to favorable market conditions.

It appears that consolidated share net will advance around 5%, to $2.10, in fiscal 2009 (which ends September 30th). Assuming further expansion in operating margins, the bottom line may increase at a similar rate, to $2.20 a share, the following fiscal year.

Finances are in order. An acquisition caused a mid-decade rise in the debt ratio. But the company has whittled that figure back to normal, if at the cost of some dilution from stock issuances. A reduced level of uncollectible accounts, owing to lower gas prices, is another plus these days.

We believe that more steady, though unexciting, profit growth is in store for the company over the next 3 to 5 years. The utility is one of the country's biggest natural gas-only distributors, currently serving customers across 12 states. What is more, the unregulated segments, especially pipelines, possess healthy overall prospects. Excluding future acquisitions, annual share-net gains may be in the mid-single-digit range over 2012-2014.

On a risk-adjusted basis, these good-quality shares offer decent total return potential. The dividend yield is appealing, compared to others in the *Value Line* Natural Gas Utility universe. Future hikes in the payout, though likely to be gradual, as in previous years, should be well covered by earnings. Meanwhile, the stock is ranked 3 (Average) for Timeliness.

Frederick L. Harris, III September 11, 2009

(A) Fiscal year ends Sept. 30th. (B) Diluted shrs. Excl. nonrec. items: '99, d23¢; '00, 12¢; '03, d17¢; '05, d18¢; '07, d2¢; Q2 '09, 12¢. Next egs. rpt. due early Nov. (C) Dividends historically paid in early March, June, Sept., and Dec. ■ Div. reinvestment plan. Direct stock purchase plan avail. (D) In millions. (E) Qtrs may not add due to change in shrs outstanding.

Company's Financial Strength	B+
Stock's Price Stability	100
Price Growth Persistence	50
Earnings Predictability	85

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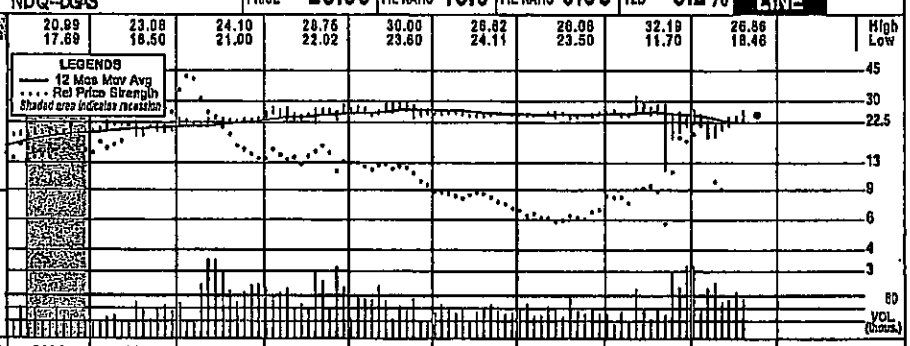
DELTA NAT. GAS NDQ-DGAS

RECENT PRICE 25.00 | TRAILING P/E RATIO 15.0 | RELATIVE P/E RATIO 0.96 | DIV'D YLD 5.2% | VALUE LINE

TIMELINESS RANKS

PERFORMANCE 4 Below Average
Technical 4 Below Average
SAFETY 2 Above Average
BETA .55 (1.00 = Market)

Financial Strength B+
Price Stability 85
Price Growth Persistence 55
Earnings Predictability 70



© VALUE LINE PUBLISHING, INC.	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010/2011
SALES PER SH	28.36	22.11	21.59	24.74	26.06	38.01	29.96	34.16	--	
"CASH FLOW" PER SH	3.08	3.16	2.85	2.65	2.86	2.94	3.19	3.49	--	
EARNINGS PER SH	1.47	1.45	1.49	1.20	1.55	1.55	1.62	2.08	1.65[A,B]	1.60[C]/NA
DIV'DS DECL'D PER SH	1.14	1.16	1.18	1.18	1.18	1.20	1.22	1.24	--	
CAP'L SPENDING PER SH	2.83	3.72	2.90	2.80	1.65	2.39	2.47	1.69	--	
BOOK VALUE PER SH	13.12	13.51	14.49	16.26	15.73	16.18	16.61	17.48	--	
COMMON SHS OUTST'G (MILL)	2.50	2.53	3.17	3.20	3.23	3.26	3.28	3.30	--	
AVG ANN'L P/E RATIO	12.3	14.1	14.5	20.1	16.8	16.9	15.5	12.3	15.2	13.9/NA
RELATIVE P/E RATIO	.63	.77	.83	1.06	.89	.91	.82	.74	--	
AVG ANN'L DIV'D YIELD	6.3%	5.7%	5.5%	4.9%	4.6%	4.6%	4.9%	4.9%	--	
SALES ($MILL)	70.8	55.9	68.4	78.2	84.2	117.3	98.2	112.7	--	
OPERATING MARGIN	23.2%	29.3%	24.7%	21.2%	21.9%	16.2%	20.4%	19.6%	--	
DEPRECIATION ($MILL)	4.0	4.4	4.5	4.7	4.3	4.6	5.2	4.7	--	
NET PROFIT ($MILL)	3.8	3.8	3.8	3.8	5.0	5.0	5.3	6.8	--	
INCOME TAX RATE	38.0%	38.2%	38.0%	38.1%	38.3%	38.6%	37.3%	37.6%	--	
NET PROFIT MARGIN	5.1%	6.6%	5.6%	4.8%	5.9%	4.3%	5.4%	6.1%	--	
WORKING CAP'L ($MILL)	d12.6	d16.3	d.2	d.7	.9	4.6	5.1	8.2	--	
LONG-TERM DEBT ($MILL)	48.3	48.6	53.4	53.0	52.7	58.8	58.6	58.3	--	
SHR. EQUITY ($MILL)	32.8	34.2	45.9	48.8	50.8	52.8	54.4	57.6	--	
RETURN ON TOTAL CAP'L	6.7%	6.6%	5.8%	5.6%	6.7%	6.7%	6.3%	7.5%	--	
RETURN ON SHR. EQUITY	11.1%	10.6%	8.8%	7.9%	9.8%	9.5%	9.7%	11.9%	--	
RETAINED TO COM EQ	2.5%	2.1%	1.6%	.2%	2.4%	2.1%	2.4%	4.8%	--	
ALL DIV'DS TO NET PROF	78%	80%	81%	98%	76%	77%	75%	60%	--	

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

[A]No. of analysts changing earn. est. in last 29 days: 0 up, 0 down, consensus 5-year earnings growth 3.0% per year. [B]Based upon one analyst's estimate. [C]Based upon one analyst's estimate.

ANNUAL RATES

of change (per share)	5 Yrs.	1 Yr.
Sales	7.0%	14.0%
"Cash Flow"	1.5%	9.5%
Earnings	3.5%	28.5%
Dividends	1.0%	1.5%
Book Value	4.0%	5.0%

Fiscal Year	QUARTERLY SALES ($mill.) 1Q	2Q	3Q	4Q	Full Year
06/30/07	13.1	28.4	41.0	15.7	98.2
06/30/08	12.4	29.3	48.4	22.6	112.7
06/30/09	16.1	34.0	43.2		
06/30/10					

Fiscal Year	EARNINGS PER SHARE 1Q	2Q	3Q	4Q	Full Year
06/30/06	d.18	.69	1.03	d.19	1.55
06/30/07	d.16	.73	1.12	d.07	1.62
06/30/08	d.25	.75	1.65	d.07	2.08
06/30/09	.08	.37	1.29		
06/30/10					

Cal-endar	QUARTERLY DIVIDENDS PAID 1Q	2Q	3Q	4Q	Full Year
2006	.30	.30	.305	.305	1.21
2007	.305	.305	.31	.31	1.23
2008	.31	.31	.32	.32	1.26
2009	.32	.32	.325		

INSTITUTIONAL DECISIONS

	4Q'08	1Q'09	2Q'09
to Buy	9	8	9
to Sell	9	9	9
Hld's(000)	626	615	568

ASSETS ($mill.)	2007	2008	3/31/09
Cash Assets	.2	.3	.9
Receivables	7.4	11.4	15.3
Inventory (Avg cost)	12.4	15.0	7.5
Other	5.6	7.3	4.8
Current Assets	25.6	34.0	28.5
Property, Plant & Equip. at cost	167.1	192.1	--
Accum Depreciation	84.8	87.7	--
Net Property	122.3	124.4	126.3
Other	12.5	12.4	14.2
Total Assets	160.4	170.8	171.0
LIABILITIES ($mill.)			
Accts Payable	10.3	12.2	4.1
Debt Due	5.4	8.0	11.9
Other	4.7	5.6	6.9
Current Liab	20.4	25.8	22.9

LONG-TERM DEBT AND EQUITY as of 3/31/09

Total Debt $69.6 mill. Due in 5 Yrs. NA
LT Debt $57.7 mill. (49% of Cap'l)
Including Cap. Leases NA
Leases, Uncapitalized Annual rentals NA

Pension Liability None in '08 vs. $1.7 mill. in '07

Pfd Stock None Pfd Div'd Paid None

Common Stock 3,313,275 shares (51% of Cap'l)

INDUSTRY: Natural Gas (Div)

BUSINESS: Delta Natural Gas Company, Inc., through its subsidiaries, engages in the sale, distribution, or transportation of natural gas to approximately 38,000 retail customers on its distribution system in central and southeastern Kentucky. It also owns and operates an underground storage field and transports gas to other pipeline systems. In addition, the company buys gas and resells it to industrial or other large use customers, as well as to customers not on Delta's system. Further, it owns and operates production properties and undeveloped acreage. Delta Natural Gas Company primarily serves residential, commercial, and industrial customers, including 8,000 customers in Nicholasville, 6,000 customers in Corbin, and 4,000 customers in Berea. Has 158 employees. Chairman, C.E.O. & President: Glenn R. Jennings. Inc.: KY. Address: 3617 Lexington Road, Winchester, KY 40391. Tel.: (859) 744-6171. Internet: http://www.deltagas.com.

L.Y.

September 11, 2009

TOTAL SHAREHOLDER RETURN
Dividends plus appreciation as of 8/31/2009

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
16.14%	23.98%	-1.97%	19.91%	25.72%

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LACLEDE GROUP NYSE-LG

RECENT PRICE 32.61 | P/E RATIO 13.8 (Trailing: 10.9 / Median: 15.0) | RELATIVE P/E RATIO 0.86 | DIV'D YLD 4.8% | VALUE LINE

TIMELINESS 3 Lowered 5/22/09
SAFETY 2 Raised 6/26/09
TECHNICAL 5 Lowered 9/4/09
BETA .60 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+85%)	19%
Low	45	(+40%)	12%

Insider Decisions

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

Institutional Decisions

	4Q2008	1Q2009	2Q2009
to Buy	73	70	71
to Sell	86	61	81
Hld's(000)	11494	11043	10559

LEGENDS
1.00 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded areas: prior recession
Latest recession began 12/07

Target Price Range 2012 | 2013 | 2014

% TOT. RETURN 6/09

	THIS STOCK	VL ARITH. INDEX
1 yr.	-24.7	-4.4
3 yr.	13.4	0.4
5 yr.	40.0	32.3

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	©VALUE LINE PUB. INC.	12-14
32.33	33.43	24.78	31.03	34.33	31.04	26.04	29.99	53.08	39.84	54.95	59.59	75.43	93.51	93.40	100.44	88.80	91.30	Revenues per sh	111.55
2.81	2.65	2.55	3.29	3.32	3.02	2.66	2.69	3.00	2.56	3.16	2.79	2.98	3.81	3.67	4.22	4.50	4.50	"Cash Flow" per sh	5.40
1.61	1.42	1.27	1.87	1.84	1.58	1.47	1.37	1.61	1.18	1.82	1.82	1.90	2.37	2.31	2.64	2.95	2.60	Earnings per sh A B	3.00
1.22	1.22	1.24	1.28	1.30	1.32	1.34	1.34	1.34	1.34	1.34	1.35	1.37	1.40	1.45	1.49	1.53	1.57	Div'ds Decl'd per sh C●	1.70
2.62	2.50	2.63	2.35	2.44	2.68	2.58	2.77	2.51	2.60	2.67	2.45	2.84	2.97	2.72	2.57	2.53	2.60	Cap'l Spending per sh	3.40
12.19	12.44	13.05	13.72	14.26	14.57	14.95	14.99	15.26	15.07	15.65	16.98	17.31	18.65	19.79	22.12	23.65	23.55	Book Value per sh D	28.05
16.59	15.57	17.42	17.58	17.56	17.63	18.88	18.89	18.88	18.96	19.11	20.98	21.17	21.38	21.65	21.93	22.50	23.00	Common Shs Outst'g E	26.00
13.5	18.4	15.5	11.9	12.6	15.5	15.8	14.9	14.5	20.0	13.6	15.7	16.2	13.6	14.2	14.3	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	17.5
.80	1.08	1.04	.75	.72	.81	.90	.97	.74	1.09	.78	.83	.88	.73	.75	.89			Relative P/E Ratio	1.15
5.6%	5.3%	6.3%	5.6%	5.6%	5.4%	5.8%	6.6%	5.7%	5.7%	5.4%	4.7%	4.4%	4.3%	4.4%	3.8%			Avg Ann'l Div'd Yield	3.2%
491.6	566.1	1002.1	755.2	1050.3	1250.3	1597.0	1997.6	2021.0	2209.0	2000	2100	Revenues ($mill) A	2900
28.9	26.0	30.5	22.4	34.6	38.1	40.1	50.5	49.8	57.6	65.0	60.0	Net Profit ($mill)	80.0
35.5%	35.2%	32.7%	35.4%	35.0%	34.6%	34.1%	32.5%	33.4%	31.3%	35.5%	35.0%	Income Tax Rate	35.0%
5.6%	4.6%	3.0%	3.0%	3.3%	2.9%	2.5%	2.5%	2.5%	2.6%	3.3%	2.9%	Net Profit Margin	2.8%
41.8%	45.2%	49.5%	47.5%	50.4%	51.6%	48.1%	49.5%	45.3%	44.4%	42.5%	45.0%	Long-Term Debt Ratio	47.0%
57.8%	54.5%	50.2%	52.3%	49.4%	48.3%	51.8%	50.4%	54.6%	55.5%	57.5%	55.0%	Common Equity Ratio	53.0%
488.6	519.2	574.1	546.6	605.0	737.4	707.9	798.9	784.5	876.1	925	985	Total Capital ($mill)	1375
519.4	575.4	602.6	594.4	621.2	646.9	679.5	763.8	793.8	823.2	865	915	Net Plant ($mill)	1250
7.1%	6.7%	6.9%	6.0%	7.4%	6.6%	7.5%	8.4%	8.5%	8.1%	8.5%	7.5%	Return on Total Cap'l	7.0%
9.5%	9.1%	10.5%	7.8%	11.5%	10.1%	10.9%	12.5%	11.6%	11.8%	12.0%	11.0%	Return on Shs. Equity	11.0%
9.5%	9.1%	10.5%	7.8%	11.6%	10.1%	10.9%	12.5%	11.6%	11.8%	12.0%	11.0%	Return on Com Equity	11.0%
1.0%	.2%	1.8%	NMF	3.1%	2.7%	3.1%	5.1%	4.3%	5.2%	5.0%	4.5%	Retained to Com Eq	5.0%
89%	98%	83%	113%	74%	73%	72%	59%	63%	56%	53%	60%	All Div'ds to Net Prof	55%

CAPITAL STRUCTURE as of 6/30/09
Total Debt $522.2 mill. Due in 5 Yrs $90.0 mill.
LT Debt $389.2 mill. LT Interest $25.0 mill.
(Total interest coverage: 3.0x)

Leases, Uncapitalized Annual rentals $.9 mill.
Pension Assets-9/08 $248.3 mill.
Oblig. $308.7 mill.

Pfd Stock None
Common Stock 22,167,303 shs.
as of 7/31/09

MARKET CAP: $725 million (Small Cap)

CURRENT POSITION ($MILL.)	2007	2008	6/30/09
Cash Assets	52.7	14.9	89.1
Other	414.6	547.0	283.6
Current Assets	467.3	561.9	372.7
Accts Payable	106.8	159.6	79.3
Debt Due	251.0	210.1	133.0
Other	115.3	103.5	87.8
Current Liab.	473.7	479.2	300.1
Fix. Chg. Cov.	262%	377%	370%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'08 to '12-'14
Revenues	11.5%	14.0%	2.5%
"Cash Flow"	2.0%	6.5%	5.5%
Earnings	3.5%	9.5%	3.5%
Dividends	1.0%	1.5%	2.5%
Book Value	3.5%	5.5%	5.5%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2006	683.2	708.8	330.6	269.0	1997.6
2007	539.6	700.8	457.9	323.3	2021.6
2008	604.0	747.7	505.5	451.8	2209.0
2009	674.3	659.1	309.9	356.7	2000
2010	630	570	520	480	2100

Fiscal Year Ends	EARNINGS PER SHARE A B F Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2006	1.23	1.05	.13	d.04	2.37
2007	.89	.97	.43	.03	2.31
2008	.99	1.39	.41	d.14	2.64
2009	1.42	1.40	.31	d.18	2.95
2010	1.03	1.21	.38	d.02	2.60

Calendar	QUARTERLY DIVIDENDS PAID C● Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.34	.345	.345	.345	1.38
2006	.345	.355	.355	.355	1.41
2007	.355	.365	.365	.365	1.48
2008	.375	.375	.375	.375	1.50
2009	.385	.385	.385		

BUSINESS: Laclede Group, Inc., is a holding company for Laclede Gas, which distributes natural gas in eastern Missouri, including the city of St. Louis, St. Louis County, and parts of 10 other counties. Has roughly 630,000 customers. Purchased SM&P Utility Resources, 1/02; divested, 3/08. Therms sold and transported in fiscal 2008: 1.09 mill. Revenue mix for regulated operations: residential, 62%; commercial and industrial, 24%; transportation, 1%; other, 13%. Has around 1,807 employees. Officers and directors own approximately 7.2% of common shares (1/09 proxy). Chairman, Chief Executive Officer, and President: Douglas H. Yaeger. Incorporated: Missouri. Address: 720 Olive Street, St. Louis, Missouri 63101. Telephone: 314-342-0500. Internet: www.thelacledegroup.com.

It appears that Laclede Group will generate record earnings in fiscal 2009, which ends on September 30th. The non-regulated gas marketing unit, Laclede Energy Resources, is enjoying a healthy rise in volumes. That has been brought about by significantly increased pipeline capacity and expanded margins on sales of natural gas (reflecting a drop in natural gas prices). Unfortunately, the utility, Laclede Gas, has not performed up to par of late, stemming partly from a rise in operational expenses. Furthermore, last year's results included certain previously unrecognized tax benefits (which amounted to about $0.07 a share). Nevertheless, consolidated share net may well advance about 12%, to $2.95 a share, in fiscal 2009.

But fiscal 2010 may be a down year, when measured against the strong profits we anticipate for this year. Moreover, the benefit of sharply lower natural gas prices may not be repeatable.

The company's 3- to 5-year prospects look unspectacular. Annual customer growth for the natural gas distribution unit has been only around 1% for some time, and it appears that trend will continue. This is because the service territory, based in eastern Missouri, is in a mature phase. Laclede Energy Resources has promising expansion possibilities, given its proximity to existing and planned pipelines, as well as opportunities from shale development. But that segment has contributed just a small portion to total profits on a historical basis. A major acquisition could help to offset this, but it appears that such plans are not on management's agenda at this juncture. Consequently, annual earnings-per-share growth could range only between 4% and 5% out to 2012-2014.

Income-oriented accounts may find the dividend yield modestly appealing. Further increases in the payout will probably be gradual, however. That is largely because of Laclede Gas' unexciting expansion prospects.

Total return potential over the 3- to 5-year horizon looks unexciting, based on the stock's current quotation and assuming minimal growth in the distribution.

Frederick L. Harris, III September 11, 2009

(A) Fiscal year ends Sept. 30th.
(B) Based on average shares outstanding thru. '07, then diluted. Excludes nonrecurring loss: '05, 7¢. Excludes gain from discontinued operations: '08, 94¢. Next earnings report due late Oct. (C) Dividends historically paid in early January, April, July, and October. ● Dividend reinvestment plan available. (D) Incl. deferred charges. In '08: $340.4 mill., $16.48/sh. (E) In millions. (F) Qtly. egs. may not sum due to rounding or change in shares outstanding.

Company's Financial Strength	B+
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	85

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N.W. NAT'L GAS NYSE-NWN

RECENT PRICE 41.94 | P/E RATIO 14.7 (Trailing: 15.6 / Median: 16.0) | RELATIVE P/E RATIO 0.91 | DIV'D YLD 4.0% | VALUE LINE

TIMELINESS 3 Lowered 7/24/09
SAFETY 1 Raised 3/18/05
TECHNICAL 4 Lowered 9/4/09
BETA .60 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+65%)	16%
Low	55	(+30%)	10%

Insider Decisions

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

Institutional Decisions

	4Q2008	1Q2009	2Q2009
to Buy	82	87	76
to Sell	83	83	69
Hld's(000)	14907	15126	15397

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	© VALUE LINE PUB., INC.	12-14
	18.15	18.30	16.02	16.86	15.82	18.77	18.17	21.09	25.78	25.07	23.57	25.69	33.01	37.20	39.13	33.16	39.60	41.50	Revenues per sh	48.20
	3.74	3.50	3.41	3.86	3.72	3.24	3.72	3.58	3.88	3.85	3.85	3.92	4.34	4.78	5.41	5.31	5.60	5.85	"Cash Flow" per sh	6.75
	1.74	1.83	1.61	1.97	1.76	1.02	1.70	1.79	1.88	1.62	1.78	1.88	2.11	2.35	2.76	2.57	2.85	2.85	Earnings per sh A	3.45
	1.17	1.17	1.18	1.20	1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.30	1.32	1.39	1.44	1.52	1.60	1.68	Div'ds Decl'd per sh B■	2.00
	3.81	4.23	3.02	3.76	5.07	4.02	4.76	3.46	3.23	3.11	4.80	5.52	3.45	3.56	4.48	3.92	4.50	4.50	Cap'l Spending per sh	4.50
	13.08	13.63	14.55	15.37	16.02	16.59	17.12	17.93	19.66	18.88	19.62	20.84	21.28	22.01	22.52	23.71	24.90	26.10	Book Value per sh	30.50
	19.77	20.13	22.24	22.55	22.86	24.85	25.09	25.23	25.23	25.59	25.84	27.55	27.58	27.24	26.41	26.50	26.50	26.50	Common Shs Outst'g C	28.00
	12.9	13.0	12.9	11.7	14.4	26.7	14.5	12.4	12.9	17.2	15.8	16.7	17.0	15.9	16.7	16.1	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	18.0
	.76	.85	.68	.73	.83	1.39	.83	.81	.68	.94	.80	.88	.91	.88	.89	1.11			Relative P/E Ratio	1.20
	5.2%	5.5%	5.7%	5.2%	4.6%	4.5%	5.0%	5.6%	5.1%	4.5%	4.6%	4.2%	3.7%	3.7%	3.1%	3.3%			Avg Ann'l Div'd Yield	3.8%
	455.6	532.1	650.3	641.4	611.3	707.6	910.5	1013.2	1033.2	1037.9	1025	1125	Revenues ($mill)	1350
	44.9	47.8	50.2	43.8	46.0	50.6	58.1	65.2	74.5	68.5	75.5	78.5	Net Profit ($mill)	96.5
	35.4%	35.5%	35.4%	34.9%	33.7%	34.4%	36.0%	36.3%	37.2%	36.9%	37.0%	37.0%	Income Tax Rate	37.0%
	9.9%	9.0%	7.7%	6.8%	7.5%	7.1%	6.4%	6.4%	7.2%	6.6%	7.3%	6.7%	Net Profit Margin	7.2%
	45.0%	45.1%	43.0%	47.6%	49.7%	45.0%	47.0%	45.3%	46.3%	44.9%	47%	47%	Long-Term Debt Ratio	47%
	49.9%	50.9%	53.2%	51.5%	50.3%	54.0%	53.0%	53.7%	53.7%	55.1%	53%	53%	Common Equity Ratio	53%
	861.5	887.8	880.6	937.3	1008.6	1052.5	1108.4	1116.5	1105.8	1140.4	1180	1225	Total Capital ($mill)	1400
	895.9	934.0	965.0	995.6	1205.9	1318.4	1373.4	1425.1	1455.9	1549.1	1600	1660	Net Plant ($mill)	1900
	6.8%	6.7%	6.9%	5.9%	5.7%	5.9%	6.5%	7.1%	8.5%	7.7%	8.0%	8.0%	Return on Total Cap'l	8.0%
	9.7%	9.8%	10.0%	8.9%	9.1%	8.9%	9.9%	10.9%	12.5%	10.9%	11.0%	11.0%	Return on Shr. Equity	11.0%
	9.9%	10.0%	10.2%	8.5%	9.0%	8.9%	9.9%	10.9%	12.5%	10.9%	11.0%	11.0%	Return on Com Equity	11.0%
	2.8%	3.1%	3.5%	1.9%	2.6%	2.7%	3.7%	4.5%	6.0%	4.5%	4.5%	4.5%	Retained to Com Eq	4.5%
	74%	70%	67%	79%	72%	69%	63%	59%	52%	59%	56%	59%	All Div'ds to Net Prof	59%

% TOT. RETURN 8/09

	THIS STOCK	VL ARITH. INDEX
1 yr.	-10.6	-4.4
3 yr.	21.8	0.4
5 yr.	63.1	32.3

CAPITAL STRUCTURE as of 6/30/09
Total Debt $677.6 mill. Due in 5 Yrs $173.8 mill.
LT Debt $567.0 mill. LT Interest $37.0 mill.

(Total interest coverage: 4.0x)

Pension Assets-12/08 $163 mill.
Oblig. $281 mill.
Pfd Stock None

Common Stock 28,513,168 shares as of 7/31/09
MARKET CAP $1.1 billion (Mid Cap)

CURRENT POSITION ($MILL)	2007	2008	6/30/09
Cash Assets	8.1	6.9	31.1
Other	266.8	474.1	241.3
Current Assets	274.9	481.0	272.4
Accts Payable	119.7	94.4	50.1
Debt Due	148.1	248.0	80.6
Other	122.1	208.9	148.8
Current Liab.	389.8	551.3	279.5
Fx. Chg. Cov.	408%	393%	NMF

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'09 to '12-'14
Revenues	9.0%	9.0%	4.0%
"Cash Flow"	3.5%	6.5%	4.5%
Earnings	5.0%	8.0%	5.0%
Dividends	2.0%	3.0%	5.5%
Book Value	3.5%	3.5%	5.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	390.4	171.0	114.9	336.9	1013.2
2007	394.1	183.2	124.2	331.7	1033.2
2008	387.7	191.3	109.7	349.2	1037.9
2009	437.4	149.4	*100*	*338.2*	*1025*
2010	*420*	*215*	*125*	*365*	*1125*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	1.48	.07	d.35	1.15	2.35
2007	1.77	.10	d.22	1.11	2.76
2008	1.62	.08	d.38	1.25	2.57
2009	1.72	.12	d.31	1.32	2.85
2010	1.72	.11	d.33	1.35	2.85

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.325	.325	.325	.345	1.32
2006	.345	.345	.345	.355	1.39
2007	.355	.355	.355	.375	1.44
2008	.375	.375	.375	.395	1.52
2009	.395	.395	.395		

BUSINESS: Northwest Natural Gas Co. distributes natural gas to 90 communities, 682,000 customers, in Oregon (90% of customers) and in southwest Washington state. Principal cities served: Portland and Eugene, OR; Vancouver, WA. Service area population: 2.5 mill. (77% in OR). Company buys gas supply from Canadian and U.S. producers; has transportation rights on Northwest Pipeline system. Owns local underground storage. Rev. breakdown: residential, 55%; commercial, 28%; industrial, gas transportation, and other, 17%. Employs 1,106. Barclays Global owns 6.6% of shares; officers and directors, 1.4% (4/09 proxy). CEO: Gregg S. Kantor, Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Telephone: 503-226-4211. Internet: www.nwnatural.com.

Northwest Natural's normal-looking first-half results contained some unusual elements. The company shares in either 20% or 10% of the difference between forecast natural gas costs and the actual outlays in Oregon. In this year's first half, very low gas prices led to an $11 million profit from the cost-sharing mechanism, versus a $6 million loss in the prior-year period. The profit, however, was partially offset by considerably higher operating and maintenance expenses, due partly to higher pension expense related to the decline in the stock market and bonuses due to the earnings gain. Meanwhile, the recession cost Northwest 3,000 customers in the June period, dropping its year-to-year customer increase to 0.8%.

Thus, we look for little earnings change through 2010. With natural gas prices likely to rise at least a bit next year, Northwest has opted to share in 10% of the difference between forecast and actual gas costs, likely reducing commodity cost effects. As gas prices are down, however, the company expects that residential rates will drop 15%-20% next year, raising the incentive to convert to gas heat. Moreover, the company plans to pare 50 to 100 jobs, adding to the 175 it eliminated in the last two years.

Northwest should benefit from a new union contract. Under the new five-year agreement, union members (about 60% of the workforce) received a 2.3% raise but will get just 1% more per year for years two through five, plus up to 2% for inflation. The company gains extra flexibility, and new hires will not be eligible for the defined benefit pension plan.

New projects could significantly boost earnings by the end of our time horizon. Northwest owns 75% of the Gill Ranch, CA gas storage project and will invest about $160 million in the project; it should contribute to the bottom line by 2011. The proposed Palomar pipeline would bring a second source of gas to the Portland area; its eastern section could come on line by 2013. NWN's investment would be around $200 million, plus an equal sum if the western half is built.

These top-quality shares offer decent total-return potential, suitable for conservative accounts.

Sigourney B. Romaine September 11, 2009

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	70
Earnings Predictability	60

(A) Diluted earnings per share. Excludes nonrecurring items: '98, $0.15; '00, $0.11; '08, ($0.08); '09, ($0.03); 1Q '09, 6¢. Next earnings report due early November.

(B) Dividends historically paid in mid-February, May, August, and November. ■ Dividend reinvestment plan available.

(C) In millions, adjusted for stock split.

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PIEDMONT NAT'L. GAS NYSE-PNY

RECENT PRICE 24.24 | P/E RATIO 14.8 (Trailing: 15.6 Median: 16.0) | RELATIVE P/E RATIO 0.92 | DIV'D YLD 4.5% | VALUE LINE

TIMELINESS 3 Raised 6/15/07
SAFETY 2 New 7/27/90
TECHNICAL 4 Raised 7/17/09
BETA .65 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	40	(+65%)	17%
Low	30	(+25%)	10%

Insider Decisions

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

Institutional Decisions

	4Q2008	1Q2009	2Q2009
to Buy	112	75	78
to Sell	93	123	96
Hld's(000)	33160	34611	33567

High: 18.1 18.3 19.7 19.0 19.0 22.0 24.3 25.8 28.4 28.0 35.3 32.0
Low: 13.9 14.3 11.6 14.6 13.7 16.6 19.2 21.3 23.2 22.0 21.7 20.7

LEGENDS
1.40 x Dividends p sh divided by Interest Rate
Relative Price Strength
2-for-1 split 11/04
Options: Yes
Shaded area: prior recession
Latest recession began 12/07

2-for-1

Percent shares traded 7.5 5 2.5

Target Price Range 2012 | 2013 | 2014: 60 50 40 30 25 20 15 10 7.5

% TOT. RETURN 6/09

	THIS STOCK	VL ARITH. INDEX
1 yr.	-13.5	-4.4
3 yr.	3.2	0.4
5 yr.	34.0	32.3

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	©VALUE LINE PUB., INC.	12-14
10.57	10.82	9.76	11.59	12.84	12.45	10.97	13.01	17.06	12.57	16.14	19.85	22.99	25.60	23.37	26.52	26.45	27.25	Revenues per sh A	30.00
1.14	1.13	1.25	1.49	1.62	1.72	1.70	1.77	1.81	1.81	2.04	2.31	2.43	2.51	2.64	2.77	2.85	2.95	"Cash Flow" per sh	3.15
.73	.68	.73	.84	.93	.98	.93	1.01	1.01	.95	1.11	1.27	1.32	1.27	1.40	1.49	1.60	1.70	Earnings per sh B	1.90
.48	.51	.54	.57	.61	.64	.68	.72	.76	.80	.82	.85	.91	.95	.99	1.03	1.07	1.11	Div'ds Decl'd per sh C■	1.23
1.58	1.95	1.72	1.64	1.52	1.46	1.58	1.65	1.29	1.21	1.16	1.85	2.50	2.74	1.85	2.47	2.40	2.10	Cap'l Spending per sh	2.25
5.45	5.68	6.16	6.53	6.95	7.45	7.86	8.26	8.63	8.91	9.36	11.15	11.53	11.83	11.99	12.11	12.70	13.25	Book Value per sh D	15.05
52.30	53.15	57.67	59.10	60.39	61.46	62.59	63.63	64.93	66.18	67.31	76.67	76.70	74.61	73.23	73.28	73.50	73.50	Common Shs Outst'g E	73.00
15.4	15.7	13.8	13.9	13.6	16.3	17.7	14.3	16.7	18.4	16.7	16.6	17.9	19.2	18.7	18.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	18.0
.91	1.03	.92	.97	.78	.85	1.01	.93	.86	1.01	.95	.89	.95	1.04	.93	1.15			Relative P/E Ratio	1.50
4.3%	4.5%	5.4%	4.9%	4.8%	4.0%	4.1%	5.0%	4.5%	4.6%	4.4%	4.1%	3.6%	3.9%	3.6%	3.6%			Avg Ann'l Div'd Yield	3.6%
686.5	830.4	1107.9	932.0	1220.8	1529.7	1761.1	1924.7	1711.3	2089.1	*1945*	*2005*							Revenues ($mill) A	*2190*
58.2	64.0	65.5	62.2	74.4	95.2	101.3	97.2	104.4	110.0	*115*	*125*							Net Profit ($mill)	*140*
39.7%	34.7%	34.6%	33.1%	34.8%	35.1%	33.7%	34.2%	33.0%	36.4%	*35.0%*	*35.0%*							Income Tax Rate	*35.0%*
8.5%	7.7%	5.9%	7.5%	6.1%	6.2%	5.8%	5.0%	6.1%	5.3%	*6.1%*	*6.3%*							Net Profit Margin	*6.4%*
48.2%	46.1%	47.6%	43.9%	42.2%	43.6%	41.4%	48.3%	48.4%	47.2%	*47.5%*	*48.0%*							Long-Term Debt Ratio	*47.0%*
53.8%	53.9%	52.4%	56.1%	57.8%	56.4%	58.6%	51.7%	51.6%	52.8%	*52.5%*	*52.0%*							Common Equity Ratio	*53.0%*
914.7	976.4	1069.4	1051.8	1090.2	1514.9	1608.2	1707.9	1703.3	1691.5	*1775*	*1875*							Total Capital ($mill)	*2075*
1047.0	1072.0	1114.7	1153.5	1812.3	1849.8	1939.1	2075.3	2141.5	2240.8	*2250*	*2300*							Net Plant ($mill)	*2450*
8.1%	8.3%	7.9%	7.8%	8.6%	7.6%	8.2%	7.2%	7.6%	8.2%	*8.0%*	*8.0%*							Return on Total Cap'l	*8.0%*
11.6%	12.1%	11.7%	10.6%	11.8%	11.1%	11.5%	11.0%	11.9%	12.4%	*12.5%*	*13.0%*							Return on Shr. Equity	*12.5%*
11.6%	12.1%	11.7%	10.6%	11.8%	11.1%	11.5%	11.0%	11.9%	12.4%	*12.5%*	*13.0%*							Return on Com Equity	*12.5%*
3.3%	3.5%	3.0%	1.7%	3.1%	3.7%	3.6%	2.8%	3.6%	3.9%	*4.0%*	*4.5%*							Retained to Com Eq	*4.5%*
72%	71%	75%	83%	74%	66%	68%	74%	70%	69%	*67%*	*65%*							All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 4/30/09
Total Debt $1029.0 mill. Due in 5 Yrs $150.0 mill.
LT Debt $783.5 mill. LT Interest $55.5 mill.
(LT Interest earned: 4.0x; total interest coverage: 3.7x)

Pension Assets-10/08 $150.3 mill.
Oblig. $143.5 mill.

Pfd Stock None

Common Stock 72,959,779 shs.
as of 6/2/09
MARKET CAP: $1.8 billion (Mid Cap)

CURRENT POSITION ($MILL)	2007	2008	4/30/09
Cash Assets	7.5	7.0	20.7
Other	427.8	593.8	526.0
Current Assets	435.3	600.8	546.7
Accts Payable	143.8	132.3	94.0
Debt Due	195.0	436.5	235.5
Other	75.9	112.7	182.3
Current Liab.	424.5	681.5	511.8
Fix. Chg. Cov.	309%	341%	350%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'08 to '12-'14
Revenues	7.6%	10.0%	2.5%
"Cash Flow"	5.0%	7.0%	3.0%
Earnings	4.5%	6.5%	5.5%
Dividends	5.0%	4.5%	3.5%
Book Value	5.5%	8.0%	4.0%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill) A Jan.31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
2006	921.4	483.2	237.9	282.2	1924.7
2007	677.2	531.5	224.4	278.2	1711.3
2008	788.6	634.2	354.7	311.7	2089.1
2009	779.6	455.4	*372*	*338*	*1945*
2010	*790*	*470*	*390*	*355*	*2005*

Fiscal Year Ends	EARNINGS PER SHARE A B Jan.31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
2006	.94	.57	d.16	d.08	1.27
2007	.94	.69	d.12	d.11	1.40
2008	1.12	.68	d.10	d.18	1.49
2009	1.10	.73	*d.10*	*d.13*	*1.60*
2010	*1.12*	*.75*	*d.08*	*d.09*	*1.70*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.215	.23	.23	.23	.91
2006	.23	.24	.24	.24	.95
2007	.24	.25	.25	.25	.99
2008	.25	.26	.26	.26	1.03
2009	.26	.27	.27		

BUSINESS: Piedmont Natural Gas Company is primarily a regulated natural gas distributor, serving over 936,724 customers in North Carolina, South Carolina, and Tennessee. 2008 revenue mix: residential (39%), commercial (24%), industrial (12%), other (25%). Principal suppliers: Transco and Tennessee Pipeline. Gas costs: 73.5% of revenues. '08 deprec. rate: 3.2%. Estimated plant age: 8.7 years. Non-regulated operations: sale of gas-powered heating equipment; natural gas brokering; propane sales. Has about 1,833 employees. Officers & directors own about 1.1% of common stock (1/09 proxy). Chairman, CEO, & President: Thomas E. Skains. Inc.: NC. Address: 4720 Piedmont Row Drive, Charlotte, NC 28210. Telephone: 704-364-3120. Internet: www.piedmontng.com.

Piedmont Natural Gas has posted a mixed bag of financial results thus far in 2009. Quarterly sales in the first half declined, year over year, as the weakened economy continued to weigh on both residential and commercial new construction activities. As a result, PNY's regulated utility segment has been experiencing declining customer growth compounded by rising conservation practices at existing accounts. Nonetheless, margins have been widening, thanks largely to lower natural gas costs, which have more than offset the rise in operating expenses. These trends resulted in a 10.6% hike in the April-period bottom line.

Meantime, slumping demand has put the brakes on many of the company's capital projects. Management has opted to defer its pipeline infrastructure enhancement plans that were scheduled to serve the new gas-fired power generation markets of North Carolina. Moreover, construction of the liquid natural gas storage facility in Robeson County, NC has also been put off. Current customer growth projections in that region indicate this facility may not be necessary for a few more years. As a result, PNY is holding off on construction until 2012, with a potential in-service date of 2015. These moves ought to help the company conserve cash at a time when rising accounts receivable and higher delinquencies are a distinct possibility.

Still, we have raised our earnings estimates for this year and next by a nickel. The main culprit for the disappointing 2009 revenues can be attributed to the slumping commodity prices. This trend masks Piedmont's continued customer growth, a figure that should register at about 1%-1.5% this year. Meantime, lower gas costs should continue to offset the margin tightening associated with diminished volumes. Consequently, annual earnings gains should persist.

These neutrally ranked shares have some appeal as an income vehicle. Recovery potential for the pull to 2012-2014 is about average for a utility. But the recent dividend hike, and relative stability provided by an ever-increasing customer base, shines a positive light on this good-quality stock.

Bryan J. Fong *September 11, 2009*

(A) Fiscal year ends October 31st.
(B) Diluted earnings. Excl. extraordinary item: '00, $4. Excl. nonrecurring charge: '07, 2¢. Next earnings report due early Nov. Quarters may not add to total due to change in shares outstanding.
(C) Dividends historically paid mid-January, April, July, October.
■ Div'd reinvest. plan available; 6% discount.
(D) Includes deferred charges. In 2008: $16.3 million, 22¢/share.
(E) In millions, adjusted for stock split.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	90

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SOUTHWEST GAS NYSE-SWX

RECENT PRICE 23.98 | P/E RATIO 13.5 (Trailing: 15.3 Median: 19.0) | RELATIVE P/E RATIO 0.84 | DIV'D YLD 4.1% | VALUE LINE

TIMELINESS 3 Raised 9/21/09
SAFETY 3 Lowered 1/4/91
TECHNICAL 4 Lowered 7/24/09
BETA .75 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	40	(+65%)	17%
Low	30	(+25%)	10%

Insider Decisions

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

Institutional Decisions

	4Q2008	1Q2009	2Q2009
to Buy	83	83	86
to Sell	75	71	71
Hld's(000)	32362	32859	32802

High: 25.9 28.6 23.0 24.7 25.3 23.6 26.2 28.1 39.4 39.9 33.3 28.4
Low: 17.3 20.4 16.9 16.6 18.1 19.3 21.5 23.5 26.0 28.5 21.1 17.1

LEGENDS
1.50 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded areas prior recession
Latest recession began 12/07

Target Price Range 2012 | 2013 | 2014

Percent shares traded 9 6 3

% TOT. RETURN 8/09

	THIS STOCK	VL ARITH. INDEX
1 yr.	-16.6	-4.4
3 yr.	-20.7	0.4
5 yr.	20.3	32.3

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	© VALUE LINE PUB., INC	12-14
25.65	28.16	23.03	24.09	26.73	30.17	30.24	32.61	42.98	39.68	35.98	40.14	43.59	48.47	50.28	48.53	39.55	41.50	Revenues per sh	52.00
3.24	5.09	2.65	3.00	3.85	4.48	4.45	4.57	4.79	5.07	5.11	5.57	5.28	5.97	6.21	5.76	5.95	6.15	"Cash Flow" per sh	7.30
.63	1.22	.10	.25	.77	1.65	1.27	1.21	1.15	1.15	1.13	1.68	1.25	1.03	1.95	1.39	1.75	1.90	Earnings per sh A	2.30
.74	.80	.82	.82	.82	.82	.82	.82	.82	.82	.82	.82	.82	.82	.85	.90	.95	1.00	Div'ds Decl'd per sh B■†	1.15
5.43	6.64	6.79	8.19	6.19	6.40	7.41	7.04	8.17	8.50	7.03	8.23	7.49	8.27	7.95	6.79	5.50	5.95	Cap'l Spending per sh	7.20
15.56	16.38	14.55	14.20	14.09	15.67	16.31	16.82	17.27	17.91	18.42	19.16	19.10	21.58	22.98	23.49	25.25	26.05	Book Value per sh	28.00
21.00	21.28	24.47	26.73	27.39	30.41	30.99	31.71	32.49	33.29	34.23	36.79	39.33	41.77	42.61	44.19	45.50	47.00	Common Shs Outst'g C	50.00
26.5	14.0	NMF	69.3	24.1	13.2	21.1	16.0	19.0	19.0	19.2	14.3	20.6	15.9	17.3	20.3	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	16.0
1.57	.92	NMF	4.34	1.39	.69	1.20	1.04	.97	1.09	1.09	.78	1.10	.85	.92	1.22			Relative P/E Ratio	1.00
4.4%	4.7%	5.4%	4.7%	4.4%	3.8%	3.1%	4.2%	3.8%	3.6%	3.8%	3.5%	3.2%	2.5%	2.6%	3.2%			Avg Ann'l Div'd Yield	3.3%
938.6	1034.1	1396.7	1320.9	1231.0	1477.1	1714.3	2024.7	2152.1	2144.7	1890	1950	Revenues ($mill)	2600
39.3	39.3	37.2	38.6	39.5	58.9	48.1	60.5	63.2	61.0	60.0	60.0	Net Profit ($mill)	115
35.5%	26.2%	34.5%	32.6%	30.5%	34.8%	29.7%	37.3%	38.6%	40.1%	38.0%	38.0%	Income Tax Rate	38.0%
4.2%	3.7%	2.7%	2.9%	3.1%	4.0%	2.8%	4.0%	3.9%	2.8%	4.4%	4.6%	Net Profit Margin	4.4%
60.3%	60.2%	58.2%	62.5%	66.0%	64.2%	63.8%	60.8%	58.1%	55.3%	51.0%	50.5%	Long-Term Debt Ratio	49.0%
35.5%	35.8%	39.6%	34.1%	34.0%	35.8%	36.2%	39.4%	41.9%	44.7%	49.0%	49.5%	Common Equity Ratio	51.0%
1424.7	1489.9	1417.6	1748.3	1661.6	1969.6	2078.0	2287.8	2349.7	2323.3	2350	2475	Total Capital ($mill)	2750
1581.1	1686.1	1825.6	1879.5	2175.7	2336.0	2469.1	2668.1	2845.3	2983.3	3050	3150	Net Plant ($mill)	3600
4.8%	4.6%	5.1%	4.3%	4.2%	5.0%	4.3%	5.5%	5.5%	4.5%	5.0%	5.5%	Return on Total Cap'l	6.0%
7.0%	6.5%	6.0%	5.9%	6.1%	8.3%	6.4%	8.9%	8.5%	5.9%	7.0%	7.5%	Return on Shr. Equity	8.0%
7.8%	7.2%	6.6%	6.5%	6.1%	8.3%	6.4%	8.9%	8.5%	5.9%	7.0%	7.5%	Return on Com Equity	8.0%
2.8%	2.4%	1.6%	1.9%	1.7%	4.3%	2.2%	5.2%	4.6%	2.1%	3.0%	3.5%	Retained to Com Eq	4.0%
64%	67%	71%	70%	72%	49%	65%	42%	44%	63%	64%	57%	All Div'ds to Net Prof	50%

CAPITAL STRUCTURE as of 6/30/09

Total Debt $1226.0 mill. Due in 5 Yrs $666.1 mill.
LT Debt $1222.9 mill. LT Interest $65.0 mill.
(Total interest coverage: 2.2x)
Leases, Uncapitalized Annual rentals $6.0 mill.
Pension Assets-12/08 $342.9 mill. Oblig. $658.9 mill.
Pfd Stock None

Common Stock 44,822,468 shs.
as of 7/30/09

MARKET CAP: $1.1 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2007	2008	6/30/09
Cash Assets	32.0	26.4	26.6
Other	470.6	411.7	232.5
Current Assets	502.6	438.1	259.3
Accts Payable	220.7	191.4	68.0
Debt Due	47.1	62.8	5.1
Other	260.1	255.7	303.0
Current Liab.	527.9	509.9	376.1
Fix. Chg. Cov.	229%	224%	233%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '06-'08 to '12-'14
Revenues	6.0%	4.5%	1.0%
"Cash Flow"	4.5%	3.5%	3.5%
Earnings	7.0%	8.0%	4.5%
Dividends	0.5%	1.0%	5.0%
Book Value	4.5%	5.0%	3.5%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	676.9	430.9	351.8	565.1	2024.7
2007	793.7	426.6	371.5	560.3	2152.1
2008	813.6	447.3	374.4	509.4	2144.7
2009	669.9	387.6	*275*	*447.5*	*1800*
2010	*730*	*410*	*310*	*500*	*1950*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2006	1.11	.02	d.26	1.11	1.98
2007	1.17	d.01	d.22	1.01	1.95
2008	1.14	d.08	d.38	.71	1.39
2009	1.12	d.01	d.35	.99	1.75
2010	*1.15*	*Nil*	*d.30*	*1.05*	*1.90*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.205	.205	.205	.205	.82
2006	.205	.205	.205	.205	.82
2007	.205	.215	.215	.215	.85
2008	.215	.225	.225	.225	.89
2009	.225	.238	.238		

BUSINESS: Southwest Gas Corporation is a regulated gas distributor serving approximately 1.8 million customers in sections of Arizona, Nevada, and California. Comprised of two business segments: natural gas operations and construction services. 2008 margin mix: residential and small commercial, 86%; large commercial and industrial, 5%; transportation, 9%. Total throughput: 2.4 billion therms. Sold PriMerit Bank, 7/96. Has 4,732 employees. Off. & Dir. own 2.0% of common stock; T. Rowe Price Associates, Inc., 7.0%; Barclays Global Investors, 6.8%; GAMCO Investors, Inc., 6.4% (3/09 Proxy). Chairman: James J. Kropid. CEO: Jeffrey W. Shaw. Inc.: CA. Address: 5241 Spring Mountain Road, Las Vegas, Nevada 89146. Telephone: 702-876-7237. Internet: www.swgas.com.

Southwest Gas reported unfavorable top-line performance for the second quarter. The recent recession stymied customer growth and resulted in lower usage. On the bright side, rate relief in Arizona and California (discussed below) supported results. Consequently, the company's share loss of $0.01 compared favorably with the prior-year tally. Losses are common during the second and third quarters, owing to the seasonal nature of the business. Looking forward, we expect lower revenue and a normal-sized share loss for the third quarter. Earnings comparisons ought to improve in the fourth quarter, assuming a better operating environment and greater cost control. Overall, we anticipate lower revenue and higher share earnings for Southwest in full-year 2009. Bottom-line growth may well continue next year.

The company is awaiting a rate case decision from the state of Nevada. Southwest is seeking a $30.5 million rate increase to compensate it for higher operating costs in that state. The request asks that the new rates take effect at the beginning of November. The company is also seeking an improvement in rate design. Specifically, SWX wants to implement a decoupled rate structure that would allow it more freedom in pursuing customer conservation opportunities. This follows recent prior rate case settlements in California and Arizona.

Investors should be mindful of several caveats. Warmer-than-normal temperatures during the winter months can hurt performance at Southwest Gas. In addition, the company will probably incur greater operating costs as it continues to expand, and profitability may suffer if rate relief cannot keep up with rising expenses. **The pace of customer growth should pick up in the future.** That's assuming economic conditions in Southwest's service areas improve in the coming years. As a result, we anticipate higher revenues and share earnings at the company by 2012-2014. Moreover, income-oriented investors may find the stock's prospects for dividend growth attractive. But from the present quotation, this neutrally ranked equity features about-average total return potential for a utility.

Michael Napoli, CPA *September 11, 2009*

(A) Based on avg. shares outstand. thru. '96, then diluted. Excl. nonrec. gains (losses): '93, 6¢; '97, 16¢; '02, (10¢); '05, (11¢); '06, 7¢. Incl. asset writedown: '93, 44¢. Excl. loss from disc. ops.: '95, 75¢. Totals may not sum due to rounding. Next egs. report due early November. (B) Dividends historically paid early March, June, September, December. ■† Div'd reinvestment and stock purchase plan avail. (C) In millions.

Company's Financial Strength	B
Stock's Price Stability	100
Price Growth Persistence	65
Earnings Predictability	70

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WGL HOLDINGS NYSE-WGL

RECENT PRICE 33.30 | P/E RATIO 13.2 (Trailing: 13.1 Median: 15.0) | RELATIVE P/E RATIO 0.82 | DIV'D YLD 4.4% | VALUE LINE

TIMELINESS 3 Lowered 6/5/09
SAFETY 1 Raised 4/2/93
TECHNICAL 5 Lowered 9/11/09
BETA .65 (1.00 = Market)

2012-14 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+35%)	12%
Low	35	(+5%)	6%

Insider Decisions

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

Institutional Decisions

	4Q2008	1Q2009	2Q2009
to Buy	94	97	85
to Sell	95	98	98
Hld's(000)	31680	30910	31333

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	© VALUE LINE PUB. INC	12-14
	21.55	21.69	19.30	22.19	24.16	23.74	20.92	22.19	29.60	32.63	42.45	42.93	44.94	53.96	53.51	52.65	53.20	54.25	Revenues per sh A	57.60
	2.25	2.43	2.51	2.93	3.02	2.79	2.74	3.20	3.24	2.63	4.00	3.87	3.97	3.89	3.89	4.34	4.40	4.45	"Cash Flow" per sh	4.70
	1.31	1.42	1.45	1.65	1.85	1.54	1.47	1.79	1.86	1.14	2.30	1.98	2.13	1.94	2.10	2.44	2.50	2.55	Earnings per sh B	2.70
	1.09	1.11	1.12	1.14	1.17	1.20	1.22	1.24	1.26	1.27	1.28	1.30	1.32	1.35	1.37	1.41	1.47	1.51	Div'ds Decl'd per sh C ■	1.63
	2.43	2.84	2.63	2.85	3.20	3.62	3.42	2.67	2.68	3.34	2.65	2.33	2.32	3.27	3.33	2.70	3.00	3.00	Cap'l Spending per sh	2.50
	11.04	11.51	11.95	12.79	13.48	13.88	14.72	15.31	15.24	15.78	16.25	16.95	17.60	18.88	19.83	20.99	22.00	23.05	Book Value per sh D	26.20
	41.50	42.19	42.93	43.70	43.70	43.84	46.47	46.47	48.54	48.56	48.63	48.67	48.65	48.89	49.45	49.92	50.00	50.00	Common Shs Outst'g E	50.00
	15.8	14.0	12.7	11.5	12.7	17.2	17.3	14.6	14.7	23.1	11.1	14.2	14.7	15.5	15.6	13.7	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	15.0
	.92	.92	.85	.72	.73	.89	.99	.95	.75	1.26	.63	.75	.78	.84	.82	.85			Relative P/E Ratio	1.00
	5.3%	5.6%	6.1%	5.4%	5.0%	4.5%	4.8%	4.8%	4.6%	4.8%	5.0%	4.5%	4.2%	4.5%	4.2%	4.2%			Avg Ann'l Div'd Yield	4.0%
	972.1	1031.1	1446.5	1584.8	2054.2	2089.8	2186.3	2537.9	2646.0	2522.2	2560	2715	Revenues ($mill) A	3280
	58.8	84.6	89.9	55.7	112.3	99.0	104.8	96.0	102.0	122.9	125	130	Net Profit ($mill)	135
	38.0%	36.1%	39.6%	34.6%	38.0%	38.2%	37.4%	39.0%	39.1%	37.1%	37.0%	37.0%	Income Tax Rate	38.0%
	7.1%	8.2%	6.2%	3.5%	5.4%	4.7%	4.8%	3.8%	3.9%	4.7%	4.7%	4.8%	Net Profit Margin	4.7%
	41.5%	43.1%	41.7%	45.7%	43.8%	40.9%	39.5%	37.8%	37.9%	35.9%	35.5%	35.5%	Long-Term Debt Ratio	34.0%
	56.1%	54.8%	56.3%	52.4%	54.3%	57.2%	58.6%	60.4%	60.3%	62.4%	62.0%	63.0%	Common Equity Ratio	64.5%
	1216.5	1299.2	1400.8	1462.5	1454.9	1443.6	1478.1	1526.1	1625.4	1679.5	1780	1830	Total Capital ($mill)	2040
	1402.7	1460.3	1519.7	1606.8	1874.9	1915.6	1969.7	2067.9	2159.4	2208.3	2325	2420	Net Plant ($mill)	2720
	7.1%	7.9%	7.9%	5.3%	8.1%	8.2%	8.5%	7.6%	7.0%	8.5%	8.0%	8.0%	Return on Total Cap'l	8.0%
	9.7%	11.4%	11.0%	7.0%	13.7%	11.5%	11.7%	10.1%	10.2%	11.4%	11.5%	11.0%	Return on Shr. Equity	10.5%
	9.9%	11.7%	11.2%	7.2%	14.0%	11.7%	12.0%	10.3%	10.4%	11.6%	12.0%	11.5%	Return on Com Equity	11.0%
	1.8%	3.7%	3.8%	NMF	6.2%	4.1%	4.6%	3.2%	3.5%	5.0%	4.5%	4.5%	Retained to Com Eq	4.0%
	82%	69%	67%	112%	56%	65%	62%	69%	68%	57%	59%	59%	All Div'ds to Net Prof	60%

CAPITAL STRUCTURE as of 6/30/09
Total Debt $728.7 mill. Due in 5 Yrs $264.5 mill.
LT Debt $624.1 mill. LT Interest $37.4 mill.
(LT interest earned: 5.8x; total interest coverage: 5.2x)
Pension Assets-9/09 $588.2 mill. Oblig. $590.5 mill.
Preferred Stock $28.2 mill. Pfd. Div'd $1.3 mill.

Common Stock 50,141,229 shs.
as of 7/31/09

MARKET CAP: $1.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2007	2008	6/30/09
Cash Assets	4.9	6.2	41.6
Other	568.8	736.1	553.2
Current Assets	573.7	742.3	594.8
Accts Payable	216.9	243.1	202.8
Debt Due	205.4	347.0	104.6
Other	134.8	158.4	202.1
Current Liab.	557.1	748.5	509.5
Fix. Chg. Cov.	492%	490%	600%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '05-'09 to '12-'14
Revenues	8.6%	9.0%	1.5%
"Cash Flow"	3.5%	4.0%	2.5%
Earnings	2.0%	4.0%	4.0%
Dividends	1.5%	1.5%	3.0%
Book Value	4.0%	4.5%	4.5%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2006	902.9	1064.6	346.9	323.6	2637.9
2007	732.9	1119.9	467.5	325.7	2646.0
2008	751.6	1020.0	464.7	391.9	2628.2
2009	821.5	1040.9	427.0	370.6	2660
2010	830	1050	445	390	2715

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2006	.93	1.17	d.01	d.15	1.94
2007	.92	1.27	.22	d.31	2.10
2008	.95	1.66	.06	d.24	2.44
2009	1.03	1.65	.11	d.29	2.50
2010	1.04	1.66	.12	d.27	2.55

Calendar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2005	.325	.333	.333	.333	1.32
2006	.333	.336	.336	.336	1.34
2007	.34	.34	.34	.34	1.36
2008	.34	.36	.36	.36	1.42
2009	.36	.37	.37		

BUSINESS: WGL Holdings, Inc. is the parent of Washington Gas Light, a natural gas distributor in Washington, D.C. and adjacent areas of VA and MD to resident'l and comm'l users (1,053,032 meters). Hampshire Gas, a federally regulated sub., operates an underground gas-storage facility in WV. Non-regulated subs.: Wash. Gas Energy Svcs. sells and delivers natural gas and provides energy related products in the D.C. metro area; Wash. Gas Energy Sys. designs/installs comm'l heating, ventilating, and air cond. systems. American Century Inv. own 7.1% of common stock; Off./dir. less than 1% (1/09 proxy). Chmn. & CEO: J.H. DeGraffenreidt, Inc.: D.C. and VA. Addr.: 1100 H St, N.W., Washington, D.C. 20080. Tel.: 202-624-6410. Internet: www.wgiholdings.com.

WGL Holdings posted a mixed bag of financial results for the off-peak June period. Top-line volumes fell approximately 8% over that time frame. This stemmed from weakness at the regulated utility segment, which has been dealing with lower natural gas consumption and some equipment cost issues. On a brighter note, the retail energy marketing division got a boost to its revenues and earnings contributions from higher natural gas and electricity margins. On the efficiency front, management has been performing well. Operating expenses declined 80 basis points versus the year-ago period. This stemmed from lower labor and benefits expenses. All told, the bottom line advanced nicely.

We look for the company to register a mid-single-digit earnings hike this year. The decent gains experienced earlier in 2009 will probably be offset by a larger share deficit in the fiscal fourth quarter. Despite the widening margins and solid performance from the retail energy and design build segments, demand at the mainstay regulated utility business may be soft. Also, the September period is historically and seasonally slow for WGL. Nonetheless, considering all that happened in the past year, the company appears to be in solid shape.

The LNG peaking facility is going to take longer than expected to be completed and put into service. That project will be used to support customer growth and maintain the pressure requirements of the distribution system in Chillum, MD. It was planned to be in service by the 2012-2013 winter heating season, but due to regulatory and legal issues, the following year is more likely.

These top-quality shares may appeal to income-oriented accounts, as they offer an attractive dividend yield. Typically, too, they proved much less volatile than the broader market during the recent turmoil. This partly stems from WGL's large government business in the DC metro area, which has been less affected by the economic downturn. These benefits are evident in the equity's top-notch Safety rank, and high mark for Price Stability. But appreciation potential is subpar for the pull to 2012-2014.

Bryan J. Fong *September 11, 2009*

(A) Fiscal years end Sept. 30th.
(B) Based on diluted shares. Excludes nonrecurring losses: '01, (13¢); '02, (34¢); '07, (4¢) discontinued operations: '06, (15¢). Qtly. egs. may not sum to total, due to change in shares outstanding. Next earnings report due late Oct.
(C) Dividends historically paid early February, May, August, and November. ■ Dividend reinvestment plan available.
(D) Includes deferred charges and intangibles. '08: $291.3 million, $5.81/sh.
(E) In millions, adjusted for stock split.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	80

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

Line No.		Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Eight AUS Utility Reports Gas Distribution Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.53 %	5.53 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	0.47 (2)	0.47 (2)
3.	Adjusted Prospective Yield on A Rated Public Utility Bonds	6.00 %	6.00 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.00 (3)	0.24 (4)
5.	Adjusted Prospective Bond Yield	6.00	6.24
6.	Equity Risk Premium (5)	5.06	4.50
7.	Risk Premium Derived Common Equity Cost Rate	11.06 %	10.74 %

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 0.53% from page 4 of this Schedule.
(3) No adjustment necessary as the average Moody's bond rating of the proxy group of six AUS Utility Reports water companies is A2 as shown on page 2 of this Schedule.
(4) Adjustment to reflect the A3 Moody's Bond Rating of the proxy group of eight AUS Utility Reports natural gas distribution companies as shown on page 2 of this Schedule. The 24 basis point adjustment is derived by taking 1/3 of the spread between Baa and A Public Utility Bonds (1/3 * 0.71% = 0.24%)
(5) From page 5 of this Schedule.

United Water New Rochelle, Inc.
Comparison of Bond Ratings, Business Risk and Financial Risk Profiles for
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natrual Gas Distribution Companies

	Moody's Bond Rating September 2009		Standard & Poor's Bond Rating September 2009							
	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)
Proxy Group of Six AUS Utility Reports Water Companies										
American States Water Company (3)	A2	6.0	A	6.0	A	6.0	Excellent	1.0	Intermediate	3.0
Aqua America, Inc . (4)	NR	--	AA-	4.0	A+	5.0	Excellent	1.0	Intermediate	3.0
California Water Services Group (5)	NR	--	AA-	4.0	A+	5.0	Excellent	1.0	Intermediate	3.0
Middlesex Water Co	NR	--	A	6.0	A-	7.0	Excellent	1.0	Intermediate	3.0
SJW Corporation (6)	NR	--	NR	--	NR	--	NR	--	NR	--
York Water Company (The)	NR	--	A-	7.0	A-	7.0	Excellent	1.0	Intermediate	3.0
Average	A2	6.0	A+	5.4	A	6.0	Excellent	1.0	Intermediate	3.0
Proxy Group of Eight AUS Utility Reports Gas Distribution Companies										
AGL Resources Inc (7)	A3	7.0	A-	7.0	A-	7.0	Excellent	1.0	Significant	4.0
Atmos Energy Corporation	Baa2	9.0	BBB+	8.0	BBB+	8.0	Excellent	1.0	Significant	4.0
Delta Natural Gas Company, Inc.	NR	--	NR	--	NR	--	NR	--	NR	--
Laclede Group, Inc. (The) (8)	A2	6.0	A	6.0	A	6.0	Excellent	1.0	Intermediate	3.0
Northwest Natural Gas Company	A1	5.0	AA-	4.0	AA-	4.0	Excellent	1.0	Intermediate	3.0
Piedmont Natural Gas Company	A3	7.0	A	6.0	A	6.0	Excellent	1.0	Intermediate	3.0
Southwest Gas Corp	Baa3	10.0	BBB	9.0	BBB	9.0	Excellent	1.0	Aggressive	5.0
WGL Holdings, Inc. (9)	A2	6.0	AA-	4.0	AA-	4.0	Excellent	1.0	Intermediate	3.0
Average	A3	7.1	A	6.3	A	6.0	Excellent	1.0	Significant	4.0

Notes:
(1) From page 3 of this Schedule.
(2) From Standard & Poor's Issuer Ranking: U.S. Investor-Owned Water Utilities, Strongest to Weakest, September 2, 2009 and U.S. Natural Gas Distribution and Integrated Gas Companies, Strongest to Weakest September 2, 2009.
(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 those of California Water Service Company.
(6) Ratings, business risk and financial risk profiles are those of San Jose Water Company.
(7) Ratings, business risk and financial risk profiles are those of Atlanta Gas Light Company.
(8) Ratings, business risk and financial risk are those of Laclede Gas Company.
(9) Ratings, business risk and financial risk profiles are those of Washington Gas Light Company.

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

United Water New Rochelle, Inc.
Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings,
Standard & Poor's Credit Ratings, and
Standard & Poor's Business and Financial Risk Profiles

Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond / Credit 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	Minimal	1
Strong	2	Modest	2
Satisfactory	3	Intermediate	3
Fair	4	Significant	4
Weak	5	Aggressive	5
Vulnerable	6	Highly Leveraged	6

Moody's
Comparison of Interest Rate Trends
for the Three Months Ending September 2009 (1)

Months	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
July-09	5.41	5.63	5.97	6.87 %					
August-09	5.26	5.33	5.71	6.36					
September-09	5.13	5.15	5.53	6.12					
Average of Last 3 Months	5.27 %	5.37 %	5.74 %	6.45 %	0.10 %	0.47 %	1.18 %	0.37 %	0.71 %

Notes: (1) All yields are distributed yields.

Source of information: Mergent Bond Record, October 2009, Vol. 76, No. 10.

Exhibit No.___
Schedule PMA-10
Page 4 of 9

United Water New Rochelle, Inc.
Judgment of Equity Risk Premium for
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natrual Gas Distribution Companies

Line No.		Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Eight AUS Utility Reports Gas Distribution Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	5.96 %	4.85 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	4.15	4.15
3.	Average equity risk premium	5.06 %	4.50 %

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

United Water New Rochelle, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natrual Gas Distribution Companies

Line No.		Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Eight AUS Utility Reports Gas Distribution Companies
1.	Arithmetic mean total return rate on the Standard & Poor's 500 Composite Index - 1926-2008 (1)	11.70 %	11.70 %
2.	Arithmetic mean yield on Aaa and Aa Corporate Bonds 1926-2008 (2)	(6.10)	(6.10)
3.	Historical Equity Risk Premium	5.60 %	5.60 %
4.	Forecasted 3-5 year Total Annual Market Return (3)	14.84 %	14.84 %
5.	Prospective Yield an Aaa Rated Corporate Bonds (4)	(5.53)	(5.53)
6.	Forecasted Equity Risk Premium	9.31 %	9.31 %
7.	Conclusion of Equity Risk Premium (5)	7.46 %	7.46 %
8.	Adjusted Value Line Beta (6)	0.80	0.65
9.	Beta Adjusted Equity Risk Premium	5.96 %	4.85 %

Notes:
(1) From Ibbotson SBBI - 2009 Valuation Yearbook - Market Results for Stocks Bonds Bills and Inflation for 1926-2008, Morningstar, Inc., 2009 Chicago, IL.

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

(3) From page 3 of Schedule PMA-14.

(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 October 1, 2009 (see page 7 of this Schedule). The estimates are detailed below.

Fourth Quarter 2009	5.30 %
First Quarter 2010	5.40
Second Quarter 2010	5.40
Third Quarter 2010	5.60
Fourth Quarter 2010	5.70
First Quarter 2011	5.80
Average	5.53 %

(5) Average of the Historical Equity Risk Premium of 5.60% from Line No. 3 and the Forecasted Equity Risk Premium of 9.31% from Line No. 6 ((5.60% + 9.31%) / 2 = 7.46%).

(6) From page 9 of this Schedule.

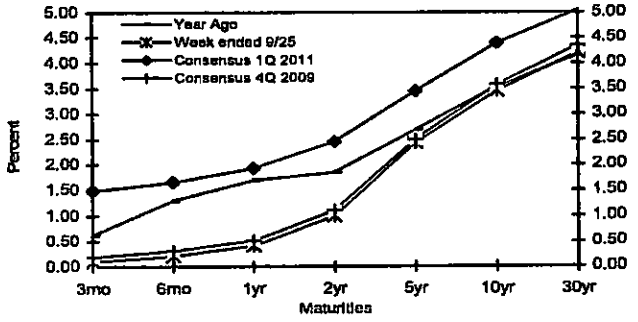
Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

	History							Consensus Forecasts-Quarterly Avg.					
	Average For Week End				Average For Month			*Latest Q**	4Q	1Q	2Q	3Q	4Q	1Q
Interest Rates	Sep. 25	Sep. 18	Sep. 11	Sep. 4	Aug.	July	June	*3Q 2009*	2009	2010	2010	2010	2010	2011
Federal Funds Rate	0.15	0.16	0.15	0.15	0.16	0.16	0.21	*0.16*	0.2	0.2	0.3	0.6	1.0	1.5
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	*3.25*	3.2	3.2	3.3	3.6	4.1	4.5
LIBOR, 3-mo.	0.29	0.30	0.31	0.34	0.42	0.52	0.62	*0.41*	0.5	0.5	0.7	1.0	1.4	1.8
Commercial Paper, 1-mo.	0.13	0.14	0.13	0.15	0.17	0.18	0.18	*0.16*	0.2	0.3	0.4	0.7	1.2	1.6
Treasury bill, 3-mo.	0.10	0.11	0.14	0.14	0.17	0.18	0.18	*0.16*	0.2	0.3	0.4	0.7	1.1	1.5
Treasury bill, 6-mo.	0.20	0.20	0.22	0.23	0.27	0.28	0.31	*0.25*	0.3	0.4	0.6	0.9	1.3	1.7
Treasury bill, 1 yr.	0.41	0.40	0.40	0.42	0.46	0.48	0.51	*0.45*	0.5	0.7	0.8	1.2	1.6	1.9
Treasury note, 2 yr.	1.00	0.98	0.92	0.93	1.12	1.02	1.18	*1.04*	1.1	1.3	1.5	1.8	2.1	2.5
Treasury note, 5 yr.	2.44	2.43	2.34	2.33	2.57	2.46	2.71	*2.48*	2.5	2.7	2.8	3.0	3.2	3.5
Treasury note, 10 yr.	3.46	3.46	3.41	3.37	3.59	3.56	3.72	*3.53*	3.6	3.7	3.9	4.1	4.2	4.4
Treasury note, 30 yr.	4.21	4.24	4.25	4.18	4.37	4.41	4.52	*4.34*	4.4	4.5	4.6	4.8	4.9	5.1
Corporate Aaa bond	5.16	5.15	5.18	5.12	5.26	5.41	5.61	*5.28*	5.3	5.4	5.4	5.6	5.7	5.8
Corporate Baa bond	6.31	6.36	6.39	6.37	6.58	7.09	7.50	*6.67*	6.6	6.7	6.7	6.8	6.9	7.0
State & Local bonds	4.04	4.20	4.33	4.37	4.60	4.72	4.81	*4.50*	4.5	4.6	4.7	4.8	4.9	5.0
Home mortgage rate	5.04	5.04	5.07	5.08	5.19	5.22	5.42	*5.15*	5.2	5.3	5.4	5.6	5.8	5.9
	History							Consensus Forecasts-Quarterly						
	4Q	1Q	2Q	3Q	4Q	1Q	2Q	*3Q**	4Q	1Q	2Q	3Q	4Q	1Q
Key Assumptions	2007	2008	2008	2008	2008	2009	2009	*2009*	2009	2010	2010	2010	2010	2011
Major Currency Index	73.3	72.0	70.9	73.5	81.3	82.7	79.4	*75.4*	75.2	75.1	74.6	74.6	74.9	75.2
Real GDP	2.1	-0.7	1.5	-2.7	-5.4	-6.4	-1.0	*3.2*	2.5	2.5	2.7	2.8	2.8	2.9
GDP Price Index	2.3	1.9	1.8	4.0	0.1	1.9	0.0	*1.4*	1.2	1.5	1.6	1.7	1.7	2.0
Consumer Price Index	5.8	4.5	4.5	6.2	-8.3	-2.4	1.3	*2.7*	1.8	1.7	1.6	2.0	2.0	2.1

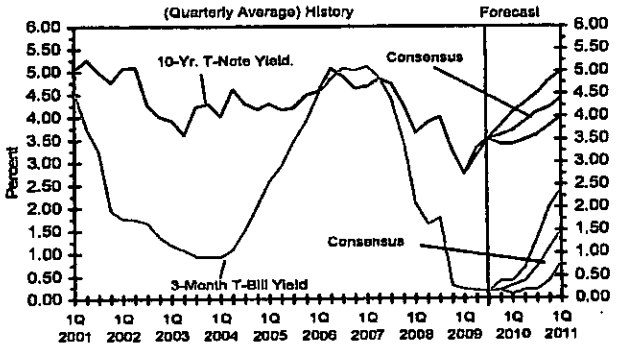
Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are the same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the Fed' 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).

U.S. Treasury Yield Curve

Week ended September 25, 2009 and Year Ago vs.
4Q 2009 and 1Q 2011 Consensus Forecasts

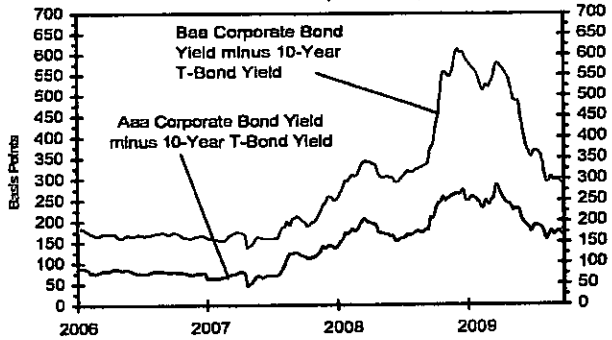


U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield



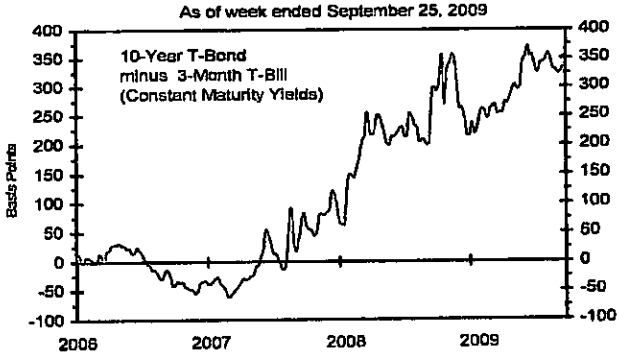
Corporate Bond Spreads

As of week ended September 25, 2009



U.S. Treasury Yield Curve

As of week ended September 25, 2009



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

Line No.		Over A Rated Public Utility Bonds AUS Consultants - Utility Services Study (1)
Time Period		1928-2008
1.	Arithmetic Mean Holding Period Returns (2): Standard & Poor's Public Utility Index	10.74 %
2.	Arithmetic Mean Yield on: Moody's A Rated Public Utility Bonds	(6.59)
3.	Equity Risk Premium	4.15 %

Notes: (1) S&P Public Utility Index and Moody's Public Utility Bond Average Annual Yields 1928-2008, (AUS Consultants - Utility Services, 2009).

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

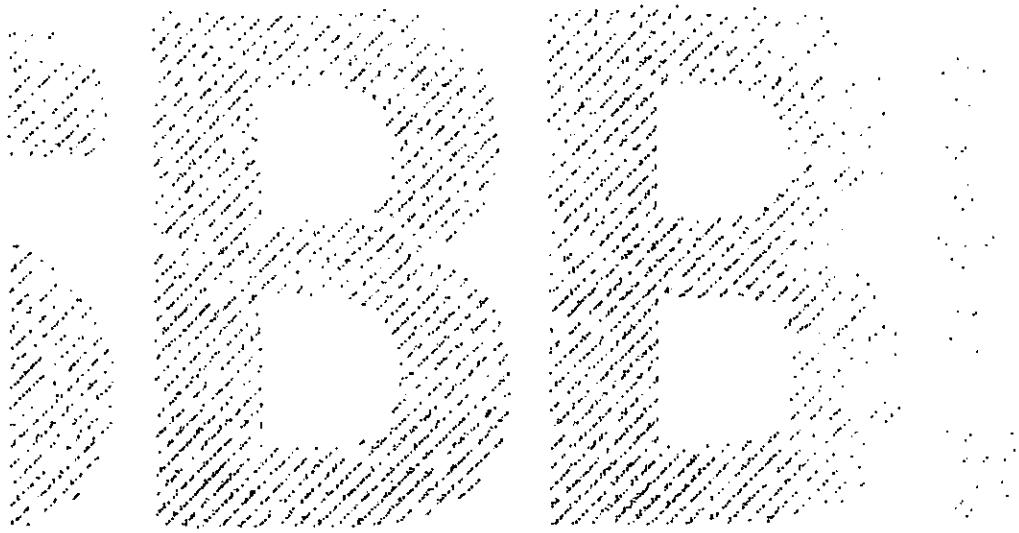
United Water New Rochelle, Inc.
Value Line Adjusted Betas for
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natrual Gas Distribution Companies

	Value Line Adjusted Beta
Proxy Group of Six AUS Utility Reports Water Companies	
American States Water Co.	0.80
Aqua America, Inc.	0.65
California Water Service Group	0.80
Middlesex Water Company	0.80
SJW Corporation	1.00
York Water Company	0.65
Average	0.78
Median	0.80
Proxy Group of Eight AUS Utility Reports Gas Distribution Companies	
AGL Resources, Inc.	0.75
Atmos Energy Corp.	0.65
Delta Natural Gas Company	0.65
Laclede Group, Inc.	0.60
Northwest Natural Gas Company	0.60
Piedmont Natural Gas Co., Inc.	0.65
Southwest Gas Corporation	0.75
WGL Holdings, Inc.	0.65
Average	0.66
Median	0.65

Source of Information: Value Line Investment Survey, July 24, and September 11, 2009
Standard Edition and Small and Mid-Cap Edition

Ibbotson® SBBI®
2009 Valuation Yearbook

Market Results for
Stocks, Bonds, Bills, and Inflation
1926–2008



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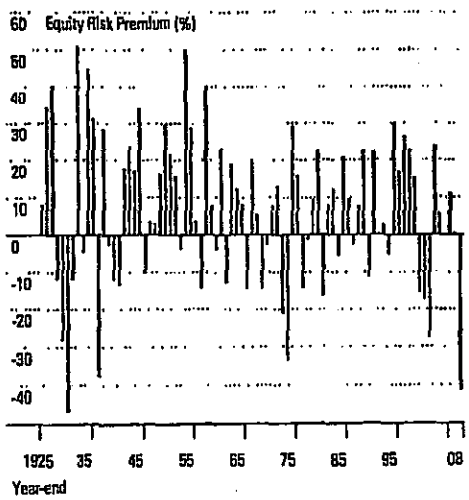
Arithmetic versus Geometric Means

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 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.

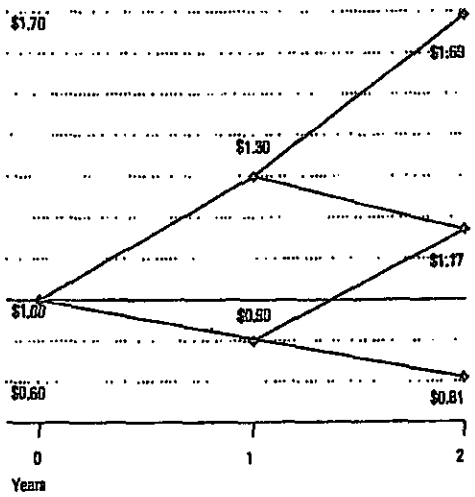
Graph 5-3: Realized Equity Risk Premium Per Year



Data from 1926–2008.

To illustrate how the arithmetic mean is more appropriate than the geometric mean in discounting cash flows, suppose the expected return on a stock is 10 percent per year with a standard deviation of 20 percent. Also assume that only two outcomes are possible each year: +30 percent and –10 percent (i.e., the mean plus or minus one standard deviation). The probability of occurrence for each outcome is equal. The growth of wealth over a two-year period is illustrated in Graph 5-4.

Graph 5-4: Growth of Wealth Example



The most common outcome of $1.17 is given by the geometric mean of 8.2 percent. Compounding the possible outcomes as follows derives the geometric mean:

$$\{(1+0.30)\times(1-0.10)\}^{1/2}-1=0.082$$

However, the expected value is predicted by compounding the arithmetic, not the geometric, mean. To illustrate this, we need to look at the probability-weighted average of all possible outcomes:

(0.25 × $1.69) =	$0.4225
+ (0.50 × $1.17) =	$0.5850
+ (0.25 × $0.81) =	$0.2025
Total	$1.2100

Therefore, $1.21 is the probability-weighted expected value. The rate that must be compounded to achieve the terminal value of $1.21 after 2 years is 10 percent, the arithmetic mean:

$$\$1\times(1+0.10)^2=\$1.21$$

The geometric mean, when compounded, results in the median of the distribution:

$$\$1\times(1+0.082)^2=\$1.17$$

The arithmetic mean equates the expected future value with the present value; it is therefore the appropriate discount rate.

Appropriate Historical Time Period

The equity risk premium can be estimated using any historical time period. For the U.S., market data exists at least as far back as the late 1800s. Therefore, it is possible to estimate the equity risk premium using data that covers roughly the past 100 years.

Our equity risk premium covers the time period from 1926 to the present. The original data source for the time series comprising the equity risk premium is the Center for Research in Security Prices. CRSP chose to begin their analysis of market returns with 1926 for two main reasons. CRSP determined that the time period around 1926 was approximately when quality financial data became available. They also made a conscious effort to include the period of extreme market volatility from the late twenties and early thirties; 1926 was chosen because it includes one full business cycle of data before the market crash of 1929. These are the most basic reasons why our equity risk premium calculation window starts in 1926.

Implicit in using history to forecast the future is the assumption that investors' expectations for future outcomes conform to past results. This method assumes that the price of taking on risk changes only slowly, if at all, over time. This "future equals the past" assumption is most applicable to a random time-series variable. A time-series variable is random if its value in one period is independent of its value in other periods.

Does the Equity Risk Premium Revert to Its Mean Over Time?

Some have argued that the estimate of the equity risk premium is upwardly biased since the stock market is currently priced high. In other words, since there have been several years with extraordinarily high market returns and realized equity risk premia, the expectation is that returns and realized equity risk premia will be lower in the future, bringing the average back to a normalized level. This argument relies on several studies that have tried to determine whether reversion to the mean exists in stock market prices and the equity risk premium.[3] Several academics contradict each other on this topic; moreover, the evidence supporting this argument is neither conclusive nor compelling enough to make such a strong assumption.

Our own empirical evidence suggests that the yearly difference between the stock market total return and the U.S. Treasury bond income return in any particular year is random. Graph 5-3, presented earlier, illustrates the randomness of the realized equity risk premium.

A statistical measure of the randomness of a return series is its serial correlation. Serial correlation (or autocorrelation) is defined as the degree to which the return of a given series is related from period to period. A serial correlation near positive one indicates that returns are predictable from one period to the next period and are positively related. That is, the returns of one period are a good predictor of the returns in the next period. Conversely, a serial correlation near negative one indicates that the returns in one period are inversely related to those of the next period. A serial correlation near zero indicates that the returns are random or unpredictable from one period to the next. Table 5-3 contains the serial correlation of the market total returns, the realized long-horizon equity risk premium, and inflation.

Table 5-3: Interpretation of Annual Serial Correlations

Series	Serial Correlation	Interpretation
Large Company Stock Total Returns	0.04	Random
Equity Risk Premium	0.04	Random
Inflation Rates	0.64	Trend

Data from 1926–2008

The significance of this evidence is that the realized equity risk premium next year will not be dependent on the realized equity risk premium from this year. That is, there is no discernable pattern in the realized equity risk premium—it is virtually impossible to forecast next year's realized risk premium based on the premium of the previous year. For example, if this year's difference between the riskless rate and the return on the stock market is higher than last year's, that does not imply that next year's will be higher than this year's. It is as likely to be higher as it is lower. The best estimate of the expected value of a variable that has behaved randomly in the past is the average (or arithmetic mean) of its past values.

Table 5-4 also indicates that the equity risk premium varies considerably by decade. The complete decades ranged from a high of 17.9 percent in the 1950s to a low of 0.3 percent in the 1970s, however, thus far the 2000s have shown a -6.7 percent equity risk premium. This look at historical equity risk premium reveals no observable pattern.

Table 5-4: Long-Horizon Equity Risk Premium by Decade (%)

1920s*	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s**	1999-2008
17.6	2.3	8.0	17.9	4.2	0.3	7.9	12.1	-6.7	-4.6

Data from 1926–2008.
*Based on the period 1926–1929.
**Based on the period 2000–2008.

Finnerty and Leistikow perform more econometrically sophisticated tests of mean reversion in the equity risk premium. Their tests demonstrate that—as we suspected from our simpler tests—the equity risk premium that was realized over 1926 to the present was almost perfectly free of mean reversion and had no statistically identifiable time trends.[4] Lo and MacKinlay conclude, "the rejection of the random walk for weekly returns does not support a mean-reverting model of asset prices."

Choosing an Appropriate Historical Period

The estimate of the equity risk premium depends on the length of the data series studied. A proper estimate of the equity risk premium requires a data series long enough to give a reliable average without being unduly influenced by very good and very poor short-term returns. When calculated using a long data series, the historical equity risk premium is relatively stable.[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 of the last hundred years took place quite recently, including the inflation of the late 1970s and early 1980s, the October 1987 stock market crash, the collapse of the high-yield bond market, the major contraction and consolidation of the thrift industry, the collapse of the Soviet Union, the development of the European Economic Community, 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.

Without an appreciation of the 1920s and 1930s, no one would believe that such events could happen. The 83-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.

A Look at the Historical Results

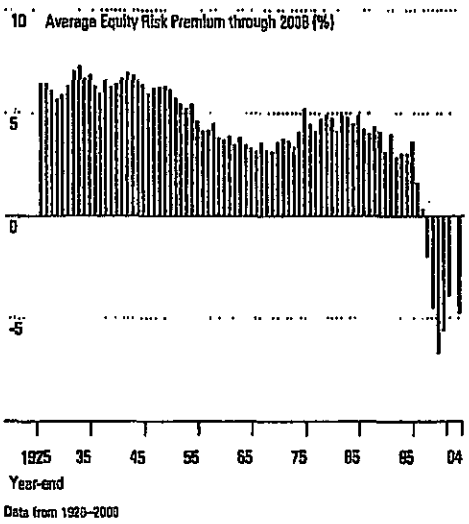
It is interesting to take a look at the realized returns and realized equity risk premium in the context of the above discussion. Table 5-5 shows the average stock market return and the average (arithmetic mean) realized long-horizon equity risk premium over various historical time periods. Similarly, Graph 5-5 shows the average (arithmetic mean) realized equity risk premium calculated through 2008 for different starting dates. The table and the graph both show

Table 5-5: Stock Market Return and Equity Risk Premium Over Time

Length (Yrs.)	Period Dates	Large Company Stock Arithmetic Mean Total Return (%)	Long-Horizon Equity Risk Premium (%)
83	1926–2008	11.7	6.5
70	1939–2008	11.9	6.3
60	1949–2008	12.4	6.3
50	1959–2008	10.6	3.8
40	1969–2008	10.6	3.2
30	1979–2008	12.5	5.0
20	1989–2008	10.4	4.2
15	1994–2008	6.7	3.1
10	1999–2008	0.7	-4.5
5	2004–2008	0.0	-4.7

Data from 1926–2009.

Graph 5-5: Equity Risk Premium Using Different Starting Dates



Data from 1926–2009

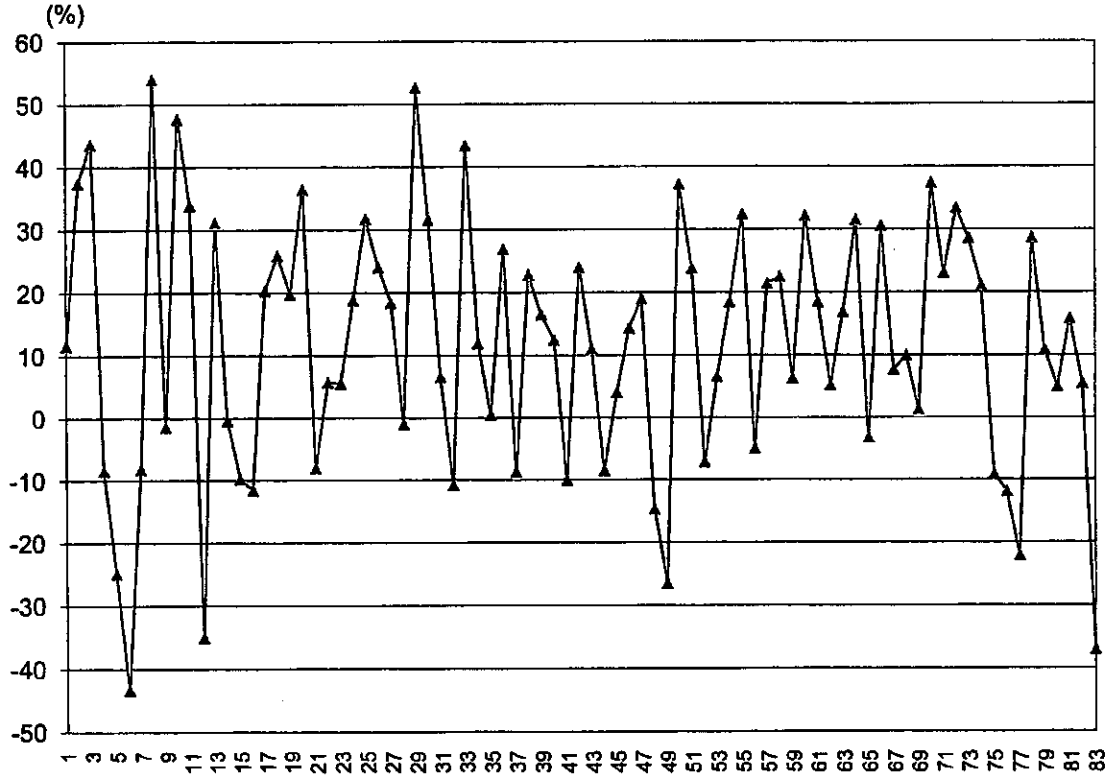
that using a longer historical period provides a more stable estimate of the equity risk premium. The reason is that any unique period will not be weighted heavily in an average covering a longer historical period. It better represents the probability of these unique events occurring over a long period of time.

Looking carefully at Graph 5-5 will clarify this point. The graph shows the realized equity risk premium for a series of time periods through 2008, starting with 1926. In other words, the first value on the graph represents the average realized equity risk premium over the period 1926–2008. The next value on the graph represents the average realized equity risk premium over the period 1927–2008, and so on, with the last value representing the average over the most recent five years, 2004–2008. Concentrating on the left side of Graph 5-5, one notices that the realized equity risk premium, when measured over long periods of time, is relatively stable. In viewing the graph from left to right, moving from longer to shorter historical periods, one sees that the value of the realized equity risk premium begins to decline significantly. Why does this occur? The reason is that the severe bear market of 1973–1974 is receiving proportionately more weight in the shorter, more recent average. If you continue to follow the line to the right, however, you will also notice that when 1973 and 1974 fall out of the recent average, the realized equity risk premium jumps up by nearly 1.2 percent.

Additionally, use of recent historical periods for estimation purposes can lead to illogical conclusions. As seen in Table 5-5, the recent bear market in the early 2000's and in 2008 has caused the realized equity risk premium in the shorter historical periods to be lower than the long-term average.

The impact of adding one additional year of data to a historical average is lessened the greater the initial time period of measurement. Short-term averages can be affected considerably by one or more unique observations. On the other hand, long-term averages produce more stable results. A series of graphs looking at the realized equity risk premium will illustrate this effect. Graph 5-6 shows the average (arithmetic mean) realized long-horizon equity risk premium starting in 1926. Each additional point on the graph represents the addition of another year to the average. Although the graph is extremely volatile in the beginning periods, the stability of the long-term average is quite remarkable. Again, the "unique" periods of time will not be weighted heavily in a long-term average, resulting in a more stable estimate.

United Water New Rochelle, Inc.
Large Company Stock Returns
From 1926 to 2008

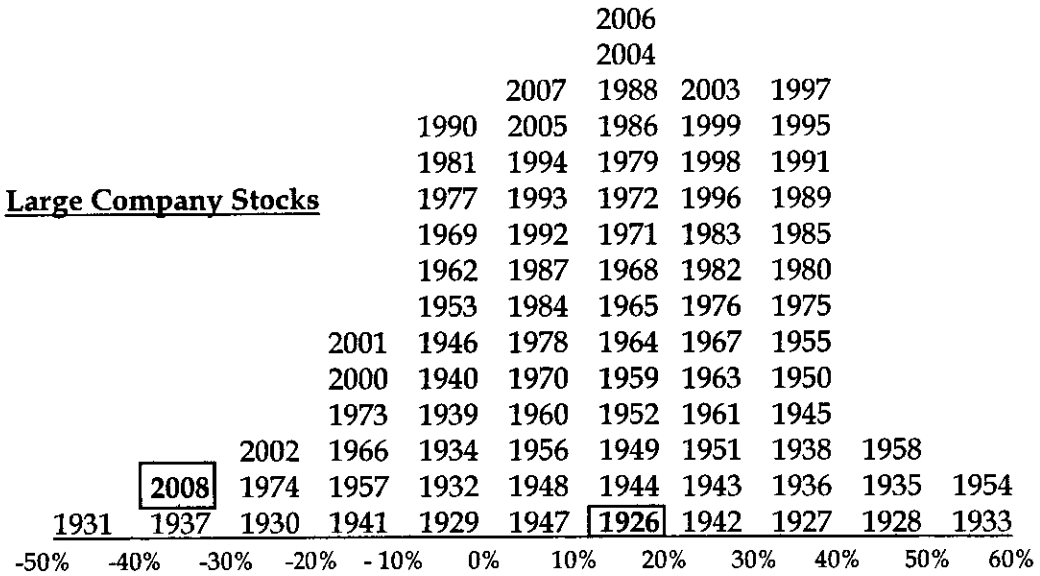


Source of Information:

Ibbotson SBBI - 2009 Valuation Yearbook - Market Results for Stocks Bonds Bills and Inflation - 1926-2008, Morningstar, Inc., 2009 Chicago, IL.

Exhibit No.__
Schedule PMA-12
Page 1 of 3

United Water New Rochelle, Inc.
Total Returns on Large Company Stocks
1926 to 2008



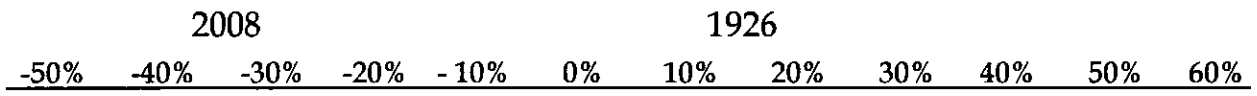
Arithmetic Mean: $r_A = \sum_{t=1}^{n} r_t / n$

Source : Ibbotson SBBI - 2009 Valuation Yearbook - Market Results for Stocks, Bonds, Bills, and Inflation -1926-2008, pp. 166-167, Morningstar, Inc., 2009 Chicago, IL

Exhibit No. ___
Schedule PMA-12
Page 2 of 3

United Water New Rochelle, Inc.
Total Returns on Large Company Stocks
1926 to 2008

Large Company Stocks



Geometric Mean: $r_G = \left[V_n / V_0 \right]^{1/n} - 1$

Source : Ibbotson SBBI – 2009 Valuation Yearbook – Market Results for Stocks, Bonds, Bills, and Inflation –1926-2008, pp. 166-167, Morningstar, Inc., 2009 Chicago, IL

Exhibit No. ___
Schedule PMA-12
Page 3 of 3

United Water New Rochelle, Inc.
Yields on Moody's A and Baa Rated Public Utility Bonds
and Aaa Rated Corporate Bonds Since October 1989

Date	Aaa Corporate Bonds	Moody's A PU Bonds	Moody's Baa PU Bonds	Spread Between Aaa v A PU Bonds	Spread Between Aaa v Baa PU Bonds	Spread between A and Baa PU Bonds
Oct-89	8.92%	9.54%	9.64%	0.62%	0.72%	0.10%
Nov-89	8.88%	9.51%	9.64%	0.62%	0.75%	0.13%
Dec-89	8.86%	9.44%	9.60%	0.58%	0.74%	0.16%
Jan-90	8.99%	9.56%	9.74%	0.57%	0.75%	0.18%
Feb-90	9.22%	9.76%	9.96%	0.54%	0.74%	0.20%
Mar-90	9.37%	9.85%	10.06%	0.48%	0.69%	0.21%
Apr-90	9.46%	9.92%	10.13%	0.46%	0.67%	0.21%
May-90	9.47%	10.00%	10.16%	0.53%	0.69%	0.16%
Jun-90	9.26%	9.80%	9.96%	0.54%	0.70%	0.16%
Jul-90	9.24%	9.75%	9.92%	0.51%	0.68%	0.17%
Aug-90	9.41%	9.92%	10.12%	0.51%	0.71%	0.20%
Sep-90	9.56%	10.12%	10.32%	0.56%	0.76%	0.20%
Oct-90	9.53%	10.05%	10.28%	0.52%	0.75%	0.23%
Nov-90	9.30%	9.90%	10.12%	0.60%	0.82%	0.22%
Dec-90	9.05%	9.73%	9.96%	0.68%	0.91%	0.23%
Jan-91	9.04%	9.71%	9.96%	0.67%	0.92%	0.25%
Feb-91	8.83%	9.47%	9.68%	0.64%	0.85%	0.21%
Mar-91	8.93%	9.55%	9.74%	0.62%	0.81%	0.19%
Apr-91	8.86%	9.46%	9.64%	0.60%	0.78%	0.18%
May-91	8.86%	9.44%	9.64%	0.58%	0.78%	0.20%
Jun-91	9.01%	9.59%	9.79%	0.58%	0.78%	0.20%
Jul-91	9.00%	9.55%	9.69%	0.55%	0.69%	0.14%
Aug-91	8.75%	9.29%	9.47%	0.54%	0.72%	0.18%
Sep-91	8.61%	9.16%	9.34%	0.55%	0.73%	0.18%
Oct-91	8.55%	9.12%	9.32%	0.57%	0.77%	0.20%
Nov-91	8.46%	9.05%	9.28%	0.57%	0.80%	0.23%
Dec-91	8.31%	8.88%	9.07%	0.57%	0.76%	0.19%
Jan-92	8.20%	8.84%	8.98%	0.64%	0.78%	0.14%
Feb-92	8.29%	8.93%	9.09%	0.64%	0.80%	0.16%
Mar-92	8.35%	8.97%	9.16%	0.62%	0.81%	0.19%
Apr-92	8.33%	8.93%	9.11%	0.60%	0.78%	0.18%
May-92	8.28%	8.87%	9.01%	0.59%	0.73%	0.14%
Jun-92	8.22%	8.78%	8.90%	0.56%	0.68%	0.12%
Jul-92	8.07%	8.57%	8.69%	0.50%	0.62%	0.12%
Aug-92	7.95%	8.44%	8.58%	0.49%	0.63%	0.14%
Sep-92	7.92%	8.40%	8.54%	0.48%	0.62%	0.14%
Oct-92	7.99%	8.54%	8.76%	0.55%	0.77%	0.22%
Nov-92	8.10%	8.63%	8.86%	0.53%	0.76%	0.23%
Dec-92	7.98%	8.43%	8.69%	0.45%	0.71%	0.26%
Jan-93	7.91%	8.27%	8.57%	0.36%	0.66%	0.30%
Feb-93	7.71%	8.04%	8.31%	0.33%	0.60%	0.27%
Mar-93	7.58%	7.90%	8.10%	0.32%	0.52%	0.20%
Apr-93	7.46%	7.81%	8.11%	0.35%	0.65%	0.30%
Apr-93	7.43%	7.86%	8.18%	0.43%	0.75%	0.32%
May-93	7.33%	7.75%	8.05%	0.42%	0.72%	0.30%
Jun-93	7.17%	7.54%	7.93%	0.37%	0.76%	0.39%
Jul-93	6.95%	7.25%	7.59%	0.40%	0.74%	0.34%
Aug-93	6.66%	7.04%	7.35%	0.38%	0.69%	0.31%
Sep-93	6.67%	7.03%	7.27%	0.36%	0.60%	0.24%
Oct-93	6.93%	7.30%	7.69%	0.37%	0.76%	0.39%
Nov-93	6.93%	7.34%	7.73%	0.41%	0.80%	0.39%
Dec-93	6.92%	7.33%	7.66%	0.41%	0.74%	0.33%
Jan-94	7.08%	7.47%	7.76%	0.39%	0.68%	0.29%
Mar-94	7.46%	7.47%	7.75%	-0.01%	0.28%	0.29%
Apr-94	7.68%	7.85%	8.11%	-0.03%	0.23%	0.26%
May-94	7.99%	8.33%	8.61%	0.34%	0.62%	0.28%
Jun-94	7.97%	8.31%	8.64%	0.34%	0.67%	0.33%
Jul-94	8.11%	8.47%	8.80%	0.36%	0.69%	0.33%
Aug-94	8.07%	8.41%	8.74%	0.34%	0.67%	0.33%
Sep-94	8.34%	8.64%	8.98%	0.30%	0.64%	0.34%
Oct-94	8.57%	8.86%	9.24%	0.29%	0.67%	0.38%
Nov-94	8.68%	8.98%	9.35%	0.30%	0.67%	0.37%
Dec-94	8.46%	8.76%	9.16%	0.30%	0.70%	0.40%
Jan-95	8.46%	8.73%	9.15%	0.27%	0.69%	0.42%
Feb-95	8.26%	8.52%	8.93%	0.26%	0.67%	0.41%
Mar-95	8.12%	8.37%	8.78%	0.25%	0.66%	0.41%
Apr-95	8.03%	8.27%	8.67%	0.24%	0.64%	0.40%
May-95	7.65%	7.91%	8.30%	0.26%	0.65%	0.39%
Jun-95	7.30%	7.60%	8.01%	0.30%	0.71%	0.41%
Jul-95	7.41%	7.70%	8.11%	0.29%	0.70%	0.41%
Aug-95	7.57%	7.83%	8.24%	0.25%	0.67%	0.41%
Sep-95	7.32%	7.62%	7.98%	0.30%	0.66%	0.36%
Oct-95	7.12%	7.46%	7.82%	0.34%	0.70%	0.36%
Nov-95	7.02%	7.43%	7.81%	0.41%	0.79%	0.38%
Dec-95	6.82%	7.23%	7.63%	0.41%	0.81%	0.40%
Jan-96	6.81%	7.22%	7.64%	0.41%	0.83%	0.42%
Feb-96	6.99%	7.37%	7.78%	0.38%	0.79%	0.41%
Mar-96	7.35%	7.73%	8.15%	0.38%	0.80%	0.42%
Apr-96	7.50%	7.89%	8.32%	0.39%	0.82%	0.43%
May-96	7.62%	7.98%	8.45%	0.36%	0.83%	0.47%
Jun-96	7.71%	8.06%	8.51%	0.35%	0.80%	0.45%
Jul-96	7.65%	8.02%	8.44%	0.37%	0.79%	0.42%
Aug-96	7.46%	7.84%	8.25%	0.38%	0.79%	0.41%
Sep-96	7.66%	8.01%	8.41%	0.35%	0.75%	0.40%
Oct-96	7.39%	7.77%	8.15%	0.38%	0.76%	0.38%
Nov-96	7.10%	7.49%	7.87%	0.39%	0.77%	0.38%
Dec-96	7.20%	7.59%	7.98%	0.39%	0.78%	0.39%
Jan-97	7.42%	7.77%	8.18%	0.35%	0.76%	0.41%
Feb-97	7.31%	7.64%	8.02%	0.33%	0.71%	0.38%
Mar-97	7.55%	7.87%	8.26%	0.32%	0.71%	0.39%
Apr-97	7.73%	8.03%	8.42%	0.30%	0.69%	0.39%
May-97	7.56%	7.89%	8.28%	0.31%	0.70%	0.39%

United Water New Rochelle, Inc.
Yields on Moody's A and Baa Rated Public Utility Bonds
and Aaa Rated Corporate Bonds Since October 1989

Date	Aaa Corporate Bonds	Moody's A PU Bonds	Moody's Baa PU Bonds	Spread Between Aaa v A PU Bonds	Spread Between Aaa v Baa PU Bonds	Spread between A and Baa PU Bonds
Jun-97	7.41%	7.72%	8.12%	0.31%	0.71%	0.40%
Jul-97	7.14%	7.48%	7.87%	0.34%	0.73%	0.39%
Aug-97	7.22%	7.51%	7.93%	0.29%	0.71%	0.42%
Sep-97	7.15%	7.47%	7.79%	0.32%	0.64%	0.32%
Oct-97	7.00%	7.35%	7.67%	0.35%	0.67%	0.32%
Nov-97	6.87%	7.25%	7.49%	0.38%	0.62%	0.24%
Dec-97	6.76%	7.16%	7.41%	0.40%	0.65%	0.25%
Jan-98	6.61%	7.05%	7.28%	0.44%	0.67%	0.23%
Feb-98	6.67%	7.12%	7.36%	0.45%	0.69%	0.24%
Feb-98	6.72%	7.16%	7.37%	0.44%	0.65%	0.21%
Mar-98	6.69%	7.16%	7.37%	0.47%	0.68%	0.21%
Apr-98	6.69%	7.16%	7.34%	0.47%	0.65%	0.18%
May-98	6.53%	7.03%	7.21%	0.50%	0.68%	0.18%
Jun-98	6.55%	7.03%	7.23%	0.48%	0.68%	0.20%
Jul-98	6.52%	7.00%	7.20%	0.48%	0.68%	0.20%
Aug-98	6.40%	6.93%	7.13%	0.53%	0.73%	0.20%
Oct-98	6.37%	6.96%	7.13%	0.59%	0.76%	0.17%
Nov-98	6.41%	7.03%	7.31%	0.62%	0.90%	0.28%
Dec-98	6.22%	6.91%	7.24%	0.69%	1.02%	0.33%
Jan-99	6.24%	6.97%	7.30%	0.73%	1.06%	0.33%
Feb-99	6.40%	7.09%	7.41%	0.69%	1.01%	0.32%
Mar-99	6.62%	7.26%	7.55%	0.64%	0.93%	0.29%
Apr-99	6.64%	7.22%	7.51%	0.58%	0.87%	0.29%
May-99	6.83%	7.47%	7.74%	0.54%	0.81%	0.27%
Jun-99	7.23%	7.74%	8.03%	0.51%	0.80%	0.29%
Jul-99	7.19%	7.71%	7.97%	0.52%	0.78%	0.26%
Aug-99	7.40%	7.91%	8.16%	0.51%	0.76%	0.25%
Sep-99	7.39%	7.93%	8.19%	0.54%	0.80%	0.26%
Oct-99	7.55%	8.06%	8.32%	0.51%	0.77%	0.26%
Nov-99	7.35%	7.94%	8.12%	0.58%	0.76%	0.18%
Dec-99	7.55%	8.14%	8.28%	0.59%	0.73%	0.14%
Jan-00	7.78%	8.35%	8.40%	0.57%	0.62%	0.05%
Feb-00	7.68%	8.25%	8.33%	0.57%	0.65%	0.08%
Mar-00	7.68%	8.28%	8.40%	0.60%	0.72%	0.12%
Apr-00	7.64%	8.29%	8.40%	0.65%	0.76%	0.11%
May-00	7.99%	8.70%	8.86%	0.71%	0.87%	0.16%
Jun-00	7.67%	8.36%	8.47%	0.69%	0.80%	0.11%
Jul-00	7.65%	8.25%	8.33%	0.60%	0.68%	0.08%
Aug-00	7.55%	8.13%	8.25%	0.58%	0.70%	0.12%
Sep-00	7.62%	8.23%	8.32%	0.61%	0.70%	0.09%
Oct-00	7.55%	8.14%	8.29%	0.59%	0.74%	0.15%
Nov-00	7.45%	8.11%	8.25%	0.66%	0.80%	0.14%
Dec-00	7.21%	7.84%	8.01%	0.63%	0.80%	0.17%
Jan-01	7.15%	7.80%	7.99%	0.65%	0.84%	0.19%
Feb-01	7.10%	7.74%	7.94%	0.64%	0.84%	0.20%
Mar-01	6.98%	7.68%	7.85%	0.70%	0.87%	0.17%
Apr-01	7.20%	7.94%	8.06%	0.74%	0.86%	0.12%
May-01	7.29%	7.99%	8.11%	0.70%	0.82%	0.12%
Jun-01	7.18%	7.85%	8.02%	0.67%	0.84%	0.17%
Jul-01	7.13%	7.78%	8.05%	0.65%	0.92%	0.27%
Aug-01	7.02%	7.59%	7.95%	0.57%	0.93%	0.35%
Sep-01	7.17%	7.75%	8.12%	0.58%	0.95%	0.37%
Oct-01	7.03%	7.63%	8.02%	0.60%	0.99%	0.39%
Nov-01	6.97%	7.57%	7.96%	0.60%	0.99%	0.39%
Dec-01	6.77%	7.83%	8.27%	1.06%	1.50%	0.44%
Jan-02	6.55%	7.66%	8.13%	1.11%	1.58%	0.47%
Feb-02	6.51%	7.54%	8.18%	1.03%	1.67%	0.64%
Mar-02	6.81%	7.76%	8.32%	0.95%	1.51%	0.56%
Apr-02	6.76%	7.57%	8.26%	0.81%	1.50%	0.69%
May-02	6.75%	7.52%	8.33%	0.77%	1.58%	0.81%
Jun-02	6.63%	7.42%	8.26%	0.79%	1.63%	0.84%
Jul-02	6.53%	7.31%	8.07%	0.78%	1.54%	0.76%
Aug-02	6.37%	7.17%	7.74%	0.80%	1.37%	0.57%
Sep-02	6.15%	7.08%	7.62%	0.93%	1.47%	0.54%
Oct-02	6.32%	7.23%	8.00%	0.91%	1.68%	0.77%
Nov-02	6.31%	7.14%	7.76%	0.83%	1.45%	0.62%
Dec-02	6.21%	7.07%	7.61%	0.86%	1.40%	0.54%
Jan-03	6.17%	7.06%	7.47%	0.89%	1.30%	0.41%
Feb-03	5.95%	6.93%	7.17%	0.98%	1.22%	0.24%
Mar-03	5.89%	6.79%	7.05%	0.90%	1.16%	0.26%
Apr-03	5.74%	6.64%	6.94%	0.90%	1.20%	0.30%
May-03	5.22%	6.36%	6.47%	1.14%	1.25%	0.11%

United Water New Rochelle, Inc.
Yields on Moody's A and Baa Rated Public Utility Bonds
and Aaa Rated Corporate Bonds Since October 1989

Date	Aaa Corporate Bonds	Moody's A PU Bonds	Moody's Baa PU Bonds	Spread Between Aaa v A PU Bonds	Spread Between Aaa v Baa PU Bonds	Spread between A and Baa PU Bonds
Jun-03	4.97%	6.21%	6.30%	1.24%	1.33%	0.09%
Jul-03	5.49%	6.57%	6.67%	1.08%	1.18%	0.10%
Aug-03	5.88%	6.78%	7.08%	0.90%	1.20%	0.30%
Sep-03	5.72%	6.56%	6.87%	0.84%	1.15%	0.31%
Oct-03	5.70%	6.43%	6.79%	0.73%	1.09%	0.36%
Nov-03	5.65%	6.37%	6.69%	0.72%	1.04%	0.32%
Dec-03	5.62%	6.27%	6.61%	0.65%	0.99%	0.34%
Jan-04	5.54%	6.15%	6.47%	0.61%	0.93%	0.32%
Feb-04	5.50%	6.15%	6.28%	0.65%	0.78%	0.13%
Mar-04	5.33%	5.97%	6.12%	0.64%	0.79%	0.15%
Apr-04	5.73%	6.35%	6.46%	0.62%	0.73%	0.11%
May-04	6.04%	6.62%	6.75%	0.58%	0.71%	0.13%
Jun-04	6.01%	6.46%	6.84%	0.45%	0.83%	0.38%
Jul-04	5.82%	6.27%	6.67%	0.45%	0.85%	0.40%
Aug-04	5.65%	6.14%	6.45%	0.49%	0.80%	0.31%
Sep-04	5.46%	5.98%	6.27%	0.52%	0.81%	0.29%
Oct-04	5.47%	5.94%	6.17%	0.47%	0.70%	0.23%
Nov-04	5.52%	5.97%	6.16%	0.45%	0.64%	0.19%
Dec-04	5.47%	5.92%	6.10%	0.45%	0.63%	0.18%
Jan-05	5.36%	5.78%	5.95%	0.42%	0.59%	0.17%
Feb-05	5.20%	5.61%	5.76%	0.41%	0.56%	0.15%
Mar-05	5.40%	5.83%	6.01%	0.43%	0.61%	0.18%
Apr-05	5.33%	5.64%	5.95%	0.31%	0.62%	0.31%
May-05	5.15%	5.53%	5.88%	0.38%	0.73%	0.35%
Jun-05	4.95%	5.40%	5.70%	0.44%	0.74%	0.30%
Jul-05	5.06%	5.51%	5.80%	0.45%	0.74%	0.29%
Aug-05	5.09%	5.50%	5.81%	0.41%	0.72%	0.31%
Sep-05	5.13%	5.52%	5.83%	0.39%	0.70%	0.31%
Oct-05	5.35%	5.79%	6.08%	0.44%	0.73%	0.29%
Nov-05	5.42%	5.88%	6.19%	0.46%	0.77%	0.31%
Dec-05	5.37%	5.80%	6.14%	0.43%	0.77%	0.34%
Jan-06	5.29%	5.75%	6.06%	0.46%	0.77%	0.31%
Feb-06	5.35%	5.82%	6.11%	0.47%	0.76%	0.29%
Mar-06	5.53%	5.98%	6.26%	0.45%	0.73%	0.28%
Apr-06	5.84%	6.29%	6.64%	0.45%	0.70%	0.25%
May-06	5.95%	6.42%	6.59%	0.47%	0.64%	0.17%
Jun-06	5.89%	6.40%	6.61%	0.51%	0.72%	0.21%
Jul-06	5.85%	6.37%	6.61%	0.52%	0.76%	0.24%
Aug-06	5.68%	6.20%	6.43%	0.52%	0.75%	0.23%
Sep-06	5.51%	6.00%	6.26%	0.49%	0.75%	0.26%
Oct-06	5.51%	5.98%	6.24%	0.47%	0.73%	0.26%
Nov-06	5.33%	5.80%	6.04%	0.47%	0.71%	0.24%
Dec-06	5.32%	5.81%	6.05%	0.49%	0.73%	0.24%
Jan-07	5.40%	5.96%	6.16%	0.56%	0.76%	0.20%
Feb-07	5.39%	5.90%	6.10%	0.51%	0.71%	0.20%
Mar-07	5.30%	5.85%	6.10%	0.55%	0.80%	0.25%
Apr-07	5.47%	5.97%	6.24%	0.50%	0.77%	0.27%
May-07	5.47%	5.99%	6.23%	0.52%	0.76%	0.24%
Jun-07	5.79%	6.30%	6.54%	0.51%	0.75%	0.24%
Jul-07	5.73%	6.25%	6.49%	0.52%	0.76%	0.24%
Aug-07	5.79%	6.24%	6.51%	0.45%	0.72%	0.27%
Sep-07	5.74%	6.18%	6.45%	0.44%	0.71%	0.27%
Oct-07	5.66%	6.11%	6.36%	0.45%	0.70%	0.25%
Nov-07	5.44%	5.97%	6.27%	0.53%	0.83%	0.30%
Dec-07	5.49%	6.16%	6.51%	0.67%	1.02%	0.35%
Jan-08	5.33%	6.02%	6.35%	0.69%	1.02%	0.33%
Feb-08	5.53%	6.21%	6.60%	0.68%	1.07%	0.39%
Mar-08	5.51%	6.21%	6.68%	0.70%	1.17%	0.47%
Apr-08	5.55%	6.29%	6.81%	0.74%	1.26%	0.52%
May-08	5.57%	6.27%	6.79%	0.70%	1.22%	0.52%
Jun-08	5.68%	6.38%	6.93%	0.70%	1.25%	0.55%
Jul-08	5.67%	6.40%	6.97%	0.73%	1.30%	0.57%
Aug-08	5.64%	6.37%	6.98%	0.73%	1.34%	0.61%
Sep-08	5.65%	6.49%	7.15%	0.84%	1.50%	0.66%
Oct-08	6.26%	7.56%	8.58%	1.28%	2.30%	1.02%
Nov-08	6.12%	7.20%	8.98%	1.08%	2.86%	1.78%
Dec-08	5.05%	6.54%	8.13%	1.49%	3.08%	1.59%
Jan-09	5.05%	6.39%	7.90%	1.34%	2.85%	1.51%
Feb-09	5.27%	6.30%	7.74%	1.03%	2.47%	1.44%
Mar-09	5.50%	6.42%	8.00%	0.92%	2.50%	1.58%
Apr-09	5.39%	6.48%	8.03%	1.09%	2.64%	1.55%
May-09	5.54%	6.49%	7.76%	0.95%	2.22%	1.27%
Jun-09	5.81%	6.20%	7.30%	0.59%	1.69%	1.10%
Jul-09	5.41%	5.97%	6.87%	0.56%	1.46%	0.90%
Aug-09	5.26%	5.71%	6.36%	0.45%	1.10%	0.65%
Sep-09	5.26%	5.71%	6.36%	0.45%	1.10%	0.65%
Average	5.90%	7.45%	7.79%	0.56%	0.90%	0.34%
Median	5.93%	7.47%	7.95%	0.52%	0.76%	0.29%

Source of information:
S&P Public Utility Index and Moody's Public Utility Bond Average Annual Yields 1928-2009, (AUS Consultants - Utility Services, 2009).

United Water New Rochelle, Inc.
Indicated Common Equity Cost Rate Through Use
of the Capital Asset Pricing Model for the
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natrual Gas Distribution Companies

Line No.		Proxy Group of Six AUS Utility Reports Water Companies	Proxy Group of Eight AUS Utility Reports Gas Distribution Companies
1.	Traditional Capital Asset Pricing Model (1)	11.37 %	10.12 %
2.	Empirical Capital Asset Pricing Model (1)	11.78 %	10.85 %
3.	Conclusion	11.58 %	10.49 %

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

United Water New Rochelle, Inc.
Indicated Common Equity Cost Rate Through Use
of the Capital Asset Pricing Model

	1	2	3
	Value Line Adjusted Beta	Company-Specific Risk Premium Based on Market Premium of 8.31% (1)	CAPM Result Including Risk-Free Rate of 4.72% (2)
Traditional Capital Asset Pricing Model (3)			
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	0.80	6.65 %	11.37 %
Aqua America, Inc.	0.65	5.40	10.12
California Water Service Group	0.80	6.65	11.37
Middlesex Water Company	0.80	6.65	11.37
SJW Corporation	1.00	8.31	13.03
York Water Company	0.65	5.40	10.12
Average	0.78	6.51 %	11.23 %
Median	0.80	6.65 %	11.37 %
Proxy Group of Eight AUS Utility Reports Gas Distribution Companies			
AGL Resources, Inc.	0.75	6.23 %	10.95 %
Atmos Energy Corp.	0.65	5.40	10.12
Delta Natural Gas Company	0.65	5.40	10.12
Laclede Group, Inc.	0.60	4.99	9.71
Northwest Natural Gas Company	0.60	4.99	9.71
Piedmont Natural Gas Co., Inc.	0.65	5.40	10.12
Southwest Gas Corporation	0.75	6.23	10.95
WGL Holdings, Inc.	0.65	5.40	10.12
Average	0.68	5.51 %	10.23 %
Median	0.65	5.40 %	10.12 %
Empirical Capital Asset Pricing Model (4)			
Proxy Group of Six AUS Utility Reports Water Companies			
American States Water Co.	0.80	7.06 %	11.78 %
Aqua America, Inc.	0.65	6.13	10.85
California Water Service Group	0.80	7.06	11.78
Middlesex Water Company	0.80	7.06	11.78
SJW Corporation	1.00	8.31	13.03
York Water Company	0.65	6.13	10.85
Average	0.78	6.96 %	11.68 %
Median	0.80	7.06 %	11.78 %
Proxy Group of Eight AUS Utility Reports Gas Distribution Companies			
AGL Resources, Inc.	0.75	6.75 %	11.47 %
Atmos Energy Corp.	0.65	6.13	10.85
Delta Natural Gas Company	0.65	6.13	10.85
Laclede Group, Inc.	0.60	5.82	10.54
Northwest Natural Gas Company	0.60	5.82	10.54
Piedmont Natural Gas Co., Inc.	0.65	6.13	10.85
Southwest Gas Corporation	0.75	6.75	11.47
WGL Holdings, Inc.	0.65	6.13	10.85
Average	0.66	6.21 %	10.93 %
Median	0.65	6.13 %	10.85 %

See page 3 for notes.

United Water New Rochelle, Inc.
Development of the Market-Required Rate of Return on Common Equity Using
the Capital Asset Pricing Model for
the Proxy Group of Six AUS Utility Reports Water Companies
and the Proxy Group of Eight AUS Utility Reports Natural Gas Distribution 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 (July 2009 – September 2009), as well as a recently available (October 9, 2009), Value Line Summary & Index, a forecasted 3-5 year total annual market return of 14.84% 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 61% produces a four-year average annual return of 12.64% ($(1.61^{.25}) - 1$). When the average annual forecasted dividend yield of 2.20% is added, a total average market return of 14.84% (2.20% + 12.64%) is derived.

The 3-month and spot forecasted total market return of 14.84% minus the forecasted risk-free rate of 4.72% (developed in Note 2) is 10.12% (14.84% - 4.72%). The Morningstar, Inc. (Ibbotson Associates) calculated market premium of 6.50% for the period 1926-2008 results from a total market return of 11.70% less the average income return on long-term U.S. Government Securities of 5.20% (11.70% - 5.20% = 6.50%). This is then averaged with the 10.12% Value Line market premium resulting in an 8.31% market premium. The 8.31% market premium is then multiplied by the beta in column 1 of page 2 of this Schedule.

(2) The 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 October 1, 2009 (see page 7 of Schedule PMA-10). The estimates are detailed below:

	30-Year Treasury Note Yield
Fourth Quarter 2009	4.40
First Quarter 2010	4.50
Second Quarter 2010	4.60
Third Quarter 2010	4.80
Fourth Quarter 2010	4.90
First Quarter 2011	5.10
Average	4.72%

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

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

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

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

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

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

Source of Information:
Value Line Summary & Index
Blue Chip Financial Forecasts, October 1, 2009
Value Line Investment Survey, July 24, 2009 and September 11, 2009 Standard Edition and Small and Mid-Cap Edition
Ibbotson SBBI – 2009 Valuation Yearbook – Market Results for Stocks, Bonds, Bills, and Inflation for 1926-2008, Morningstar, Inc., 2009, Chicago,

United Water New Rochelle, Inc.
Comparable Earnings Analysis
for a Proxy Group of One Hundred Sixteen Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Sixteen Non-Utility Companies Comparable to the Proxy Group of Six AUS Utility Reports Water Companies (1)	VL Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth, or Partner's Capital 5-Year Projected (2) 5 Year Projection	Student's T Statistic
Affiliated Computer	0.75	0.56	3.2090	0.0714	14.50	(0.20)
Analog Devices	0.90	0.81	3.6726	0.0818	17.50	0.18
Allergan, Inc.	0.80	0.62	3.3554	0.0746	17.50	0.18
Gallagher (Arthur J.)	0.75	0.56	3.1255	0.0696	24.00	1.00
Amgen	0.65	0.42	3.8055	0.0847	16.50	0.05
Aon Corp.	0.70	0.52	3.9021	0.0869	14.50	(0.20)
AVX Corp.	0.95	0.85	3.4217	0.0762	7.50	(1.08)
Bed Bath & Beyond	0.90	0.85	3.7545	0.0836	12.00	(0.51)
Beckman Coulter	0.75	0.62	3.1885	0.0710	12.00	(0.51)
Bio-Rad Labs. A	0.90	0.84	3.8652	0.0860	11.50	(0.58)
BJs Wholesale Club	0.75	0.55	4.0163	0.0894	10.00	(0.77)
BMC Software	0.85	0.73	3.3622	0.0748	21.00	0.62
Brown & Brown	0.70	0.51	3.2448	0.0722	13.00	(0.39)
Cardinal Health	0.75	0.60	3.3076	0.0736	9.50	(0.83)
Coca-Cola Enterprises	0.90	0.81	3.5117	0.0782	36.00 (3)	2.51
Crown Holdings	0.90	0.83	3.4851	0.0776	29.50	1.69
Cephalon Inc.	0.70	0.52	4.0466	0.0901	14.50	(0.20)
Comer Corp.	0.85	0.71	3.9413	0.0877	11.00	(0.64)
CLARCOR Inc.	0.95	0.85	3.7027	0.0824	11.50	(0.58)
Coherent, Inc.	0.50	0.78	3.8597	0.0859	6.00	(1.27)
Coca-Cola Bottling	0.70	0.47	3.6318	0.0808	19.00	0.37
Columbia Sportswear	0.90	0.77	3.8340	0.0854	12.50	(0.45)
Copart, Inc.	0.95	0.85	3.6280	0.0808	19.50	0.43
Charles River	0.85	0.77	3.7484	0.0834	10.50	(0.70)
Del Monte Foods	0.70	0.53	3.2767	0.0729	10.50	(0.70)
Dionex Corp.	0.90	0.79	3.5366	0.0787	23.50	0.94
DIRECTV Group (The)	0.85	0.77	3.1875	0.0710	30.50	1.82
DaVita Inc.	0.65	0.39	3.1744	0.0707	16.50	0.05
Lauder (Estee)	0.95	0.85	3.3989	0.0757	30.50	1.82
EarthLink, Inc.	0.70	0.51	4.0490	0.0901	18.00	(0.01)
EMC Corp.	0.90	0.84	3.8370	0.0854	9.50	(0.83)
Energy Transfer	0.85	0.71	3.1256	0.0696	32.50 (3)	2.07
First Niagara Fin! Group	0.85	0.73	3.5910	0.0799	7.50	(1.08)
Forest Labs.	0.80	0.63	3.8042	0.0847	9.50	(0.83)
Genzyme Corp.	0.65	0.44	3.7938	0.0845	13.50	(0.32)
Gilead Sciences	0.65	0.40	3.6747	0.0818	33.50 (3)	2.20
G&K Services 'A	0.80	0.69	3.3552	0.0747	8.50	(0.95)
Global Payments	0.85	0.70	3.7010	0.0824	16.00	(0.01)
Gen-Probe	0.85	0.76	4.0290	0.0897	13.50	(0.32)
Haemonetics Corp.	0.65	0.42	3.1695	0.0706	13.50	(0.32)
Hasbro, Inc.	0.80	0.62	3.3402	0.0744	21.00	0.62
HCC Insurance Hldgs.	0.85	0.71	3.1673	0.0705	12.00	(0.51)
Hewitt Associates A	0.75	0.58	3.2548	0.0725	18.00	0.24
Block (H&R)	0.90	0.78	3.7417	0.0833	29.50	1.69
Hospira Inc.	0.70	0.51	3.6472	0.0812	22.50	0.81
Heartland Express	0.85	0.72	3.9916	0.0889	23.00	0.87
IDEXX Labs.	0.85	0.77	3.2654	0.0727	18.00	0.24
Intuit Inc.	0.90	0.83	3.1749	0.0707	20.00	0.50
Investors Bancorp Inc	0.70	0.51	3.4564	0.0769	5.50	(1.33)
Intl Speedway A	0.80	0.62	3.4301	0.0764	9.00	(0.89)
J&J Snack Foods	0.75	0.57	3.4659	0.0772	11.50	(0.58)
Life Technologies	0.80	0.65	3.7722	0.0840	12.00	(0.51)
Lincare Holdings	0.65	0.41	3.2537	0.0724	25.00	1.13
Mattel, Inc.	0.85	0.76	3.8584	0.0857	22.00	0.75
Matthews Intl	0.85	0.72	3.2537	0.0724	15.50	(0.07)
McKesson Corp.	0.80	0.64	3.6895	0.0821	14.00	(0.26)
Medtronic, Inc.	0.75	0.60	3.4559	0.0770	22.00	0.75
Medco Health Solutions	0.70	0.49	3.5992	0.0801	18.50	0.31
Markel Corp.	0.80	0.80	3.2875	0.0732	7.50	(1.08)
Magellan Midstream	0.90	0.83	3.3552	0.0750	22.00	0.75
MAXIMUS Inc.	0.80	0.64	3.3819	0.0753	14.00	(0.26)
National Instruments	0.80	0.61	3.6957	0.0823	16.00	(0.13)
Annaly Capital Mgmt.	0.60	0.63	3.9643	0.0883	15.00	(0.13)
Northwest Bancorp	0.65	0.70	3.2705	0.0728	8.50	(0.95)
New York Community	0.80	0.69	3.6327	0.0809	12.00	(0.51)
Realty Income Corp.	0.90	0.84	3.8316	0.0808	6.00	(1.02)

United Water New Rochelle, Inc.
Comparable Earnings Analysis
for a Proxy Group of One Hundred Sixteen Non-Utility Companies Comparable to the
Proxy Group of Six AUS Utility Reports Water Companies (1)

Proxy Group of One Hundred Sixteen Non-Utility Companies Comparable to the Proxy Group of Six AUS Utility Reports Water Companies (1)	VL Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth, or Partner's Capital — 5-Year Projected (2): 5 Year Projection	Student's T Statistic
Owens & Minor	0.70	0.50	3.3598	0.0748	11.50	(0.58)
Oracle Corp.	0.90	0.83	3.1502	0.0701	34.00 (3)	2.26
Odyssey Re Hldgs.	0.70	0.52	3.2108	0.0715	5.50	(1.33)
OReilly Automotive	0.85	0.72	3.5748	0.0796	10.50	(0.70)
Plains All Amer. Pipe.	0.90	0.79	3.5972	0.0801	12.00	(0.51)
PepsiAmericas Inc.	0.80	0.66	3.4481	0.0768	12.00	(0.51)
Peoples United Fin	0.65	0.40	3.2451	0.0722	5.50	(1.33)
Pepsi Bottling Group	0.90	0.78	3.3408	0.0744	22.00	0.75
Patterson Cos.	0.80	0.60	3.7787	0.0841	13.00	(0.39)
Peets Coffee & Tea	0.80	0.63	3.9190	0.0872	12.00	(0.51)
PerkinElmer Inc.	0.90	0.79	3.6054	0.0847	10.00	(0.77)
Papa Johns Intl	0.85	0.77	3.6534	0.0860	20.00	0.50
Ruddick Corp.	0.60	0.38	3.5943	0.0800	10.50	(0.70)
Reinsurance Group	0.85	0.76	3.7769	0.0841	17.00	0.12
ResMed Inc.	0.75	0.57	3.9162	0.0872	13.50	(0.32)
Rollins, Inc.	0.80	0.65	3.2083	0.0714	27.00	1.28
Ross Stores	0.85	0.72	3.8069	0.0847	41.00 (3)	3.14
Sycamore Networks	0.85	0.77	3.6995	0.0824	1.50	(1.84)
Schulman (A.)	0.90	0.81	4.0352	0.0898	7.50	(1.08)
Sherwin-Williams	0.75	0.55	3.3228	0.0740	26.00	1.25
Silgan Holdings	0.80	0.64	3.1408	0.0699	18.50	0.31
Synopsys, Inc.	0.85	0.72	3.7319	0.0831	13.00	(0.39)
Suburban Propane	0.75	0.62	3.2843	0.0731	50.00 (3)	4.28
Stericycle Inc.	0.65	0.47	3.5458	0.0789	17.00	0.12
STERIS Corp.	0.80	0.61	3.6866	0.0821	15.50	(0.07)
St. Jude Medical	0.80	0.68	4.0412	0.0900	17.00	0.12
Constellation Brands	0.85	0.76	3.8445	0.0856	11.00	(0.64)
Stryker Corp.	0.80	0.66	3.3340	0.0742	17.00	0.12
Hanover Insurance	0.85	0.77	3.2090	0.0714	10.50	(0.70)
TEPPCO Partners L.P.	0.90	0.82	3.5151	0.0783	21.00	0.82
Total System Svcs.	0.90	0.80	3.4338	0.0764	16.00	(0.01)
Texas Instruments	0.90	0.81	3.6129	0.0804	15.50	(0.07)
Universal Health Sv. 'B	0.80	0.68	3.8443	0.0811	12.00	(0.51)
Universal Corp.	0.80	0.68	3.8708	0.0862	10.50	(0.70)
Varian Medical Sys.	0.80	0.69	3.8942	0.0867	23.00	0.87
WD-40 Co.	0.75	0.55	3.5149	0.0782	17.50	0.18
Werner Enterprises	0.90	0.82	3.9498	0.0879	17.00	0.12
Weis Markets	0.65	0.46	3.1192	0.0694	6.50	(0.95)
W.P. Carey & Co. LLC	0.90	0.80	3.5415	0.0788	15.00	(0.13)
Watson Pharmac.	0.75	0.58	3.2191	0.0717	10.50	(0.70)
Washington Post	0.80	0.67	3.4659	0.0776	8.00	(1.02)
Berkley (W.R.)	0.75	0.58	3.3727	0.0751	17.00	0.12
West Pharmac. Svcs.	0.80	0.65	3.9376	0.0877	13.50	(0.32)
Watson Wyatt	0.70	0.54	3.3237	0.0740	13.50	(0.32)
World Wrestling Ent.	0.80	0.56	3.3909	0.0755	31.50	1.95
Wolverine World Wide	0.80	0.65	3.9008	0.0868	16.50	0.05
Alleghany Corp.	0.95	0.72	3.2654	0.0727	6.50	(1.21)
Zimmer Holdings	0.95	0.85	3.7659	0.0839	13.00	(0.39)
Alleghany Corp.	0.85	0.72	3.2654	0.0727	6.50	(1.21)
Zimmer Holdings	0.95	0.85	3.7659	0.0839	13.00	(0.39)
Average	0.81	0.68	3.5504	0.0792		
Average for the Proxy Group of Six AUS Utility Reports Water Companies	0.77	0.61	3.5871 (4)	0.0799		
Median (5)					14.25%	
Conclusion (6)					13.50%	

See page 4 for notes.

United Water New Rochelle, Inc.
Comparable Earnings Analysis
for a Proxy Group of Twenty Eight Non-Utility Companies Comparable to the
Proxy Group of Eight AUS Utility Reports Natural Gas Distribution Companies (7)

Proxy Group of Twenty Eight Non-Utility Companies Comparable to the Proxy Group of Eight AUS Utility Reports Natural Gas Distribution Companies (7)	VL Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta	Rate of Return on Book Common Equity, Net Worth, or Partner's Capital: 5 Year Projection	Student's T Statistic
AmerisourceBergen	0.70	0.52	2.7517	0.0613	13.5 %	(0.80)
Automatic Data Proc.	0.70	0.54	2.2331	0.0497	16.0	(0.73)
Baxter Intl Inc.	0.60	0.35	2.4924	0.0555	34.0	0.50
Bard (C.R.)	0.55	0.31	2.4789	0.0552	21.0	(0.39)
Becton, Dickinson	0.65	0.40	2.5881	0.0576	19.0	(0.53)
British Amer Tobacco ADR	0.65	0.44	2.7175	0.0605	38.0	0.77
Church & Dwight	0.60	0.35	2.6247	0.0584	15.5	(0.77)
Colgate-Palmolive	0.55	0.30	2.6663	0.0594	42.0	1.05
Clorox Co.	0.65	0.40	2.3441	0.0522	79.0 (8)	3.58
Campbell Soup	0.60	0.32	2.4069	0.0536	29.5	0.19
Erie Indemnity Co.	0.70	0.53	2.2086	0.0492	21.5	(0.35)
GlaxoSmithKline ADR	0.70	0.53	2.5992	0.0579	53.5	1.84
Hormel Foods	0.65	0.43	2.7259	0.0607	16.0	(0.73)
Hershey Co.	0.65	0.47	2.7933	0.0622	42.5	1.08
Intl Flavors & Frag.	0.75	0.58	2.4057	0.0536	24.0	(0.18)
Kraft Foods	0.70	0.48	2.4920	0.0555	10.5	(1.11)
Kinder Morgan Energy	0.75	0.61	2.5204	0.0561	24.5	(0.15)
Coca-Cola	0.60	0.33	2.2256	0.0495	22.5	(0.29)
Laboratory Corp.	0.65	0.42	2.6786	0.0596	20.5	(0.42)
McDonalds Corp.	0.70	0.47	2.4563	0.0547	27.0	0.02
McCormick & Co.	0.55	0.30	2.6807	0.0597	17.5	(0.63)
PepsiCo, Inc.	0.60	0.36	2.2579	0.0503	26.0	(0.05)
Raytheon Co.	0.75	0.57	2.6400	0.0588	17.0	(0.66)
Sysco Corp.	0.75	0.55	2.6244	0.0584	33.5	0.47
Tootsie Roll Ind.	0.70	0.52	2.5729	0.0573	8.0	(1.28)
Unilever PLC ADR	0.75	0.56	2.7188	0.0605	31.0	0.30
Wal-Mart Stores	0.60	0.36	2.3459	0.0522	18.5	(0.56)
Exxon Mobil Corp.	0.75	0.60	2.4733	0.0551	25.5	(0.08)
Average	0.66	0.45	2.5258	0.0562		
Average for the Proxy Group of Eight AUS Natural Gas Distribution Companies	0.66	0.44	2.4773 (6)	0.0551		
Median (5)					22.50%	
Conclusion (6)					22.00%	

See page 4 for notes.

United Water New Rochelle, Inc.
Comparable Earnings Analysis

Notes:

(1) The criteria for selection of the proxy group of one hundred sixteen non-utility companies was that the non-utility companies be domestic and have a meaningful projected rate of return on book common equity, shareholders' equity, net worth, or partners' capital 2012 – 2014 as reported in Value Line Investment Survey (Standard Edition). The proxy group of one hundred-sixteen non-utility companies was selected based upon the proxy group of six AUS Utility Reports water companies' unadjusted beta range of 0.37 – 0.85 and standard error of the regression range of 3.1143 – 4.0599. 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) 2012 - 2014.

(3) 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.

(4) The standard deviation of the group of six AUS Utility Reports water companies' standard error of the regression is 0.1587. 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

$$\text{Thus, } 0.1576 = \frac{3.5871}{\sqrt{518}} = \frac{3.5871}{22.7596}$$

(5) Median five year projected rate of return on book common equity, shareholder's equity, net worth, or partners' capital including returns identified as outliers as outlined in Note (3) above.

(6) Median of the five year historical and five year projected return on book common equity, shareholder's equity, net worth or partner's capital excluding returns identified as outliers as outlined on Note (3) above.

(7) The criteria for selection of the proxy group of twenty-eight 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 projected 2012 -2014 as reported in Value Line Investment Survey (Standard Edition). The proxy group of twenty-eight non-utility companies was selected based upon the proxy group of eight AUS Utility Reports natural gas distribution companies' unadjusted beta range of 0.27 – 0.61 and standard error of the regression range of 2.1094 – 2.7500. 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.

(8) The Student's T-statistic associated with these returns exceeds 2.052 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.

(9) The standard deviation of the proxy group of six AUS Utility Reports water companies' standard error of the regression is 0.1088 (2.4773 / 22.7596).

Source of Information: Value Line, Inc., September 15, 2009
Value Line Investment Survey (Standard Edition)