DIRECT TESTIMONY

of

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Finance Department

Financial Analysis Division

Illinois Commerce Commission

Illinois-American Water Company

Proposed General Increase in Rates for Delivery Service

Docket No. 07-0507

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WITNESS IDENTIFICATION

Q. Please state your name and business address.

A. My name is Sheena Kight-Garlisch. My business address is 527 East Capitol Avenue, Springfield, IL 62701.

Q. By whom are you employed and in what capacity?

A. I am employed by the Illinois Commerce Commission ("Commission") as a Senior Financial Analyst in the Finance Department of the Financial Analysis Division.

Q. Please describe your qualifications and background.

A. In May of 1998, I received a Bachelor of Business degree in Finance and Marketing from Western Illinois University in Macomb, Illinois. I earned a Master of Business Administration degree, with a concentration in Finance, also at Western Illinois University in May 2001. I have been employed by the Commission since January of 2001. I was promoted to Senior Financial Analyst on October 1, 2004.

Q. Please state the purpose of your testimony in this proceeding.

A. The purpose of my testimony and accompanying schedules is to present my analysis of the cost of capital of, and recommend an overall rate of return for Illinois-American Water Company ("IAWC" or the "Company"). I will also respond to Company witness Ms. Pauline Ahern's business risk adjustment.

COST OF CAPITAL

Q. Please summarize your cost of capital findings.

A. I recommend an 8.18% overall rate of return for the Company, as shown on Schedule 4.1. The Company's proposed 8.26%[1] overall rate of return for IAWC is also presented on Schedule 4.1.

Q. Why must one determine the overall rate of return for a public utility?

A. A primary goal of regulation is to properly balance the interests of a utility's ratepayers and investors. This is accomplished by minimizing the cost of reliable service to ratepayers while allowing utilities to earn a fair and reasonable rate of return on rate base.

Under the traditional regulatory model, ratepayer and shareholder interests are balanced when the Commission authorizes a rate of return on rate base equal to the public utility's overall cost of capital, as long as that overall cost of capital is not unnecessarily expensive. When public utilities charge rates that reflect an authorized rate of return that exceeds the cost of capital, consumers are encumbered with excessive prices. Conversely, when public utilities charge rates that reflect an authorized rate of return below the cost of capital, the financial integrity of the utility suffers, making it difficult for the utility to attract capital at a reasonable cost. Ultimately, the utility's inability to raise sufficient capital would impair service quality. Consumers are best served when the authorized rate of return on rate base equals the overall cost of capital.

[1] Company's Schedule D-1 First Revised, p. 1.

In authorizing a rate of return on rate base equal to the overall cost of capital, all costs of service are assumed reasonable and accurately measured. If unreasonable costs continue to be incurred, or if any reasonable cost of service component is measured inaccurately, then the allowed rate of return on rate base will not balance ratepayer and investor interests.

Q. Mathematically define the overall cost of capital for a public utility.

A. The overall cost of capital equals the sum of the costs of the capital structure components (i.e., debt and equity) after weighting each component according to its proportion of total capitalization.

CAPITAL STRUCTURE

Q. What capital structure does the Company propose for determining the rate of return on rate base?

A. The Company proposes determining the rate of return on rate base on the forecasted average of the year ending June 30, 2009 capital structure comprising 2.28% short-term debt, 53.28% long-term debt and 44.44% common equity.[2] The Company's proposed capital structure appears on Schedule 4.1.

Q. What capital structure do you recommend for setting rates in this proceeding?

A. My proposed capital structure is shown on Schedule 4.1. I also used a forecasted average of the year ending June 30, 2009 ("average 2009") capital

[2] Company's Schedule D-1 First Revised, p. 1.

structure comprising 3.29% short-term debt, 53.49% long-term debt and 43.23% common equity.[3]

Q. Please describe the adjustment you made to IAWC's short-term debt balance.

A. I adjusted the total construction work in progress ("CWIP") balances to reconcile it with the Company's response to a Commission Staff ("Staff") data request.[4] CWIP affects the amount of short-term debt supporting rate base. The short-term debt schedule is presented on Schedule 4.2.

Q. Please describe the adjustments you made to IAWC's long-term debt balance.

A. I adjusted the Company's long-term debt schedule to reconcile it with Company responses to Staff data requests and to reflect other corrections. I also modified the principal amount outstanding for average 2009 on Series 6.073%, 9.22%, 2.57% and 9.90% and all of the unamortized debt expense balances to reflect their averages for the twelve months ending June 30, 2009.[5] The average 2009 balance of long-term debt is presented on Schedule 4.3.

[3] The numbers appear to total 100.01% due to rounding.
[4] Company's response to Staff data request SK 4-03.
[5] 83 Ill. Admin. Code Part 285.400 requires "utilities electing an average capital structure, average balances for each source of capital … shall be calculated from 12 months of average monthly balances."

Q. Please describe the adjustment you made to IAWC's common equity balance.

A. IAWC's proposed capital structure assumes the Company's proposed rate increase will be adopted by the Commission. However, the Company has not been able to document the validity of its common equity forecast. Instead, the support for the adjustment, which it did not provide until January 3, 2008, does not reconcile with the Company's original forecast. If the Company can reconcile the discrepancies among Schedule D-12, IAWC's Response to deficiency number 2, and the Company's response to Staff Data Request SK 4-01, I will consider including the effect of a rate increase in its balance of common equity, assuming that reconciliation is provided to me in a timely fashion. Until then, I recommend the Commission use the Company's common equity balance at present rates. My recommended balance of common equity is shown on Schedule 4.1 and Schedule 4.4.

Q. Does capital structure affect the overall cost of capital?

A. Yes. Financial theory suggests capital structure will affect the value of a firm and, therefore, its cost of capital, to the extent capital structure affects the expected level of cash flows that accrue to outside parties (i.e., other than debt and stock holders). Employing debt as a source of capital reduces a company's income taxes,[6] thereby reducing the cost of capital. However, as reliance on debt as a source of capital increases, so does the probability of bankruptcy. As

[6] The tax advantage debt has over equity at the corporate level is partially offset at the individual investor level. Debt investors receive returns largely in the form of current income (i.e., interest). In contrast, equity investors receive returns in the form of both current income (i.e., dividends) and capital appreciation (i.e., capital gains). Taxes on capital gains and dividend income are lower than taxes on interest income because capital gains and dividend tax rates are lower and taxes on capital gains are deferred until realized.

bankruptcy becomes more probable, expected payments to attorneys, trustees, accountants and other outside parties increase; simultaneously, the expected value of the income tax shield provided by debt financing declines. Beyond a certain point, a growing dependence on debt as a source of funds increases the overall cost of capital. Therefore, the Commission should not determine the overall rate of return from a utility's actual capital structure if the Commission concludes that capital structure adversely affects the overall cost of capital.

An optimal capital structure would minimize the cost of capital and maintain a utility's financial integrity. Unfortunately, determining whether a capital structure is optimal remains problematic because: (1) the cost of capital is a continuous function of the capital structure, rendering precise measurement along each point of the range of possible capital structures problematic; (2) the optimal capital structure is a function of operating risk, which is dynamic; and (3) the relative costs of the different types of capital vary with dynamic market conditions. Consequently, one should determine whether the capital structure is consistent with the financial strength necessary to access the capital markets under most conditions, and if so, whether the cost of that financial strength is reasonable.

Towards that end, I compared the Company's average 2009 capital structure to industry standards. Standard & Poor's ("S&P") categorizes debt securities on the basis of the risk that a company will default on its interest or principal payment obligations. The resulting credit rating reflects both the operating and financial risks of a utility.[7] The mean total debt ratio of water utilities that have an S&P "A" credit rating equals 51.40%. The mean common equity ratio for S&P A-rated

[7] Standard & Poor's, *Utility Financial Statistics*, June 1999, p. 3.

water utilities equals 48.06%.[8] The above ratios are shown in Table 1 for comparative purposes.

TABLE 1: Capital Structure Ratios

	A-rated Water Utilities		S&P Benchmark for an 'A' Credit Rating	IAWC Average 2009
	Mean	Standard Deviation	Business Profile of 2 (Range)	
Total Debt Ratio	51.40%	4.51%	52% - 58%	56.78%
Equity Ratio	48.06%	4.64%		43.23%

IAWC's average 2009 capital structure comprises a higher amount of debt and a lower amount of equity compared to water utilities. However, IAWC's average 2009 total debt ratio is within the range S&P publishes for A-rated utilities with business profiles of 2. According to S&P, an obligor rated "A" has a strong capacity to meet its financial commitments.[9] The above suggests that the Company's average 2009 capital structure as presented by Staff on Schedule 4.1 is commensurate with a strong degree of financial strength.

Q. S&P currently does not rate IAWC's credit strength. Why did you compare IAWC's capital structure ratios to utilities with "A" credit ratings?

A. S&P categorizes debt securities on the basis of the risk that a company will default on its interest or principal payment obligations. The resulting credit rating

[8] *S&P Utility Compustat II.*
[9] Standard & Poor's Ratings Direct, "Research: Standard & Poor's Ratings Definitions," December 10, 2002, p. 5.

reflects both the operating and financial risks of a utility.[10] In Docket No. 00-0306, the Commission approved an agreement between American Water Capital Corporation ("AWCC"), and IAWC, for AWCC to provide IAWC short-term and long-term debt capital. IAWC is also a wholly owned subsidiary of American Water Works Company Inc. ("AWWC"), which is responsible for raising equity capital on behalf of IAWC. Since AWCC and AWCC raise capital on behalf of IAWC, I used AWWC's and AWCC's credit ratings as measures of IAWC's financial strength.

Q. Why did you compare IAWC's Benchmark Ratio values to the ranges S&P established for the business profile score of 2?

A. A firm's market-required return on common equity is a function of its operating and financial risks. S&P business profile scores reflect the operating risk of a utility. S&P focuses on industry characteristics as well as the company's competitive position and management. A utility's business profile is evaluated on a scale of one to ten. A rating of one denotes below average business risk, while a rating of ten denotes above average business risk.[11]

AWWC has a business profile score of 2, which reflects the risk of all of its operations. Although most of AWWC's revenues come from its regulated business, it does have nonregulated subsidiaries. These nonregulated subsidiaries only increase the operating risk of AWWC slightly.[12] Since most of

[10] Standard and Poor's Utilities Rating Service, "Utilities Rating Criteria," May 20, 1996, p. 1.
[11] Standard & Poor's, *Corporate Ratings Criteria 2002,* www.standardandpoors.com/ratings, p. 17.
[12] Standard & Poor's RatingsDirect, *Research, American Water Works Co. Inc,* December 19, 2007, p. 2.

AWWC's operating risk comes from its regulated subsidiaries, I used the business profile assigned to AWWC as a proxy for IAWC's operating risk.

COST OF SHORT-TERM DEBT

Q. What is IAWC's cost of short-term debt?

A. IAWC obtains short-term financing from AWCC. I used IAWC's average interest rate for the December 2007 period of 5.28%,[13] since it is the most recently available interest rate for the Company's cost of short-term debt.

COST OF LONG-TERM DEBT

Q. What is IAWC's embedded cost of long-term debt?

A. As shown on Schedule 4.3, IAWC's embedded cost of long-term debt for average 2009 is 5.88%. I adjusted the two variable rate debt instruments to reflect the 3.59% and 3.77% interest rates the Company is currently paying.[14]

COST OF COMMON EQUITY

Q. What is your estimate of IAWC's cost of common equity?

A. My analysis indicates that the cost of common equity equals 11.24%.

[13] Company's updated response to Staff data request SK 1-03.
[14] Company's revised response to Staff data request SK 1-02.

Q. How did you measure the investor required rate of return on common equity for IAWC?

A. I measured the investor-required rate of return on common equity for IAWC with discounted cash flow ("DCF") and risk premium models. Since IAWC does not have market-traded common stock, DCF and risk premium models cannot be applied directly to IAWC; therefore, I applied both models to water utility and public utility samples. [15]

Sample Selection

Q. How did you select your Water Sample?

A. I selected my Water Sample based on two criteria. First, I began with a list of all domestic corporations assigned an industry number of 4941 (i.e., water utilities) within *Standard & Poor's Utility Compustat*. Second, I removed any company that did not have Zacks Investment Research ("Zacks") long-term growth rates. The remaining companies, Aqua America Inc.; Artesian Resources Corp.; California Water Service Group; Middlesex Water Company; SJW Corp.; Southwest Water Company; and York Water Company, compose my sample.

Q. How did you select a Utility Sample comparable in risk to IAWC?

A. To form the Utility Sample, I began with a list of all domestic publicly traded corporations listed in S&P RatingsDirect Issuer Ranking[16] that had a business profile score of 1, 2, or 3. Second, I removed any company that did not have an investment grade S&P debt rating. Next, I removed any company that lacked Zacks growth rates. Finally, I eliminated any company that was in the process of

[15] Hereafter referred to as *Water Sample* and *Utility Sample*, respectively.

[16] S&P RatingsDirect, "Issuer Ranking: U.S. Integrated Electric Utility Companies, Strongest to Weakest," November 1, 2007; S&P RatingsDirect, "Issuer Ranking: U.S. Natural Gas Distributors and Integrated Gas Companies, Strongest to Weakest," November 9, 2007.

being acquired by another company or making a significant acquisition. The remaining companies, Atmos Energy Corp.; Centerpoint Energy Inc.; Consolidated Edison Inc.; Nicor Inc.; Northwest Natural Gas Co.; Nstar; Piedmont Natural Gas Company, Inc.; and WGL Holdings Inc., compose my Utility Sample.

DCF Analysis

Q. Please describe DCF analysis.

A. For a utility to attract common equity capital, it must provide a rate of return on common equity sufficient to meet investor requirements. DCF analysis establishes a rate of return directly from investor requirements. A comprehensive analysis of operating and financial risks is unnecessary to apply DCF analysis to a company since the market price of that company's stock already embodies the market consensus of those risks.

According to DCF theory, a security price equals the present value of the cash flow investors expect it to generate. Specifically, the market value of common stock equals the cumulative value of the expected stream of future dividends after each is discounted by the investor required rate of return.

Q. Please describe the DCF model with which you measured the investor required rate of return on common equity.

A. As it applies to common stocks, DCF analysis is generally employed to determine appropriate stock prices given a specified discount rate. Since a DCF model incorporates time-sensitive valuation factors, it must correctly reflect the timing of the dividend payments that stock prices embody. As such,

incorporating stock prices that the financial market sets on the basis of quarterly dividend payments into a model that ignores the time value of quarterly cash flows constitutes a misapplication of DCF analysis.

The companies in the Utility Sample pay dividends quarterly; therefore, I applied a constant-growth DCF model that measures the annual required rate of return on common equity as follows:

$$k = \frac{\sum_{q=1}^{4} D_{1,q}(1+k)^{1-[x+0.25(q-1)]}}{P} + g.$$

Where P ≡ the current stock price;

$D_{1,q}$ ≡ the next dividend paid at the end of quarter q, where q = 1 to 4;

k ≡ the cost of common equity;

x ≡ the elapsed time between the stock observation and next dividend payment dates, in years; and

g ≡ the expected dividend growth rate.

The expression $(1 + k)^{1-[x+0.25(q-1)]}$ is a future value factor that measures the value of each expected dividend ($D_{1,q}$) one year from the stock price measurement date. The DCF model above assumes that dividends will grow at a constant rate and that the market value of common stock (i.e., stock price) equals the sum of the discounted value of each dividend.

Q. How did you estimate the growth rate parameter?

A. Determining the market-required rate of return with the DCF methodology requires a growth rate that reflects the expectations of investors. Although the

current market price reflects aggregate investor expectations, market-consensus expected growth rates cannot be measured directly. Therefore, I measured market-consensus expected growth indirectly with growth rates forecasted by securities analysts that are disseminated to investors.

Zacks summarizes and publishes the earnings growth expectations of financial analysts employed by the research departments of investment brokerage firms. Zacks provides forward-looking, expectational estimates of earnings growth. Schedule 4.5 presents the analysts' growth rate estimates for the companies in the Utility Sample.

Q. How did you measure the stock price?

A. A current stock price reflects all information that is available and relevant to the market; thus, it represents the market's assessment of the common stock's current value. I measured each company's current stock price with its closing market price from December 12, 2007. Those stock prices appear on Schedule 4.6.

Since current stock prices reflect the market's current expectation of both the cash flows the securities will produce and the rate at which those cash flows are discounted, an observed change in the market price does not necessarily indicate a change in the required rate of return on common equity. Rather, a price change may reflect investors' re-evaluation of the expected dividend growth rate. In addition, stock prices change with the approach of dividend payment dates. Consequently, when estimating the required return on common equity with the DCF model, one should measure the expected dividend yield and the

corresponding expected growth rate concurrently. Using a historical stock price along with current growth expectations or combining an updated stock price with past growth expectations will likely produce an inaccurate estimate of the market-required rate of return on common equity.

Q. Please explain the significance of the column titled "Next Dividend Payment Date" shown on Schedule 4.6.

A. Estimating year-end dividend values requires measuring the length of time between each dividend payment date and the first anniversary of the stock observation date. For the first dividend payment, that length of time is measured from the "Next Dividend Payment Date." Subsequent dividend payments occur in quarterly intervals.

Q. How did you estimate the next four expected quarterly dividends?

A. Most utilities declare and pay the same dividend per share for four consecutive quarters before adjusting the rate. Consequently, I assumed the current declared dividend rate will remain in effect for a minimum of four quarters and then adjust during the same quarter it changed during the preceding year; if the utility did not declare a change in its dividend during the last year, I assumed the rate would change during the next quarter. The average expected growth rate was applied to the current dividend rate to estimate the expected dividend rate. Schedule 4.6 presents the current quarterly dividends. Schedule 4.7 presents the expected quarterly dividends.

Q. Based on your DCF analysis, what is the estimated required rate of return on common equity for the Water Sample and the Utility Sample?

A. The DCF analysis estimates the required rate of return on common equity is 12.22% for the Water Sample and 9.91% for the Utility Sample, as shown on Schedule 4.8. Those estimates are derived from the growth rates from Schedule 4.5, the stock price and dividend payment dates from Schedule 4.6, and the expected quarterly dividends from Schedule 4.7.

Risk Premium Analysis

Q. Please describe the risk premium model.

A. The risk premium model is based on the theory that the market-required rate of return for a given risk-bearing security equals the risk-free rate of return plus a risk premium that investors expect in exchange for assuming the risk associated with that security. Mathematically, a risk premium equals the difference between the expected rate of return on a risk factor and the risk-free rate. If the risk of a security is measured relative to a portfolio, then multiplying that relative measure of risk and the portfolio's risk premium produces a security-specific risk premium for that risk factor.

The risk premium methodology is consistent with the theory that investors are risk-averse. That is, investors require higher returns to accept greater exposure to risk. Thus, if investors had an opportunity to purchase one of two securities with equal expected returns, they would purchase the security with less risk. Similarly, if investors had an opportunity to purchase one of two securities with equal risk, they would purchase the security with the higher expected return. In

equilibrium, two securities with equal quantities of risk have equal required rates of return.

The Capital Asset Pricing Model ("CAPM") is a one-factor risk premium model that mathematically depicts the relationship between risk and return as:

$$R_j = R_f + \beta_j \times (R_m - R_f)$$

where R_j ≡ the required rate of return for security j;

R_f ≡ the risk-free rate;

R_m ≡ the expected rate of return for the market portfolio; and

β_j ≡ the measure of market risk for security j.

In the CAPM, the risk factor is market risk, which is defined as risk that cannot be eliminated through portfolio diversification. To implement the CAPM, one must estimate the risk-free rate of return, the expected rate of return on the market portfolio, and a security or portfolio-specific measure of market risk.

Q. How did you estimate the risk-free rate of return?

A. I examined the suitability of the yields on four-week U.S. Treasury bills and thirty-year U.S. Treasury bonds as estimates of the risk-free rate of return.

Q. Why did you examine the yields on U.S. Treasury bills and bonds as measures of the risk-free rate?

A. The proxy for the nominal risk-free rate should contain no risk premium and reflect similar inflation and real risk-free rate expectations to the security being

analyzed through the risk premium methodology.[17] The yields of fixed income securities include premiums for default and interest rate risk. Default risk pertains to the possibility of default on principal or interest payments. The federal government's fiscal and monetary authority makes securities of the United States Treasury virtually free of default risk. Interest rate risk pertains to the effect of unexpected interest rate fluctuations on the value of securities.

Since common equity theoretically has an infinite life, its market-required rate of return reflects the inflation and real risk-free rates anticipated to prevail over the long run. U.S. Treasury bonds, the longest term treasury securities, are issued with terms to maturity of thirty years; U.S. Treasury notes are issued with terms to maturity ranging from two to ten years; U.S. Treasury bills are issued with terms to maturity ranging from four weeks to six months. Therefore, U.S. Treasury bonds more likely incorporate within their yields the inflation and real risk-free rate expectations that drive, in part, the prices of common stocks than either U.S. Treasury notes or U.S. Treasury bills.

However, due to relatively long terms to maturity, U.S. Treasury bond yields also contain an interest rate risk premium that diminishes their usefulness as measures of the risk-free rate. U.S. Treasury bill yields contain a smaller premium for interest rate risk. Thus, in terms of interest rate risk, U.S. Treasury bill yields more accurately measure the risk-free rate.

[17] The real risk-free rate and inflation expectations compose the non-risk related portion of a security's rate of return.

Q. Given the similarity in the inflation and real risk-free rate expectations that are reflected in the yields on U.S. Treasury bonds and the prices of common stocks, does it necessarily follow that the inflation and real risk-free rate expectations that are reflected in the yields on U.S. Treasury bills and the prices of common stocks are dissimilar?

A. No. To the contrary, short and long-term inflation and real risk-free rate expectations, including those that are reflected in the yields on U.S. Treasury bills, U.S. Treasury bonds, and the prices of common stocks, should equal over time. Any other assumption implausibly implies that the real risk-free rate and inflation are expected to systematically and continuously rise or fall.

Although expectations for short and long-term real risk-free rates and inflation should equal over time, in finite time periods short and long-term expectations may differ. Short-term interest rates tend to be more volatile than long-term interest rates.[18] Consequently, over time U.S. Treasury bill yields are less biased (i.e., more accurate) but less reliable (i.e., more volatile) estimators of the long-term risk-free rate than U.S. Treasury bond yields. In comparison, U.S. Treasury bond yields are more biased (i.e., less accurate) but more reliable (i.e., less volatile) estimators of the long-term risk-free rate. Therefore, an estimator of the long-term nominal risk-free rate should not be chosen mechanistically. Rather, the similarity in current short and long-term nominal risk-free rates should be evaluated. If those risk-free rates are similar, then U.S. Treasury bill yields should be used to measure the long-term nominal risk-free rate. If not, some other proxy or combination of proxies should be used.

[18] Fabozzi, ed., The Handbook of Fixed Income Securities, Fifth Edition, Irwin, p. 827.

Q. Provide the current yields on 4-week U.S. Treasury bills and thirty-year U.S. Treasury bonds.

A. Four-week U.S. Treasury bills are currently yielding 2.92%. The yield for thirty-year U.S. Treasury bonds equals 4.56%. Both estimates are derived from quotes for December 12, 2007.[19] Schedule 4.9 presents the published quotes and effective yields.

Q. Of the U.S. Treasury bill and U.S. Treasury bond yields, which is currently a better proxy for the long-term risk-free rate?

A. In terms of the gross domestic product ("GDP") price index, the Energy Information Administration ("EIA") forecasts the inflation rate will average 1.9% annually during the 2007-2030 period.[20] Global Insight forecasts the GDP price index will average 1.8% annually during the 2007-2037 period.[21] In terms of the consumer price index ("CPI"), the *Survey of Professional Forecasters* ("*Survey*") forecasts the inflation rate will average 2.5% during the next ten years.[22] EIA forecasts of real GDP growth imply the real risk-free rate will average 2.9% during the 2007-2030 period.[23] Global Insight forecasts of real GDP growth imply the real risk-free rate will average 2.5% during the 2007-2037 period.[24] The

[19] The Federal Reserve Board, *Federal Reserve Statistical Release: Selected Interest Rates, H.15 Daily Update*, www.federalreserve.gov/releases/H15/update, December 12, 2007.
[20] Energy Information Administration, *Annual Energy Outlook 2007*, Table 19, Macroeconomic Indicators, www.eia.doe.gov/oiaf/aeo/, February 2007.
[21] Global Insight, *The U.S. Economy: The 30-Year Focus, Fourth Quarter 2007*, Table 1: Summary of the U.S. Economy.
[22] Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters*, www.phil.frb.org/files/spf/survq407.htm, November 13, 2007. The *Survey* aggregates the forecasts of approximately thirty forecasters.
[23] Energy Information Administration, *Annual Energy Outlook 2007*, Table 19, Macroeconomic Indicators, www.eia.doe.gov/oiaf/aeo/, February 2007.
[24] Global Insight, *The U.S. Economy: The 30-Year Focus, Fourth Quarter 2007*, Table 1: Summary of the U.S. Economy.

Survey forecasts real GDP growth will average 3.0% during the next ten years.[25] Those forecasts imply a long-term, nominal risk-free rate between 4.37% and 5.57%.[26] Therefore, to the extent inflation and real GDP growth expectations coincide with EIA, Global Insight, and *Survey* forecasts, the U.S. Treasury bond yield more closely approximates the long-term risk-free rate. Therefore, I conclude that the U.S. Treasury bond yield is the better proxy for the long-term risk-free rate currently. It should be noted, however, that the estimate from using the U.S. Treasury bond yield contains an upward bias due to the inclusion of an interest rate risk premium associated with its relatively long term to maturity.

Q. Explain why the real risk-free rate and the GDP growth rate should be similar.

A. Risk-free securities provide a rate of return sufficient to compensate investors for the time value of money, which is a function of production opportunities, time preferences for consumption, and inflation. The real risk-free rate excludes the premium for inflation.[27] The real GDP growth rate measures output of goods and services without reflecting inflation expectations and, as such, also reflects both production and consumers' consumption preferences. Therefore, both the real GDP growth rate and the real risk-free rate of return should be similar since both

[25] Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters*, www.phil.frb.org/files/spf/survq107.html, February 13, 2007.

[26] Nominal interest rates are calculated as follows:

$$r = (1 + R) \times (1 + i) - 1.$$

where r ≡ nominal interest rate;
R ≡ real interest rate; and
i ≡ inflation rate.

[27] Brigham and Houston, *Fundamentals of Financial Management,* 8th edition.

are a function of production opportunities and consumption preferences without the effects of either a risk premium or an inflation premium.

Q. How was the expected rate of return on the market portfolio estimated?

A. The expected rate of return on the market was estimated by conducting a DCF analysis on the firms composing the S&P 500 Index ("S&P 500") as of September 28, 2007. That analysis used dividend information reported in the October 2007 edition of S&P's *Security Owner's Stock Guide* and closing market prices and growth rate estimates reported by Zacks on October 1, 2007. Firms not paying a dividend as of September 28, 2007, or for which Zacks growth rates were not available were eliminated from the analysis. The resulting company-specific estimates of the expected rate of return on common equity were then weighted using market value data from Zacks on October 1, 2007. The estimated weighted average expected rate of return for the remaining 387 firms, composing 84.27% of the market capitalization of the S&P 500, equals 13.55%.

Q. How did you measure market risk on a security-specific basis?

A. Beta measures risk in a portfolio context. When multiplied by the market risk premium, a security's beta produces a market risk premium specific to that security. I used Value Line's betas and a regression analysis to estimate the beta of the Utility Sample.

Value Line estimates beta for a security with the following model using an ordinary least-squares technique:[28]

$$R_{j,t} = a_j + \beta_j \times R_{m,t} + e_{j,t}$$

where $R_{j,t}$ ≡ the return on security j in period t;

$R_{m,t}$ ≡ the return on the market portfolio in period t;

a_j ≡ the intercept term for security j;

β_j ≡ beta, the measure of market risk for security j; and

$e_{j,t}$ ≡ the residual term in period t for security j.

A beta can be calculated for firms with market-traded common stock. Value Line calculates its betas in two steps. First, the returns of each company are regressed against the returns of the New York Stock Exchange Composite Index ("NYSE Index") to estimate a raw beta. The Value Line regression employs 259 weekly observations of stock return data. Then, an adjusted beta is estimated through the following equation:

$$\beta_{adjusted} = 0.35 + 0.67 \times \beta_{raw}.$$

The regression analysis applies an ordinary least-squares technique to the following model to estimate beta for a security or portfolio of securities:

$$R_{j,t} - R_{f,t} = \alpha + \beta (R_{m,t} - R_{f,t}) + \varepsilon_t$$

[28] Statman, Meir, "Betas Compared: Merrill Lynch vs. Value Line", *The Journal of Portfolio Management*, Winter 1981.

where $R_{j,t}$ ≡ the return on security *j* in period *t*;

$R_{f,t}$ ≡ the risk-free rate of return in period *t*;

$R_{m,t}$ ≡ the return on the market portfolio in period *t*;

α ≡ the intercept term for security *j*;

β ≡ beta, the measure of market risk for security *j*; and

ε_t ≡ the residual term in period *t* for security *j*.

The regression analysis beta estimate for the Utility Sample was calculated in three steps. First, the U.S. Treasury bill return was subtracted from the average percentage change in the sample's stock prices and the percentage change in the NYSE Index to estimate the portfolios' returns in excess of the risk-free rate. Second, the excess returns of the Utility Sample were regressed against the excess returns of the NYSE Index to estimate a raw beta. The regression analysis employs sixty monthly observations of stock and U.S. Treasury bill return data. Third, an adjusted beta is estimated through the following equation:

$$\beta_{adjusted} = 0.33743 + 0.66257 \times \beta_{raw}.$$

Q. What are the beta estimates for the Water Sample and the Utility Sample?

A. The Value Line beta estimates average 0.86 for the both the Water Sample and Utility Sample. The regression beta estimates are 0.82 and 0.73, respectively. The average of the Value Line and regression beta estimates equals 0.84 for the Water Sample and 0.80 for the Utility Sample.

Q. What required rates of return on common equity does the risk premium model estimate for the Water and Utility Samples?

A. The risk premium model estimates a required rate of return on common equity of 12.11% for the Water Sample and 11.75% for the Utility Sample. The computation of that estimate appears on Schedule 4.9.

Cost of Equity Recommendation

Q. Based on your entire analysis, what is your estimate of the required rate of return on the common equity for the Utility Sample?

A. A thorough analysis of the required rate of return on common equity requires both the application of financial models and the analyst's informed judgment. An estimate of the required rate of return on common equity based solely on judgment is inappropriate. Nevertheless, because techniques to measure the required rate of return on common equity necessarily employ proxies for investor expectations, judgment remains necessary to evaluate the results of such analyses. Along with DCF and risk premium cost of common equity analyses, I have considered the observable 6.07% rate of return the market currently requires on less risky A-rated long-term utility debt.[29] Based on my analysis, in my judgment, the investor-required rate of return on common equity for IAWC is 11.24%.

[29] The Value Line Investment Survey, "Selection & Opinion," December 14, 2007.

Q. Please summarize how you estimated the investor-required rate of return on common equity for the Company.

A. First, I averaged the results of the DCF and CAPM analyses to estimate the investor-required rate of return on common equity for each sample. For the Water Sample, the average of the 12.22% DCF and 12.11% CAPM estimates of the cost of common equity equals 12.17%. For the Utility Sample, the average of the 9.91% DCF and 11.75% CAPM estimates of cost of common equity equals 10.83%.

Second, I adjusted both the Water Sample's and the Utility Sample's investor-required rate of return downward four basis points to reflect the lower risk of the Company relative to the two samples. Thus, the average of the results for the Water Sample and Utility Sample adjusted for risk are 12.13% and 10.79%, respectively.

Finally, in combining the Water and Utility Sample cost of common equity estimates, I weighted the latter twice the amount of the former. That weighting results in an estimated cost of common equity of 11.24% for IAWC.

Q. Why did you subtract four basis points from the estimated investor-required rate of return on common equity for the Utility Sample?

A. A proxy for the target company, which is IAWC in this proceeding, should reflect the risks of that company. If the risk of the proxy does not equal the risk of the target company, the proxy's cost of common equity should be adjusted to more accurately reflect the risk of the target company. Therefore, a review of the risks

of the Utility and Water Samples in comparison to the risk of the Company is necessary.

As I discussed previously, the cost of common equity is a function of both operating and financial risk. As shown on Schedule 4.10, the average business profile for the Utility Sample is slightly higher than the target business profile of 2. Thus, the operating risk of IAWC is slightly lower than that of the Utility Sample. Unfortunately, some of the water utilities do not have Standard & Poor's business profiles. Nevertheless, since companies in the same industry confront many of the same types of risk, for the purpose of this analysis, I assume that IAWC and the Water Sample have similar degrees of operating risk.

Q. How did you assess the financial risk of the Utility Sample, Water Sample and the Company?

A. S&P categorizes debt securities on the basis of the risk that a company will default on its interest and principal payment obligations. The resulting credit rating reflects both the operating and financial risks of a utility.[30]

Although no formula exists for determining a credit rating, S&P publishes utility benchmark values, by business profile, for the financial ratios it uses to determine credit ratings. Therefore, I compared the values for the benchmark financial ratios that result from Staff's proposed revenue requirement to S&P's benchmarks for utilities with the Company's implied business profile of 2.

[30] S&P Utilities Rating Service: Industry Commentary, May 20, 1996, p.1.

The benchmark financial ratios from S&P for utilities with a business profile score of 2 as well as those resulting from Staff's proposed revenue requirements and those for the Utility Sample are presented below in Table 2 – Benchmark Ratios.

Table 2 – Benchmark Ratios

	AA	A
Financial Guideline Ratios		
FFO/IC	3.0-4.0X	2.0-3.0X
FFO/Debt	20-25%	12-20%
Total Debt/Total Capital	45-52%	52-58%
Staff Proposal – IAWC 2009		
FFOIC	4.5X	
FFO/Debt	20.2%	
Total Debt/Total Capital		56.8%
Utility Sample (Average 2004-2006)		
FFOIC	4.2X	
FFO/Debt		19.4%
Total Debt/Total Capital		57.23%
Water Sample (Average 2004-2006)		
FFOIC	3.94X	
FFO/Debt		19.2%
Total Debt/Total Capital	51.46%	

The ratios for the Water Sample imply a slightly higher level of risk than IAWC's ratios indicate. The table above shows that the Water Sample's FFOIC and FFO/Debt ratios are weaker than IAWC's FFOIC and FFO/Debt ratios. Conversely, the Water Sample's debt ratio is stronger than IAWC's debt ratio.

However, the debt ratio is less important in assessing the financial risk of a company. Unlike the FFOIC and FFO/Debt ratios, the debt ratio neither reflects the cost of a company's debt nor the cash flows available to meet its debt service obligations.

The ratios for the Utility Sample imply a slightly higher level of financial risk than IAWC's ratios indicate. From this analysis of relative business and financial risk, I conclude that Staff's revenue requirement recommendations, including my cost of common equity recommendation, indicate a level of financial strength that is commensurate with a credit rating that is one notch higher than the Utility Sample's credit rating.[31] Financial theory posits that investors require higher returns to accept greater exposure to risk. Conversely, the investor-required rate of return is lower for investments with less exposure to risk. Thus, in my judgment, given the difference between the implied forward-looking risk for the Company and risk of the Water Sample and Utility Sample, an adjustment is required.

Q. How did you establish the adjustment for the Water Sample and Utility Sample that you used to determine the cost of common equity for the Company?

A. The four basis point adjustment for IAWC reflects the spread between A rated and A+ rated 30-year utility debt yields.[32] This adjustment is derived from the average S&P credit rating of A for the Utility Sample (see Schedule 4.10) and the implied, going-forward, financial strength of IAWC relative to the Samples.

[31] Credit ratings are only available for two of the seven companies in the Water Sample. Therefore, I determined the adjustment based upon the average credit rating of the Utility Sample.
[32] Reuters Corporate Spreads for Utilities, www.bondsonline.com, December 12, 2007.

Q. How did you calculate the coverage ratios implied by your capital component cost recommendations and capital structure?

A. The funds from operations ("FFO") to interest coverage ratio equals interest divided into the sum of the funds available to shareholders, non-cash items (i.e., depreciation, amortization, deferred taxes and investment tax credits), and interest. The FFO to debt coverage ratio equals the sum of the funds available to shareholders and non-cash items divided by total debt. The calculation of those ratios is presented in Schedule 4.11.

Q. How did you estimate the components of the above coverage ratios?

A. Each component was based on its contribution to Staff's recommended revenue requirement for IAWC. "Funds available to shareholders" equals the product of Staff's recommendations for cost of common equity, common equity ratio, and rate base. Depreciation, amortization, deferred taxes, and investment tax credits equal Staff's recommendations for those items.[33] The interest component equals the product of Staff's recommendations for cost of debt, debt ratio, and rate base. Total debt equals the product of Staff's recommendations for percentage of debt in the capital structure and rate base.

Q. Why did you weight the cost of equity estimates from your Water Sample and Utility Sample to estimate IAWC's cost of common equity?

A. The average Zacks growth rate for my Water Sample is 9.16%. In contrast, the average growth rate for my Utility Sample is 5.54%. The Water Sample growth rate is much higher than the long-term growth forecasts for the United States

[33] ICC Staff Exhibit 1.0, Schedule 1.1.

economy of 4.37% to 5.57%, and thus, are not likely to be sustainable for the long-term.

In addition water utilities are not as frequently traded as other utilities; hence, estimates of their cost of common equity are prone to larger measurement error. The less frequently a security trades, the less reliable its beta estimate becomes. For example, Schedule 4.12 shows that California Water Service Co.'s, SJW Co.'s, and Southwest Water Co.'s have Value Line beta estimates of 1.15, 1.15, and 1.0, respectively. Those beta estimates imply that those water utilities are as risky as, if not riskier than, the market as a whole.[34] That implication is not probable given the low risk of water utilities in comparison to unregulated companies.[35] Thus, either the beta estimates for those companies contain a very high degree of measurement error or those companies are not comparable in risk to IAWC. Either way, they should be weighted less in estimating IAWC's cost of common equity.

In summary, in my judgment, the current estimates of the cost of common equity for the Water Sample are suspect. Therefore, I gave the Utility Sample twice as much weight as the Water Sample in developing my recommend cost of equity to the Commission.

[34] The market has a beta of 1.0.
[35] Standard and Poor's Ratings Direct, "*Industry Report Card: Favorable Business and financial conditions Continue for U.S. Investor-Owned Water Sector*," December 17, 2007.

Q. Ms. Ahern adjusted her cost of common equity results for business risk. Is this adjustment necessary?

A. No. Ms. Ahern's business risk adjustment is based on IAWC's "small size relative to each proxy group."[36] A size-based risk premium for a utility is contrary to financial theory and unsupported by empirical studies.

Q. Has the Commission ruled on a size-based risk premium before?

A. Yes. A size-based risk premium was presented in Consumers Illinois Water rate case, Docket No. 97-0351, and was rejected on the basis that the company witness failed to demonstrate that there is a direct relationship between the size of a utility and its risk.[37] Importantly, in Docket No. 03-0403, an Aqua rate proceeding in which Ms. Ahern was the Company cost of equity witness, the Commission Order stated:

> The Commission does not conclude that the size of [Aqua] warrants a risk premium. [Aqua] is a wholly-owned subsidiary within a much larger organization, and in that sense is distinguishable from an independent utility of the same size as [Aqua].[38]

IAWC is also a wholly-owned subsidiary within a much larger organization. Therefore, Ms. Ahern's inclusion of business risk adjustment based on the size of IAWC is unwarranted.

Overall Cost of Capital Recommendation

Q. What are the overall costs of capital for IAWC?

A. As shown on Schedule 4.1, IAWC's overall cost of capital is 8.18%. The estimate incorporates a cost of common equity of 11.24%.

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[36] IAWC Exhibit 12.0, p. 35, line 786; and Company's response to DR SK 2-06.
[37] Amended Order, Docket No. 97-0351, June 17, 1998, p. 39.
[38] Order, Docket No. 03-0403, April 13, 2004, p. 43.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

Illinois-American Water Company

Staff's Proposed Weighted Average Cost of Capital

Class of Capital	Amount at Present Rates	Adjustment	Balance	Percent of Total Capital	Cost	Weighted Cost
Short-Term Debt	$ 21,696,082		$ 21,696,082	3.29%	5.28%	0.17%
Long-Term Debt	$ 352,983,580		$ 352,983,580	53.49%	5.88%	3.15%
Common Equity	$ 285,260,206	$ -	$ 285,260,206	43.23%	11.24%	4.86%
Total	$ 659,939,868		$ 659,939,868	100.0%		8.18%

Company's Proposed Weighted Average Cost of Capital

Class of Capital	Amount at Present Rates	Adjustment	Balance	Percent of Total Capital	Cost	Weighted Cost
Short-Term Debt	$ 15,032,370		$ 15,032,370	2.28%	4.81%	0.11%
Long-Term Debt	$ 351,920,879		$ 351,920,879	53.28%	5.91%	3.15%
Common Equity	$ 285,261,039	$ 8,269,130	$ 293,530,169	44.44%	11.25%	5.00%
Total	$ 652,214,288		$ 660,483,418	100.0%		8.26%

Docket No. 07-0507
ICC Staff Exhibit 4.0
Schedule 4.2

Illinois-American Water Company

Balance of Short-Term Debt
Average 2009

Line No.	Date (A)	Gross Short-term Debt Outstanding (B)	CWIP (C)	CWIP Accruing AFUDC (D)	Net Average Short-term Debt Outstanding (E)
1	Jun-09	$ 37,883,807	$ 77,121,541	$ 28,462,377	$ 23,902,458
2	May-09	38,891,023	84,530,947	27,972,127	26,021,599
3	Apr-09	43,531,364	78,340,869	25,856,877	29,163,574
4	Mar-09	32,344,960	72,150,791	23,741,627	21,701,667
5	Feb-09	24,081,594	65,960,713	21,626,377	16,186,021
6	Jan-09	22,692,697	59,770,636	19,511,127	15,285,045
7	Dec-08	40,934,046	88,551,136	46,162,351	19,594,830
8	Nov-08	63,362,581	116,574,611	71,852,067	24,308,345
9	Oct-08	63,080,312	107,747,399	67,904,261	23,326,016
10	Sep-08	62,422,423	97,696,848	63,677,762	21,736,154
11	Aug-08	63,047,221	87,617,745	58,914,438	20,654,078
12	Jul-08	61,990,938	77,200,320	54,194,754	18,473,196
	Average				**$ 21,696,082**

Notes: Column (E) = the greater of [Column (B) - Column (C)] or [Column (B) - Column (B) / Column (C) * Column (D)]

Docket No. 07-0507
ICC Staff Exhibit 4.0
Schedule 4.3

Illinois-American Water Company

Embedded Cost of Debt
Average 2009

	Debt Issue Type, Coupon Rate (A)		Date Issued (B)	Maturity Date (C)	Original Principal Amount (D)	Face Amount Outstanding (F)	Debt Discount or (Premium) (H)	Unamortized Debt Expense (I)	Carrying Value (J)	Coupon Interest Expense (K)	Amortization of Debt Discount or (Premium) (L)	Amortization of Debt Expense (M)	Total Expense (N)
1	**General Mortgage Bonds**												
2	Series	6.073%	12/31/2008	12/31/2038	26,500,000	14,354,167		71,219	14,282,948	871,729		2,209	873,938
3	Series	6.310%	7/1/2008	7/1/2038	28,500,000	28,500,000		154,220	28,345,780	1,798,350		5,376	1,803,726
4	Series	6.593%	9/30/2007	9/30/2037	94,000,000	94,000,000		900,827	93,099,174	6,197,420		31,243	6,228,663
5	Series	9.220%	12/15/1998	12/1/2009	6,000,000	875,000		4,978	870,022	80,675		5,432	86,107
6	Variable Series	3.590%	3/28/2002	9/1/2032	24,860,000	24,860,000		747,266	24,112,734	892,474		32,256	924,730
7	Series	9.625%	3/15/1989	2/1/2019	6,000,000	6,000,000		30,205	5,969,796	577,500		2,995	580,495
8	Series	5.150%	9/23/1993	8/1/2023	6,000,000	5,745,000		234,232	5,510,768	295,868		16,062	311,930
9	Tax Exempt	5.500%	12/19/1996	12/1/2026	7,000,000	6,990,000		323,870	6,666,130	384,450		18,076	402,526
10	Series	5.000%	2/24/1998	2/1/2028	12,000,000	11,975,000		542,165	11,432,835	598,750		28,410	627,160
11	Tax Exempt	5.000%	2/25/1998	2/1/2028	6,000,000	5,875,000		277,341	5,597,660	293,750		14,533	308,283
12	Tax Exempt	5.100%	6/23/1999	6/1/2029	30,645,000	30,645,000		1,208,981	29,436,020	1,562,895		59,215	1,622,110
13	Variable Series	3.770%	5/1/1997	5/1/2032	23,325,000	23,325,000		209,254	23,115,746	879,353		8,968	888,321
14	**Total General Mortgage Bonds**				270,830,000	253,144,167	-	4,704,556	248,439,611	14,433,213	-	224,775	14,657,988
15	**Docket Nos 06-0650/0651**												
16	Series	5.520%	5/16/2007	12/21/2016	2,500,000	2,500,000		11,741	2,488,260	138,000		1,437	139,437
17	Series	5.620%	5/16/2007	12/21/2018	13,500,000	13,500,000		65,707	13,434,294	758,700		6,463	765,163
18	Series	5.770%	5/16/2007	12/21/2021	23,000,000	23,000,000		115,873	22,884,128	1,327,100		8,801	1,335,901
19	Series	5.390%	5/16/2007	12/21/2013	13,000,000	13,000,000		55,297	12,944,703	700,700		10,702	711,402
20	Series	5.620%	5/16/2007	3/23/2019	22,000,000	22,000,000		106,984	21,893,016	1,236,400		10,270	1,246,670
21	Series	5.620%	6/12/2007	12/21/2018	30,000,000	30,000,000		84,071	29,915,930	1,686,000		8,337	1,694,337
22	**Total Docket Nos 06-0650/0651**				104,000,000	104,000,000	-	439,671	103,560,329	5,846,900	-	46,010	5,892,910
23	**Notes Payable**												
24	Series	2.570%	5/15/2004	5/15/2024	1,586,381	1,329,514			1,329,514	34,169			34,169
25									-				
26	Series	9.870%	7/31/2002	12/1/2013	6,485,642	958,941			958,941	94,647			94,647
27	**Total Notes Payable**				8,072,023	2,288,455	-	-	2,288,455	128,816	-	-	128,816
28	**Reaquired Debt**												
29		6.100%	24-Nov-87	30-Sep-22				361,172	-$361,172			$26,267	$26,267
30		6.100%	24-Nov-87	30-Sep-22				210,656	-$210,656			$15,320	$15,320
31		6.150%	24-Nov-87	31-Aug-24				481,685	-$481,685			$30,746	$30,746
32		6.900%	25-Aug-04	28-Feb-21				251,303	-$251,303			20,655	20,655
33	**Total - Reaquired Debt**							$1,304,815	-$1,304,815			$92,988	$92,988
34						$359,432,622		$6,449,042	$352,983,580	$20,408,929		$363,773	$20,772,702
35													**5.88%**

Illinois-American Water Company

Common Equity Balance

Month	Common Equity Month-End Balance: Present Rates		Average
June 2008	$ 284,402,442		
July 2008	$ 285,830,338		$ 285,116,390
August 2008	$ 287,236,708		$ 286,533,523
September 2008	$ 287,870,820		$ 287,553,764
October 2008	$ 288,690,416		$ 288,280,618
November 2008	$ 288,728,431		$ 288,709,424
December 2008	$ 285,011,424		$ 286,869,928
January 2009	$ 284,328,145		$ 284,669,785
February 2009	$ 283,628,012		$ 283,978,079
March 2009	$ 282,723,125		$ 283,175,569
April 2009	$ 282,323,268		$ 282,523,197
May 2009	$ 282,864,786		$ 282,594,027
June 2009	$ 283,371,545		$ 283,118,166
		Average 2009	$ 285,260,206

Illinois-American Water Company

Growth Rates

Water Sample

	Company	Zacks Earnings
1	Aqua America Inc.	10.80%
2	Artesian Resources Corp.	5.00%
3	California Water Service Group	8.00%
4	Middlesex Water Co.	8.00%
5	SJW Corp.	10.00%
6	Southwest Water Co.	11.00%
7	York Water Co.	11.33%

Utility Sample

	Company	Zacks Earnings
1	Atmos Energy Corp.	5.75%
2	Centerpoint Energy Inc.	9.50%
3	Consolidated Edison Inc.	3.67%
4	Nicor Inc.	4.00%
5	Northwest Natural Gas Co.	5.25%
6	Nstar	6.50%
7	Piedmont Natural Gas Co., Inc.	5.67%
8	WGL Holding Inc	4.00%

Illinois-American Water Company

Water Sample

	Company	Current Dividend $D_{0,1}$	$D_{0,2}$	$D_{0,3}$	$D_{0,4}$	Next Dividend Payment Date	Stock Price
1	Aqua America Inc.	$ 0.115	$ 0.115	$ 0.125	$ 0.125	03/01/08	$ 22.350
2	Artesian Resources Corp.	0.160	0.166	0.166	0.172	02/21/08	19.220
3	California Water Service Group	0.290	0.290	0.290	0.290	02/16/08	38.460
4	Middlesex Water Co.	0.173	0.173	0.173	0.175	03/03/08	18.950
5	SJW Corp.	0.151	0.151	0.151	0.151	03/01/08	34.360
6	Southwest Water Co.	0.058	0.058	0.058	0.058	01/19/08	12.490
7	York Water Co.	0.118	0.118	0.118	0.118	01/16/08	15.800

Utility Sample

	Company	Current Dividend $D_{0,1}$	$D_{0,2}$	$D_{0,3}$	$D_{0,4}$	Next Dividend Payment Date	Stock Price
1	Atmos Energy Corp.	$ 0.320	$ 0.320	$ 0.320	$ 0.325	03/10/08	$ 26.940
2	Centerpoint Energy Inc.	0.170	0.170	0.170	0.170	03/10/08	18.000
3	Consolidated Edison Inc.	0.580	0.580	0.580	0.580	03/15/08	49.710
4	Nicor Inc.	0.465	0.465	0.465	0.465	02/01/08	43.470
5	Northwest Natural Gas Co.	0.355	0.355	0.355	0.375	02/15/08	48.150
6	Nstar	0.325	0.325	0.325	0.325	02/01/08	36.150
7	Piedmont Natural Gas Co., Inc.	0.240	0.250	0.250	0.250	01/15/08	26.520
8	WGL Holding Inc	0.338	0.343	0.343	0.343	02/01/08	32.740

Illinois-American Water Company

Expected Quarterly Dividends

Water Sample

Company	$D_{1,1}$	$D_{1,2}$	$D_{1,3}$	$D_{1,4}$
Aqua America Inc.	$0.125	$0.125	$0.139	$0.139
Artesian Resources Corp.	0.172	0.174	0.174	0.181
California Water Service Group	0.313	0.313	0.313	0.313
Middlesex Water Co.	0.175	0.175	0.175	0.189
SJW Corp.	0.166	0.166	0.166	0.166
Southwest Water Co.	0.064	0.064	0.064	0.064
York Water Co.	0.131	0.131	0.131	0.131

Utility Sample

Company	$D_{1,1}$	$D_{1,2}$	$D_{1,3}$	$D_{1,4}$
Atmos Energy Corp.	$0.325	$0.325	$0.325	$0.344
Centerpoint Energy Inc.	0.186	0.186	0.186	0.186
Consolidated Edison Inc.	0.601	0.601	0.601	0.601
Nicor Inc.	0.465	0.484	0.484	0.484
Northwest Natural Gas Co.	0.375	0.375	0.375	0.395
Nstar	0.350	0.350	0.350	0.350
Piedmont Natural Gas Co., Inc.	0.250	0.264	0.264	0.264
WGL Holding Inc	0.343	0.356	0.356	0.356

Illinois-American Water Company

DCF- Cost of Common Equity Estimate

Water Sample

	Company		Cost of Equity Estimate
1	Aqua America Inc.		13.28%
2	Artesian Resources Corp.		8.78%
3	California Water Service Group		11.42%
4	Middlesex Water Co.		11.94%
5	SJW Corp.		12.03%
6	Southwest Water Co.		13.19%
7	York Water Co.		14.91%
		Average	12.22%

Utility Sample

	Company		Cost of Equity Estimate
1	Atmos Energy Corp.		10.84%
2	Centerpoint Energy Inc.		13.85%
3	Consolidated Edison Inc.		8.66%
4	Nicor Inc.		8.59%
5	Northwest Natural Gas Co.		8.52%
6	Nstar		10.57%
7	Piedmont Natural Gas Co., Inc.		9.80%
8	WGL Holding Inc		8.48%
		Average	9.91%

Illinois-American Water Company

Risk Premium Analysis

Interest Rates as of December 12, 2007

U.S. Treasury Bills		U.S. Treasury Bonds	
Discount Rate	Effective Yield	Bond Equivalent Yield	Effective Yield
2.84%	2.92%	4.51%	4.56%

Risk Premium Cost of Equity Estimates*

Water Sample

Risk-Free Rate		Beta		Risk Premium		Cost of Common Equity
4.56%	+	0.840	*	(13.55% - 4.56%)	=	12.11%

Utility Sample

Risk-Free Rate		Beta		Risk Premium		Cost of Common Equity
4.56%	+	0.800	*	(13.55% - 4.56%)	=	11.75%

*Risk-Free Rate Proxy is the U.S. Treasury Bond

Illinois-American Water Company

Company	S&P Credit Rating	S&P Business Profile
Atmos Energy Corp.	BBB	3
Centerpoint Energy Inc.	BBB	3
Consolidated Edison Inc.	A	2
Nicor Inc.	AA	3
Northwest Natural Gas Co.	AA-	1
Nstar	A+	1
Piedmont Natural Gas Co., Inc.	A	2
WGL Holding Inc	AA-	3
Average	A	2.25

Illinois-American Water Company

Benchmark Ratios

Components

Funds Available to Shareholders =	(Weighted Cost of Equity + Weighted Cost of Preferred Stock) x Rate Base
Non-Cash Items =	Depreciation & Amortization + Deferred Taxes & Investment Tax Credits
Funds From Operations =	Funds Available to Shareholders + Non-Cash Items
Interest =	(Weighted Cost of Short-term Debt + Weighted Cost of Long-term Debt) x Rate Base
Total Debt =	(Short-term Debt Ratio + Long-term Debt Ratio) x Rate Base

Ratios

Funds From Operations / Interest Coverage =	(Funds From Operations + Interest) ÷ Interest
Funds From Operations / Debt =	Funds From Operations ÷ Total Debt

Illinois-American Water Company

Components

Staff's Proposed Rate Base = $533,340,490

Funds Available to Shareholders = 4.86% x $533,340,490 = $25,920,348

Non-Cash Items = $33,862,507 + $1,457,885 = $35,320,392

Funds From Operations = $25,920,348+ $35,320,392 = $61,240,740

Interest = 3.32% x $533,340,490= $17,706,904

Total Debt = 56.78% x $533,340,490 = $302,803,095

Ratios

Funds From Operations / Interest Coverage = ($61,240,740 + $17,706,904) ÷ $17,706,904 = **4.5X**

Funds From Operations / Debt = $61,240,740 ÷ $302,803,095 = **20.2%**

Reuters Corporate Spreads for Utilities

Rating	30-Year
Aaa/AAA	135
Aa1/AA+	150
Aa2/AA	155
Aa3/AA-	174
A1/A+	180
A2/A	184
A3/A-	203
Baa1/BBB+	212
Baa2/BBB	231
Baa3/BBB-	229

Illinois-American Water Company

CAPM-Value Line Betas

Water Sample

	Company		Value Line Beta
1	Aqua America Inc.		0.90
2	Artesian Resources Corp.		0.50
3	California Water Service Group		1.15
4	Middlesex Water Co.		0.80
5	SJW Corp.		1.15
6	Southwest Water Co.		1.00
7	York Water Co.		0.50
		Average	0.86

Utility Sample

	Company		Cost of Equity Estimate
1	Atmos Energy Corp.		0.85
2	Centerpoint Energy Inc.		0.95
3	Consolidated Edison Inc.		0.75
4	Nicor Inc.		1.00
5	Northwest Natural Gas Co.		0.90
6	Nstar		0.75
7	Piedmont Natural Gas Co., Inc.		0.85
8	WGL Holding Inc		0.85
		Average	0.86