BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition for increase in rates By Progress Energy Florida	))	Docket No. 090079-EI
	)	FILED: August 10, 2009

DIRECT TESTIMONY

OF

J. RANDALL WOOLRIDGE

ON BEHALF OF THE CITIZENS OF

THE STATE OF FLORIDA

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Attorneys for the Citizens of the
State of Florida

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DIRECT TESTIMONY

OF

J. Randall Woolridge

On Behalf of the Office of Public Counsel

Before the

Florida Public Service Commission

Docket No. 090079-EI

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

A. My name is J. Randall Woolridge. My business address is 120 Haymaker Circle, State College, PA 16801. I am a Professor of Finance and the Goldman, Sachs & Co. and Frank P. Smeal Endowed University Fellow in Business Administration at the University Park Campus of the Pennsylvania State University. I am also the Director of the Smeal College Trading Room and President of the Nittany Lion Fund, LLC. A summary of my educational background, research, and related business experience is provided in Appendix A.

I. SUBJECT OF TESTIMONY AND SUMMARY OF RECOMMENDATIONS

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I have been asked by the Florida Office of Public's Counsel ("OPC") to provide an opinion as to the overall fair rate of return or cost of capital for the Progress Energy Florida, Inc. ("PEF" or "Company") and to evaluate PEF's rate of return testimony in this proceeding.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. First I will review my cost of capital recommendation for PEF, and detail the primary areas of contention between PEF's rate of return position and OPC. Second, I provide an assessment of capital costs in today's capital markets. Third, I discuss my proxy group of electric utility companies for estimating the cost of capital for PEF. Fourth, I present my recommendations for the Company's capital structure and debt cost rate. Fifth, I discuss the concept of the cost of equity capital and then estimate the equity cost rate for PEF. Finally, I critique Company's rate of return analysis and testimony. I have included a table of contents which provides a more detailed outline.

Q. PLEASE REVIEW YOUR RECOMMENDATIONS REGARDING THE APPROPRIATE RATE OF RETURN FOR PEF.

A. I have developed a capital structure for PEF that reflects the Company's prospective capitalization used by investors. Even with my adjustments, this capital structure has a higher equity component than the capitalizations of most electric utility companies. I have adjusted the Company's debt cost rates to reflect current market interest rates. I have applied the Discounted Cash Flow Model ("DCF") and the Capital Asset Pricing Model ("CAPM") to a proxy group of publicly-held electric utility companies ("Electric Proxy Group") as well as the group of companies used by the Company. My analysis indicates an equity cost rate in the range of 9.5% to 10.0%. I have used the midpoint of this range, 9.75% as my equity cost rate for PEF. Using my capital structure and debt and equity cost rates, I am recommending an overall rate of return of 7.50% for PEF. These findings are summarized in Exhibit JRW-1.

Q. PLEASE SUMMARIZE THE PRIMARY ISSUES REGARDING RATE OF RETURN IN THIS PROCEEDING.

A. PEF's proposed cost of capital is provided in MFR Schedule D. The Company's recommended capital structure has a common equity ratio of 53.9% based on investor provided capital. This figure includes $711 million in imputed equity associated with the Company's Purchased Power Agreements ("PPAs"). I demonstrate that a capital structure with a common equity ratio of 53.9% is high relative to (1) the Company's actual historic as well as (2) the capital structures of other electric utilities. In my testimony, I show that the Company's imputed equity adjustment is unwarranted. My recommended capital structure reflects the capitalization of PEF as viewed by investors, and has a higher common equity ratio than the capitalizations of electric utility companies. I have also adjusted the Company's proposed debt cost rates to reflect market interest rates.

Dr. James A. Vander Weide provides the Company's equity cost rate. Dr. Vander Weide's estimated common equity cost rate is 12.54%. We have both used DCF and CAPM approaches in estimating an equity cost rate for the Company. Dr. Vander Weide has also used a Risk Premium ("RP") approach to estimate an equity cost rate for PEF. Dr. Vander Weide has applied these approaches to a proxy group of twenty-four electric companies.

In terms of the DCF approach, the two major areas of disagreement are (1) the appropriate adjustment to the DCF dividend yield and (2) most significantly, the estimation of the expected growth rate. With respect to (1), Dr. Vander Weide has made an inappropriate adjustment to the spot dividend yield. With respect to (2), Dr. Vander Weide has relied exclusively on the forecasted earnings per share ("EPS") growth rates of Wall Street analysts to compute the equity cost rate. I have used both

historic and projected growth rate measures and have evaluated growth in dividends, book value, and earnings per share. A very significant factor that I consider and highlight is the upwardly-biased expected earnings growth rates of Wall Street analysts.

The RP and CAPM approaches require an estimate of the based interest rate and the equity risk premium. In both approaches, Dr. Vander Weide's base interest rate is above current market rates. However, the major area of disagreement involves our significantly different views on the alternative approaches to measuring the equity risk premium as well as the magnitude of equity risk premium. Dr. Vander Weide's equity risk premiums are excessive and do not reflect current market fundamentals. As I highlight in my testimony, there are three procedures for estimating an equity risk premium – historic returns, surveys, and expected return models. Dr. Vander Weide uses a historical equity risk premium which is based on historic stock and bond returns. He also calculates an expected risk premium in which he applies the DCF approach to the S&P 500 and public utility stock. I provide evidence that risk premiums based on historic stock and bond returns are subject to empirical errors which result in upwardly biased measures of expected equity risk premiums. I demonstrate that Dr. Vander Weide's projected equity risk premiums, which use analysts' EPS growth rate projections, includes unrealistic assumptions regarding future economic and earnings growth and stock returns.

In his DCF, RP, and CAPM approaches, Dr. Vander Weide's makes an unwarranted adjustment for flotation costs which serve to inflate his DCF equity cost rate.

Finally, Dr. Vander Weide also makes a leverage adjustment to his equity cost rate estimates derived from his comparable groups to reflect the leverage difference between the market value capital structures of the group and PEF's book value capital structure which is used for rate making purposes. The adjustment increases his equity cost rate estimate by 104 basis points. In my testimony I discuss why this adjustment is not appropriate and highlight the fact that it produces illogical results.

In the end, the most significant areas of disagreement in measuring PEF's cost of capital are: (1) the appropriate capital structure; 2) the Company's short-term and long-term debt cost rates; (3) the use of the earnings per share growth rates of Wall Street analysts to measure expected DCF growth; (4) the measurement and magnitude of the equity risk premium used in CAPM and RP approaches; and (5) whether or not equity cost rate adjustments are needed to account for leverage and flotation costs.

II. CAPITAL COSTS IN TODAY'S MARKETS

Q. PLEASE DISCUSS CAPITAL COSTS IN U.S. MARKETS.

A. Long-term capital cost rates for U.S. corporations are a function of the required returns on risk-free securities plus a risk premium. The risk-free rate of interest is the yield on long-term U.S Treasury yields. The yields on ten-year U.S. Treasury bonds are provided on page 1 of Exhibit JRW-2 from 1953 to the present. These yields peaked in the early 1980s and have generally declined since that time. In the summer of 2003 these yields hit a 60-year low at 3.33%. They subsequently increased and fluctuated between the 4.0% and 5.0% levels over the next four years in response to ebbs and flows in the economy. Ten-year Treasury yields began to decline in mid-2007 at the

beginning of the current financial crisis. In 2008 Treasury yields declined to below 3.0% as a result of the expansion of the mortgage and sub-prime market credit crisis, the turmoil in the financial sector, the government bailout of financial institutions, and the economic recession. Overall, these economic developments led investors to seek out low risk investments. This 'flight to quality' in the fixed income market has driven Treasury yields to historically low levels.

Panel B on page 1 of Exhibit JRW-2 shows the differences in yields between ten-year Treasuries and Moody's Baa rated bonds since the year 2000. This differential primarily reflects the additional risk required by bond investors for the risk associated with investing in corporate bonds. The difference also reflects, to a much lesser degree, yield curve changes over time. The Baa rating is the lowest of the investment grade bond ratings for corporate bonds. The yield differential hovered in the 2.0% to 3.0% area until 2005, declined to 1.5% until late 2007, and then increased significantly in response to the current financial crisis. This differential peaked at 6.0% in November of 2008, at the height of the financial crisis, due to tightening in credit markets which increased corporate bond yields and the 'flight to quality' which decreased treasury yields. The differential has declined over the past several months.

As noted, the risk premium is the return premium required by investors to purchase riskier securities. As illustrated in Panel B of Exhibit JRW-2, the risk premium required by investors to buy corporate bonds is observable based on yield differentials in the markets. The equity risk premium is the return premium required to purchase stocks as opposed to bonds. The equity risk premium is not readily observable in the markets (as are bond risk premiums) since expected stock market returns are not

readily observable. As a result, equity risk premiums must be estimated using market data. There are alternative methodologies to estimating the equity risk premium, and the alternative approaches and equity risk premium results are subject to much debate. One way to estimate the equity risk premium is to compare the mean returns on bonds and stocks over long historical periods. Measured in this manner, the equity risk premium has been in the 5-7 percent range. But studies by leading academics as well as surveys of financial professionals indicate the forward-looking equity risk premium is in the 4.0 percent range

Q. PLEASE DISCUSS THE FINANCIAL CRISIS AND THE RESPONSE OF THE U.S. GOVERNMENT.

A. The mortgage crisis, subprime crisis, credit crisis, economic recession and the restructuring of financial institutions has had tremendous global economic implications. This issue first surfaced in the summer of 2007 as a mortgage crisis. It expanded into the subprime area in late 2008 and led to the collapse of certain financial institutions, notably Bear Stearns, in the first quarter of 2008. Commodity and energy prices peaked and then began to decline in the summer of 2008 as the crisis in the financial markets spread to the global economy. The turmoil in the financial sector peaked in September with the failure of several large financial institutions, Bank of America's buyout of Merrill Lynch, and the government takeover of Fannie Mae and Freddie Mac.

The spillover to the economy has been ongoing. According to the National Bureau of Economic Research, the economy slipped into a recession in the 4th quarter of 2007 and remains there. The unemployment rate has increased steadily and was at 9.5% in

June of 2009. Certain industries - especially those tied to discretionary spending, commodities, and industrial goods – have been especially hard hit. Inflationary pressures--which were tied to global growth and increases in commodity prices until mid-2008-- largely disappeared in late 2008 and early 2009. A barrel of oil, which was nearly $150 in mid-2008, declined to the $30 range and now has increased to $70. Other commodity prices also peaked last year, bottomed out in the first quarter of 2009, and now have rebounded. The stock market bottomed out in early March, and has increased some 25% since that time. The increase in commodity and energy prices and the stock market since the first quarter of this year provides evidence that the worst of the financial crisis and economic recession appears to be over.

In response to the market crisis, the Federal Reserve took extraordinary steps in an effort to stabilize capital markets. Most significantly, the Fed has opened its lending facilities to numerous banking and investment firms to promote credit markets. As a result, the balance sheet of the Federal Reserve has grown by hundreds of billions of dollars in support of the financial system. The federal government has taken a series of measures to shore up the economy and the markets. The Troubled Asset Relief Program ("TARP") is aimed at providing over $700B in government funds into the banking system in the form of equity investments. The federal government has spent billions bailing out a number of prominent financial institutions, including AIG, Citigroup, and Bank of America. The government is also moving to bail out other industries, most notably the auto industry. Earlier this year, President Obama's signed into law his $787B economic stimulus which includes significant tax cuts and government spending aimed at creating jobs and turning around the economy.

In summary, the Federal Reserve and government have taken never-before seen

actions and have provided or will provide extraordinary sums of money in various ways to rescue the economy, certain industries, and the credit markets.

Q. PLEASE DISCUSS THE RESPONSE OF THE FINANCIAL MARKETS TO THE ACTIONS OF THE U.S. GOVERNMENT.

A. In response to the financial crisis, United States ("U. S.") Treasury Rates declined to levels not seen since the 1950s. This reflects the 'flight to quality' in the credit markets, as investors have sought out low risk investments. The credit market for corporate and utility debt has experienced higher rates due to the credit crisis. The short-term credit markets were initially hit with credit issues, leading to the demise of several large financial institutions. The primary indicator of the short-term credit market is the 3-month London Interbank Offered Rate ("LIBOR") rate. LIBOR peaked in the third quarter of 2008 at 4.75%. It has declined to below 1.0% as the short-term credit markets have opened up and Treasury rates have continued to decline.

The long-term credit market has remained tighter, but has improved significantly over the first half of 2009. The credit crisis is associated with concerns among credit providers – mainly financial institutions – in terms of making loans and investing in bonds due to the overleveraging and perceived weakness of the economy. Panel A of page 1 of Exhibit JRW-3 provides the yields on A, BBB+, and BBB rated public utility bonds. These yields peaked in November and have since declined by over 150 basis points. For example, the yields on 'A' rated utility bonds, which peaked at over 7.50% in November of 2008, have declined to below 6.0% in recent weeks. Panel B of Exhibit JRW-3 provides the yield spreads on A, BBB+, and BBB rated public

utility bonds relative to Treasury bonds. These yield spreads increased dramatically in the third quarter during the peak of the financial crisis and have since decreased by about 200 basis points.

Thus, the yields and yield spreads have declined in response to the federal government's unprecedented actions in response to the financial crisis. Public utility debt in particular has found favor with fixed income investors. Pages 2 and 3 of Exhibit JRW-3 contain an article from the *Wall Street Journal* which highlights the fact that the market for the bonds of utilities came back significantly in early 2009. In particular, the article highlights the fact that utility bonds are viewed as a 'safe haven' in the current market and that yields on utility bonds declined significantly and bond issuances picked up early in 2009. It quotes from the CFO of Progress Energy, who says:

> "People have turned the page on 2008 and spreads have come down for people like us," said Mark Mulhern, Progress Energy's chief financial officer.

In sum, it appears that the massive government spending and Federal Reserve actions have had an effect on the credit markets. The Obama administration is clearly committed to bringing the economy around. The worst of the credit crisis appears to be over. The short-term credit market has loosened up considerably. LIBOR rates peaked in the fall and have declined to below 1.0%. Likewise, the long-term credit market has loosened as well and credit spreads have declined significantly. In addition, the stock market has rebounded from its lows in March of this year.

Q. PLEASE PROVIDE YOUR ASSESSMENT OF THE IMPACT OF RECENT

CAPITAL MARKET CONDITIONS ON THE VOLATILITY OF STOCKS AND BONDS.

A. To assess the effect of recent capital market volatility on the equity risk premium and the equity cost rate, one must look at the volatility of stocks relative to bonds. To compare the volatility of stocks and bonds, one must standardize the volatility measure. This is normally done by dividing the volatility measure, the standard deviation, by the mean. This standardized volatility measure is known as the Coefficient of Variation ("CV").

I have performed an analysis of the volatility of stocks relative to bonds since 2000. I have used the S&P 500 and the Bear Sterns Bond Price Index ("BSBPI") to compute the CV using a twenty-two day mean and standard deviation. A twenty two day period approximates one month of trading. In Panel A of Exhibit JRW-3, page 4, I have graphed the CV for the S&P 500 and the BSBPI since the year 2000. In association with the unprecedented economic events in the third quarter of 2008, there is a dramatic increase in the volatility of stocks and a not so dramatic increase in the volatility of bonds. After the September – October time frame, stock volatility declined significantly while bond volatility increased. In the first quarter of 2009, there was another increase in the volatility of stocks relative to bonds. However, stock volatility has declined over the past two months. Panel B of page 4 of Exhibit JRW-3 shows the ratio of the Stock CV/Bond CV. Hence, this graph shows the standardized volatility of stocks relative to bonds. Higher levels of this ratio represent time periods when stock volatility is high relative to bond volatility, and low levels of this ratio occur during time periods when stock volatility is low relative to bonds. As such, the volatility of stocks relative to bonds has declined over the past two months, suggesting

that the markets have settled somewhat compared to the third quarter of 2008 and the first quarter of 2009.

Q. HAVE LEADING FINANCIAL PRACTITIONERS WEIGHED IN ON THE IMPACT OF THE FINANCIAL CRISIS ON THE COST OF EQUITY CAPITAL?

A. Yes. McKinsey & Co., recognized as the leading management consulting firm in the world, recently published a study entitled "Why the Crisis Hasn't Shaken the Cost of Capital." In the study, the authors contend the financial crisis has not significantly changed the firm's long-term estimate of the equity risk premium, which is in the 3.5 to 4 percent range. McKinsey develops an equity risk premium based on the price level of the S&P 500, GDP growth, and corporate profits. In summing up their analysis of the impact of the financial crisis on S&P 500, GDP growth, and corporate profits, they conclude: "Taking all these factors into account, we think there has been no significant change in the long-term cost of equity capital.[1]"

III. PROXY GROUP SELECTION

Q. PLEASE DESCRIBE YOUR APPROACH TO DEVELOPING A FAIR RATE OF RETURN RECOMMENDATION FOR PEF.

[1]Richard Dobbs, Bin Jang, and Timothy Koeller, "Why the Crisis Hasn't Shaken the Cost of Capital," *McKinsey Quarterly* (December 2008), p. 6.

A. To develop a fair rate of return recommendation for PEF, I have evaluated the return requirements of investors on the common stock of a proxy group of publicly-held electric utility companies.

Q. PLEASE DESCRIBE YOUR PROXY GROUP OF ELECRIC UTILITY COMPANIES.

A. My Electric Proxy Group consists of fifteen electric utility companies. These companies met the following selection criteria: (1) listed as a Electric Utility or Combination Electric and Gas Company in *AUS Utility Reports*; (2) listed as a Electric Utility in the Standard Edition of the *Value Line Investment Survey*; (3) at least 75% regulated electric revenues; (4) operating revenues of less than $15B; (5) at least a three-year history of paying dividends, with no actual or pending dividend cuts; and (6) an investment grade bond rating by Moody's and/or Standard & Poor's. Summary financial statistics for the Electric Proxy Group are listed in Panel A of Exhibit JRW-4. The median operating revenues and net plant for the group are $5,873.6 million and $8,313.5 million, respectively. On average, the group receives 89% of revenues from regulated electric operations, a current common equity ratio of 44%, and an earned return on common equity of 11.4%.

Q. HAVE YOU ALSO CONSIDERED THE RESULTS OF DR. VANDER WEIDE'S PROXY GROUP OF ELECTRIC UTILITIES?

A. Yes. I have also performed an equity cost rate study on Dr. Vander Weide's group of utility companies. Dr. Vander Weide's proxy group consists of twenty-four utility companies. Summary financial data are provided for this group in Panel B of Exhibit JRW-4. On average, this group is much larger than the Electric Proxy Group and PEF.

The median operating revenues and net plant for the group are $10,087.4 million and $17,577.7 million, respectively. These companies, on average, receive 76% of revenues from regulated electric operations and have a current common equity ratio of 43% and an earned return on common equity of 11.7%.

Q. WHAT IS YOUR SUMMARY ASSESSMENT OF THE RISKINESS OF THE TWO GROUPS?

A. Dr. Vander Weide's group is larger, has a lower percentage of regulated electric revenue. But, the two groups do have similar bond ratings as well as relatively similar pre-tax interest coverage, common equity ratio, and earned return on common equity. However, the variability of the bond ratings is higher for Dr. Vander Weide's group than the Electric Proxy Group. Based on this cursory analysis, I believe that Dr. Vander Weide's group is slightly riskier than the Electric Proxy Group.

Q. HOW DOES PEF COMPARE TO THE TWO PROXY GROUPS?

A. The summary financial data for PEF is also provided in Exhibit JRW-4. PEF is very similar to the Electric Proxy Group in terms of operating revenues, net plant, bond ratings, and interest coverage ratio. PEF has a lower return on equity, but a higher common equity ratio. In my opinion, PEF is more comparable to the Electric Proxy Group than to Dr. Vander Weide's proxy group. The data do indicate that PEF's parent, Progress Energy, is more similar to Dr. Vander Weide's proxy group in terms of size and capitalization.

IV. CAPITAL STRUCTURE RATIOS AND DEBT COST RATES

Q. WHAT IS THE REQESTED CAPITAL STRUCTURE OF THE COMPANY?

A. The Company's requested capital structure, based on investor provided capital, is shown in Panel A of page 1 of Exhibit JRW-5. The Company is requesting a capital structure consisting 0.66% short-term debt, 45.10% long-term debt, 0.34% preferred stock, and 53.90% common equity. However, this capital structure includes $711 million of "imputed equity." As discussed at length later in my testimony, imputed equity is a non-GAAP adjustment to the capital structure of the company. As such, it is an adjustment not found in the company's financial statements and SEC filings. Panel B of page 1 of Exhibit JRW-5 shows PEF's requested capital structure, based on investor provided capital, without the imputed equity. Therefore, PEF is actually requesting a capital structure (based on investor provided capital) consisting 0.75% short-term debt, 51.35% long-term debt, 0.39% preferred stock, and 47.51% common equity.

Q. IS THE COMPANY'S REQESTED CAPITAL STRUCTURE APPROPRIATE FOR RATEMAKING PURPOSES?

A. No. This capital structure is not appropriate for three reasons. First, the capital structure includes a common equity ratio (53.90%) which is higher than the common equity ratios of electric utility companies. Second, the company has requested a capital structure that includes a common equity ratio of 53.90%. This claim is based on incorrectly including the $711 million in imputed equity. Third, the Company's requested capital structure includes more common equity than is projected for the Company.

Q. BEFORE DISCUSSING YOUR RECOMMENDED CAPITAL STRUCTURE, PLEASE REVIEW THE CAPITAL STRUCTURES FOR PEF AND ITS PARENT COMPANY, PROGRESS ENERGY.

A. In panels C and D of Exhibit JRW-5, page 1, the average capitalization ratios for PEF and Progress Energy are shown over the past three years. These ratios highlight the fact that Progress Energy employs much more debt and much less equity than PEF. Hence, Progress Energy has a higher degree of financial risk than PEF. These ratios also show that Progress Energy finances its other businesses and operations with more debt than PEF.

Q. PLEASE DISCUSS THE CAPITAL STRUCTURE RATIOS OF YOUR ELECTRIC PROXY GROUP.

A. The capital structures for the Electric Proxy Group are shown in Panel E of Exhibit JRW-5. The average capitalization ratios for the group over the past four quarters are 7.06% short-term debt, 49.41% long-term debt, 0.79% preferred stock, and a 42.74% common equity. These ratios indicate that: (1) the Electric Proxy Group has, on average, a much lower common equity ratio and higher financial risk than PEF; and (2) the average capitalization of the Electric Proxy Group is similar to PEF's parent, Progress Energy.

Q. WHAT CAPITAL STRUCTURE RATIOS ARE YOU EMPLOYING FOR PEF?

A. Panel F (page 2) of Exhibit JRW-5 provides PEF projected actual capitalization for the years 2009 and 2010 based on investor provided capital. These figures represent the projected capitalizations per the company books, and therefore these are the figures that investors would have access to and use. These capitalizations include a

significant capital infusion from Progress Energy. The average capitalization ratios are 1.82% short-term debt, 47.81% long-term debt, 0.36% preferred stock, and a 50.00% common equity. While these capitalization ratios include a much higher common equity ratio than the Electric Proxy Group, they are a much more realistic view of the expected capitalization of the company as viewed by investors.

Q. YOU HAVE REFERRED SEVERAL TIMES TO THE DIFFERING EQUITY RATIOS OF THE ELECTRIC PROXY GROUP, PROGRESS ENERGY, AND PEF. PLEASE ELABORATE ON THE SIGNIFICANCE OF THE AMOUNT OF EQUITY THAT IS INCLUDED IN AN ELECTRIC UTILITY'S CAPITAL STRUCTURE.

A. An electric utility's decision as to the amount of equity capital it will incorporate in its capital structure involves fundamental trade-offs relating to the amount of financial risk the firm carries, the overall revenue requirements its customers are required to bear through the rates they pay, and the return on equity that investors will require.

Q. PLEASE DISCUSS A UTILITY'S USE OF USING DEBT VERSUS EQUITY TO MEET ITS CAPITAL NEEDS.

A. Utilities satisfy their capital needs through a mix of equity and debt. Because equity capital is more expensive than debt, the issuance of debt enables a utility to raise more capital with a given commitment of dollars than it could raise with just equity. Debt is therefore a means of "leveraging" capital dollars. However, as the amount of debt in the capital structure increases, its financial risk increases and the risk of the utility perceived by equity investors also increases. Significantly for this case, the converse is also true. As the amount of debt in the capital structure decreases, the financial risk

decreases. The required return on equity capital is a function of the amount of overall risk that investors perceive, including financial risk in the form of debt.

Q. WHY IS THIS RELATIONSHIP IMPORTANT TO THE UTILITY'S CUSTOMERS?

A. Just as there is a direct correlation between the utility's authorized return on equity and the utility's revenue requirements (the higher the return, the greater the revenue requirement), there is a direct correlation between the amount of equity in the capital structure and the revenue requirements the customers are called on to bear. Again, equity capital is more expensive than debt. Not only does equity command a higher cost rate, it also adds more to the income tax burden that ratepayers are required to pay through rates. As the equity ratio increases, the utility's revenue requirements increase and rates paid by customers increase. If the proportion of equity is too high, rates will be higher than they need to be. For this reason, the utility's management must pursue a capital acquisition strategy that results in the proper balance in the capital structure.

Q. HOW HAVE ELECTRIC UTILITIES TYPICALLY STRUCK THIS BALANCE?

A. Due to regulation and the essential nature of its output, an electric utility is exposed to less business risk than other companies that are not regulated. This means that an electric utility can reasonably carry relatively more debt in its capital structure than can most unregulated companies. Typically, one may see equity ratios for electric utilities range from the 40% to 50% range. As I stated earlier, the average amount of common equity in the average capital structure of the utilities in my proxy group is 42%. In my experience, this value is typical for electric utilities. It is also significant

that Progress Energy has significantly less equity in its capital structure—i.e., is significantly more leveraged—than is its subsidiary, PEF.

Q. TURNING TO PEF'S PROPOSED CAPITAL STRUCTURE, HOW DOES PEF'S EQUITY RATIO RELATE TO THIS DISCUSSION?

A. PEF's real recommended common equity ratio is 47.51% based on investor provided capital. The 53.90% common equity ratio includes the $711 million in inputed equity. My recommended capital structure, with a common equity ratio of 50.0%, is very reasonable given these figures as well as the capitalizations of electric utilities.

Q. DO YOU BELIEVE THAT EQUITY RATIOS IN THE RANGE OF 53% ARE APPROPRIATE FOR PEF?

A. No. It includes imputed equity and is much higher than the capitalizations of electric utilities.

Q. GIVEN YOUR VIEW THAT PEF'S REQUESTED EQUITY RATIO IS HIGHER THAN IS WARRANTED, WHAT SHOULD THE COMMISSION DO IN THIS RATEMAKING PROCEEDING?

A. When a regulated electric utility's actual capital structure contains too high an equity ratio, the options are: (1) to employ a more reasonable capital structure and reflect this capital structure in revenue requirements; or (2) to recognize the downward impact that a high equity ratio will have on financial risk of a utility and authorize a lower common equity cost rate.

Q. PLEASE ELABORATE ON THIS "DOWNWARD IMPACT."

A. As I stated earlier, there is a direct correlation between the amount of debt in a utility's capital structure and the risk that an equity investor will associate with that utility. A relatively lower proportion of debt translates into a lower required return on equity, all other things being equal. Stated differently, a utility cannot expect to "have it both ways." Specifically, a utility cannot maintain an unusually high equity ratio and not expect to have the resulting lower risk reflected in its authorized return on equity. The fundamental relationship between the lower risk and the appropriate authorized return should not be ignored.

Q. OF THE TWO OPTIONS FOR ADDRESSING AN INAPPROPRIATELY HIGH EQUITY RATIO, WHICH HAVE YOU EMPLOYED IN THIS CASE?

A. I have used the Company's projected capital structure which includes an actual common equity ratio of 50.0%. This capital structure includes a capital infusion from Progress Energy and includes a higher common equity ratio and therefore lower financial risk than the capital structures of the Electric Proxy Group and Progress Energy. Concurrently, I have taken into account the relatively lower financial risk of PEF that is associated with high equity ratio in my recommendation that the Commission authorize a return on equity of 9.75%.

Q. PLEASE SUMMARIZE YOUR RECOMMENDED CAPITAL STRUCTURE FOR RATEMAKING PURPOSES.

A. My recommended capital structure for ratemaking purposes is provided in Panel G (page 2) of Exhibit JRW-5. I have included the per books amounts of customer deposits, deferred income tax, and investment tax credits from PEF Schedule D-1A

along with my recommended amounts of short-term and long-term debt and common equity.

Q. WHY IS YOUR RECOMMENDED CAPITAL STRUCTURE MORE APPROPRIATE FOR PEF?

A. My recommended capital structure is more appropriate for three reasons: (1) PEF's requested capital structure ratios do not reflect the actual capitalization of PEF or Progress Energy; (2) PEF's requested capital structure ratios do not reflect the capitalization of electric utility companies; and (3) PEF's requested capital structure is not based on the company book figures but reflects a number of adjustments, most notably imputed equity. My capital structure much more accurately reflects the Company's capital structure as viewed by investors.

Q. PLEASE DISCUSS YOUR SHORT-TERM DEBT COST RATE.

A. PEF has based its short-term debt rates for 2009 and 2010 based on a Commercial Paper ("CP") rate of 4.50%. In response to OPC ROG 4-169 and OPC ROG 4-170, PEF explains how it arrived at the 4.5% CP rate. It is based on the projected 3-month LIBOR rate implied from the Bloomberg LIBOR forward curve plus a CP yield differential. For 2009, the average 3-month LIBOR rate implied from the Bloomberg LIBOR forward curve is 2.66%. This is significantly above the 3-month LIBOR rates that have existed in 2009. These rates are shown on page 4 of exhibit JRW-5. These rates peaked in the fall of 2008 during the financial crisis, fell to 1.0% in May, and have continued to decline. The current 3-month LIBOR rate is only 0.47%.

I have computed a short-term debt cost rate for the Company in a four step process on page 4 of Exhibit JRW-5: (1) I start with PEF's assumed base CR rate of 4.5% and subtracted the average 3-month LIBOR rate implied from the Bloomberg LIBOR forward curve (2.66%). This gives PEF's CP yield spread over 3-Month LIBOR of 1.85%; (2) I computed the average LIBOR rate for 2009, which is 1.0%; and (3) I add the CP spread to the average LIBOR rate for 2009, to get 2.85%; and (2) I add the 21 basis points in fees. The resulting short-term debt cost rate is 3.06%. Given that the current 3-month LIBOR rate is 0.47% versus the 2009 average of 1.00%, this is a very fair short-term debt cost rate.

Q. WHAT LONG-TERM DEBT COST RATE ARE YOU USING IN THE COST OF CAPITAL FOR PEF?

A. I am using PEF's projected long-term debt cost rate for 2009 of 6.05% which is found on page 3 of MFR Schedule D-4a. PEF has used a long-term debt cost rate of 6.42%. The debt cost rate includes a projected 10-year bond issue on March 1, 2010 at an interest rate of 6.98%. This rate is too high given current market interest rates. Page 5 of Exhibit JRW-5 shows the yields on ten-year, A and BBB+ rated utility bonds. These yields have declined since the end of 2008. The current yields on ten-year, A and BBB+ rated utility bonds are 5.19% and 5.60%, respectively, As such, a projected yield at 6.98% is not reflective of current market interest rates.

V. THE COST OF COMMON EQUITY CAPITAL

A. Overview

Q. WHY MUST AN OVERALL COST OF CAPITAL OR FAIR RATE OF RETURN BE ESTABLISHED FOR A PUBLIC UTILITY?

A. In a competitive industry, the return on a firm's common equity capital is determined through the competitive market for its goods and services. Due to the capital requirements needed to provide utility services and to the economic benefit to society from avoiding duplication of these services, some public utilities are monopolies. It is not appropriate to permit monopoly utilities to set their own prices because of the lack of competition and the essential nature of the services. Thus, regulation seeks to establish prices that are fair to consumers and, at the same time, are sufficient to meet the operating and capital costs of the utility (i.e., provide an adequate return on capital to attract investors).

Q. PLEASE PROVIDE AN OVERVIEW OF THE COST OF CAPITAL IN THE CONTEXT OF THE THEORY OF THE FIRM.

A. The total cost of operating a business includes the cost of capital. The cost of common equity capital is the expected return on a firm's common stock that the marginal investor would deem sufficient to compensate for risk and the time value of money. In equilibrium, the expected and required rates of return on a company's common stock are equal.

Normative economic models of the firm, developed under very restrictive assumptions, provide insight into the relationship between firm performance or profitability, capital costs, and the value of the firm. Under the economist's ideal model of perfect competition where entry and exit is costless, products are undifferentiated, and there are increasing marginal costs of production, firms produce

up to the point where price equals marginal cost. Over time, a long-run equilibrium is established where price equals average cost, including the firm's capital costs. In equilibrium, total revenues equal total costs, and because capital costs represent investors' required return on the firm's capital, actual returns equal required returns and the market value and the book value of the firm's securities must be equal.

In the real world, firms can achieve competitive advantage due to product market imperfections. Most notably, companies can gain competitive advantage through product differentiation (adding real or perceived value to products) and by achieving economies of scale (decreasing marginal costs of production). Competitive advantage allows firms to price products above average cost and thereby earn accounting profits greater than those required to cover capital costs. When these profits are in excess of that required by investors, or when a firm earns a return on equity in excess of its cost of equity, investors respond by valuing the firm's equity in excess of its book value.

James M. McTaggart, founder of the international management consulting firm Marakon Associates, has described this essential relationship between the return on equity, the cost of equity, and the market-to-book ratio in the following manner:[2]

> Fundamentally, the value of a company is determined by the cash flow it generates over time for its owners, and the minimum acceptable rate of return required by capital investors. This "cost of equity capital" is used to discount the expected equity cash flow, converting it to a present value. The cash flow is, in turn, produced by the interaction of a company's return on equity and the annual rate of equity growth. High return on equity (ROE) companies in low-growth markets, such as Kellogg, are prodigious generators of cash flow, while

[2] James M. McTaggart, "The Ultimate Poison Pill: Closing the Value Gap," *Commentary* (Spring 1988), p. 2.

> low ROE companies in high-growth markets, such as Texas Instruments, barely generate enough cash flow to finance growth.
>
> A company's ROE over time, relative to its cost of equity, also determines whether it is worth more or less than its book value. If its ROE is consistently greater than the cost of equity capital (the investor's minimum acceptable return), the business is economically profitable and its market value will exceed book value. If, however, the business earns an ROE consistently less than its cost of equity, it is economically unprofitable and its market value will be less than book value.

As such, the relationship between a firm's return on equity, cost of equity, and market-to-book ratio is relatively straightforward. A firm that earns a return on equity above its cost of equity will see its common stock sell at a price above its book value. Conversely, a firm that earns a return on equity below its cost of equity will see its common stock sell at a price below its book value.

Q. PLEASE PROVIDE ADDITIONAL INSIGHTS INTO THE RELATIONSHIP BETWEEN RETURN ON EQUITY AND MARKET-TO-BOOK RATIOS.

A. This relationship is discussed in a classic Harvard Business School case study entitled "A Note on Value Drivers." On page 2 of that case study, the author describes the relationship very succinctly:[3]

> For a given industry, more profitable firms – those able to generate higher returns per dollar of equity – should have higher market-to-book ratios. Conversely, firms which are unable to generate returns in excess of their cost of equity should sell for less than book value.

Profitability	*Value*
If ROE > K	*then Market/Book > 1*
If ROE = K	*then Market/Book =1*
If ROE < K	*then Market/Book < 1*

[3] Benjamin Esty, "A Note on Value Drivers," Harvard Business School, Case No. 9-297-082, April 7, 1997.

To assess the relationship by industry, as suggested above, I have performed a regression study between estimated return on equity and market-to-book ratios using natural gas distribution, electric utility and water utility companies. I used all companies in these three industries which are covered by *Value Line* and who have estimated return on equity and market-to-book ratio data. The results are presented in Panels A-C of Exhibit JRW-6. The average R-squares for the electric, gas, and water companies are 0.65, 0.60, and 0.92.[4] This demonstrates the strong positive relationship between ROEs and market-to-book ratios for public utilities.

Q. WHAT ECONOMIC FACTORS HAVE AFFECTED THE COST OF EQUITY CAPITAL FOR PUBLIC UTILITIES?

A. Exhibit JRW-7 provides indicators of public utility equity cost rates over the past decade. Page 1 shows the yields on long-term 'A' rated public utility bonds. These yields peaked in the early 2000s at over 8.0%, declined to about 5.0% in 2005, and rose to 6.0% in 2006 and 2007. They stayed in that 6.0% range until the third quarter of 2008 when they spiked to almost 7.5%. They have since retreated to the 6.0% range again.

Page 2 provides the dividend yields for the Electric Utility Group over the past decade. These yields peaked in 2003 at 5.25%, declined to the 3.5% range as of 2007, and increased in 2008 to 4.1%.

[4] R-square measures the percent of variation in one variable (e.g., market-to-book ratios) explained by another variable (e.g., expected return on equity). R-squares vary between zero and 1.0, with values closer to 1.0 indicating a higher relationship between two variables.

Average earned returns on common equity and market-to-book ratios for the group are given on page 3 of Exhibit JRW-7. Over the past decade, earned returns on common equity have been in the 9.0%-12.0% range. The average ROE peaked at 12.65% in 2001 and subsequently declined through the year 2005 before rebounding in the 2006 – 2008 years. Over the past decade, the average market-to-book ratios for this group have been between 1.40 to 1.80. As of 2008, the average ROE and market-to-book for the group was 12.1% and 1.72, respectively.

The indicators in Exhibit JRW-7, coupled with the overall decrease in interest rates, suggest that capital costs for the Electric Proxy Group have decreased over the past decade.

Q. WHAT FACTORS DETERMINE INVESTORS' EXPECTED OR REQUIRED RATE OF RETURN ON EQUITY?

A. The expected or required rate of return on common stock is a function of market-wide as well as company-specific factors. The most important market factor is the time value of money as indicated by the level of interest rates in the economy. Common stock investor requirements generally increase and decrease with like changes in interest rates. The perceived risk of a firm is the predominant factor that influences investor return requirements on a company-specific basis. A firm's investment risk is often separated into business and financial risk. Business risk encompasses all factors that affect a firm's operating revenues and expenses. Financial risk results from incurring fixed obligations in the form of debt in financing its assets.

Q. HOW DOES THE INVESTMENT RISK OF PUBLIC UTILITY COMPANIES COMPARE WITH THAT OF OTHER INDUSTRIES?

A. Due to the essential nature of their service as well as their regulated status, public utilities are exposed to a lesser degree of business risk than other, non-regulated businesses. The relatively low level of business risk allows public utilities to meet much of their capital requirements through borrowing in the financial markets, thereby incurring greater than average financial risk. Nonetheless, the overall investment risk of public utilities is below most other industries.

Exhibit JRW-8 provides an assessment of investment risk for 100 industries as measured by beta, which according to modern capital market theory is the only relevant measure of investment risk. These betas come from the *Value Line Investment Survey* and are compiled annually by Aswath Damodoran of New York University.[5] The study shows that the investment risk of public utilities is relatively low. The average beta for electric utility industry is 0.88. This figure put electric utility companies in the bottom twenty percent of all industries and well below the *Value Line* average of 1.24. As such, the cost of equity for the electric utility industry is relatively low compared to other industries in the U.S.

Q. HOW CAN THE EXPECTED OR REQUIRED RATE OF RETURN ON COMMON EQUITY CAPITAL BE DETERMINED?

A. The costs of debt and preferred stock are normally based on historical or book values and can be determined with a great degree of accuracy. The cost of common equity capital, however, cannot be determined precisely and must instead be estimated from

[5] They may be found on the Internet at http:// www.stern.nyu.edu/~adamodar.

market data and informed judgment. This return to the stockholder should be commensurate with returns on investments in other enterprises having comparable risks.

According to valuation principles, the present value of an asset equals the discounted value of its expected future cash flows. Investors discount these expected cash flows at their required rate of return that, as noted above, reflects the time value of money and the perceived riskiness of the expected future cash flows. As such, the cost of common equity is the rate at which investors discount expected cash flows associated with common stock ownership.

Models have been developed to ascertain the cost of common equity capital for a firm. Each model, however, has been developed using restrictive economic assumptions. Consequently, judgment is required in selecting appropriate financial valuation models to estimate a firm's cost of common equity capital, in determining the data inputs for these models, and in interpreting the models' results. All of these decisions must take into consideration the firm involved as well as current conditions in the economy and the financial markets.

Q. HOW DO YOU PLAN TO ESTIMATE THE COST OF EQUITY CAPITAL FOR THE COMPANY?

A. I rely primarily on the DCF model to estimate the cost of equity capital. Given the investment valuation process and the relative stability of the utility business, I believe that the DCF model provides the best measure of equity cost rates for public utilities. It is my experience that this Commission has traditionally relied on the DCF method.

I have also performed a CAPM study, but I give these results less weight because I believe that risk premium studies, of which the CAPM is one form, provide a less reliable indication of equity cost rates for public utilities.

B. Discounted Cash Flow Analysis

Q. DESCRIBE THE THEORY BEHIND THE TRADITIONAL DCF MODEL.

A. According to the DCF model, the current stock price is equal to the discounted value of all future dividends that investors expect to receive from investment in the firm. As such, stockholders' returns ultimately result from current as well as future dividends. As owners of a corporation, common stockholders are entitled to a pro-rata share of the firm's earnings. The DCF model presumes that earnings that are not paid out in the form of dividends are reinvested in the firm so as to provide for future growth in earnings and dividends. The rate at which investors discount future dividends, which reflects the timing and riskiness of the expected cash flows, is interpreted as the market's expected or required return on the common stock. Therefore, this discount rate represents the cost of common equity. Algebraically, the DCF model can be expressed as:

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

where P is the current stock price, D_n is the dividend in year n, and k is the cost of common equity.

Q. IS THE DCF MODEL CONSISTENT WITH VALUATION TECHNIQUES EMPLOYED BY INVESTMENT FIRMS?

A. Yes. Virtually all investment firms use some form of the DCF model as a valuation technique. One common application for investment firms is called the three-stage DCF or dividend discount model ("DDM"). The stages in a three-stage DCF model are presented in Exhibit JRW-9. This model presumes that a company's dividend payout progresses initially through a growth stage, then proceeds through a transition stage, and finally assumes a steady-state stage. The dividend-payment stage of a firm depends on the profitability of its internal investments, which, in turn, is largely a function of the life cycle of the product or service.

1. Growth stage: Characterized by rapidly expanding sales, high profit margins, and abnormally high growth in earnings per share. Because of highly profitable expected investment opportunities, the payout ratio is low. Competitors are attracted by the unusually high earnings, leading to a decline in the growth rate.

2. Transition stage: In later years increased competition reduces profit margins and earnings growth slows. With fewer new investment opportunities, the company begins to pay out a larger percentage of earnings.

3. Maturity (steady-state) stage: Eventually the company reaches a position where its new investment opportunities offer, on average, only slightly attractive returns on equity. At that time its earnings growth rate, payout ratio, and return on equity stabilize for the remainder of its life. The constant-growth DCF model is appropriate when a firm is in the maturity stage of the life cycle.

In using this model to estimate a firm's cost of equity capital, dividends are projected into the future using the different growth rates in the alternative stages, and then the equity cost rate is the discount rate that equates the present value of the future dividends to the current stock price.

Q. HOW DO YOU ESTIMATE STOCKHOLDERS' EXPECTED OR REQUIRED RATE OF RETURN USING THE DCF MODEL?

A. Under certain assumptions, including a constant and infinite expected growth rate, and constant dividend/earnings and price/earnings ratios, the DCF model can be simplified to the following:

$$P = \frac{D_1}{k - g}$$

where D_1 represents the expected dividend over the coming year and g is the expected growth rate of dividends. This is known as the constant-growth version of the DCF model. To use the constant-growth DCF model to estimate a firm's cost of equity, one solves for k in the above expression to obtain the following:

$$k = \frac{D_1}{P} + g$$

Q. IN YOUR OPINION, IS THE CONSTANT-GROWTH DCF MODEL APPROPRIATE FOR PUBLIC UTILITIES?

A. Yes. The economics of the public utility business indicate that the industry is in the steady-state or constant-growth stage of a three-stage DCF. The economics include the relative stability of the utility business, the maturity of the demand for public utility services, and the regulated status of public utilities (especially the fact that their

returns on investment are effectively set through the ratemaking process). The DCF valuation procedure for companies in this stage is the constant-growth DCF. In the constant-growth version of the DCF model, the current dividend payment and stock price are directly observable. However, the primary problem and controversy in applying the DCF model to estimate equity cost rates entails estimating investors' expected dividend growth rate.

Q. WHAT FACTORS SHOULD ONE CONSIDER WHEN APPLYING THE DCF METHODOLOGY?

A. One should be sensitive to several factors when using the DCF model to estimate a firm's cost of equity capital. In general, one must recognize the assumptions under which the DCF model was developed in estimating its components (the dividend yield and expected growth rate). The dividend yield can be measured precisely at any point in time, but tends to vary somewhat over time. Estimation of expected growth is considerably more difficult. One must consider recent firm performance, in conjunction with current economic developments and other information available to investors, to accurately estimate investors' expectations.

Q. PLEASE DISCUSS EXHIBIT JRW-10.

A. My DCF analysis is provided in Exhibit JRW-10. The DCF summary is on page 1 of this Exhibit, and the supporting data and analysis for the dividend yield and expected growth rate are provided on the following pages of the Exhibit.

Q. WHAT DIVIDEND YIELDS ARE YOU EMPLOYING IN YOUR DCF ANALYSIS FOR THE PROXY GROUPS?

A. The dividend yields on the common stock for the companies in the proxy group are provided on page 2 of Exhibit JRW-10 for the six-month period ending July 2009. For the DCF dividend yields for the groups, I am using the average of the six month and July, 2009 dividend yields. The table below shows these dividend yields.

	6-Month Average Dividend Yield	August 2009 Dividend Yield	DCF Dividend Yield
Electric Proxy Group	**5.2%**	**5.1%**	**5.15%**
Vander Weide Proxy Group	**5.5%**	**5.2%**	**5.35%**

Q. PLEASE DISCUSS THE APPROPRIATE ADJUSTMENT TO THE SPOT DIVIDEND YIELD.

A. According to the traditional DCF model, the dividend yield term relates to the dividend yield over the coming period. As indicated by Professor Myron Gordon, who is commonly associated with the development of the DCF model for popular use, this is obtained by: (1) multiplying the expected dividend over the coming quarter by 4 and (2) dividing this dividend by the current stock price to determine the appropriate dividend yield for a firm, that pays dividends on a quarterly basis.[6]

In applying the DCF model, some analysts adjust the current dividend for growth over the coming year as opposed to the coming quarter. This can be complicated because firms tend to announce changes in dividends at different times during the year. As such, the dividend yield computed based on presumed growth over the coming quarter as opposed to the coming year can be quite different. Consequently, it is common for

[6] *Petition for Modification of Prescribed Rate of Return*, Federal Communications Commission, Docket No. 79-05, Direct Testimony of Myron J. Gordon and Lawrence I. Gould at 62 (April 1980).

analysts to adjust the dividend yield by some fraction of the long-term expected growth rate.

Q. GIVEN THIS DISCUSSION, WHAT ADJUSTMENT FACTOR WILL YOU USE FOR YOUR DIVIDEND YIELD?

A. I will adjust the dividend yield by one-half (1/2) the expected growth so as to reflect growth over the coming year.

Q. PLEASE DISCUSS THE GROWTH RATE COMPONENT OF THE DCF MODEL.

A. There is much debate as to the proper methodology to employ in estimating the growth component of the DCF model. By definition, this component is investors' expectation of the long-term dividend growth rate. Presumably, investors use some combination of historical and/or projected growth rates for earnings and dividends per share and for internal or book value growth to assess long-term potential.

Q. WHAT GROWTH DATA HAVE YOU REVIEWED FOR THE PROXY GROUPS?

A. I have analyzed a number of measures of growth for companies in the proxy groups. I examined historic growth rates in earnings per share ("EPS"), dividends per share ("DPS"), and book value per share ("BVPS"). I have reviewed *Value Line's* historical and projected growth rate estimates for EPS, DPS, and BVPS. In addition, I have utilized the average EPS growth rate forecasts of Wall Street analysts as provided by Yahoo First Call, Zacks, and Reuters. These services solicit five-year earnings growth rate projections from securities analysts and compile and publish the means

and medians of these forecasts. Finally, I have also assessed prospective growth as measured by prospective earnings retention rates and earned returns on common equity.

Q. PLEASE DISCUSS HISTORICAL GROWTH IN EARNINGS AND DIVIDENDS AS WELL AS INTERNAL GROWTH.

A. Historical growth rates for EPS, DPS, and BVPS are readily available to virtually all investors and presumably an important ingredient in forming expectations concerning future growth. However, one must use historical growth numbers as measures of investors' expectations with caution. In some cases, past growth may not reflect future growth potential. Also, employing a single growth rate number (for example, for five or ten years), is unlikely to accurately measure investors' expectations due to the sensitivity of a single growth rate figure to fluctuations in individual firm performance as well as overall economic fluctuations (i.e., business cycles). However, one must appraise the context in which the growth rate is being employed. According to the conventional DCF model, the expected return on a security is equal to the sum of the dividend yield and the expected long-term growth in dividends. Therefore, to best estimate the cost of common equity capital using the conventional DCF model, one must look to long-term growth rate expectations.

Internally generated growth is a function of the percentage of earnings retained within the firm (the earnings retention rate) and the rate of return earned on those earnings (the return on equity). The internal growth rate is computed as the retention rate times the return on equity. Internal growth is significant in determining long-run earnings and therefore, dividends. Investors recognize the importance of internally generated

growth and pay premiums for stocks of companies that retain earnings and earn high returns on internal investments.

Q. WHY ARE YOU NOT RELYING EXCLUSIVELY ON THE EPS FORECASTS OF WALL STREET ANALYSTS IN ARRIVING AT A DCF GROWTH RATE FOR THE PROXY GROUPS?

A. There are several issues with using the EPS growth rate forecasts of Wall Street analysts as DCF growth rates. First, the appropriate growth rate in the DCF model is the dividend growth rate, not the earnings growth rate. Nonetheless, over the very long-term, dividend and earnings will have to grow at a similar growth rate. Therefore, in my opinion, consideration must be given to other indicators of growth, including prospective dividend growth, internal growth, as well as projected earnings growth. Second, and most significantly, it is well-known that the EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. Hence, using these growth rates as a DCF growth rate will provide an overstated equity cost rate. This issue is discussed at length in the rebuttal section of this testimony.

Q. PLEASE DISCUSS THE HISTORICAL GROWTH OF THE COMPANIES IN THE GROUPS AS PROVIDED IN THE *VALUE LINE INVESTMENT SURVEY*.

A. Historic growth rates for the companies in the groups, as published in the *Value Line Investment Survey*, are provided on page 3 of Exhibit JRW-10. Due to the presence of

outliers, I have used the median as well as the mean as a measure of central tendency.[7] The historical growth measures in EPS, DPS, and BVPS for the Electric Proxy Group, as measured by the means and medians, range from 1.1% to 2.9%, with an average of 1.9%. For the Vander Weide Proxy Group, the range is from -0.7% to 9.3%, with an average of 4.3%. The results for the Vander Weide Proxy Group are much more volatile than those of the Electric Proxy Group.

Q. PLEASE SUMMARIZE *VALUE LINE'S* PROJECTED GROWTH RATES FOR THE COMPANIES IN THE PROXY GROUPS.

A. *Value Line's* projections of EPS, DPS, and BVPS growth for the companies in the proxy groups are shown on page 4 of Exhibit JRW-10. As above, due to the presence of outliers, both the mean and medians are used in the analysis. For the Electric Proxy Group, the central tendency measures range from 3.0% to 6.0%, with an average of 4.6%. The average of the means and medians is also 4.6% for the Vander Weide Proxy Group.

Also provided on page 4 of Exhibit JRW-10 is prospective sustainable growth for the proxy group as measured by *Value Line*'s average projected retention rate and return on shareholders' equity. As noted above, sustainable growth is significant in a primary driver of long-run earnings growth. For the Electric Proxy Group, the average prospective sustainable growth rate is 4.0%. The prospective sustainable growth rate for the Vander Weide Proxy Group is 4.7%.

[7] Outliers are observations that are much larger or smaller than the majority of the observations that are being evaluated.

Q. PLEASE ASSESS GROWTH FOR THE PROXY GROUPS AS MEASURED BY ANALYSTS' FORECASTS OF EXPECTED 5-YEAR EPS GROWTH.

A. Zacks, Yahoo!/First Call, and Reuters collect, summarize, and publish Wall Street analysts' five-year EPS growth rate forecasts for the companies in the proxy groups. These forecasts are provided for the companies in the proxy groups on page 5 of Exhibit JRW-10. The median of analysts' projected EPS growth rates for the Electric Proxy Group and the Vander Weide Proxy Group are 6.4% and 5.0%, respectively.[8]

Q. PLEASE SUMMARIZE YOUR ANALYSIS OF THE HISTORICAL AND PROSPECTIVE GROWTH OF THE PROXY GROUPS.

A. Page 6 of Exhibit JRW-10 shows the summary DCF growth rate indicators for the two groups. These indicators suggest that the prospective growth of the Vander Weide Group is slightly higher than the Electric Proxy Group. The averages of the growth rate indicators for the Electric Proxy Group and the Vander Weide Proxy Group are 4.7% and 4.9%. The average projected *Value Line* growth rates for EPS, DPS, and BVPS and the average sustainable growth rate are both slightly higher for the Vander Weide Proxy Group. The projected EPS growth rates from Wall Street analysts are similar for both groups. On balance, with these growth rate indicators given greater weight to the prospective growth rate indicators, an expected DCF growth rate in the 4.5% to 5.0% range is indicated for the Electric Proxy Group, and an expected DCF growth rate in the 4.5% to 5.5% range is indicated for Vander Weide Proxy Group. I

[8] Since there is considerable overlap in analyst coverage between the three services, and not all of the companies have forecasts from the different services, I have averaged the expected five-year EPS growth rates from the three services for each company to arrive at an expected EPS growth rate by company.

will use the midpoint of these ranges, 4.75% for the Electric Proxy Group and 5.0% for the Vander Weide Proxy Group, as my DCF growth rates.

Q. BASED ON THE ABOVE ANALYSIS, WHAT ARE YOUR INDICATED COMMON EQUITY COST RATES FROM THE DCF MODEL FOR THE GROUPS?

A. My DCF-derived equity cost rate for the groups is summarized on page 1 of Exhibit JRW-10.

$$\text{DCF Equity Cost Rate (k)} = \frac{D}{P} + g$$

	Dividend Yield	1 + ½ Growth Adjustment	DCF Growth Rate	Equity Cost Rate
Electric Proxy Group	**5.15%**	**1.023750**	**4.75%**	**10.3%**
Vander Weide Proxy Group	**5.35%**	**1.025000**	**5.00%**	**10.5%**

C. Capital Asset Pricing Model Results

Q. PLEASE DISCUSS THE CAPITAL ASSET PRICING MODEL ("CAPM").

A. The CAPM is a risk premium approach to gauging a firm's cost of equity capital. According to the risk premium approach, the cost of equity is the sum of the interest rate on a risk-free bond (R_f) and a risk premium (RP), as in the following:

$$k = R_f + RP$$

The yield on long-term Treasury securities is normally used as R_f. Risk premiums are measured in different ways. The CAPM is a theory of the risk and expected returns of common stocks. In the CAPM, two types of risk are associated with a stock: firm-

specific risk or unsystematic risk, and market or systematic risk, which is measured by a firm's beta. The only risk that investors receive a return for bearing is systematic risk.

According to the CAPM, the expected return on a company's stock, which is also the equity cost rate (K), is equal to:

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$

Where:

- K represents the estimated rate of return on the stock;
- $E(R_m)$ represents the expected return on the overall stock market. Frequently, the 'market' refers to the S&P 500;
- (R_f) represents the risk-free rate of interest;
- $[E(R_m) - (R_f)]$ represents the expected equity or market risk premium—the excess return that an investor expects to receive above the risk-free rate for investing in risky stocks; and
- *Beta*—(ß) is a measure of the systematic risk of an asset.

To estimate the required return or cost of equity using the CAPM requires three inputs: the risk-free rate of interest (R_f), the beta (ß), and the expected equity or market risk premium $[E(R_m) - (R_f)]$. R_f is the easiest of the inputs to measure – it is the yield on long-term Treasury bonds. ß, the measure of systematic risk, is a little more difficult to measure because there are different opinions about what adjustments, if any, should be made to historical betas due to their tendency to regress to 1.0 over time. And finally, an even more difficult input to measure is the expected equity or market risk premium $(E(R_m) - (R_f))$. I will discuss each of these inputs below.

Q. PLEASE DISCUSS EXHIBIT JRW-11.

A. Exhibit JRW-11 provides the summary results for my CAPM study. Page 1 shows the results, and the following pages contain the supporting data.

Q. PLEASE DISCUSS THE RISK-FREE INTEREST RATE.

A. The yield on long-term U.S. Treasury bonds has usually been viewed as the risk-free rate of interest in the CAPM. The yield on long-term U.S. Treasury bonds, in turn, has been considered to be the yield on U.S. Treasury bonds with 30-year maturities. However, when the Treasury's issuance of 30-year bonds was interrupted for a period of time in recent years, the yield on 10-year U.S. Treasury bonds replaced the yield on 30-year U.S. Treasury bonds as the benchmark long-term Treasury rate. Ten-year Treasury yields began to decline in mid-2007 at the beginning of the financial crisis, and fell below 3.0% as the housing and sub-prime mortgage crises led to an overall credit crisis and economic recession. These rates bottomed out in December of 2008 and have increased since that time as prospects for an economic recovery have increased.

Q. WHAT RISK-FREE INTEREST RATE ARE YOU USING IN YOUR CAPM?

A. The U.S. Treasury began to issue the 30-year bond in the early 2000s as the U.S. budget deficit increased. As such, the market has once again focused on its yield as the benchmark for long-term capital costs in the U.S. Long Treasury rates have trended up in recent months. As of August 1, 2009, as shown on page 2 of Exhibit JRW-11, the rate on 30- U.S. Treasury Bonds was 4.30%, respectively. Given the recent trend in the 30-year Treasury yields, I believe that a long-term Treasury rate in

the 4.50% range is reasonable for the near future. I will use this as the risk-free rate, or R_f, in my CAPM.

Q. WHAT BETAS ARE YOU EMPLOYING IN YOUR CAPM?

A. Beta (ß) is a measure of the systematic risk of a stock. The market, usually taken to be the S&P 500, has a beta of 1.0. The beta of a stock with the same price movement as the market also has a beta of 1.0. A stock whose price movement is greater than that of the market, such as a technology stock, is riskier than the market and has a beta greater than 1.0. A stock with below average price movement, such as that of a regulated public utility, is less risky than the market and has a beta less than 1.0. Estimating a stock's beta involves running a linear regression of a stock's return on the market return.

As shown on page 3 of Exhibit JRW-11, the slope of the regression line is the stock's ß. A steeper line indicates the stock is more sensitive to the return on the overall market. This means that the stock has a higher ß and greater than average market risk. A less steep line indicates a lower ß and less market risk.

Numerous online investment information services, such as Yahoo! and Reuters, provide estimates of stock betas. Usually these services report different betas for the same stock. The differences are usually due to: (1) the time period over which the ß is measured; and (2) any adjustments that are made to reflect the fact that betas tend to regress to 1.0 over time. In estimating an equity cost rate for the proxy group, I am using the betas for the companies as provided in the *Value Line Investment Survey*. As shown on page 3 of Exhibit JRW-11, the average betas for the companies in Electric Proxy Group and the Vander Weide Proxy Group are 0.70 and 0.73.

Q. PLEASE DISCUSS THE ALTERNATIVE VIEWS REGARDING THE EQUITY RISK PREMIUM.

A. The equity or market risk premium - $(E(R_m) - R_f)$ - is equal to the expected return on the stock market (e.g., the expected return on the S&P 500 ($E(R_m)$) minus the risk-free rate of interest (R_f). The equity premium is the difference in the expected total return between investing in equities and investing in "safe" fixed-income assets, such as long-term government bonds. However, while the equity risk premium is easy to define conceptually, it is difficult to measure because it requires an estimate of the expected return on the market.

Q. PLEASE DISCUSS THE ALTERNATIVE APPROACHES TO ESTIMATING THE EQUITY RISK PREMIUM.

A. Page 4 of Exhibit JRW-11 highlights the primary approaches to, and issues in, estimating the expected equity risk premium. The traditional way to measure the equity risk premium was to use the difference between historical average stock and bond returns. In this case, historical stock and bond returns, also called ex post returns, were used as the measures of the market's expected return (known as the ex ante or forward-looking expected return). This type of historical evaluation of stock and bond returns is often called the "Ibbotson approach" after Professor Roger Ibbotson who popularized this method of using historical financial market returns as measures of expected returns. Most historical assessments of the equity risk premium suggest an equity risk premium of 5-7 percent above the rate on long-term U.S. Treasury bonds. However, this can be a problem because: (1) ex post returns are not the same as ex ante expectations, (2) market risk premiums can change over time, increasing when investors become more risk-averse and decreasing when investors

become less risk-averse, and (3) market conditions can change such that ex post historical returns are poor estimates of ex ante expectations.

The use of historical returns as market expectations has been criticized in numerous academic studies.[9] The general theme of these studies is that the large equity risk premium discovered in historical stock and bond returns cannot be justified by the fundamental data. These studies, which fall under the category "Ex Ante Models and Market Data," compute ex ante expected returns using market data to arrive at an expected equity risk premium. These studies have also been called "Puzzle Research" after the famous study by Mehra and Prescott in which the authors first questioned the magnitude of historical equity risk premiums relative to fundamentals.[10]

Q. PLEASE PROVIDE A SUMMARY OF THE EQUITY RISK PREMIUM STUDIES.

A. Derrig and Orr (2003), Fernandez (2007), and Song (2007) have completed the most comprehensive reviews to date of the research on the equity risk premium.[11] Derrig and Orr's study evaluated the various approaches to estimating equity risk premiums as well as the issues with the alternative approaches and summarized the findings of the published research on the equity risk premium. Fernandez examined four alternative measures of the equity risk premium – historical, expected, required, and

[9] The problems with using ex post historical returns as measures of ex ante expectations will be discussed at length later in my testimony.

[10] R. Mehra and Edward Prescott, "The Equity Premium: A Puzzle," *Journal of Monetary Economics* (1985).

[11] Richard Derrig and Elisha Orr, "Equity Risk Premium: Expectations Great and Small," Working Paper (version 3.0), Automobile Insurers Bureau of Massachusetts, (August 28, 2003), Pablo Fernandez, "Equity Premium: Historical, Expected, Required, and Implied," IESE Business School Working Paper, (2007), and Zhiyi Song, "The Equity Risk Premium: An Annotated Bibliography," CFA Institute, (2007).

implied. He also reviewed the major studies of the equity risk premium and presented the summary equity risk premium results. Song provides an annotated bibliography and highlights the alternative approaches to estimating the equity risk summary.

Page 5 of Exhibit JRW-11 provides a summary of the results of the primary risk premium studies reviewed by Derrig and Orr, Fernandez, and Song. In developing page 5 of Exhibit JRW-11, I have categorized the studies as discussed on page 4 of Exhibit JRW-11. I have also included the results of the "Building Blocks" approach to estimating the equity risk premium, including a study I performed, which is presented below. The Building Blocks approach is a hybrid approach employing elements of both historic and ex ante models.

Q. PLEASE DISCUSS YOUR DEVELOPMENT OF AN EQUITY RISK PREMIUM COMPUTED USING THE BUILDING BLOCKS METHODOLOGY.

A. Ibbotson and Chen (2003) evaluate the ex post historical mean stock and bond returns in what is called the Building Blocks approach.[12] They use 75 years of data and relate the compounded historical returns to the different fundamental variables employed by different researchers in building ex ante expected equity risk premiums. Among the variables included were inflation, real EPS and DPS growth, ROE and book value growth, and price-earnings ("P/E") ratios. By relating the fundamental factors to the ex post historical returns, the methodology bridges the gap between the ex post and ex ante equity risk premiums. Ilmanen (2003) illustrates this approach using the

[12] Roger Ibbotson and Peng Chen, "Long Run Returns: Participating in the Real Economy," *Financial Analysts Journal*, (January 2003).

geometric returns and five fundamental variables – inflation ("CPI"), dividend yield ("D/P"), real earnings growth ("RG"), repricing gains ("PEGAIN") and return interaction/reinvestment ("INT").[13] This is shown on page 7 of Exhibit JRW-11. The first column breaks the 1926-2000 geometric mean stock return of 10.7% into the different return components demanded by investors: the historical U.S. Treasury bond return (5.2%), the excess equity return (5.2%), and a small interaction term (0.3%). This 10.7% annual stock return over the 1926-2000 period can then be broken down into the following fundamental elements: inflation (3.1%), dividend yield (4.3%), real earnings growth (1.8%), repricing gains (1.3%) associated with higher P/E ratios, and a small interaction term (0.2%).

Q. HOW ARE YOU USING THIS METHODOLOGY TO DERIVE AN EX ANTE EXPECTED EQUITY RISK PREMIUM?

A. The third column in the graph on page 7 of Exhibit JRW-11 shows current inputs to estimate an ex ante expected market return. These inputs include the following:

CPI – To assess expected inflation, I have employed expectations of the short-term and long-term inflation rate. Long term inflation forecasts are available in the Federal Reserve Bank of Philadelphia's publication entitled *Survey of Professional Forecasters*.[14] This survey of professional economists has been published for almost 50 years. While this survey is published quarterly, only the first quarter survey includes long-term forecasts of gross domestic product ("GDP") growth, inflation, and

[13] Antti Ilmanen, Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003), p. 11.

[14]Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters,* (February 13, 2009). The *Survey of Professional Forecasters* was formerly conducted by the American Statistical Association ("ASA") and the National Bureau of Economic Research ("NBER") and was known as the ASA/NBER survey. The survey, which began in 1968, is conducted each quarter. The Federal Reserve Bank of Philadelphia, in cooperation with the NBER, assumed responsibility for the survey in June 1990.

market returns. In the first quarter 2009 survey, published on February 13, 2009, the median long-term (10-year) expected inflation rate as measured by the CPI was 2.4% (see page 8 of Exhibit JRW-11).

The University of Michigan's Survey Research Center surveys consumers on their short-term (one-year) inflation expectations on a monthly basis. As shown on page 9 of Exhibit JRW-11, the current short-term expected inflation rate is 3.1%. As a measure of expected inflation, I will use the average of the long-term (2.4%) and short-term (3.1%) inflation rate measures, or 2.75%.

D/P – As shown on page 10 of Exhibit JRW-11, the dividend yield on the S&P 500 has decreased gradually over the past decade. Today, it is below its average of 4.3% over the 1926-2000 time period. The S&P dividend yield bottomed out at less than 1.4% in 2000. Currently, as shown on page 10 of Exhibit JRW-11, the S&P 500 dividend yield is 2.35%. I will use this figure in my ex ante risk premium analysis.

RG – To measure expected real growth in earnings, I use the historical real earnings growth rate for the S&P 500 and the expected real GDP growth. The S&P 500 was created in 1960. It includes 500 companies which come from ten different sectors of the economy. On page 11 of Exhibit JRW-11, real EPS growth is computed using the CPI as a measure of inflation. The real growth figure over 1960-2008 period for the S&P 500 is 2.3%.

The second input for expected real earnings growth is expected real GDP growth. The rationale is that over the long-term, corporate profits have averaged a relatively

consistent 5.50% of U.S. GDP.[15] Real GDP growth, according to McKinsey, has averaged 3.5% over the past 80 years. Expected GDP growth, according to the Federal Reserve Bank of Philadelphia's *Survey of Professional Forecasters,* is 2.6% (see page 8 of Exhibit JRW-11).

Given these results, I will use 2.50%, for real earnings growth.

PEGAIN – PEGAIN is the repricing gain associated with an increase in the P/E ratio. It accounted for 1.3% of the 10.7% annual stock return in the 1926-2000 period. In estimating an ex ante expected stock market return, one issue is whether investors expect P/E ratios to increase from their current levels. The P/E ratios for the S&P 500 over the past 25 years are shown on page 10 of Exhibit JRW-11. The run-up and eventual peak in P/Es in the year 2000 is very evident in the chart. The average P/E declined until late 2006, and then increased, primarily due to the decline in EPS as a result of the financial crisis and the recession. As shown on page 11 of Exhibit JRW-11, the average P/E for the S&P 500 as of June 30, 2009 was 134.01.

Given the current economic and capital markets environment, I do not believe that investors expect even higher P/E ratios. Therefore, a PEGAIN would not be appropriate in estimating an ex ante expected stock market return. The current P/E for the S&P 500 is well above the average historical S&P 500 P/E ratio of approximately 16.0. Hence, investors are not likely to expect to get stock market gains from lower interest rates and higher P/E ratios.

[15]Marc. H. Goedhart, et al, "The Real Cost of Equity," *McKinsey on Finance* (Autumn 2002), p.14.

Q. GIVEN THIS DISCUSSION, WHAT IS YOUR EX ANTE EXPECTED MARKET RETURN AND EQUITY RISK PREMIUM USING THE "BUILDING BLOCKS METHODOLOGY"?

A. My expected market return is represented by the last column on the right in the graph entitled "Decomposing Equity Market Returns: The Building Blocks Methodology" set forth on page 7 of Exhibit JRW-11. As shown, my expected market return of 7.45% is composed of 2.75% expected inflation, 2.35% dividend yield, and 2.50% real earnings growth rate.

Q. GIVEN THAT THE HISTORICAL COMPOUNDED ANNUAL MARKET RETURN IS IN EXCESS OF 10%, WHY DO YOU BELIEVE THAT YOUR EXPECTED MARKET RETURN OF 7.60% IS REASONABLE?

A. As discussed above, in the development of the expected market return, stock prices are still high at the present time in relation to earnings and dividends, and interest rates are relatively low. Hence, it is unlikely that investors are going to experience high stock market returns due to higher P/E ratios and/or lower interest rates. In addition, as shown in the decomposition of equity market returns, whereas the dividend portion of the return was historically 4.3%, the current dividend yield is only 2.35%. Due to these reasons, lower market returns are expected for the future.

Q. IS YOUR EXPECTED MARKET RETURN OF 7.60% CONSISTENT WITH THE FORECASTS OF MARKET PROFESSIONALS?

A. Yes. In the first quarter 2009 *Survey of Financial Forecasters*, published on February 13, 2009 by the Federal Reserve Bank of Philadelphia, the mean long-term expected return on the S&P 500 was 6.62% (see page 8 of Exhibit JRW-11).

Q. IS YOUR EXPECTED MARKET RETURN CONSISTENT WITH THE EXPECTED MARKET RETURNS OF CORPORATE CHIEF FINANCIAL OFFICERS (CFOs)?

A. Yes. John Graham and Campbell Harvey of Duke University conduct a quarterly survey of corporate CFOs. The survey is a joint project of Duke University and *CFO Magazine*. In the June 2009 survey, the mean expected return on the S&P 500 over the next ten years was 7.31%.[16]

Q. GIVEN THIS EXPECTED MARKET RETURN, WHAT IS YOUR EX ANTE EQUITY RISK PREMIUM USING THE BUILDING BLOCKS METHODOLOGY?

A. As shown on page 2 of Exhibit JRW-11, the current 30-year U.S. Treasury yield is 4.30%. My ex ante equity risk premium is simply the expected market return from the Building Blocks methodology minus this risk-free rate:

Ex Ante Equity Risk Premium = 7.60% - 4.30% = 3.30%

Q. GIVEN THIS DISCUSSION, HOW ARE YOU MEASURING AN EXPECTED EQUITY RISK PREMIUM IN THIS PROCEEDING?

A. As discussed above, page 5 of Exhibit JRW-11 provides a summary of the results of the equity risk premium studies that I have reviewed. These include the results of: (1) the various studies of the historical risk premium, (2) ex ante equity risk premium studies, (3) equity risk premium surveys of CFOs, Financial Forecasters, and academics, and (4) the Building Block approaches to the equity risk premium. There

[16] The survey results are available at www.cfosurvey.org.

are results reported for over thirty studies, and the average equity risk premium is 4.37%.

Q. SOME OF THE EQUITY RISK PREMIUM STUDIES THAT YOU USE IN YOUR EQUITY RISK PREMIUM STUDY DATE BACK INTO THE EARLY 2000S. IF YOU ELIMINATE THE OLDER STUDIES, HOW DOES THAT AFFECT YOUR EQUITY RISK PREMIUM?

A. In developing my equity risk premium study, I have used all equity risk premium studies and surveys I could identify that were published over the past decade and that provided an equity risk premium estimate. Since some of these studies were published in the early 2000s at the market peak, one could argue that these results are not as relevant today. However, I must add that most of these studies used data over long periods of time (as long as fifty years of data) and so they were not estimating an equity risk premium as of a point in time (e.g., the year 2001). Nonetheless, to assess as to whether the studies published in the early 2000s significantly affect my equity risk premium results, on page 6 of Exhibit JRW-11 I have reconstructed page 5 of Exhibit JRW-11, but I have eliminated all studies published before 2005. The average for this subset of studies is 4.36%. Therefore, eliminating the earlier studies does not have a significant impact on my equity risk premium estimate.

Q. IS YOUR EX ANTE EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS USED BY CFOS?

A. Yes. In the previously referenced June 2009 CFO survey conducted by *CFO Magazine* and Duke University, the expected 10-year equity risk premium was 4.11%.

Q. IS YOUR EX ANTE EQUITY RISK PREMIUM CONSISTENT WITH THE EX ANTE EQUITY RISK PREMIUMS OF PROFESSIONAL FORECASTERS?

A. Yes. The financial forecasters in the previously referenced Federal Reserve Bank of Philadelphia survey project both stock and bond returns. As shown on page 8 of Exhibit JRW-11, the mean long-term expected stock and bond returns were 6.62% and 4.68%, respectively. This provides an ex ante equity risk premium of 1.94%.

Q. IS YOUR EX ANTE EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS USED BY THE LEADING CONSULTING FIRMS?

A. Yes. McKinsey & Co. is widely recognized as the leading management consulting firm in the world. It published a study entitled "The Real Cost of Equity" in which the McKinsey authors developed an ex ante equity risk premium for the U.S. In reference to the decline in the equity risk premium, as well as what is the appropriate equity risk premium to employ for corporate valuation purposes, the McKinsey authors concluded the following:

> We attribute this decline not to equities becoming less risky (the inflation-adjusted cost of equity has not changed) but to investors demanding higher returns in real terms on government bonds after the inflation shocks of the late 1970s and early 1980s. We believe that using an equity risk premium of 3.5 to 4 percent in the current environment better reflects the true long-term opportunity cost of equity capital and hence will yield more accurate valuations for companies.[17]

[17] Marc H. Goedhart, et al, "The Real Cost of Equity," *McKinsey on Finance* (Autumn 2002), p. 15.

Q. HAS MCKINSEY RECENTLY REAFFIRMED ITS OPINION ON THE EQUITY RISK PREMIUM IN LIGHT OF THE FINANCIAL TURMOIL OF THE LAST TWO YEARS?

A. Yes. As previously discussed, McKinsey has recently published a study in which they reaffirm their estimate of the equity risk premium in light of the financial turmoil of the past two years.[18]

Q. WHAT EQUITY COST RATES ARE INDICATED BY YOUR CAPM ANALYSIS?

A. The results of my CAPM study for the proxy group are provided below:

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$

	Risk-Free Rate	Beta	Equity Risk Premium	Equity Cost Rate
Electric Proxy Group	**4.50%**	**0.70**	**4.37%**	**7.6%**
Vander Weide Proxy Group	**4.50%**	**0.73**	**4.37%**	**7.7%**

These results are summarized on page 1 of Exhibit JRW-11.

D. Equity Cost Rate Summary

[18]Richard Dobbs, Bin Jang, and Timothy Koeller, "Why the Crisis Hasn't Shaken the Cost of Capital," *McKinsey Quarterly* (December 2008), p. 1-6.

Q. PLEASE SUMMARIZE YOUR EQUITY COST RATE STUDY.

A. The table below provides the equity cost rate results for my DCF and CAPM analyses for the two proxy groups.

Summary Equity Cost Rate Results

	DCF Approach	CAPM Approach
Electric Proxy Group	**10.3%**	**7.6%**
Vander Weide Proxy Group	**10.5%**	**7.7%**

Q. GIVEN THESE RESULTS, WHAT IS YOUR ESTIMATED EQUITY COST RATE FOR THE GROUPS?

A. Given these results, I conclude that the appropriate equity cost rate for the two groups is in the 7.6%-10.5% range. The midpoint of this range is 9.1%. In my opinion, this wide range reflects the uncertainty and volatility in today's capital markets. In recognition of this uncertainty and volatility, I believe that an equity cost rate in the upper end of this range is appropriate at this time. Given that I give primary weight to the results of the Electric Proxy Group, I believe that the relevant range is 9.5% to 10.0%. I will use the midpoint of this range, 9.75% as an equity cost rate for PEF. This is especially fair given the high common equity ratio (50.0%) I am recommending relative to the average common equity ratio of the Electric Proxy Group (44%).

VI. CRITIQUE OF PEF'S RATE OF RETURN TESTIMONY

Q. PLEASE SUMMARIZE PEF'S RATE OF RETURN REQUEST FOR PEF.

A. PEF's cost of capital request for PEF is provided on page 1 of Exhibit JRW-12. The

company is requesting a capital structure from investor sources consisting of 0.66% short-term debt, 45.10% long debt, 0.34% preferred stock, and 53.90% common equity. The Company uses short-term debt, long-term debt and preferred stock cost rates of 4.51%, 6.42%, and an equity cost rate of 11.60%.

Q. WHAT ISSUES DO YOU HAVE WITH THE COMPANY'S COST OF CAPITAL POSITION?

A. Yes. I have issues with the Company's capital structure, short-term and long-term debt cost rates, and most significantly, the equity cost rate. The debt cost rates were previously discussed. I will focus below on the capital structure issue and Dr. Vander Weide's equity cost rate of 11.6%.

A. <u>Capital Structure</u>

Q. WHY IS YOUR RECOMMENDED CAPITAL STRUCTURE MORE APPROPRIATE FOR PEF?

A. As I previously noted, my recommended capital structure is more appropriate for three reasons: (1) PEF's requested capital structure ratios do not reflect the actual capitalization of PEF or Progress Energy; (2) PEF's requested capital structure ratios do not reflect the capitalization of electric utility companies; and (3) PEF's requested capital structure is not based on the company book figures but reflects a number of adjustments, most notably imputed equity. My capital structure much more accurately reflects the Company's capital structure as viewed by investors.

Q. DID YOU USE A BALANCED APPROACH IN ARRIVING AT YOUR PROPOSED CAPITAL STRUCTURE FOR PEF?

A. Yes. My recommended capital structure, which includes a common equity ratio of 50%, is based on the Company's projected year-end capital structures for the years 2009 and 2010. These figures include an equity capital infusion from Progress Energy. Had I used the 13-month average capital structure figures for PEF, my capital structure would have included a lower common equity ratio due to the timing of the proposed equity capital infusion. In addition, had I used the Company's proposed capital structure figures and eliminated the $711 million in imputed equity associated with the PPAs, my capital structure would have included a lower common equity ratio as well. Therefore, in my opinion, my recommended capital structure which includes a common equity ratio of 50.0% is very fair, especially given the much lower common equity ratios in the capital structures of electric utility companies.

Q. PLEASE REVIEW THE COMPANY'S ADJUSTED CAPITAL STRUCTURE THAT INCLUDES IMPUTED EQUITY.

A. The Company's requested capital structure includes $711 million in imputed equity to account for the Company's PPAs. The $711 million is computed by multiplying a risk factor of 25% to the present value of the Company's capacity contracts. In computing credit rating metrics, S&P applies such a risk factor ranging from 0% to 100% which is intended to reflect the risk of recovery of the PPA payments. However, S&P does not indicate how the risk factor that ranges from 0% to 100% is determined. Given a recovery mechanism for PPA payments, the financial condition of an electric utility company in Florida is not impaired by entering into these contracts. Hence, providing incremental revenues through a higher equity ratio and a higher overall rate of return is

unnecessary and would result in an unwarranted revenue benefit to the utility. I have identified several flaws in the adjustment.

Risk Factor

Given the methodology for imputing debt from PPAs, the risk factor is extremely important. PEF has presumed that a risk factor of 25% is appropriate for the Company. However, S&P does not indicate how the risk factor that ranges from 0% to 100% is determined. Hence, the S&P risk factor for imputing debt is not well defined and cannot be assessed in this situation. Given the Commission's support for the collection of long-term contractual payments, the risk of non-recovery appears to be extremely low (perhaps even zero percent). Hence, a risk factor as high as 25% seems out of line. But, given the lack of guidance from S&P, it is impossible to properly assess the risk factor in this situation.

In addition, as opposed to S&P, Moody's appears to recognize some of the benefits of PPAs and looks at them in a more positive manner. For example, Moody's states:[19]

> "If a utility enters into a PPA for the purpose of providing an assured supply and there is reasonable assurance that regulators will allow the costs to be recovered in regulated rates, Moody's may view the PPA as being most akin to an operating cost. In this circumstance, there most likely will be no imputed adjustment to the obligations of the utility."

In other words, under this scenario Moody's would rate the risk factor at 0% and there would be no imputed debt.

[19] Moody's Rating Methodology: Global Regulated Electric Utilities, March 2005, page 10.

S&P Adjustments are Not GAAP Accounting

Even if debt were imputed by S&P from a PPA (assuming a risk factor greater than 0%), no changes would be made to the company's GAAP financial statements. Hence, investors would not see the impact of S&P's adjustment. In addition, the Company does not incur a liability on its GAAP-based financial statements for the PPAs. Furthermore, given a regulatory-mandated recovery method for the payments, investors should be indifferent to a utility entering into a PPA.

From a Regulatory Perspective, PPA Payments are Unlike Debt

In a regulatory setting, a utility is given the 'opportunity to earn' its cost of debt as well as its overall cost of capital through the ratemaking process. Given the many uncertainties associated with revenues and expenses between rate cases, there is no guarantee that the overall cost of debt can be earned. However, with long-term PPAs, the timely and certain recovery of fixed payments is assured. That is, PPA costs do not feature the uncertainty associated with the 'opportunity to earn' as do debt payments. In sum, given S&P's lack of guidance on the risk factor, the Commission's support for the collection of payments for PPAs, the notion that these are not GAAP adjustments that are not recorded as liabilities on the books of the company, and the fact that, from a regulatory perspective, PPA payments are unlike debt, the PPA adjustment to the Company's capital structure is inappropriate.

B. Equity Cost Rate

Q. PLEASE REVIEW DR. VANDER WEIDE'S EQUITY COST RATE APPROACHES.

A. Dr. Vander Weide uses a proxy group of twenty-four electric companies and employs

DCF, RP, and CAPM equity cost rate approaches.

Q. PLEASE SUMMARIZE DR. VANDER WEIDE'S EQUITY COST RATE RESULTS.

A. Dr. Vander Weide's equity cost rate estimates for PEF are summarized in Panel A of page 2 of Exhibit JRW-12. Based on these figures, he concludes that the appropriate equity cost rate for his group is 11.5%. He then makes a leverage adjustment to the equity cost rate to reflect the market value capital structures of his proxy group. This adjustment adds 104 BPs to his equity cost rate. As a result, his recommended equity cost rate for PEF is 12.54%.

Q. PLEASE DISCUSS YOUR ISSUES WITH DR. VANDER WEIDE'S REQUESTED EQUITY COST RATE.

A. Dr. Vander Weide's requested return on common equity is too high primarily due to: (1) the full-year adjustment to the dividend yield in his DCF approach; (2) an inflated growth rate in his DCF approach; (3) excessive equity risk premiums in his RP and CAPM approaches; (4) unwarranted flotation cost adjustments to his equity cost rate results; and (5) an erroneous leverage adjustment based on the market value capital structures of his proxy group.

1. DCF Approach

Q. PLEASE SUMMARIZE DR. VANDER WEIDE'S DCF ESTIMATES.

A. On pages 26-38 of his testimony and his Exhibit No. ___(JVW-1), Dr. Vander Weide develops an equity cost rate by applying a DCF model to his group of electric utility companies. In the traditional DCF approach, the equity cost rate is the sum of the

dividend yield and expected growth. Dr. Vander Weide makes adjustments to the dividend yield to reflect the quarterly payment of dividends and an ex-dividend adjustment to the stock price. Dr. Vander Weide uses one measure of DCF expected growth - the projected EPS growth rate forecasts from Wall Street analysts as provided by IBES. Dr. Vander Weide's DCF results are provided in Panel B of page 2 of Exhibit JRW-12. Based on these figures, Dr. Vander Weide claims that the DCF equity cost rate for the Vander Weide Proxy Group is 12.3%.

Q. BEFORE DETAILING YOUR ISSUES WITH DR. VANDREWEIDE'S DCF ANALYSIS, PLEASE EXPRESS YOUR CONCERNS WITH DR. VANDER WEIDE'S PROXY GROUP AS WELL AS MARKET VALUE WEIGHTING OF HIS EQUITY COST RATE RESUTLS.

A. Even though I have used Dr. Vander Weide's group as a secondary proxy group, there are some issues with this group and how Dr. Vander Weide calculates his equity cost rate results. First, the group has several companies that receive a low percentage of revenues from regulated electric operations. These include Dominion (43%), SCANA (44%), and Vectren (22%). Second, the group's average operating revenue ($9,590.4 million) is more than twice that of PEF. This latter issue is compounded by the fact that Dr. Vander Weide weights his DCF and CAPM results by the market capitalization for each of the companies in his proxy group. As a result, he gives the greatest weight to the companies that are significantly larger than PEF.

<u>DCF Dividend Yield Adjustment</u>

Q. PLEASE DISCUSS THE ADJUSTMENT TO THE DIVIDEND YIELD TO REFLECT THE QUARTERLY PAYMENT OF DIVIDENDS.

A. In Exhibit No. __ (JVW-10), Appendix 2 of his testimony, Dr. Vander Weide discusses the adjustments he makes to his dividend yields. This includes an adjustment to reflect the time value of money. The quarterly timing adjustment is in error and results in an overstated equity cost rate. First, as above, the appropriate dividend yield adjustment for growth in the DCF model is the expected dividend for the next quarter multiplied by four. The quarterly adjustment procedure is inconsistent with this approach.

Second, Dr. Vander Weide's approach presumes that investors require additional compensation during the coming year because their dividends are paid out quarterly instead of being paid all in a lump sum. Therefore, he compounds each dividend to the end of the year using the long-term growth rate as the compounding factor. The error in this logic and approach is that the investor receives the money from each quarterly dividend and has the option to reinvest it as he or she chooses. This reinvestment generates its own compounding, but it is outside of the dividend payments of the issuing company. Dr. Vander Weide's approach serves to duplicate this compounding process, thereby inflating the return to the investor. Finally, the notion that an adjustment is required to reflect the quarterly timing issue is refuted in a study by Richard Bower of Dartmouth College. Bower acknowledges the timing issue and downward bias addressed by Dr. Vander Weide. However, he demonstrates

that this does not result in a biased required rate of return. He provides the following assessment:[20]

> ... authors are correct when they say that the conventional cost of equity calculation is a downward-biased estimate of the market discount rate. They are not correct, however, in concluding that it has a bias as a measure of required return. As a measure of required return, the conventional cost of equity calculation (K*), ignoring quarterly compounding and even without adjustment for fractional periods, serves very well.

He also makes the following observation on the issue:

> Too many rate cases have come and gone, and too many utilities have survived and sustained market prices above book, to make downward bias in the conventional calculation of required return a likely reality.

DCF Growth Rate

Q. PLEASE REVIEW DR. VANDER WEIDE'S DCF GROWTH RATE.

A. Dr. Vander Weide uses the projected EPS growth rate forecasts of Wall Street analysts as compiled by IBES in estimating as his DCF growth rate. His market-value weighted average for the group is 7.3%.

Q. PLEASE DISCUSS THE HISTORICAL AND PROJECTED GROWTH OF DR. VANDER WEIDE'S GROUP AS REPORTED BY *VALUE LINE.*

A. As previously discussed, pages 4 and 5 of Exhibit JRW-10 shows the historic and projected growth rate for Dr. Vander Weide's proxy group as reported by *Value Line*. The historical growth rates, as shown in Panel B of page 3, are highly variable. The

[20] See Richard Bower, The N-Stage Discount Model and Required Return: A Comment," *Financial Review* (February 1992), pp 141-9.

projected rates are in Panel B of page 4, and they indicate projected growth in the 4.0% to 5.5% range for EPS, DPS, and BVPS. This is well below Dr. Vander Weide's unsupportable projected growth of 7.3% for these companies.

Q. GIVEN THAT DR. VANDER WEIDE'S HISTORICAL AND PROJECTED GROWTH RATE MEASURES DO NOT SUPPORT HIS 7.3% DCF GROWTH RATE FOR THE GROUP, HOW DO YOU BELIEVE HE ARRIVES AT THE 7.3% FIGURE?

A. Dr. Vander Weide has relied exclusively on the EPS growth rate forecasts of Wall Street analysts. This is an error. It is well-known that the EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. Hence, using these projected EPS growth rates as a DCF growth rate will provide an overstated equity cost rate.

Q. PLEASE REVIEW THE BIAS IN ANALYSTS' GROWTH RATE FORECASTS.

A. Analysts' growth rate forecasts are collected and published by Zack's, First Call, I/B/E/S, and Reuters. These services retrieve and compile EPS forecasts from Wall Street analysts. These analysts come from both the sell side (Merrill Lynch, Paine Webber) and the buy side (Prudential Insurance, Fidelity). The problem with using these forecasts to estimate a DCF growth rate is that, as noted above, the objectivity of Wall Street research has been challenged, and many have argued that analysts' EPS forecasts are overly optimistic and biased upwards. To evaluate the accuracy of analysts' EPS forecasts, I have compared actual 3-5 year EPS growth rates with forecasted EPS growth rates on a quarterly basis over the past 20 years for all companies covered by the I/B/E/S data base. In Panel A of page 1 of Exhibit JRW-13, I show the average

analysts' forecasted 3-5 year EPS growth rate with the average actual 3-5 year EPS growth rate for the past twenty years.

The following example shows how the results can be interpreted. For the 3-5 year period prior to the first quarter of 1999, analysts had projected an EPS growth rate of 15.13%, but companies only generated an average annual EPS growth rate over the 3-5 years of 9.37%. This projected EPS growth rate figure represented the average projected growth rate for over 1,510 companies, with an average of 4.88 analysts' forecasts per company. For the entire twenty-year period of the study, for each quarter there were on average 5.60 analysts' EPS projections for 1,281 companies. Overall, my findings indicate that forecast errors for long-term estimates are predominantly positive, which indicates an upward bias in growth rate estimates. The mean and median forecast errors over the observation period are 143.06% and 75.08%, respectively. The forecast errors are negative for only eleven of the eighty quarterly time periods: five consecutive quarters starting at the end of 1995 and six consecutive quarters starting in 2006. As shown in the figure below, the quarters with negative forecast errors were for the 3-5 year periods following earnings declines associated with the 1991 and 2001 economic recessions in the U.S. Thus, there is evidence of a persistent upward bias in long-term EPS growth forecasts.

The average 3-5 year EPS growth rate projections for all companies provided in the I/B/E/S database on a quarterly basis from 1988 to 2007 are shown in Panel B of page 1 of Exhibit JRW-13. In this graph, no comparison to actual EPS growth rates is made, and hence, there is no follow-up period. Therefore, since companies are not lost from the sample due to a lack of follow-up EPS data, these results are for a larger

sample of firms. Analysts' forecasts for EPS growth were higher for this larger sample of firms, with a more pronounced run-up and then decline around the stock market peak in 2000. The average projected growth rate hovered in the 14.5%-17.5% range until 1995 and then increased dramatically over the next five years to 23.3% in the fourth quarter of the year 2000. Forecasted EPS growth has since declined to the 15.0% range.

Q. WHAT IMPACT HAS RECENT REGULATORY DEVELOPMENTS HAD ON ANALYSTS' EPS GROWTH RATE FORECASTS?

A. Analysts' EPS growth rate forecasts have subsided somewhat since the stock market peak of 2000. In addition, the apparent conflict of interest within investment firms with investment banking and analysts' operations was addressed in the Global Analysts Research Settlements ("GARS"). GARS, as agreed upon on April 23, 2003, between the SEC, NASD, NYSE and ten of the largest U.S. investment firms, includes a number of regulations that were introduced to prevent investment bankers from pressuring analysts to provide favorable projections. Nonetheless, despite the new regulations, analysts' EPS growth rate forecasts have not significantly changed and continue to be overly-optimistic. Analysts' long-term EPS growth rate forecasts before and after GARS, are about two times the level of historic GDP growth. Furthermore, historic growth rates in GDP and S&P 500 EPS have been in the 7% range.

Finally, these observations are supported by a *Wall Street Journal* article entitled "Analysts Still Coming Up Rosy – Over-Optimism on Growth Rates is Rampant – and the Estimates Help to Buoy the Market's Valuation." The following quote provides

insight into the continuing bias in analysts' forecasts:

> Hope springs eternal, says Mark Donovan, who manages Boston Partners Large Cap Value Fund. "You would have thought that, given what happened in the last three years, people would have given up the ghost. But in large measure they have not."
>
> These overly optimistic growth estimates also show that, even with all the regulatory focus on too-bullish analysts allegedly influenced by their firms' investment-banking relationships, a lot of things haven't changed: Research remains rosy and many believe it always will.[21]

Q. IS THE BIAS IN ANALYSTS' GROWTH RATE FORECASTS GENERALLY KNOWN IN THE MARKETS?

A. Yes. Page 2 of Exhibit JRW-13 provides a recent article published in the *Wall Street Journal* that discusses the upward bias in analysts' EPS growth rate forecasts.

Q. ARE ANALYSTS' EPS GROWTH RATE FORECASTS LIKEWISE UPWARDLY BIASED FOR ELECTRIC UTILITY COMPANIES?

A. Yes. To evaluate whether analysts' EPS growth rate forecasts are upwardly biased for electric utility companies, I conducted a study similar to the one described above using a group of electric utility companies. The results are shown on page 3 of Exhibit JRW-13. The projected EPS growth rates have declined from about six percent in the 1990s to about five percent in the 2000s. As shown, the achieved EPS growth rates have been volatile. Overall, the upward bias in EPS growth rate projections is not as pronounced for electric utility companies as it is for all companies. Over the entire period, the average quarterly 3-5 year projected and actual EPS growth rates are 4.59% and 2.90%, respectively. These results are consistent with the results for companies in

[21] Ken Brown, "Analysts Still Coming Up Rosy – Over-Optimism on Growth Rates is Rampant – and the Estimates Help to Buoy the Market's Valuation." *Wall Street Journal*, (January 27, 2003), p. C1.

general -- analysts' projected EPS growth rate forecasts are upwardly-biased for electric utility companies.

Q. DR. VANDER WEIDE HAS DEFENDED THE USE OF ANALYSTS' EPS FORECASTS IN HIS DCF MODEL BY CITING A STUDY HE PUBLISHED WITH DR. WILLARD CARLETON. PLEASE DISCUSS DR. VANDER WEIDE'S STUDY.

A. Dr. Vander Weide cites the study on pages 32-3 of his testimony. In the study, Dr. Vander Weide performs a linear regression of a company's stock price to earnings ratio (P/E) on the dividend yield payout ratio (D/E), alternative measures of growth (g), and three measures of risk (beta, covariance, r-squared, and the standard deviation of analysts' growth rate projections). He performed the study for three one-year periods – 1981-1982, and 1983 – and used a sample of approximately 65 companies. His results indicated that regressions measuring growth as analysts' forecasted EPS growth were more statistically significant that those using various historic measures of growth. Consequently, he concluded that analysts' growth rates are superior measures of expected growth.

Q. PLEASE CRITIQUE DR. VANDER WEIDE'S STUDY.

A. Before highlighting the errors in the study, it is important to note that the study was published twenty years ago, used a sample of only sixty five companies, and evaluated a three-year time period (1981-83) that was over twenty-five years ago. Since that time, many more exhaustive studies have been performed using significantly larger data bases and, from these studies, much has been learned about Wall Street analysts

and their stock recommendations and earnings forecasts. Nonetheless, there are several errors that invalidate the results of the study.

Q. PLEASE DESCRIBE THE ERRORS IN DR. VANDER WEIDE'S STUDY.

A. The primary error in the study is that his regression model is misspecified. As a result, he cannot conclude whether one growth rate measure is better than the other. The misspecification results from the fact that Dr. Vander Weide did not actually employ a modified version of the DCF model. Instead, he used a "linear approximation." He used the approximation so that he did not have to measure k, investors' required return, directly, but instead he used some proxy variables for risk. The error in this approach is there can be an interaction between growth (g) and investors' required return (k) which could lead him to conclude that one growth rate measure is superior to others. Furthermore, due to this problem, analysts' EPS forecasts could be upwardly biased and still appear to provide better measures of expected growth.

There are other errors in the study as well that further invalidate the results. Dr. Vander Weide does not use both historic and analysts' projections growth rate measures in the same regression to assess if both historic and forecasts should be used together to measure expected growth. In addition, he did not perform any tests to determine if the difference between historic and projected growth measures is statistically significant. Without such tests, he cannot make any conclusions about the superiority of one measure versus the other.

Q. DO YOU HAVE ANY OTHER THOUGHTS ON DR. VANDER WEIDE'S DCF GROWTH RATE?

A. Yes. In the DCF model, investors are presumed to be forecasting and discounting future dividends per share. *Value Line's* mean projected dividend growth rate for Dr. Vander Weide's proxy group is only 4.2%. He gave no weight to this growth rate indicator, which is especially significant *since the relevant growth variable in the DCF model is dividends.*

Q. FINALLY, PLEASE ASSESS WHETHER DR. VANDER WEIDE'S DCF EQUITY COST RATE IS REALISTIC.

A. Simply stated, Dr. Vander Weide's DCF equity cost rate of 12.3% is not realistic. As shown in the calculations below, a current risk-free rate of 4.5%, an average proxy group beta of 0.73, and an equity cost rate of 12.3%, the implied expected market return is 15.2%.

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$
$$12.3\% = 4.5\% + 0.73 * [E(R_m) - 4.5\%]$$
$$E(R_m) = 15.2\%$$

An expected market return of 15.2% is simply not realistic and well beyond expectations. The historic annual compounded annual return on the U.S. stock market is 9.6% according to Ibbotson Associates. An expected market return of 15.2% indicates that investors would expect a long-term annual stock market return that is more than 50% higher than it has been in the past. There are no logical economic arguments to suggest that the stock market in the U.S. would provide such a higher rate of return in the future than it has in the past. As such, Dr. Vander Weide's DCF equity cost rate of 12.3% is

unrealistic.

Flotation Costs

Q. PLEASE DISCUSS DR. VANDER WEIDE'S ADJUSTMENT FOR FLOTATION COSTS.

A. Dr. Vander Weide claims that an upward adjustment to the equity cost rate is necessary for flotation costs. This adjustment factor is erroneous for several reasons. First, the Company has not identified any actual flotation costs for the Company. Therefore, the Company is requesting annual revenues in the form of a higher return on equity for flotation costs that have not been identified. Second, it is commonly argued that a flotation cost adjustment (such as that used by the Company) is necessary to prevent the dilution of the existing shareholders. In this case, a flotation cost adjustment is justified by reference to bonds and the manner in which issuance costs are recovered by including the amortization of bond flotation costs in annual financing costs. However, this is incorrect for several reasons:

(1) If an equity flotation cost adjustment is similar to a debt flotation cost adjustment, the fact that the market-to-book ratios for electric utility companies are over 1.0X actually suggests that there should be a flotation cost reduction (and not increase) to the equity cost rate. This is because when (a) a bond is issued at a price in excess of face or book value, and (b) the difference between market price and the book value is greater than the flotation or issuance costs, the cost of that debt is lower than the coupon rate of the debt. The amount by which market values of electric utility companies are in excess of book values

is much greater than flotation costs. Hence, if common stock flotation costs were exactly like bond flotation costs, and one was making an explicit flotation cost adjustment to the cost of common equity, the adjustment would be downward;

(2) If a flotation cost adjustment is needed to prevent dilution of existing stockholders' investment, then the reduction of the book value of stockholder investment associated with flotation costs can occur only when a company's stock is selling at a market price at/or below its book value. As noted above, electric utility companies are selling at market prices well in excess of book value. Hence, when new shares are sold, existing shareholders realize an increase in the book value per share of their investment, not a decrease;

(3) Flotation costs consist primarily of the underwriting spread or fee and not out-of-pocket expenses. On a per share basis, the underwriting spread is the difference between the price the investment banker receives from investors and the price the investment banker pays to the company. Hence, these are not expenses that must be recovered through the regulatory process. Furthermore, the underwriting spread is known to the investors who are buying the new issue of stock, who are well aware of the difference between the price they are paying to buy the stock and the price that the Company is receiving. The offering price which they pay is what matters when investors decide to buy a stock based on its expected return and risk prospects. Therefore, the company is not entitled to an adjustment to the allowed return to account for those costs; and

(4) Flotation costs, in the form of the underwriting spread, are a form of a transaction cost in the market. They represent the difference between the price paid by investors and the amount received by the issuing company. Whereas the Company believes that it should be compensated for these transactions costs, they have not accounted for other market transaction costs in determining a cost of equity for the Company. Most notably, brokerage fees that investors pay when they buy shares in the open market are another market transaction cost. Brokerage fees increase the effective stock price paid by investors to buy shares. If the Company had included these brokerage fees or transaction costs in their DCF analysis, the higher effective stock prices paid for stocks would lead to lower dividend yields and equity cost rates. This would result in a downward adjustment to their DCF equity cost rate.

2. Risk Premium ("RP") Approach

Q. PLEASE REVIEW DR. VANDER WEIDE'S RP ANALYSIS.

A. Dr. Vander Weide develops an equity cost rate using expected (ex ante) and a historical RP models. Dr. Vander Weide's RP results are provided in Panels C and D of page 2 of Exhibit JRW-12. In his expected RP approach, Dr. Vander Weide computes an expected stock return by applying the DCF model to the S&P utilities and the S&P 500 and uses the EPS growth rate forecasts of Wall Street analysts as his growth rate. He then subtracts the yield on 'A' rated utility bonds. In his historic RP model, Dr. Vander Weide computes a historical risk premium as the difference in the arithmetic mean stock and bond returns. The stock returns are computed for different time periods for

several different indexes, including S&P and Moody's electric utility indexes as well as the S&P 500.

Q. WHAT ARE THE ERRORS IN DR. VANDER WEIDE'S RP ANALYSES?

A. The errors in Dr. Vander Weide's RP equity cost rate approaches include: (1) an inflated base interest rate; (2) an excessive risk premium which is based on the historical relationship between stock and bond returns; and (3) the inclusion of flotation costs. The flotation cost issue has already been addressed. The other two issues are discussed below.

Q. PLEASE DISCUSS THE BASE YIELD OF DR. VANDER WEIDE'S RISK PREMIUM ANALYSIS.

A. The base yield in Dr. Vander Weide's RP analysis is the projected yield on 'A' rated utility bonds. There are two issues with his projected 6.33% 'A' rated utility bond yield. First, the yield is above current market rates. As shown on Page 1 of Exhibit JRW-3, the current yield on long-term, 'A' rated public utility bonds is below 6.0%. Second, Vander Weide's base yield is erroneous and inflates the required return on equity in two ways. First, long-term bonds are subject to interest rate risk, a risk which does not affect common stockholders since dividend payments (unlike bond interest payments) are not fixed but tend to increase over time. Second, the base yield in Dr. Vander Weide's risk premium study is subject to credit risk since it is not default risk-free like an obligation of the U.S. Treasury. As a result, its yield-to-maturity includes a premium for default risk and therefore is above its expected return. Hence using such a bond's yield-to-maturity as a base yield results in an overstatement of investors' return expectations.

Q. DR. VANDER WEIDE EMPLOYS A DCF-BASED EX ANTE RISK PREMIUM APPROACH. PLEASE DISCUSS THE ERRORS IN THIS APPROACH.

A. Dr. Vander Weide computes a DCF-based equity risk premium. Dr. Vander Weide estimates an expected return using the DCF model and subtracts a concurrent measure of interest rates. The expected return is computed for utilities using the DCF model with analysts' EPS growth rate forecasts for the growth rate. Then Dr. Vander Weide employs 'A' rated utility yields as a measure of interest rates.

The primary error in this approach is the DCF-based or ex ante risk premium. This ex ante risk premium uses of the EPS growth rate forecasts of Wall Street analysts as the one and only measure of growth in the DCF model. This issue was addressed above. In short, as I discuss and demonstrate above, analysts' EPS growth rate forecasts are upwardly biased estimates of actual EPS growth for companies in general as well as for electric utilities.

Q. PLEASE REVIEW DR. VANDER WEIDE'S EX POST OR HISTORIC RP STUDY.

A. Dr. Vander Weide performs an ex-post or historical RP study that appears in Exhibit__(JVW-3) and Exhibit__(JVW-4). This study involves an assessment of the historical differences between S&P Public Utility Index and the S&P 500 stock returns and public utility bond returns over various time periods between the years 1928-2007. From the results of his study, he concludes that an appropriate risk premium is 4.90%.

Q. PLEASE ADDRESS THE ISSUES INVOLVED IN USING HISTORICAL STOCK AND BOND RETURNS TO COMPUTE A FORWARD-LOOKING OR

EX ANTE RISK PREMIUM.

A. Using the historical relationship between stock and bond returns to measure an ex ante equity risk premium is erroneous and, especially in this case, overstates the true market equity risk premium. The equity risk premium is based on expectations of the future and when past market conditions vary significantly from the present, historic data does not provide a realistic or accurate barometer of expectations of the future. Using historical returns to measure the ex ante equity risk premium ignores current market conditions and masks the change in the risk and return relationship between stocks and bonds. This change suggests that the equity risk premium has declined.

Q. PLEASE DISCUSS THE PROBLEMS WITH USING HISTORIC STOCK AND BOND RETURNS TO ESTIMATE AN EQUITY RISK PREMIUM.

A. There are a number of flaws in using historic returns over long time periods to estimate expected equity risk premiums. These issues include:

(A) Biased historical bond returns;

(B) The arithmetic versus the geometric mean return;

(C) The large error in measuring the equity risk premium using historical returns;

(D) Unattainable and biased historical stock returns;

(E) Company survivorship bias;

(F) The "Peso Problem" - U.S. stock market survivorship bias;

(G) Market conditions today are significantly different than the past; and

(H) Changes in risk and return in the markets.

These issues will be addressed in order.

Biased Historical Bond Returns

Q. HOW ARE HISTORICAL BOND RETURNS BIASED?

A. An essential assumption of these studies is that over long periods of time investors' expectations are realized. However, the experienced returns of bondholders in the past violate this critical assumption. Historic bond returns are biased downward as a measure of expectancy because of capital losses suffered by bondholders in the past. As such, risk premiums derived from this data are biased upwards.

The Arithmetic versus the Geometric Mean Return

Q. PLEASE DISCUSS THE ISSUE RELATING TO THE USE OF THE ARITHMETIC VERSUS THE GEOMETRIC MEAN RETURNS IN THE IBBOTSON METHODOLOGY.

A. The measure of investment return has a significant effect on the interpretation of the risk premium results. When analyzing a single security price series over time (i.e., a time series), the best measure of investment performance is the geometric mean return. Using the arithmetic mean overstates the return experienced by investors. In a study entitled "Risk and Return on Equity: The Use and Misuse of Historical Estimates," Carleton and Lakonishok make the following observation: "The geometric mean measures the changes in wealth over more than one period on a buy and hold (with dividends invested) strategy."[22] Since Dr. Vander Weide's study covers more than one period (and he assumes that dividends are reinvested), he should be employing the geometric mean and not the arithmetic mean.

[22] Willard T. Carleton and Josef Lakonishok, "Risk and Return on Equity: The Use and Misuse of Historical Estimates," *Financial Analysts Journal* (January-February, 1985), pp. 38-47.

Q. PLEASE PROVIDE AN EXAMPLE DEMONSTRATING THE PROBLEM WITH USING THE ARITHMETIC MEAN RETURN.

A. To demonstrate the upward bias of the arithmetic mean, consider the following example. Assume that you have a stock (that pays no dividend) that is selling for $100 today, increases to $200 in one year, and then falls back to $100 in two years. The table below shows the prices and returns.

Time Period	Stock Price	Annual Return
0	$100	
1	$200	100%
2	$100	-50%

The arithmetic mean return is simply (100% + (-50%))/2 = 25% per year. The geometric mean return is $((2 * .50)^{(1/2)}) - 1 = 0\%$ per year. Therefore, the arithmetic mean return suggests that your stock has appreciated at an annual rate of 25%, while the geometric mean return indicates an annual return of 0%. Since after two years, your stock is still only worth $100, the geometric mean return is the appropriate return measure. For this reason, when stock returns and earnings growth rates are reported in the financial press, they are generally reported using the geometric mean. This is because of the upward bias of the arithmetic mean. As further evidence of the appropriate mean return measure, the U.S. Securities and Exchange Commission requires equity mutual funds to report historic return performance using geometric mean and not arithmetic mean returns.[23] Therefore, Dr. Vander Weide's arithmetic mean return measures are biased and should be disregarded.

<u>The Error in Measuring Equity Risk Premiums with Historic Data</u>

[23] U.S. Securities and Exchange Commission, Form N-1A.

Q. PLEASE DISCUSS THE ERROR IN MEASURING THE EQUITY RISK PREMIUM USING HISTORICAL STOCK AND BOND RETURNS.

A. Measuring the equity risk premium using historical stock and bond return is subject to a substantial forecasting error. For example, the long-term equity risk premium of 6.5% has a standard deviation of 20.6%. This may be interpreted in the following way with respect to the historical distribution of the long-term equity risk premium using a standard normal distribution and a 95%, +/- two standard deviation confidence interval: We can say, with a 95% degree of confidence, that the true equity risk premium is between -34.7% and +47.7%. As such, the historical equity risk premium is measured with a substantial degree of error.

Unattainable and Biased Historic Stock Returns

Q. YOU NOTE THAT HISTORIC STOCK RETURNS ARE BIASED USING THE IBBOTSON METHODOLOGY. PLEASE ELABORATE.

A. Returns developed using Ibbotson's methodology are computed on stock indexes and therefore (1) cannot be reflective of expectations because these returns are unattainable to investors and (2) produce biased results. This methodology assumes: (a) monthly portfolio rebalancing and (b) reinvestment of interest and dividends. Monthly portfolio rebalancing presumes that investors rebalance their portfolios at the end of each month in order to have an equal dollar amount invested in each security at the beginning of each month. The assumption generates high transaction costs and thereby renders these

returns unattainable to investors. In addition an academic study demonstrates that the monthly portfolio rebalancing assumption produces biased estimates of stock returns.[24] Transaction costs themselves provide another bias in historic versus expected returns. In the past, the observed stock returns were not the realized returns of investors due to the much higher transaction costs of previous decades. These higher transaction costs are reflected through the higher commissions on stock trades and the lack of low cost mutual funds like index funds.

Company Survivorship Bias

Q. HOW DOES COMPANY SURVIVORSHIP BIAS AFFECT DR. VANDER WEIDE'S HISTORIC EQUITY RISK PREMIUM?

A. Using historic data to estimate an equity risk premium suffers from company survivorship bias. Company survivorship bias results when using returns from indexes like the S&P 500. The S&P 500 includes only companies that have survived. The fact that returns of firms that did not perform well were dropped from these indexes is not reflected. Therefore, these stock returns are upwardly biased because they only reflect the returns from more successful companies.

The "Peso Problem" - U.S. Stock Market Survivorship Bias

Q. WHAT IS THE "PESO PROBLEM," AND HOW DOES IT RELATE TO SURVIVORSHIP BIAS IN U. S. STOCK MARKET RETURNS?

[24] See Richard Roll, "On Computing Mean Returns and the Small Firm Premium," *Journal of Financial Economics* (1983), pp. 371-86.

A. Dr. Vander Weide's use of historic return data also suffers from the so-called "Peso Problem," which is also known as U.S. stock market survivorship bias. The "peso problem" issue was first highlighted by the Nobel laureate, Milton Friedman, and gets its name from conditions related to the Mexican peso market in the early 1970s. This issue involves the fact that past stock market returns were higher than were expected at the time because despite war, depression, and other social, political, and economic events, the U.S. economy survived and did not suffer hyperinflation, invasion, and/or the calamities of other countries. As such, highly improbable events, which may or may not occur in the future, are factored into stock prices, leading to seemingly low valuations. Higher than expected stock returns are then earned when these events do not subsequently occur. Therefore, the "peso problem" indicates that historic stock returns are overstated as measures of expected returns because the U.S. markets have not experienced the disruptions of other major markets around the world.

Market Conditions Today are Significantly Different than in the Past

Q. FROM AN EQUITY RISK PREMIUM PERSPECTIVE, PLEASE DISCUSS HOW MARKET CONDITIONS ARE DIFFERENT TODAY.

A. The equity risk premium is based on expectations of the future. When past market conditions vary significantly from the present, historic data does not provide a realistic or accurate barometer of expectations of the future. As noted previously, stock valuations (as measured by the price-earnings ratio) are relatively high and interest rates are relatively low, on a historic basis. Therefore, given the high stock prices and low interest rates, expected returns are likely to be lower on a going forward basis.

Changes in Risk and Return in the Markets

Q. PLEASE DISCUSS THE NOTION THAT HISTORIC EQUITY RISK PREMIUM STUDIES DO NOT REFLECT THE CHANGE IN RISK AND RETURN IN TODAY'S FINANCIAL MARKETS.

A. The historic equity risk premium methodology is unrealistic in that it makes the explicit assumption that risk premiums do not change over time based on market conditions such as inflation, interest rates, and expected economic growth. Furthermore, using historic returns to measure the equity risk premium masks the dramatic change in the risk and return relationship between stocks and bonds. The nature of the change, as I will discuss below, is that bonds have increased in risk relative to stocks. This change suggests that the equity risk premium has declined in recent years.

Page 1 of Exhibit JRW-14 provides the yields on long-term U.S. Treasury bonds from 1926 to 2008. One very obvious observation from this graph is that interest rates increased dramatically from the mid-1960s until the early 1980s and have since returned to their 1960 levels. The annual market risk premiums for the 1926 to 2008 period are provided on page 2 of Exhibit JRW-14. The annual market risk premium is defined as the return on common stock minus the return on long-term U.S. Treasury Bonds. There is considerable variability in this series and a clear decline in recent decades. The high was 54% in 1933, and the low was -62% in 2008. Evidence of a change in the relative riskiness of bonds and stocks is provided on page 3 of Exhibit JRW-14, which plots the standard deviation of monthly stock and bond returns since 1930. The plot shows that, whereas stock returns were much more volatile than bond returns from the 1930s to the 1970s, bond returns became more variable than stock

returns during the 1980s. In recent years stocks and bonds have become much more similar in terms of volatility, but stocks are still a little more volatile. The decrease in the volatility of stocks relative to bonds over time can be attributed to several stock related factors: (1) the impact of technology on productivity and the new economy; (2) the role of information in the economy and markets; (3) better cost and risk management by businesses; (4) several bond related factors; (5) deregulation of the financial system; (6) inflation fears and interest rates; and (7) the increase in the use of debt financing. Further evidence of the greater relative riskiness of bonds is shown on page 4 of Exhibit JRW-14, which plots real interest rates (the nominal interest rate minus inflation) from 1926 to 2008. Real rates have been well above historic norms during the past 10-15 years. These high real interest rates reflect the fact that investors view bonds as riskier investments.

The net effect of the change in risk and return has been a significant decrease in the return premium that stock investors require over bond yields. In short, the equity or market risk premium has declined in recent years. This decline has been discovered in studies by leading academic scholars and investment firms, and has been acknowledged by government regulators. As such, using a historic equity risk premium analysis is simply outdated and not reflective of current investor expectations and investment fundamentals.

Q. DO YOU HAVE ANY OTHER THOUGHTS ON THE USE OF HISTORICAL RETURN DATA TO ESTIMATE AN EQUITY RISK PREMIUM?

A. Yes. Jay Ritter, a Professor of Finance at the University of Florida, identified the use of historical stock and bond return data to estimate a forward-looking equity risk

premium as one of the "Biggest Mistakes" taught by the finance profession.[25] His argument is based on the theory behind the equity risk premium, the excessive results produced by historical returns, and the previously-discussed errors such as survivorship bias in historical data.

3. CAPM Approach

Q. PLEASE DISCUSS DR. VANDER WEIDE'S CAPM.

A. Dr. Vander Weide's CAPM results are provided in Panels E and F of page 2 of Exhibit JRW-12. Based on these figures, Dr. Vander Weide estimates an equity cost rate for PEF of 1.73% using his historical CAPM and 11.85% using his expected CAPM approach.

Q. WHAT ARE THE ERRORS IN DR. VANDER WEIDE'S CAPM ANALYSIS?

A. There are three flaws with Dr. Vander Weide's CAPM analysis: (1) his risk-free rate of 4.87%; (2) the historic and expected equity risk premiums; and (3) the flotation cost adjustment.

Q. PLEASE DISCUSS DR. VANDER WEIDE'S RISK-FREE RATE OF INTEREST IN HIS CAPM.

A. Dr. Vander Weide uses a risk-free rate of interest of 4.87% in his CAPM. As previously discussed, the current rate on long-term Treasury bonds is 4.30%.

Q. PLEASE ADDRESS THE PROBLEMS WITH DR. VANDER WEIDE'S HISTORIC CAPM.

[25] Jay Ritter, "The Biggest Mistakes We Teach," *Journal of Financial Research* (Summer 2002).

A. Dr. Vander Weide historical CAPM uses an equity risk premium of 7.1% which is based on the difference between the arithmetic mean stock and bond income returns over the 1926-2007 period. The errors associated with computing an expected equity risk premium using historical stock and bond returns were addressed at length earlier in my testimony. In short, there are a myriad of empirical problems, which result in historical market returns producing inflated estimates of expected risk premiums. Among the errors are the U.S. stock market survivorship bias (the 'Peso Problem'), the company survivorship bias (only successful companies survive – poor companies do not survive), and unattainable return bias (the Ibbotson procedure presumes monthly portfolio rebalancing). In addition, in this case, Dr. Vander Weide has compounded the error by using the bond income return and not the actual bond return. By omitting the price change component of the bond return, he has magnified the historic risk premium by not matching the returns on stock with the actual returns on bonds.

Q. PLEASE REVIEW THE ERRORS IN DR. VANDER WEIDE'S EQUITY OR MARKET RISK PREMIUM IN HIS EXPECTED CAPM APPROACH.

A. Dr. Vander Weide develops an expected equity risk premium for his CAPM of 8.83% in Exhibit__JVW-7) by applying the DCF model to the S&P 500. Dr. Vander Weide estimates an expected market return of 13.7% using a dividend yield of 3.4% and an expected DCF growth rate of 10.3. There are two errors with this approach. First, the published dividend yield for the S&P 500 is only 2.35% (see page 10 of Exhibit JRW-11). Hence, Dr. Vander Weide's calculated expected return is inflated and incorrect. Second, and most significantly, the expected DCF growth rate is the projected 5-year EPS growth rate for the companies in the S&P 500 as reported by IBES. As explained below, this produces an overstated expected market return and equity risk premium.

Q. WHAT EVIDENCE CAN YOU PROVIDE THAT DR. VANDER WEIDE'S S&P 500 GROWTH RATE IS ERRONEOUS?

A. Dr. Vander Weide's expected S&P 500 growth rate of 10.3% represents the forecasted 5-year EPS growth rates of Wall Street analysts. The error with this approach is that the EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. This was detailed at length earlier in my testimony. Further, a long-term growth rate of 10.3% is inconsistent with economic and earnings growth in the U.S. The long-term economic and earnings growth rate in the U.S. has only been about 7%. I have performed a study of the growth in nominal GDP, S&P 500 stock price appreciation, and S&P 500 EPS and DPS growth since 1960. The results are provided on page 1 of Exhibit JRW-15, and a summary is given in the table below.

GNP, S&P 500 Stock Price, EPS, and DPS Growth 1960-Present

Nominal GDP	**7.20%**
S&P 500 Stock Price Appreciation	**5.88%**
S&P 500 EPS	**6.56%**
S&P 500 DPS	**5.68%**
Average	**6.33%**

These results offer compelling evidence that a long-run growth rate of in the 5% to 7% range is appropriate for companies in the U.S. By comparison, Dr. Vander Weide's long-run growth rate projection of 10.3% is overstated. These estimates suggest that companies in the U.S. would be expected to: (1) increase their growth rate of EPS by over 50% in the future and (2) maintain that growth indefinitely in an economy that is expected to grow at about one half of his projected growth rates. Such a scenario is not economically feasible and is directly attributable to Dr. Vander Weide's use of the upwardly biased EPS growth rate forecasts of Wall Street analysts.

Q. PLEASE PROVIDE A SUMMARY ASSESSMENT OF DR. VANDER WEIDE'S CAPM EQUITY RISK PREMIUMS.

A. Dr. Vander Weide's equity risk premiums are inflated due to errors and bias in his studies. In addition, they do not reflect the equity risk premiums that are used in the real worlds of finance. Investment banks, consulting firms, and CFOs use the equity risk premium concept every day in making financing, investment, and valuation decisions. On this issue, the opinions of CFOs and financial forecasters are especially relevant. CFOs deal with capital markets on an ongoing basis since they must continually assess and evaluate capital costs for their companies. They are well aware of the historical equity risk premium results as published by Ibbotson Associates as well as Wall Street analysts' projections. Nonetheless, the CFOs in the June 2009 *CFO Magazine* – Duke University Survey of over 500 CFOs shows an expected return on the S&P 500 of 7.31% over the next ten years. In addition, the financial forecasters in the February 2009 Federal Reserve Bank of Philadelphia survey expect an annual market return of 6.6% over the next ten years. As such, the appropriate equity cost rate for a public utility should be in the 9.0%-10.0% range and not in the 11.0%-12.0% range.

3. Leverage Adjustment

Leverage Adjustment

Q. PLEASE REVIEW DR. VANDER WEIDE'S LEVERAGE ADJUSTMENT.

A. Dr. Vander Weide has included a leverage adjustment of 104 basis points to his estimated equity cost rates estimated using the DCF, RP, and CAPM approaches. Dr. Vander Weide claims that this is needed since (1) market values are greater than book values for utilities and (2) the overall rate of return is applied to a book value capitalization in the

ratemaking process. This adjustment is unwarranted for the following reasons:

(1) The market value of a firm's equity exceeds the book value of equity when the firm is expected to earn more on the book value of investment than investors require. This relationship is described very succinctly in the Harvard Business School case study which I quote earlier in my testimony. As such, the reason that market values exceed book values is that the company is earning a return on equity in excess of its cost of equity;

(2) Despite Dr. Vander Weide's contention that this represents a leverage adjustment, there is no change in leverage. There is no need for a leverage adjustment since there is no change in leverage. The Company's financial statements and fixed financial obligations remain the same;

(3) Financial publications and investment firms report capitalizations on a book value and not a market value basis; and

(4) Dr. Vander Weide has presented his leverage adjustment in many rate cases before many regulatory commissions. In response to OPC ROG 4-163, Dr. Vander Weide indicated that he: (1) has testified in over 400 cases before regulatory commissions; and (2) had been recommending the leverage adjustment to his cost of equity since the early 1990s. However, he could not identify any proceeding in which he has testified in which the regulatory commission had adopted his leverage adjustment.

Q. PLEASE EXPLAIN WHY YOU BELIEVE THAT REGULATORY COMMISSIONS HAVE REJECTED DR. VANDER WEIDE'S LEVERAGE ADJUSTMENT?

A I believe that Dr. Vander Weide's leverage adjustment has been rejected by regulatory commissions because it increases the ROEs for utilities that have high returns on common equity and decreases the ROEs for utilities that have low returns on common equity.

In the graphs presented in Exhibit JRW-6, I have demonstrated that there is a strong positive relationship between expected returns on common equity and market-to-book ratios for public utilities. Hence, in the context of Dr. Vander Weide's leverage adjustment, this means that: (1) for a utility with a relatively high market-to-book ratio (e.g., 2.5) and ROE (e.g., 12.0%), the leverage adjustment will increase the estimated equity cost rate, while (2) for a utility with a relatively low market-to-book ratio (e.g., 0.5) and ROE (e.g., 5.0%), the leverage adjustment will decrease the estimated equity cost rate. Therefore, the adjustment will result in even higher market-to-book ratios for utilities with relatively high ROEs and even lower market-to-book ratios for utilities with relatively low ROEs.

Q. DOES THIS CONCLUDE YOUR ANSWER TESTIMONY?

A. Yes.

DOCKET NO. 090079-EI
CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the Direct Testimony of J. Randall Woolridge has been furnished by U.S. Mail and * hand delivery on this 10th day of August 2009, to the following parties:

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EXHIBITS OF J. RANDALL WOOLRIDGE

Appendix A
Educational Background, Research, and Related Business Experience
J. Randall Woolridge

J. Randall Woolridge is a Professor of Finance and the Goldman, Sachs & Co. and Frank P. Smeal Endowed Faculty Fellow in Business Administration in the College of Business Administration of the Pennsylvania State University in University Park, PA. In addition, Professor Woolridge is Director of the Smeal College Trading Room and President and CEO of the Nittany Lion Fund, LLC.

Professor Woolridge received a Bachelor of Arts degree in Economics from the University of North Carolina, a Master of Business Administration degree from the Pennsylvania State University, and a Doctor of Philosophy degree in Business Administration (major area-finance, minor area-statistics) from the University of Iowa. At Iowa he received a Graduate Fellowship and was awarded membership in Beta Gamma Sigma, a national business honorary society. He has taught Finance courses at the University of Iowa, Cornell College, and the University of Pittsburgh, as well as the Pennsylvania State University. These courses include corporation finance, commercial and investment banking, and investments at the undergraduate, graduate, and executive MBA levels.

Professor Woolridge's research has centered on the theoretical and empirical foundations of corporation finance and financial markets and institutions. He has published over 35 articles in the best academic and professional journals in the field, including the *Journal of Finance,* the *Journal of Financial Economics,* and the *Harvard Business Review.* His research has been cited extensively in the business press. His work has been featured in the *New York Times, Forbes, Fortune, The Economist, Financial World, Barron's, Wall Street Journal, Business Week, Washington Post, Investors' Business Daily, Worth Magazine, USA Today,* and other publications. In addition, Dr. Woolridge has appeared as a guest to discuss the implications of his research on CNN's *Money Line,* CNBC's *Morning Call* and *Business Today,* and Bloomberg Televisions' *Morning Call.*

Professor Woolridge's popular stock valuation book, *The StreetSmart Guide to Valuing a Stock* (McGraw-Hill, 2003), was released in its second edition. He has also co-authored *Spinoffs and Equity Carve-Outs: Achieving Faster Growth and Better Performance* (Financial Executives Research Foundation, 1999) as well as a textbook entitled *Applied Principles of Finance* (Kendall Hunt, 2006). Dr. Woolridge is a founder and a managing director of www.valuepro.net - a stock valuation website.

Professor Woolridge has also consulted with and prepared research reports for major corporations, financial institutions, and investment banking firms, and government agencies. In addition, he has directed and participated in over 500 university- and company- sponsored professional development programs for executives in 25 countries in North and South America, Europe, Asia, and Africa.

Dr. Woolridge has prepared testimony and/or provided consultation services in the following cases:

Pennsylvania: Dr. Woolridge has prepared testimony on behalf of the Pennsylvania Office of Consumer Advocate in the following cases before the Pennsylvania Public Utility Commission; Bell Telephone Company (R-811819), Peoples Natural Gas Company (R-832315), Pennsylvania Power Company (R-832409), Western Pennsylvania Water Company (R-832381), Pennsylvania Power Company (R-842740), Pennsylvania Gas and Water Company (R-850178), Metropolitan Edison Company (R-860384), Pennsylvania Electric Company (R-860413), North Penn Gas Company (R-860535), Philadelphia Electric Company (R-870629), Western Pennsylvania Water Company (R-870825), York Water Company (R-870749), Pennsylvania-American Water Company (R-880916), Equitable Gas Company (R-880971), the Bloomsburg Water Co. (R-891494), Columbia Gas of Pennsylvania, Inc. (R-891468), Pennsylvania-American Water Company (R-90562), Breezewood Telephone Company (R-901666), York Water Company (R-901813), Columbia Gas of Pennsylvania, Inc. (R-901873), National Fuel Gas Corporation (R-911912), Pennsylvania-American Water Company (R-911909), Borough of Media Water Fund (R-912150), UGI Utilities, Inc. - Electric Utility Division (R-922195), Dauphin Consolidated Water Supply Company - General Waterworks of

Appendix A
Educational Background, Research, and Related Business Experience
J. Randall Woolridge

Pennsylvania, Inc, (R-932604), National Fuel Gas Corporation (R-932548), Commonwealth Telephone Company (I-920020), Conestoga Telephone and Telegraph Company (I-920015), Peoples Natural Gas Company (R-932866), Blue Mountain Consolidated Water Company (R-932873), National Fuel Gas Corporation (R-942991), UGI - Gas Division (R-953297), UGI - Electric Division (R-953534), Pennsylvania-American Water Company (R-973944), Pennsylvania-American Water Company (R-994638), Philadelphia Suburban Water Company (R-994868;R-994877;R-994878; R-9948790), Philadelphia Suburban Water Company (R-994868), Wellsboro Electric Company (R-00016356), Philadelphia Suburban Water Company (R-00016750), National Fuel Gas Corporation (R-00038168), Pennsylvania-American Water Company (R-00038304), York Water Company (R-00049165), Valley Energy Company (R-00049345), Wellsboro Electric Company (R-00049313), National Fuel Gas Corporation (R-00049656), T.W. Phillips Gas and Oil Co. (R-00051178), PG Energy (R-00061365), City of Dubois Water Company (Docket No. R-00050671), R-00049165), York Water Company (R-00061322), Emporium Water Company (R-00061297), Pennsylvania-American Water Company (R-00072229),

New Jersey: Dr. Woolridge prepared testimony for the New Jersey Department of the Public Advocate, Division of Rate Counsel: New Jersey-American Water Company (R-91081399J), New Jersey-American Water Company (R-92090908J), and Environmental Disposal Corp. (R-94070319).

Alaska: Dr. Woolridge prepared testimony for Attorney General's Office of Alaska: Golden Heart Utilities, Inc. and College Utilities Corp. (Water Public Utility Service TA-29-118 and Sewer Public Utility Service TA-82-97), Anchorage Water and Wastewater Utility (TA-106-122).

Arizona: Dr. Woolridge prepared testimony for Utility Division staff of the Arizona Corporation Commission, Arizona Public Service Company (Docket No. E-01345A-06-0009).

Hawaii: Dr. Woolridge prepared testimony for the Hawaii Office of the Consumer Advocate: East Honolulu Community Services, Inc. (Docket No. 7718).

Delaware: Dr. Woolridge prepared testimony for the Delaware Division of Public Advocate: Artesian Water Company (R-00-649). Dr. Woolridge prepared testimony for the staff of the Public Service Commission: Artesian Water Company (R-06-158).

Ohio: Dr. Woolridge prepared testimony for the Ohio Office of Consumers' Council: SBC Ohio (Case No. 02-1280-TP-UNC R-00-649), Cincinnati Gas & Electric Company (Case No. 05-0059-EL-AIR), Dominion East Ohio Company (Case No. 07-829-GA-AIR), Cleveland Electric Illuminating Company and Toledo Edison Company (Case No. 08-935-EL-SSO), Columbia Gas of Ohio, Inc. (Case No. 08-0072-GA-AIR), and Columbus Southern Power Company (Case No. 08-917-EL-SSO).

Texas: Dr. Woolridge prepared testimony for the Atmos Cities Steering Committee: Mid-Texas Division of Atmos Energy Corp. (Docket No. 9670).

New York: Dr. Woolridge prepared testimony for the County of Nassau in New York State: Long Island Lighting Company (PSC Case No. 942354).

Florida: Dr. Woolridge prepared testimony for the Office of Public Counsel in Florida: Florida Power & Light Co. (Docket No. 050045-EL), Tampa Electric Company (Docket No 080317-EI), Peoples Gas Company (Docket No 080318-GU).

Appendix A
Educational Background, Research, and Related Business Experience
J. Randall Woolridge

Indiana: Dr. Woolridge prepared testimony for the Indiana Office of Utility Consumer Counsel (OUCC) in the following cases: Southern Indiana Gas and Electric Company (IURC Cause No. 43111 and IURC Cause No. 43112).

Oklahoma: Dr. Woolridge prepared testimony for the Oklahoma Industrial Energy Companies (OIEC) in the following cases: Public Service Company of Oklahoma (Cause No. PUD 200600285), Oklahoma Gas & Electric Company (Cause No. PUD 200700012).

Connecticut: Dr. Woolridge prepared testimony for the Office of Consumer Counsel in Connecticut: United Illuminating (Docket No. 96-03-29), Yankee Gas Company (Docket No. 04-06-01), Southern Connecticut Gas Company (Docket No. 03-03-17), the United Illuminating Company (Docket No. 05-06-04), Connecticut Light and Power Company (Docket No. 05-07-18), Birmingham Utilities, Inc. (Docket No. 06-05-10), Connecticut Water Company (Docket No. 06-07-08), Connecticut Natural Gas Corp. (Docket No. 06-03-04), Aquarion Water Company (Docket No. 07-05-09), Yankee Gas Company (Docket No. 06-12-02), Connecticut Light and Power Company (Docket No. 07-07-01), and the United Illuminating Company (Docket No. 08-07-03).

California: Dr. Woolridge prepared testimony for the Office of Ratepayer Advocate in California: San Gabriel Valley Water Company (Docket No. 05-08-021), Pacific Gas & Electric (Docket No. 07-05-008), San Diego Gas & Electric (Docket No. 07-05-007), Southern California Edison (Docket No. 07-05-003), California-American Water Company (Docket No. 08-05-003), Golden State Water Company (Docket No. 08-05-004), and California Water Service Company (Docket No. 08-05-002).

South Carolina: Dr. Woolridge prepared testimony for the Office of Regulatory Staff in South Carolina: South Carolina Electric and Gas Company (Docket No. 2005-113-G), Carolina Water Service Co. (Docket No. 2006-87-WS), Tega Cay Water Company (Docket No. 2006-97-WS), United Utilities Companies, Inc. (Docket No. 2006-107-WS).

Missouri: Dr. Woolridge prepared testimony for the Department of Energy in Missouri: Kansas City Power & Light Company (CASE NO. ER-2006-0314). Dr. Woolridge prepared testimony for the Office of Attorney General of Missouri: Union Electric Company (CASE NO. ER-2007-0002).

Kentucky: Dr. Woolridge prepared testimony for the Office of Attorney General in Kentucky: Kentucky-American Water Company (Case No. 2004-00103), Union Heat, Light, and Power Company (Case No. 2004-00042), Kentucky Power Company (Case No. 2005-00341), Union Heat, Light, and Power Company (Case No. 2006-00172), Atmos Energy Corp. (Case No. 2006-00464), Columbia Gas Company (Case No. 2007-00008), Delta Natural Gas Company (Case No. 2007-00089), Kentucky-American Water Company (Case No. 2007-00143).

Washington, D.C.: Dr. Woolridge prepared testimony for the Office of the People's Counsel in the District of Columbia: Potomac Electric Power Company (Formal Case No. 939).

Washington: Dr. Woolridge consulted with trial staff of the Washington Utilities and Transportation Commission on the following cases: Puget Energy Corp. (Docket Nos. UE-011570 and UG-011571); and Avista Corporation (Docket No. UE-011514).

Kansas: Dr. Woolridge prepared testimony on behalf of the Kansas Citizens' Utility Ratepayer Board in the following cases: Western Resources Inc. (Docket No. 01-WSRE-949-GIE), UtiliCorp (Docket No. 02-UTCG701-CIG), and Westar Energy, Inc. (Docket No. 05-WSEE-981-RTS).

Appendix A
Educational Background, Research, and Related Business Experience
J. Randall Woolridge

Utah: Dr. Woolridge prepared testimony on behalf of the Utah Committee on Consumer Services (CCS) in the following case: Questar Gas Company (Docket No. No. 07-057-13).

FERC: Dr. Woolridge has prepared testimony on behalf of the Pennsylvania Office of Consumer Advocate in the following cases before the Federal Energy Regulatory Commission: National Fuel Gas Supply Corporation (RP-92-73-000) and Columbia Gulf Transmission Company (RP97-52-000).
Vermont: Dr. Woolridge prepared testimony for the Department of Public Service in the Central Vermont Public Service (Docket No. 6988) and Vermont Gas Systems, Inc. (Docket No. 7160).

Exhibit JRW-1

Progress Energy Florida, Inc.
Cost of Capital

Weighted Average Cost of Capital - Regulatory Capital Structure

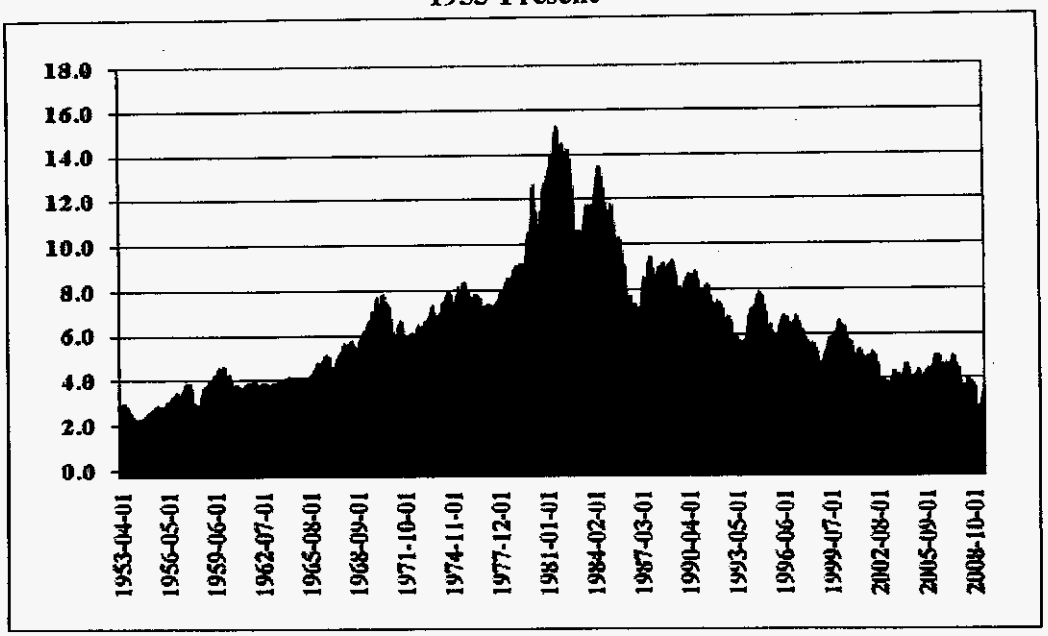
Capital Source	Capitalization Ratio	Cost Rate	Weighted Cost Rate
Short Term Debt	1.71%	3.06%	0.05%
Long-Term Debt	45.22%	6.05%	2.74%
Preferred Stock	0.34%	4.51%	0.02%
Common Equity	47.27%	9.75%	4.61%
Customer Deposits	1.92%	5.95%	0.11%
Customer Deposits (inactive)	0.02%		0.00%
Investment Tax Credits '70	0.08%	7.84%	0.01%
Deferred Income Taxes	5.28%	0.00%	0.00%
FAS 109 - DIT - Net	-1.84%		
Total Capital	100.0%		7.53%

Weighted Average Cost of Capital - Conventional Capital Structure

Capital Source	Capitalization Ratio	Cost Rate	Weighted Cost Rate
Short Term Debt	1.82%	3.06%	0.06%
Long-Term Debt	47.81%	6.05%	2.89%
Preferred Stock	0.36%	4.51%	0.02%
Common Equity	50.00%	9.75%	4.88%
Total	100.00%		7.84%

Exhibit JRW-2

Panel A
Ten-Year Treasury Yields
1953-Present



Source: http://research.stlouisfed.org/fred2/data/GS10.txt

Panel B
Long-Term Moody's Baa Yields Minus Ten-Year Treasury Yields
2000-Present

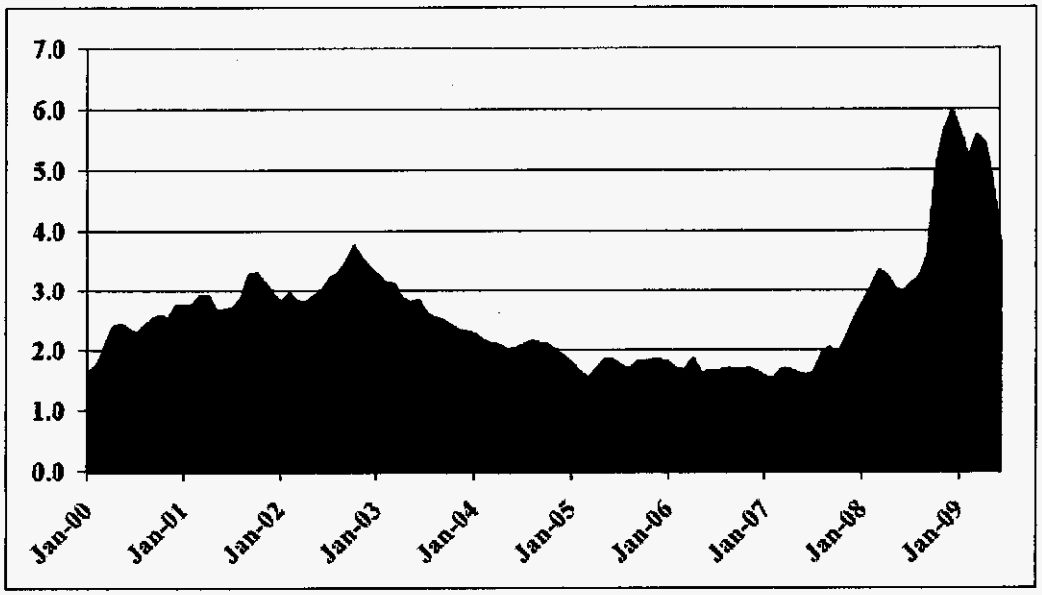
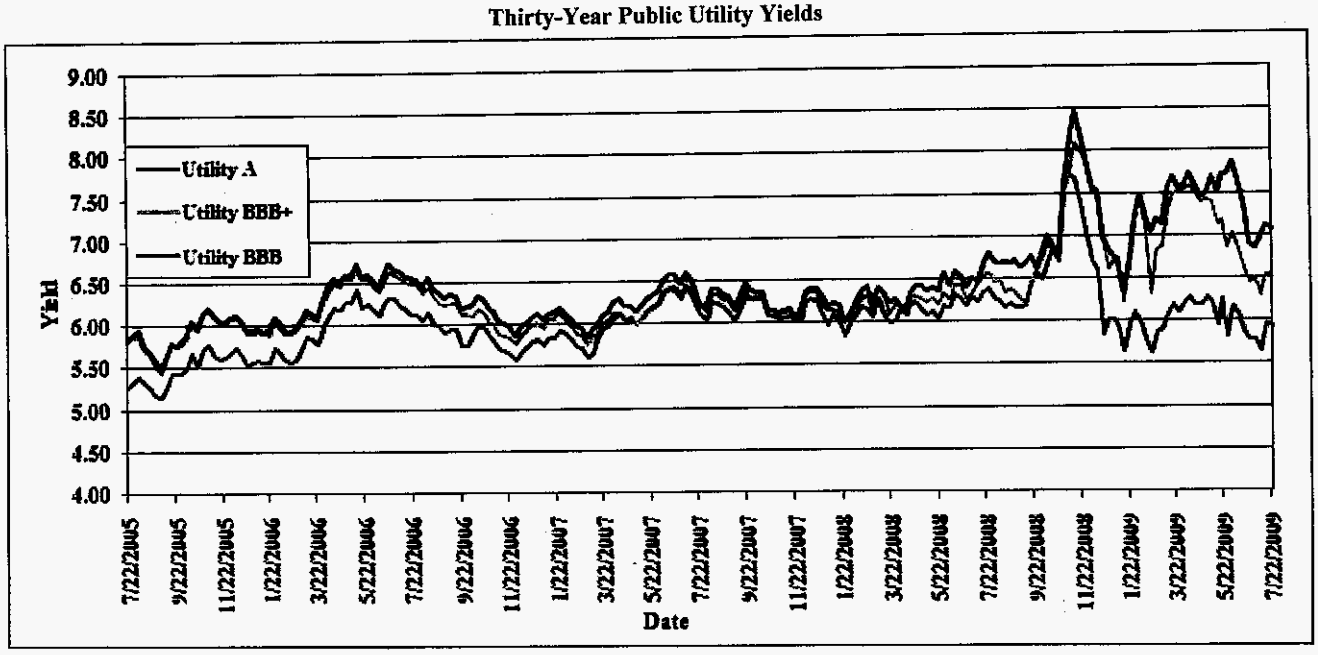


Exhibit JRW-3
Panel A
Thirty-Year Public Utility Yields



Panel B
Thirty-Year Public Utility Yield Spread Over Treasuries

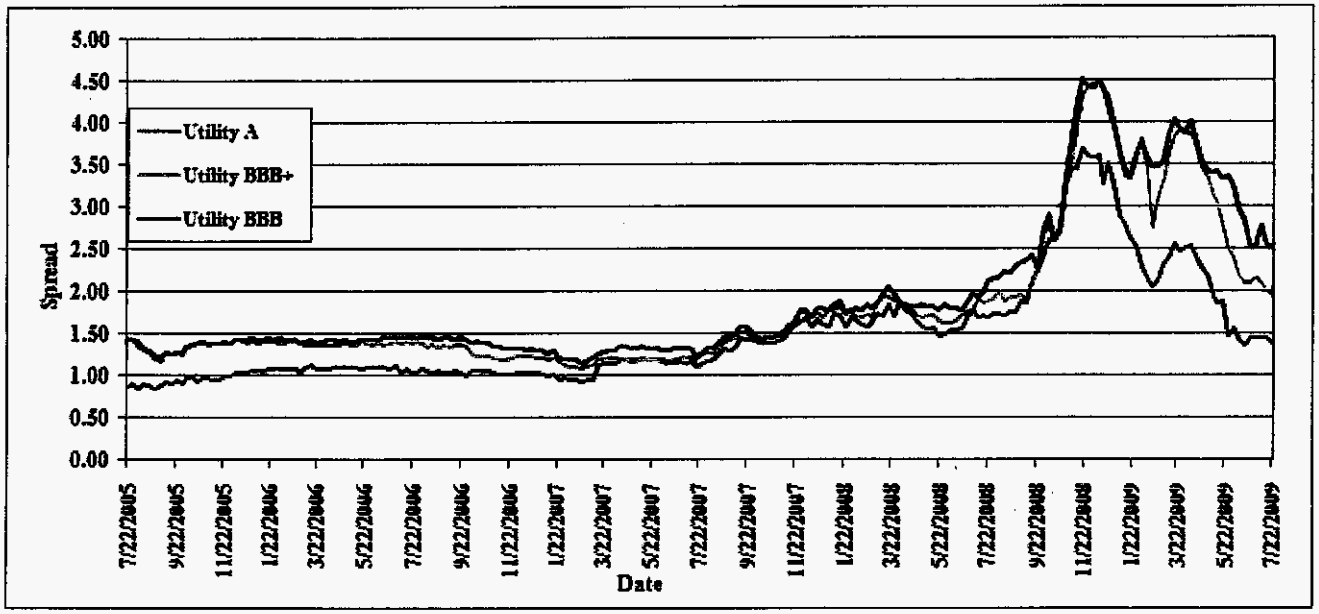


Exhibit JRW-3
Bonds a Bright Spot for Utilities in '08

THE WALL STREET JOURNAL.

JANUARY 13, 2009

Bonds a Bright Spot for Utilities in '08
Debt Issuance Rose 34% as Investors Shunned Commercial Paper, Stocks

By REBECCA SMITH

Even as credit markets seized last year, the utility industry achieved a noteworthy feat: It sold more bonds than it had in years.

Utilities with investment-grade credit ratings sold $47 billion of corporate bonds last year, 34% more than the $35 billion issued in 2007 and 77% more than the $26.5 billion of 2006.

The 2008 increase marked one of the few bright spots in the overall bond market, which registered a decline in issuance of nearly 35%, to $645 billion from $987 billion in 2007, according to Thomson SDC.

PacifiCorp's Huntington Power Plant in Huntington, Utah

Some of Heftiest Utility Bond Sales

Sept. 3, '08	Ohio Edison Delivery	$1.5	5.700	3.05
June 11, '08	Florida Power	1.5	5.650	1.63
April 1, '08	Consolidated Edison of N.Y.	1.2	5.300	2.50
July 5, '07	PacifiCorp	1.0	5.450	3.00
May 22, '08	Duke Energy Carolinas	0.9	5.300	3.10
May 27, '08	Sempra Energy	0.75	6.000	6.50
May 6, '08	Virginia Electric & Power	0.7	8.875	4.54
May 15, '08	NiSource Finance	0.7	6.150	2.92
March 19, '08	Commonwealth Edison	0.7	5.950	2.65
March 25, '08	MidAmerican Energy	0.65	5.750	2.75

Utilities are the third-largest debt issuers after government and finance, requiring a steady supply of cash to build power plants, pipelines and transmission lines and to meet tightening environmental requirements. When credit markets tanked last autumn, many utilities were hurt as market valuations tumbled amid investor fears that demand for their services would decline and that they would have difficulty raising the large sums of money they require, at least at affordable rates.

The full-year issuance for utilities is encouraging, analysts said, because it shows a vital sector of the economy has adapted to changing conditions and is getting the money it needs to support basic operations as well as fund expansion.

Utilities will be critical players in President-elect Barack Obama's economic-stimulus plan, particularly in efforts to modernize the nation's electric grid and to triple the amount of energy garnered from renewable sources in coming years.

Exhibit JRW-3
Bonds a Bright Spot for Utilities in '08

Key to that effort is the ability of utilities to finance big infrastructure projects. Steve Tulip, a managing director in debt capital markets for Goldman Sachs Group, says utilities stood out in a stormy credit landscape. "The flight to quality clearly has benefited the power sector," Mr. Tulip said. "Investors are looking for safe havens."

Utilities leaned on the bond market last year partly out of desperation because commercial paper markets came unglued and they were unable, in some cases, to refinance short-term notes. Meantime, sagging stock market valuations made equity issuance unattractive. Bonds offered a better way for companies to secure stable money and garner some measure of protection against what could be a rough 2009.

"We expect a choppy economy," said Bill Johnson, chief executive of Progress Energy Inc., a utility that operates in the Carolinas and Florida that sold $600 million of bonds Jan. 8. It hopes that will be sufficient to tide it over until 2010. "It felt good to get that one off the table," he said.

The 10-year bonds carried a coupon rate of 5.3%, substantially less than the 7.5% to 8% rate executives felt they might have to swallow, based on prevailing rates in mid- to late-December.

"People have turned the page on 2008 and spreads have come down for people like us," said Mark Mulhern, Progress Energy's chief financial officer.

Pepco Holdings Inc. did three $250-million bond issuances in November and December for its three utilities, including sales of five-year, 10-year and 30-year bonds. Though the spreads to comparable U.S. Treasurys were high -- such as the 4.12 percentage point spread for 10-year bonds issued by Atlantic City Electric -- the actual coupon rates "weren't bad," said Chief Financial Officer Paul Barry. Interest rates were 7.75% for the Atlantic City Electric issuance and 6.4% and 6.5% on two other issues.

Higher financing costs for utilities could put pressure on customer rates if they continue long enough. That is because financing costs typically are a pass-through expense, though there sometimes is a lag between when costs are incurred and when they get folded into rates. That lag can be a drag on utility earnings.

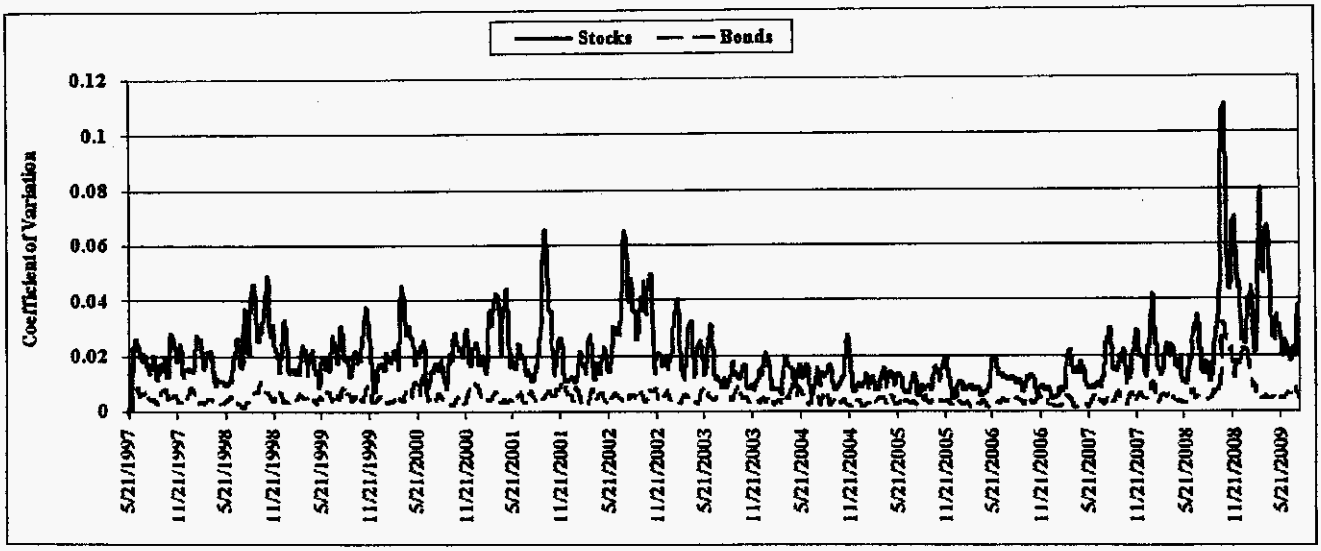
The financing cost, expressed as a "spread," or an amount above the interest rates for U.S. Treasury notes of similar duration, widened to about five to eight percentage points by the end of 2008 from two or three percentage points at the beginning of the year. The actual interest rates paid to bond purchasers, called the coupon rates, didn't rise to unbearable levels because Treasury interest rates fell.

In the fourth quarter, issuance by investment-grade utilities topped $10 billion. In 2008, utilities widened their share of total U.S. investment-grade bond issuance to 7% from 4% in 2007 and 3% in 2006.

Total bond issuance by financial firms, such as commercial banks and investment banks, skidded 52% to $322 billion from $676 billion in 2007 and $686 billion in 2006. For nonfinancial firms, with utilities excluded, total issuance held steady at $275 billion for 2008 and 2007, up from $217 billion in 2006.

Exhibit JRW-3

Panel C
Coefficient of Variation
S&P 500 Price CV and Bear Sterns Bond Price Index CV



Panel D
Coefficient of Variation
S&P 500 Price CV/Bear Sterns Bond Price Index CV

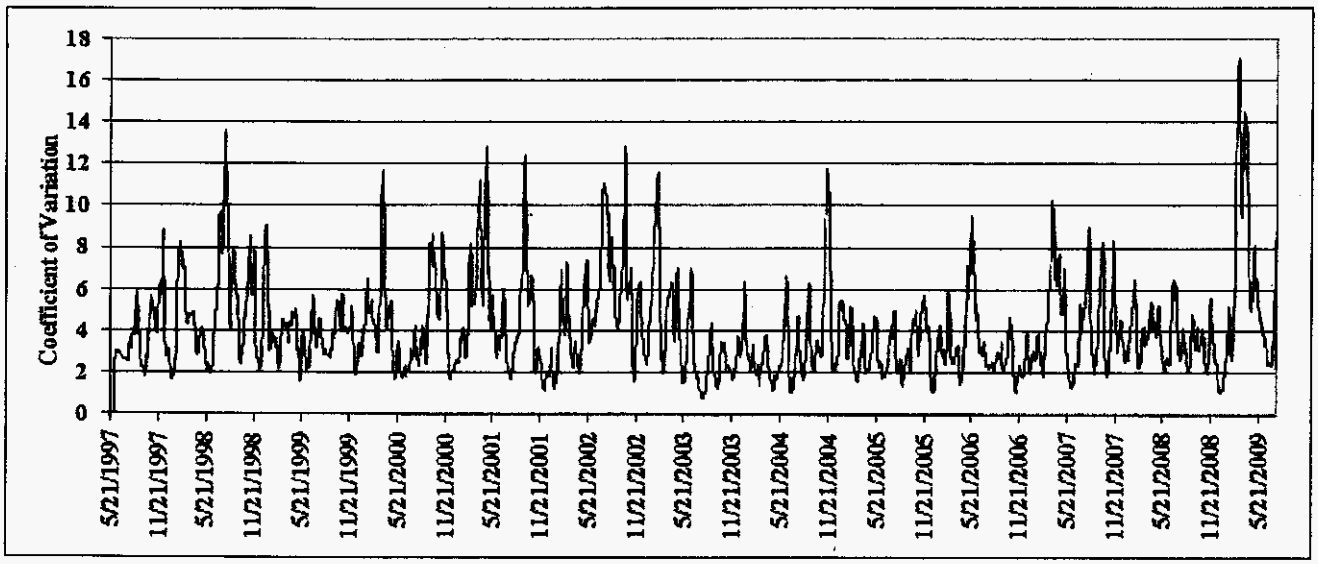


Exhibit JRW-4
Progress Energy Florida, Inc.
Summary Financial Statistics for Electric Proxy Group

Panel A
Electric Proxy Group

Company	Operating Revenue ($mil)	Percent Elec Revenue	Net Plant ($mil)	S&P Bond Rating	Moody's Bond Rating	Pre-Tax Interest Coverage	Primary Service Area	Common Equity Ratio	Return on Equity	Market to Book Ratio
ALLETE, Inc. (NYSE-ALE)	792.5	89	1,435.2	A-	NR	5.3	MN, WS	57	13.4	1.05
American Electric Power Co. (NYSE-AEP)	14,431.0	94	33,251.0	BBB	Baa1	3.0	11 States	37	11.4	1.06
Central Vermont Public Serv. Corp. (NYSE-CV)	341.7	100	345.2	BBB+	NR	3.7	VT	55	9.1	0.94
Cleco Corporation (NYSE-CNL)	1,070.6	96	2,114.7	BBB	Baa1	1.5	LA	46	15.9	1.29
DPL Inc.(NYSE-DPL)	1,600.5	100	2,874.2	A	A2	5.0	OH	42	22.3	2.55
Edison International (NYSE-EIX)	13,841.0	80	19,321.0	A	A2	3.9	CA	44	14.3	1.06
Entergy Corporation (NYSE-ETR)	13,018.1	77	22,619.7	A-	Baa2	4.3	AK,LA,MS,TX	41	14.7	1.79
FirstEnergy Corporation (NYSE-FE)	13,684.0	89	18,207.0	BBB	Baa2	4.0	OH,PA,NJ	36	14.6	1.45
IDACORP, Inc. (NYSE-IDA)	975.5	100	2,768.8	A-	A3	2.4	ID,OR	49	7.8	0.92
Northeast Utilities (NYSE-NU)	5,873.6	81	8,313.5	BBB+	Baa1	2.3	CT,NH,MA	41	7.6	1.05
NSTAR (NYSE-NST)	3,397.6	79	4,429.7	AA-	A1	3.4	MA	38	10.6	1.88
PG&E Corporation (NYSE-PCG)	14,326.0	74	26,923.0	BBB+	A3	3.1	CA	47	11.8	1.46
Progress Energy Inc. (NYSE-PGN)	9,535.0	98	18,636.0	A-	A2	3.1	NC,SC,FL	45	9.7	1.13
UIL Holdings Corporation (NYSE-UIL)	949.6	100	1,086.0	NR	Baa2	4.3	CT	38	8.2	1.21
Xcel Energy Inc. (NYSE-XEL)	10,870.3	79	17,947.5	A-	A3	2.9	CO,MN,WI,ND,SD,MI	45	9.8	1.18
Median	5,873.6	89	8,313.5	A-	A3	3.4		44	11.4	1.18

Data Source: AUS *Utility Reports*, July 2009; Service Area, and Pre-Tax Interest Coverage is from *Value Line Investment Survey.*

Progress Energy Florida, Inc.	4,488.7	100	7,467.8	A-	A3	3.5		50	9.7	

Data Source: MFR Schedule C, PEF Rate of Return Report, December 2008.

Panel B
Vander Weide Proxy Group

Company	Operating Revenue ($mil)	Percent Elec Revenue	Net Plant ($mil)	S&P Bond Rating	Moody's Bond Rating	Pre-Tax Interest Coverage	Primary Service Area	Common Equity Ratio	Return on Equity	Market to Book Ratio
Ameren Corporation (NYSE-AEE)	7,672.0	82	16,781.0	BBB	Baa2	3.7	MO,IL	45	8.6	0.74
American Electric Power Co. (NYSE-AEP)	14,431.0	94	33,251.0	BBB	Baa1	3.0	11 States	37	11.4	1.06
Consolidated Edison, Inc. (NYSE-ED)	13,429.0	64	21,206.0	A-	A1	3.7	NY	47	10.9	1.05
Dominion Resources, Inc. (NYSE-D)	16,679.0	43	23,353.0	A	A3	4.2	VA,NC,	40	10.5	1.84
DPL Inc.(NYSE-DPL)	1,600.5	100	2,874.2	A	A2	5.0	OH	42	22.3	2.55
Edison International (NYSE-EIX)	13,841.0	80	19,321.0	A	A2	3.9	CA	44	14.3	1.06
Entergy Corporation (NYSE-ETR)	13,018.1	77	22,619.7	A-	Baa2	4.3	AK,LA,MS,TX	41	14.7	1.79
Exelon Corporation (NYSE-EXC)	19,065.0	67	25,928.0	A-	A3	6.1	IL,PA	48	NM	2.78
FirstEnergy Corporation (NYSE-FE)	13,684.0	89	18,207.0	BBB	Baa2	4.0	OH,PA,NJ	36	14.6	1.45
FPL Group, Inc. (NYSE-FPL)	16,680.0	70	33,053.0	A	Aa3	3.6	FL	41	13.4	1.95
Northeast Utilities (NYSE-NU)	5,873.6	81	8,313.5	BBB+	Baa1	2.3	CT,NH,MA	41	7.6	1.05
PG&E Corporation (NYSE-PCG)	14,326.0	74	26,923.0	BBB+	A3	3.1	CA	47	11.8	1.46
Pinnacle West Capital Corp. (NYSE-PNW)	3,259.7	95	8,989.4	BBB-	Baa2	2.3	AZ,NM,UT,ID	43	8.8	0.94
Pepco Holdings, Inc. (NYSE-POM)	10,578.7	50	8,427.0	A-	Baa1	2.7	DC,MD,VA,NJ	40	8.6	0.72
Portland General Electric (NYSE-POR)	1,759.0	98	3,440.0	A	Baa1	2.3	OR	52	6.9	0.85
Progress Energy Inc. (NYSE-PGN)	9,535.0	98	18,636.0	A-	A2	3.1	NC,SC,FL	45	9.7	1.13
SCANA Corporation (NYSE-SCG)	5,128.0	44	8,443.0	A-	A2	3.3	SC	40	10.2	1.19
SEMPRA Energy (NYSE-SRE)	9,596.0	47	17,208.0	A+	A1	6.6	CA	52	12.4	1.44
Southern Company (NYSE-SO)	17,110.0	99	36,767.7	A	A2	4.1	GA,AL,FL,MS	39	14.4	1.83
TECO Energy, Inc. (NYSE-TE)	3,407.6	63	5,347.8	BBB	Baa2	2.2	FL	38	15.4	1.26
Vectren Corporation (NYSE-VVC)	2,377.8	22	2,768.5	A	A3	3.5	IN	47	11.7	1.39
Wisconsin Energy Corporation (NYSE-WEC)	4,395.4	62	8,600.4	A-	Aa3	3.3	WI,MI	41	10.9	1.39
Westar Energy, Inc. (NYSE-WR)	1,853.9	70	5,619.7	BBB-	Baa2	2.4	MO	49	10.2	0.92
Xcel Energy Inc. (NYSE-XEL)	10,870.3	79	17,947.5	A-	A3	2.9	CO,MN,WI,ND,SD,MI	45	9.8	1.18
Median	10,087.4	76	17,577.7	A-	A3	3.6		43	11.7	1.38

Data Source: AUS *Utility Reports*, July 2009.

Exhibit JRW-5
Progress Energy Florida, Inc.
Capital Structure Ratios

Panel A - PEF's Recommended Capitalization Ratios - Investor Provided Capital - With Imputed Equity

Capital	Capitalization Ratios	Capitalization Ratios
Short Term Debt	38,609	0.66%
Long-Term Debt	2,637,596	45.10%
Preferred Stock	19,881	0.34%
Common Equity*	3,151,819	53.90%
Total Capital*	5,847,905	100.00%

* Includes $711 of imputed equity for PPAs

Panel B - PEF's Recommended Capitalization Ratios - Investor Provided Capital - Without Imputed Equity

Capital	Capitalization Ratios	Capitalization Ratios
Short Term Debt	38,609	0.75%
Long-Term Debt	2,637,596	51.35%
Preferred Stock	19,881	0.39%
Common Equity*	2,440,489	47.51%
Total Capital	5,136,575	100.00%

* Excludes $711M adjustment for PPAs

Panel C -PEF's Year-End Capital Structure Per Books - 2006-2008

Capital	2006	2007	2008	Average
Short Term Debt	0.88%	0.00%	5.50%	2.1%
Long-Term Debt	48.02%	51.47%	51.90%	50.5%
Preferred Stock	0.63%	0.54%	0.42%	0.5%
Common Equity	50.47%	47.99%	42.19%	46.9%
Total Capital	100.00%	100.00%	100.00%	100.0%

Panel D -Progress Energy's Year-End Capital Structure Per Books - 2006-2008

Capital	2006	2007	2008	Average
Short Term Debt	0.00%	1.10%	5.12%	2.1%
Long-Term Debt	52.23%	52.45%	51.95%	52.2%
Preferred Stock	0.53%	0.51%	0.45%	0.5%
Common Equity	47.25%	45.94%	42.48%	45.2%
Total Capital	100.00%	100.00%	100.00%	100.0%

Panel E - Average Capital Structure Ratios of Electric Proxy Group (Including Short-Term Debt)

Capital	3/31/09	12/31/08	9/30/08	6/30/08	Average
Short Term Debt	7.96%	6.95%	7.02%	6.32%	7.06%
Long-Term Debt	48.78%	49.59%	49.72%	49.56%	49.41%
Preferred Stock	0.76%	0.77%	0.77%	0.85%	0.79%
Common Equity	42.50%	42.70%	42.48%	43.28%	42.74%
Total Capital	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Page 3 of Exhibit JRW-5

Exhibit JRW-5
Progress Energy Florida, Inc.
Capital Structure Ratios

Panel F - PEF's Year-End Capitalization - Per Books - 2009 - 2010

Capital	2009	2010	Average
Short Term Debt	181,250	152,504	166,877
Long-Term Debt	4,182,644	4,633,358	4,408,001
Preferred Stock	33,497	33,497	33,497
Common Equity	4,397,390	4,819,359	4,608,375
Total Capital	8,794,781	9,638,717	9,216,749

Capital	2009	2010	Average
Short Term Debt	2.06%	1.58%	1.82%
Long-Term Debt	47.56%	48.07%	47.81%
Preferred Stock	0.38%	0.35%	0.36%
Common Equity	50.00%	50.00%	50.00%
Total Capital	100.00%	100.00%	100.00%

Source: MFR D Section

Panel G - OPC Recommended Capital Structure for PEF

	2009 Amounts	2010 Amounts	Average Amounts	Capitalization Ratios
Short Term Debt	181,250	152,504	166,877	1.71%
Long-Term Debt	4,182,644	4,633,358	4,408,001	45.22%
Preferred Stock	33,497	33,497	33,497	0.34%
Common Equity	4,397,390	4,819,359	4,608,375	47.27%
Customer Deposits	185,509	188,256	186,883	1.92%
Customer Deposits (inactive)	1,874	1,902	1,888	0.02%
Investment Tax Credits '70	9,233	6,083	7,658	0.08%
Deferred Income Taxes	533,205	495,822	514,514	5.28%
FAS 109 - DIT - Net	-164,398	(193,855)	(179,127)	-1.84%
Total Capital	9,360,204	10,136,925	9,748,565	100.00%

Source: Schedule D-1A,all numbers, per books

Capital Structure Investor Sources Only:

	Capitalization Ratios
Short Term Debt	1.82%
Long Term Debt	47.81%
Preferred Stock	0.36%
Common Equity	50.00%
Total	100.00%

Exhibit JRW-5
Progress Energy Florida, Inc.
Capital Structure Ratios with Short-Term Debt
Electric Proxy Group

ALE

	3/31/09	12/31/08	9/30/08	6/30/08
Short Term Debt	14,000	10,400	17,200	14,800
Long-Term Debt	627,100	588,300	537,200	538,500
Preferred Stock				
Common Equity	848,700	827,100	799,700	759,200
Total	1,489,800	1,425,800	1,354,100	1,312,500

AEP

Short Term Debt	3,094,000	2,423,000	1,984,000	2,265,000
Long-Term Debt	16,078,000	15,536,000	15,325,000	15,532,000
Preferred Stock				
Common Equity	10,940,000	10,693,000	10,917,000	10,631,000
Total	30,112,000	28,652,000	28,226,000	28,428,000

CV

Short Term Debt	6,813	5,452	4,000	13,332
Long-Term Debt	184,901	176,742	185,343	196,018
Preferred Stock	9,054	9,054	9,054	9,054
Common Equity	221,647	219,479	205,853	193,326
Total	422,415	410,727	404,250	411,730

CNL

Short Term Debt	91,518	93,655	63,546	58,350
Long-Term Debt	1,091,220	1,076,819	944,869	950,090
Preferred Stock				
Common Equity	944,106	929,178	906,592	876,183
Total	2,126,844	2,099,652	1,915,007	1,884,623

DPL

Short Term Debt	365,700	100,700	100,700	100,800
Long-Term Debt	1,276,500	1,541,500	1,451,600	1,451,700
Preferred Stock	22,900	22,900	22,900	22,900
Common Equity	920,500	895,600	816,000	804,400
Total	2,585,600	2,560,700	2,391,200	2,379,800

EIX

Short Term Debt	2,002,000	2,501,000	2,163,000	1,296,000
Long-Term Debt	11,975,000	11,863,000	10,710,000	9,535,000
Preferred Stock	907,000	907,000	907,000	907,000
Common Equity	9,768,000	10,424,000	10,188,000	9,374,000
Total	24,652,000	25,695,000	23,968,000	21,112,000

ETR

Short Term Debt	738,062	706,853	369,284	913,205
Long-Term Debt	11,215,692	11,517,382	14,894,748	11,413,669
Preferred Stock	311,033	311,029	311,023	311,019
Common Equity	8,630,406	7,966,592	7,976,923	7,322,805
Total	20,895,193	20,501,856	23,551,978	19,960,698

FE

Short Term Debt	4,541,000	4,873,000	4,901,000	5,116,000
Long-Term Debt	9,697,000	9,100,000	8,674,000	8,603,000
Preferred Stock				
Common Equity	8,250,000	8,283,000	9,301,000	9,221,000
Total	22,488,000	22,256,000	22,876,000	22,940,000

IDA

Short Term Debt	90,133	86,528	7,817	8,643
Long-Term Debt	1,279,884	1,183,451	1,273,028	1,153,454
Preferred Stock				
Common Equity	1,308,686	1,302,437	1,270,660	1,224,648
Total	2,678,703	2,572,416	2,551,505	2,386,745

NU

Short Term Debt	655,421	774,102	622,648	177,184
Long-Term Debt	5,875,179	5,702,099	5,560,685	5,703,694
Preferred Stock				
Common Equity	3,456,072	3,020,312	3,015,981	2,939,456
Total	9,986,672	9,496,513	9,199,314	8,820,334

NST

Short Term Debt	639,964	98,024	287,462	6,106
Long-Term Debt	1,868,975	2,012,467	2,720,102	2,014,220
Preferred Stock	43,000	43,000	43,000	43,000
Common Equity	1,810,506	1,788,155	1,787,520	1,778,484
Total	4,362,445	3,941,646	4,838,084	3,841,810

PCG

Short Term Debt	759,000	1,257,000	2,301,000	756,000
Long-Term Debt	10,705,000	10,254,000	9,126,000	7,721,000
Preferred Stock	258,000	258,000	258,000	258,000
Common Equity	10,404,000	9,787,000	9,139,000	8,897,000
Total	22,126,000	21,556,000	20,824,000	17,632,000

PGN

Short Term Debt	1,286,000	1,543,000	895,000	1,613,000
Long-Term Debt	12,014,000	11,159,000	10,389,000	10,393,000
Preferred Stock	93,000	93,000	93,000	93,000
Common Equity	9,261,000	8,780,000	8,827,000	8,700,000
Total	22,654,000	21,575,000	20,204,000	20,799,000

UIL

Short Term Debt	215,286	203,286	230,286	202,286
Long-Term Debt	591,866	549,031	475,031	475,031
Preferred Stock				
Common Equity	476,943	474,579	475,175	463,243
Total	1,284,095	1,226,896	1,180,492	1,140,560

XEL

Short Term Debt	953,865	1,089,561	1,384,437	1,534,615
Long-Term Debt	8,010,693	8,072,490	7,825,158	7,485,934
Preferred Stock	104,980	104,980	104,980	104,980
Common Equity	7,154,062	7,068,721	6,953,320	6,479,450
Total	16,223,600	16,335,752	16,267,895	15,604,979

Summary

	3/31/09	12/31/08	9/30/08	6/30/08
Short Term Debt	7.96%	6.95%	7.02%	6.32%
Long-Term Debt	48.78%	49.59%	49.72%	49.56%
Preferred Stock	0.76%	0.77%	0.77%	0.85%
Common Equity	42.50%	42.70%	42.48%	43.28%
Total	100.00%	100.00%	100.00%	100.00%

ALE

	3/31/09	12/31/08	9/30/08	6/30/08
Short Term Debt	0.94%	0.73%	1.27%	1.13%
Long-Term Debt	42.09%	41.26%	39.67%	41.03%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Common Equity	56.97%	58.01%	59.06%	57.84%
Total	100.00%	100.00%	100.00%	100.00%

AEP

Short Term Debt	10.27%	8.46%	7.03%	7.97%
Long-Term Debt	53.39%	54.22%	54.29%	54.64%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Common Equity	36.33%	37.32%	38.68%	37.40%
Total	100.00%	100.00%	100.00%	100.00%

CV

Short Term Debt	1.61%	1.33%	0.99%	3.24%
Long-Term Debt	43.77%	43.03%	45.85%	47.61%
Preferred Stock	2.14%	2.20%	2.24%	2.20%
Common Equity	52.47%	53.44%	50.92%	46.95%
Total	100.00%	100.00%	100.00%	100.00%

CNL

Short Term Debt	4.30%	4.46%	3.32%	3.10%
Long-Term Debt	51.31%	51.29%	49.34%	50.41%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Common Equity	44.39%	44.25%	47.34%	46.49%
Total	100.00%	100.00%	100.00%	100.00%

DPL

Short Term Debt	14.14%	3.93%	4.21%	4.24%
Long-Term Debt	49.37%	60.20%	60.71%	61.00%
Preferred Stock	0.89%	0.89%	0.96%	0.96%
Common Equity	35.60%	34.97%	34.13%	33.80%
Total	100.00%	100.00%	100.00%	100.00%

EIX

Short Term Debt	8.12%	9.73%	9.02%	6.14%
Long-Term Debt	48.58%	46.17%	44.68%	45.16%
Preferred Stock	3.68%	3.53%	3.78%	4.30%
Common Equity	39.62%	40.57%	42.51%	44.40%
Total	100.00%	100.00%	100.00%	100.00%

ETR

Short Term Debt	3.53%	3.45%	1.57%	4.58%
Long-Term Debt	53.68%	56.18%	63.24%	57.18%
Preferred Stock	1.49%	1.52%	1.32%	1.56%
Common Equity	41.30%	38.86%	33.87%	36.69%
Total	100.00%	100.00%	100.00%	100.00%

FE

Short Term Debt	20.19%	21.90%	21.42%	22.30%
Long-Term Debt	43.12%	40.89%	37.92%	37.50%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Common Equity	36.69%	37.22%	40.66%	40.20%
Total	100.00%	100.00%	100.00%	100.00%

IDA

Short Term Debt	3.36%	3.36%	0.31%	0.36%
Long-Term Debt	47.78%	46.01%	49.89%	48.33%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Common Equity	48.86%	50.63%	49.80%	51.31%
Total	100.00%	100.00%	100.00%	100.00%

NU

Short Term Debt	6.56%	8.15%	6.77%	2.01%
Long-Term Debt	58.83%	60.04%	60.45%	64.67%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Common Equity	34.61%	31.80%	32.78%	33.33%
Total	100.00%	100.00%	100.00%	100.00%

NST

Short Term Debt	14.67%	2.49%	5.94%	0.16%
Long-Term Debt	42.84%	51.06%	56.22%	52.43%
Preferred Stock	0.99%	1.09%	0.89%	1.12%
Common Equity	41.50%	45.37%	36.95%	46.29%
Total	100.00%	100.00%	100.00%	100.00%

PCG

Short Term Debt	3.43%	5.83%	11.05%	4.29%
Long-Term Debt	48.38%	47.57%	43.82%	43.79%
Preferred Stock	1.17%	1.20%	1.24%	1.46%
Common Equity	47.02%	45.40%	43.89%	50.46%
Total	100.00%	100.00%	100.00%	100.00%

PGN

Short Term Debt	5.68%	7.15%	4.43%	7.76%
Long-Term Debt	53.03%	51.72%	51.42%	49.97%
Preferred Stock	0.41%	0.43%	0.46%	0.45%
Common Equity	40.88%	40.70%	43.69%	41.83%
Total	100.00%	100.00%	100.00%	100.00%

UIL

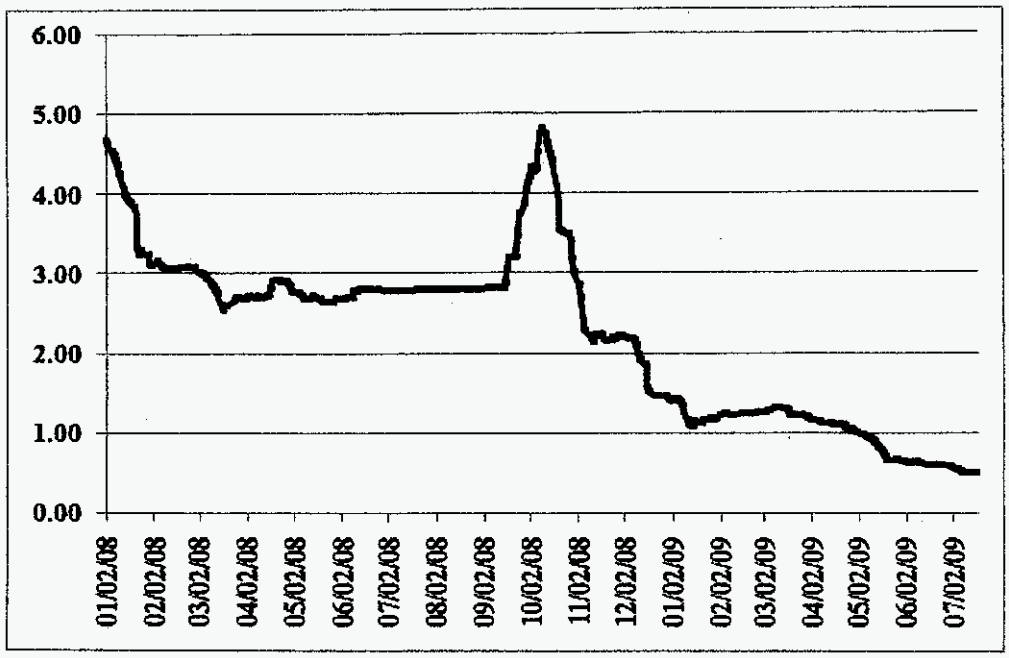
Short Term Debt	16.77%	16.57%	19.51%	17.74%
Long-Term Debt	46.09%	44.75%	40.24%	41.65%
Preferred Stock	0.00%	0.00%	0.00%	0.00%
Common Equity	37.14%	38.68%	40.25%	40.62%
Total	100.00%	100.00%	100.00%	100.00%

XEL

Short Term Debt	5.88%	6.67%	8.51%	9.83%
Long-Term Debt	49.38%	49.42%	48.10%	47.97%
Preferred Stock	0.65%	0.64%	0.65%	0.67%
Common Equity	44.10%	43.27%	42.74%	41.52%
Total	100.00%	100.00%	100.00%	100.00%

Exhibit JRW-5
Progress Energy Florida, Inc.

Three-Month LIBOR Rates



Key Rates

	CURRENT	1 MONTH PRIOR	3 MONTH PRIOR	6 MONTH PRIOR	1 YEAR PRIOR
FED FUNDS RATE	.18	.20	.25	.38	.50
FED RESERVE TARGET RATE	.25	.25	.25	.25	2.00
PRIME RATE	3.25	3.25	3.25	3.25	5.00
US UNEMPLOYMENT RATE	9.50	9.40	8.50	7.20	5.60
1-MONTH LIBOR	.28	.30	.41	.44	2.46
3-MONTH LIBOR	.47	.56	1.01	1.23	2.79

Q1 2009	2.98%	Average 3-Month LIBOR Rate - 2009
Q2 2009	2.75%	1.00%
Q3 2009	2.95%	Current 3-Month LIBOR Rate
Q4 2009	1.94%	0.47%
Average	2.66%	

Base Commercial Paper Rate Based on Projected 3-Month LIBOR Rate	4.50%
Projected 3-Month LIBOR Rate	2.66%
CP Yield Spread over 3-Month LIBOR	1.85%
Average 3-Month LIBOR Rate - 2009	1.00%
Base Commercial Paper Rate Based on Actual 3-Month LIBOR Rate	2.85%
Credit Fees	0.21%
Short-Term Debt Cost Rate	3.06%

Exhibit JRW-5
Progress Energy Florida, Inc.
Ten-Year Utility Bond Yields

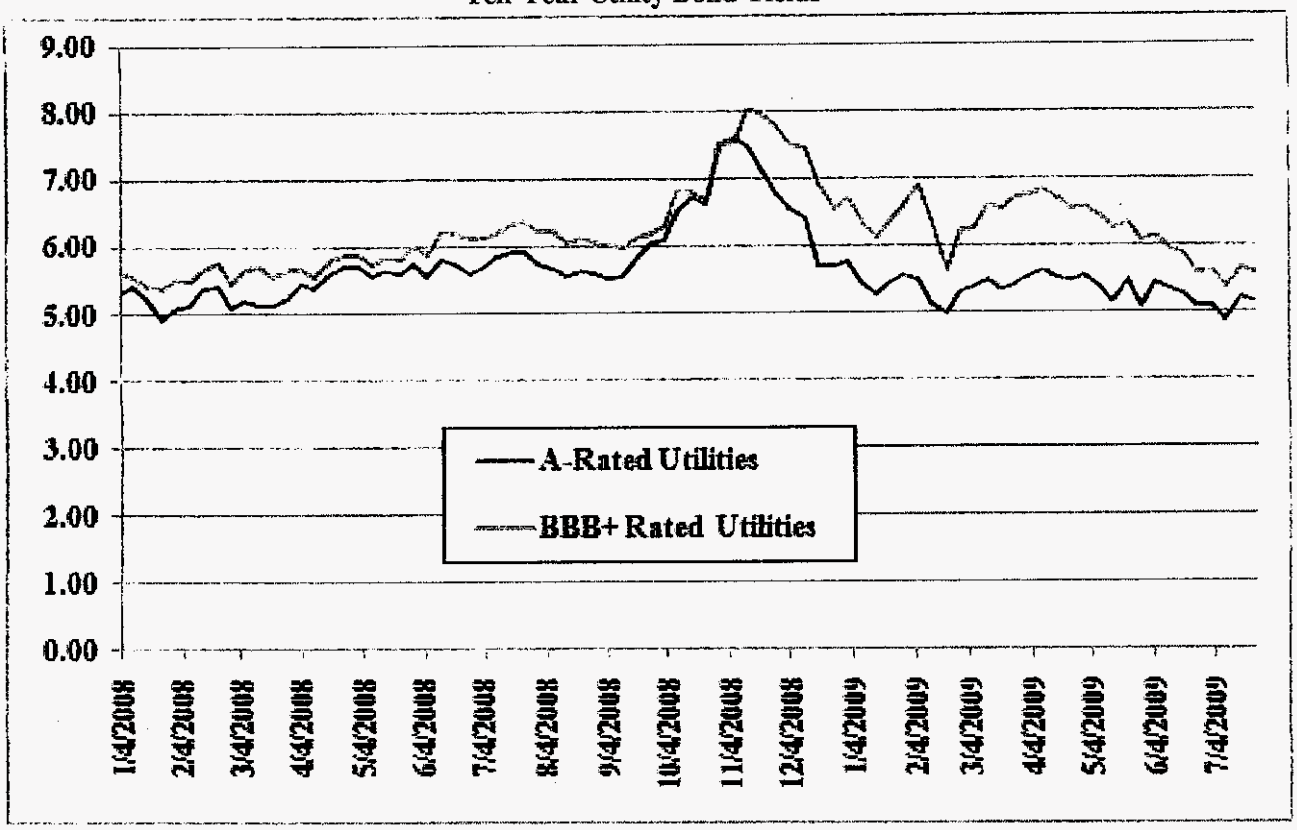
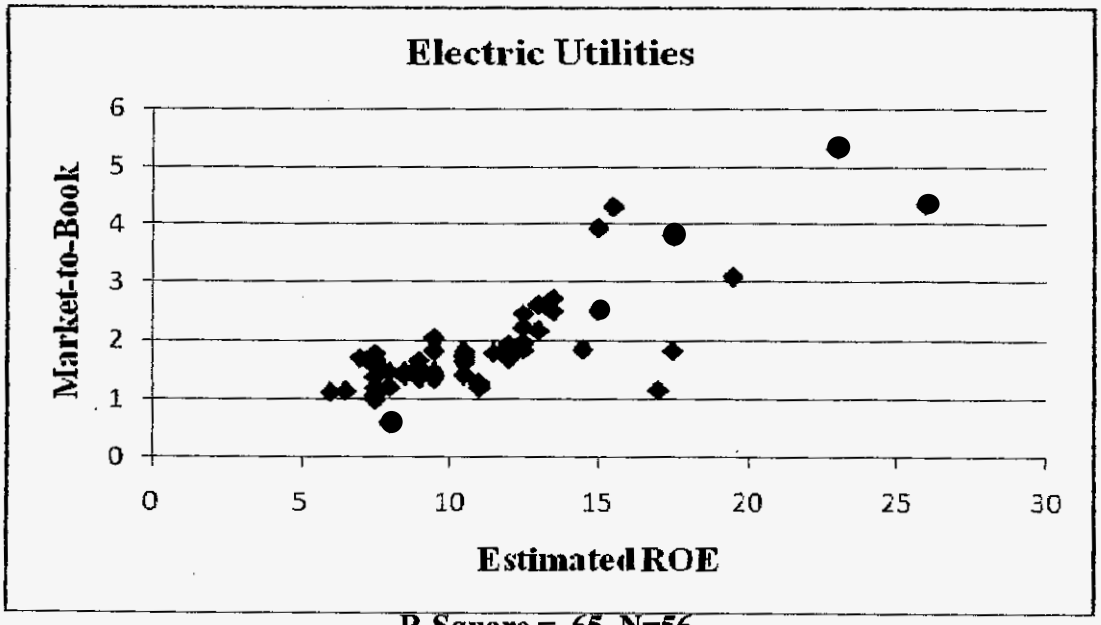


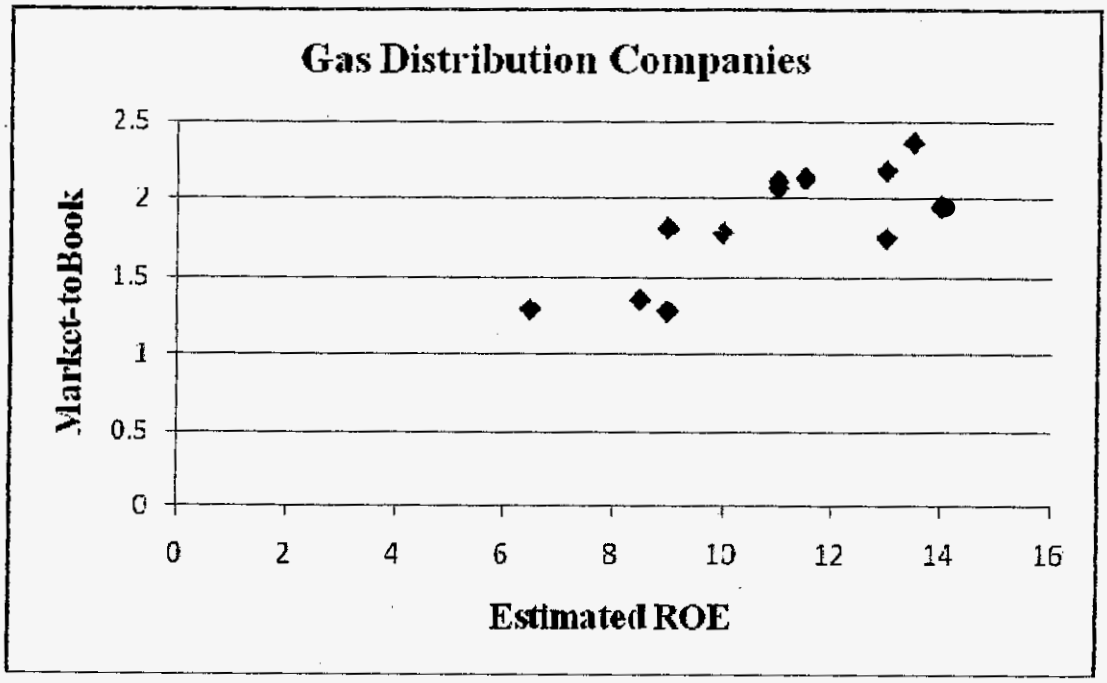
Exhibit JRW-6

Panel A



R-Square = .65, N=56.

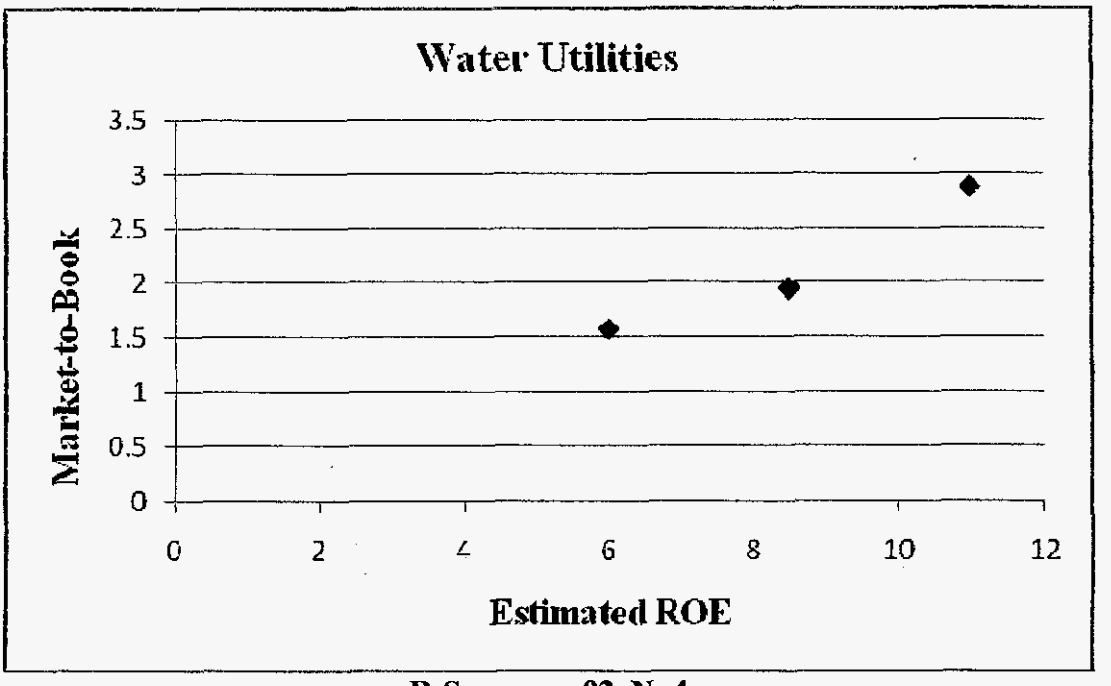
Panel B



R-Square = .60, N=12.

Exhibit JRW-6

Panel C



R-Square = .92, N=4.

Exhibit JRW-7
Long-Term 'A' Rated Public Utility Bonds

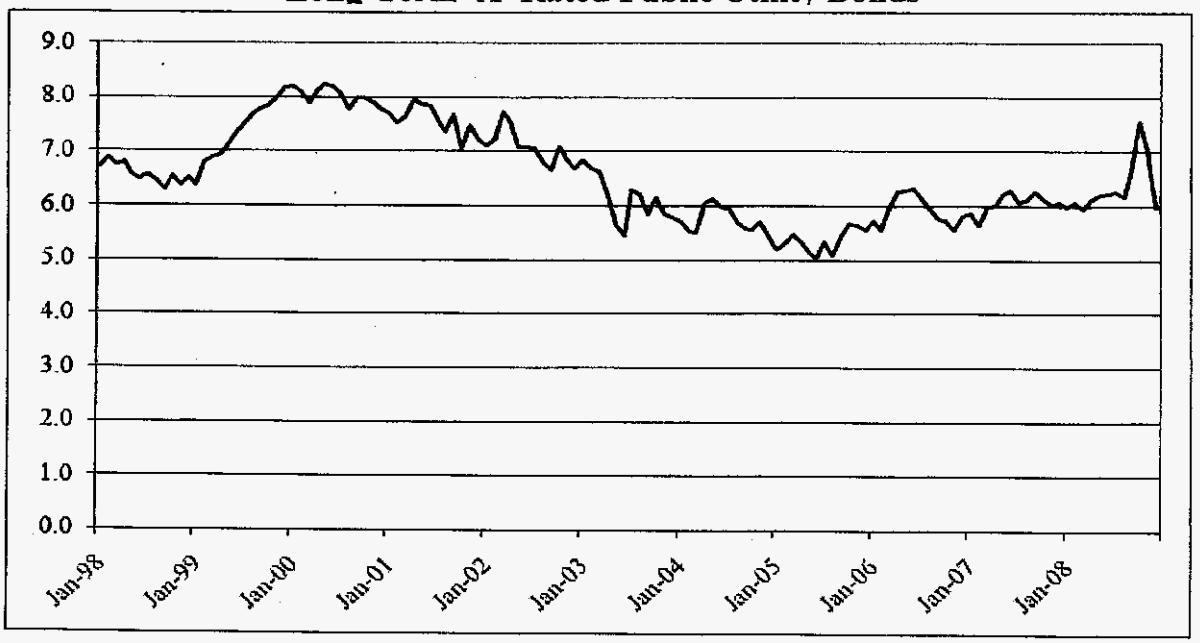
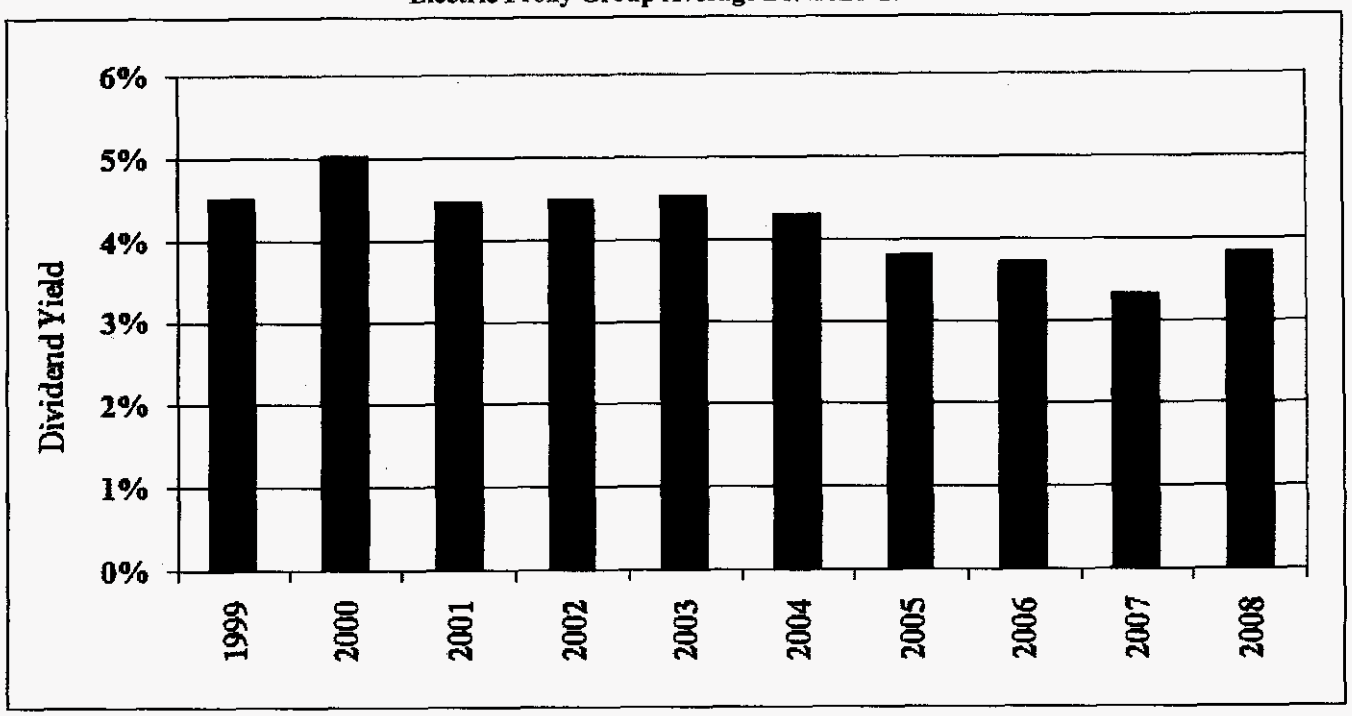
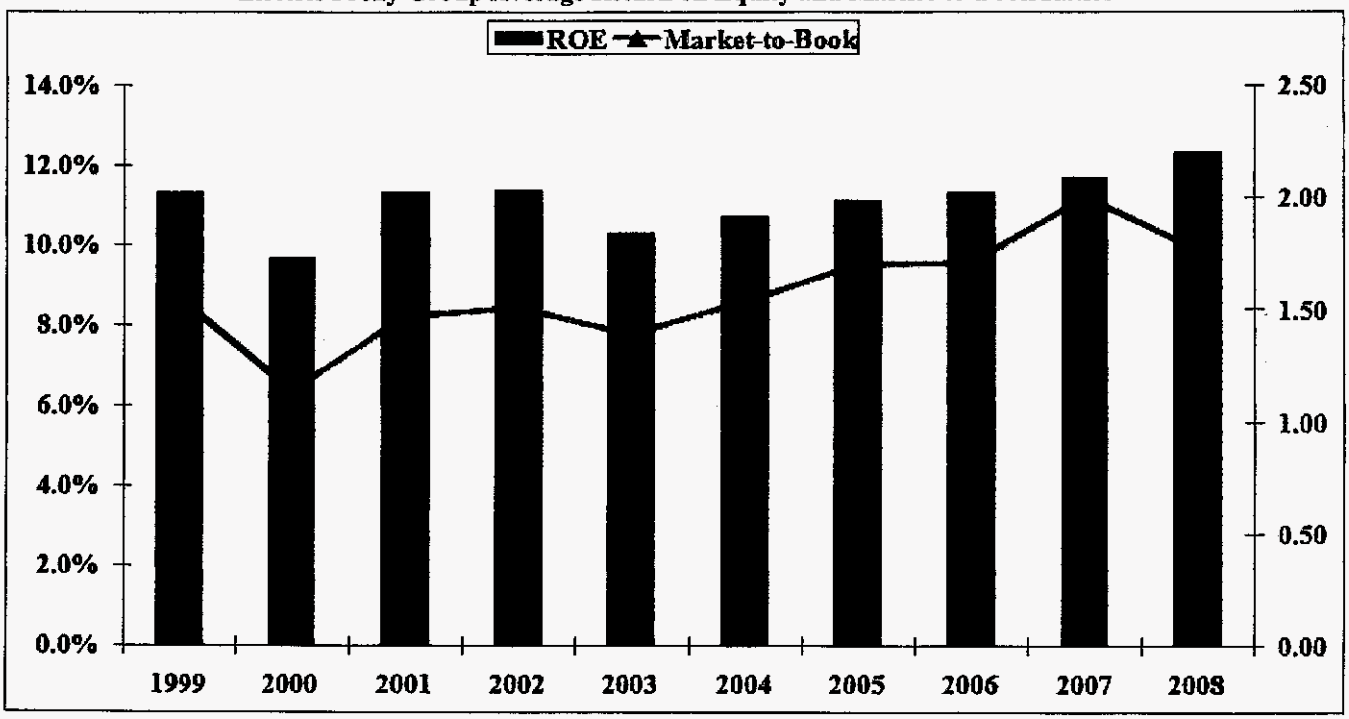


Exhibit JRW-7
Electric Proxy Group Average Dividend Yield



Data Source: *Value Line Investment Survey.*

Exhibit JRW-7
Electric Proxy Group Average Return on Equity and Market-to-Book Ratios



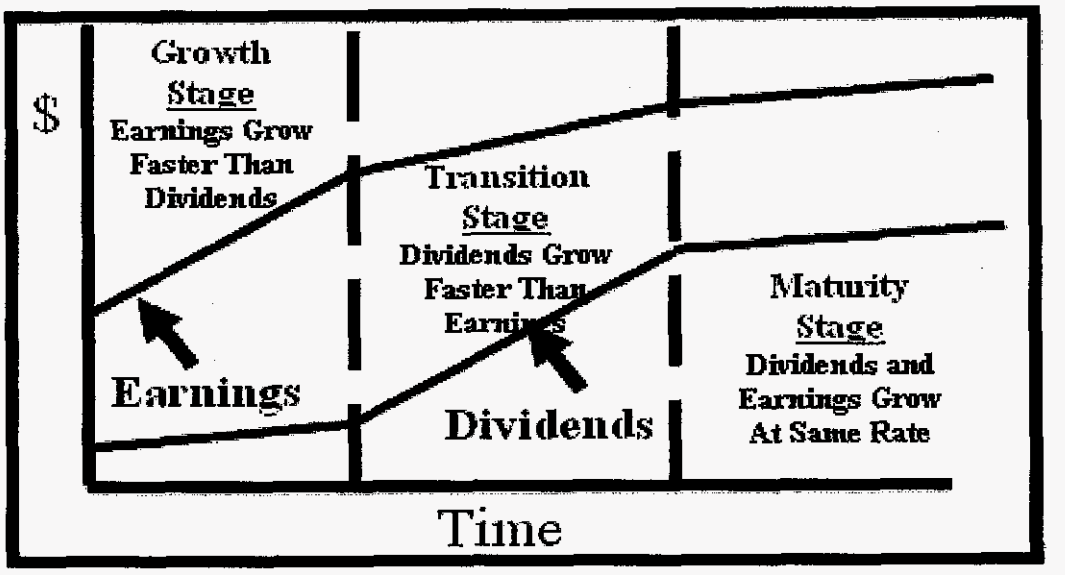
Data Source: *Value Line Investment Survey.*

Exhibit JRW-8

Industry Average Betas

Industry Name	No.	Beta	Industry Name	No.	Beta	Industry Name	No.	Beta
Public/Private Equity	10	2.08	Homebuilding	32	1.36	Trucking	33	1.17
Coal	18	1.98	R.E.I.T.	144	1.35	Medical Supplies	252	1.17
Steel (Integrated)	14	1.96	Petroleum (Integrated)	25	1.34	Drug	342	1.16
Semiconductor	122	1.81	Manuf. Housing/RV	18	1.32	Newspaper	16	1.16
Semiconductor Equip	16	1.78	Retail Automotive	16	1.31	Air Transport	44	1.15
Steel (General)	20	1.71	Electronics	173	1.31	Apparel	53	1.14
Hotel/Gaming	68	1.70	Investment Co.(Foreign)	16	1.31	Office Equip/Supplies	26	1.11
Metals & Mining (Div.)	78	1.69	Maritime	56	1.30	Environmental	79	1.11
Entertainment	84	1.66	Computers/Peripherals	125	1.29	Medical Services	160	1.10
Power	66	1.63	Furn/Home Furnishings	34	1.29	Household Products	26	1.08
Auto Parts	54	1.56	Aerospace/Defense	66	1.27	Healthcare Information	29	1.05
Oilfield Svcs/Equip.	112	1.56	Financial Svcs. (Div.)	296	1.27	Retail Building Supply	8	1.01
Cable TV	25	1.56	Packaging & Container	33	1.27	Retail Store	38	1.01
Metal Fabricating	35	1.56	Chemical (Basic)	19	1.26	Toiletries/Cosmetics	23	0.95
Wireless Networking	57	1.54	Retail (Special Lines)	155	1.26	Beverage	41	0.95
E-Commerce	54	1.50	Restaurant	68	1.26	Pharmacy Services	19	0.94
Telecom. Equipment	110	1.49	Biotechnology	108	1.25	Insurance (Prop/Cas.)	78	0.91
Auto & Truck	20	1.49	Railroad	15	1.25	Bank (Midwest)	39	0.91
Heavy Construction	14	1.48	Diversified Co.	113	1.25	Reinsurance	11	0.91
Precision Instrument	90	1.47	Petroleum (Producing)	188	1.24	Oil/Gas Distribution	19	0.89
Entertainment Tech	33	1.45	Publishing	27	1.24	Water Utility	16	0.86
Human Resources	31	1.44	Shoe	19	1.23	Bank (Canadian)	8	0.86
Advertising	30	1.43	Utility (Foreign)	5	1.23	Grocery	14	0.84
Telecom. Services	140	1.43	Computer Software/Svcs	322	1.22	Educational Services	34	0.84
Precious Metals	75	1.41	Canadian Energy	12	1.22	Investment Co.	17	0.83
Internet	208	1.41	Information Services	34	1.22	Electric Util. (Central)	24	0.82
Recreation	64	1.41	Chemical (Diversified)	33	1.21	Food Processing	109	0.80
Funeral Services	6	1.41	Paper/Forest Products	38	1.20	Electric Utility (West)	16	0.79
Building Materials	52	1.39	Natural Gas (Div.)	34	1.20	Electric Utility (East)	26	0.74
Machinery	124	1.39	Industrial Services	167	1.20	Food Wholesalers	18	0.73
Property Management	17	1.38	Chemical (Specialty)	88	1.18	Bank	477	0.71
Electrical Equipment	83	1.37	Foreign Electronics	10	1.18	Tobacco	12	0.71
Securities Brokerage	32	1.37	Insurance (Life)	35	1.17	Natural Gas Utility	25	0.69
Data Source: http:// www.stern.nyu.edu/~adamodar.						Thrift	234	0.66
						Total Market	**6870**	**1.19**

Exhibit JRW-9
Three-Stage DCF Model



Source: William F. Sharpe, Gordon J. Alexander, and Jeffrey V. Bailey, Investments (Prentice-Hall, 1995), pp. 590-91.

Exhibit JRW-10

Progress Energy Florida, Inc.
Discounted Cash Flow Analysis

Panel A
Electric Proxy Group

Dividend Yield*	5.15%
Adjustment Factor	1.02375
Adjusted Dividend Yield	5.27%
Growth Rate**	4.75%
Equity Cost Rate	10.0%

* Page 2 of Exhibit JRW-10

** Based on data provided on pages 3, 4, 5, and 6 of Exhibit JRW-10

Panel B
Vander Weide Proxy Group

Dividend Yield*	5.35%
Adjustment Factor	1.025
Adjusted Dividend Yield	5.48%
Growth Rate**	5.00%
Equity Cost Rate	10.5%

* Page 2 of Exhibit JRW-10

** Based on data provided on pages 3, 4, 5, and 6 of Exhibit JRW-10

Exhibit JRW-10

Progress Energy Florida, Inc.
Monthly Dividend Yields

Panel A
Electric Proxy Group

Company	Mar	Apr	May	June	July	Aug	Mean
ALLETE, Inc. (NYSE-ALE)	6.2%	6.4%	7.0%	6.7%	6.1%	6.0%	6.4%
American Electric Power Co. (NYSE-AEP)	5.4%	5.9%	6.1%	6.6%	5.2%	5.5%	5.8%
Central Vermont Public Serv. Corp. (NYSE-CV)	3.8%	4.8%	5.6%	5.6%	5.2%	5.0%	5.0%
Cleco Corporation (NYSE-CNL)	4.4%	4.2%	4.1%	4.3%	4.0%	4.0%	4.2%
DPL Inc.(NYSE-DPL)	5.6%	5.1%	5.0%	5.4%	5.0%	4.8%	5.2%
Edison International (NYSE-EIX)	4.4%	4.3%	4.5%	4.4%	4.0%	3.9%	4.3%
Entergy Corporation (NYSE-ETR)	4.3%	4.4%	4.5%	4.1%	3.7%	4.0%	4.2%
FirstEnergy Corporation (NYSE-FE)	4.6%	5.7%	5.6%	6.0%	4.2%	5.4%	5.3%
IDACORP, Inc. (NYSE-IDA)	4.9%	5.0%	5.2%	5.4%	4.7%	4.6%	5.0%
Northeast Utilities (NYSE-NU)	3.8%	4.4%	4.5%	4.6%	3.8%	4.3%	4.2%
NSTAR (NYSE-NST)	4.5%	4.8%	4.9%	5.2%	4.7%	4.8%	4.8%
PG&E Corporation (NYSE-PCG)	4.4%	4.7%	4.5%	4.7%	4.1%	4.4%	4.5%
Progress Energy Inc. (NYSE-PGN)	6.6%	7.0%	7.2%	7.3%	6.3%	6.6%	6.8%
UIL Holdings Corporation (NYSE-UIL)	7.3%	8.0%	7.6%	7.3%	7.6%	7.5%	7.6%
Xcel Energy Inc. (NYSE-XEL)	5.3%	5.2%	5.2%	5.5%	5.2%	5.2%	5.3%
Mean	5.0%	5.3%	5.4%	5.5%	4.9%	5.1%	5.2%

Source: *AUS Utility Reports*, monthly issues.

Panel B
Vander Weide Proxy Group

Company	Mar	Apr	May	June	July	Aug	Mean
Ameren Corporation (NYSE-AEE)	9.5%	7.0%	6.9%	6.6%	6.3%	6.3%	7.1%
American Electric Power Co. (NYSE-AEP)	5.4%	5.9%	6.1%	6.6%	5.2%	5.5%	5.8%
Consolidated Edison, Inc. (NYSE-ED)	6.2%	6.2%	6.1%	6.8%	6.3%	6.2%	6.3%
Dominion Resources, Inc. (NYSE-D)	5.4%	5.6%	5.9%	5.7%	5.2%	5.3%	5.5%
DPL Inc.(NYSE-DPL)	5.6%	5.1%	5.0%	5.4%	5.0%	4.8%	5.2%
Edison International (NYSE-EIX)	4.4%	4.3%	4.5%	4.4%	4.0%	3.9%	4.3%
Entergy Corporation (NYSE-ETR)	4.3%	4.4%	4.5%	4.1%	3.7%	4.0%	4.2%
Exelon Corporation (NYSE-EXC)	4.2%	4.7%	4.6%	4.4%	4.2%	4.1%	4.4%
FirstEnergy Corporation (NYSE-FE)	4.6%	5.7%	5.6%	6.0%	4.2%	5.4%	5.3%
FPL Group, Inc. (NYSE-FPL)	3.6%	3.8%	3.7%	3.5%	3.5%	3.3%	3.6%
Northeast Utilities (NYSE-NU)	3.8%	4.4%	4.5%	4.6%	3.8%	4.3%	4.2%
PG&E Corporation (NYSE-PCG)	4.4%	4.7%	4.5%	4.7%	4.1%	4.4%	4.5%
Pinnacle West Capital Corp. (NYSE-PNW)	6.9%	8.0%	7.8%	8.0%	7.1%	6.8%	7.4%
Pepco Holdings, Inc. (NYSE-POM)	6.6%		9.0%	9.1%	8.1%	7.8%	8.1%
Portland General Electric (NYSE-POR)	6.9%	5.4%	5.8%	5.7%	5.1%	5.1%	5.7%
Progress Energy Inc. (NYSE-PGN)	6.6%	7.0%	7.2%	7.3%	6.3%	6.6%	6.8%
SCANA Corporation (NYSE-SCG)	5.9%	3.6%	6.1%	6.5%	5.9%	5.6%	5.6%
SEMPRA Energy (NYSE-SRE)	3.5%	4.3%	3.4%	3.5%	3.2%	3.2%	3.5%
Southern Company (NYSE-SO)	5.4%	5.5%	5.6%	6.2%	4.7%	5.6%	5.5%
TECO Energy, Inc. (NYSE-TE)	8.0%	7.0%	7.7%	7.2%	6.7%	6.7%	7.2%
Vectren Corporation (NYSE-VVC)	6.1%	6.7%	6.6%	6.2%	5.6%	5.7%	6.2%
Wisconsin Energy Corporation (NYSE-WEC)	3.2%	3.4%	3.4%	3.6%	3.3%	3.2%	3.4%
Westar Energy, Inc. (NYSE-WR)	6.5%	6.9%	6.9%	7.1%	6.4%	6.3%	6.7%
Xcel Energy Inc. (NYSE-XEL)	5.3%	5.2%	5.2%	5.5%	5.2%	5.2%	5.3%
Mean	5.5%	5.4%	5.7%	5.8%	5.1%	5.2%	5.5%

Source: *AUS Utility Reports*, monthly issues.

Exhibit JRW-10

Progress Energy Florida, Inc.
DCF Equity Cost Growth Rate Measures
***Value Line* Historic Growth Rates**

Panel A
Electric Proxy Group

Company	*Value Line* Historic Growth					
	Past 10 Years			Past 5 Years		
	Earnings	Dividends	Book Value	Earnings	Dividends	Book Value
ALLETE, Inc. (NYSE-ALE)	NA	NA	NA	NA	NA	NA
American Electric Power Co. (NYSE-AEP)	-0.5%	-4.0%	NA	0.0%	-6.0%	2.5%
Central Vermont Public Serv. Corp. (NYSE-CV)	5.0%	0.5%	1.5%	3.5%	1.0%	1.5%
Cleco Corporation (NYSE-CNL)	3.0%	1.5%	6.5%	0.5%	0.5%	9.0%
DPL Inc.(NYSE-DPL)	3.5%	1.5%	-1.0%	7.0%	2.0%	2.5%
Edison International (NYSE-EIX)	7.0%	1.5%	6.0%	13.5%	0.0%	14.5%
Entergy Corporation (NYSE-ETR)	9.5%	4.5%	4.0%	10.5%	13.0%	3.0%
FirstEnergy Corporation (NYSE-FE)	7.5%	3.0%	5.0%	12.5%	6.5%	3.0%
IDACORP, Inc. (NYSE-IDA)	-1.0%	-4.5%	3.5%	1.5%	-8.0%	3.0%
Northeast Utilities (NYSE-NU)	NA	3.5%	1.0%	3.0%	8.5%	2.0%
NSTAR (NYSE-NST)	4.5%	4.0%	4.0%	4.0%	6.0%	5.0%
PG&E Corporation (NYSE-PCG)	4.5%	0.5%	1.5%	26.5%	0.0%	18.0%
Progress Energy Inc. (NYSE-PGN)	-0.5%	2.5%	5.5%	-6.5%	2.0%	2.5%
UIL Holdings Corporation (NYSE-UIL)	0.0%	0.0%	0.0%	0.0%	0.0%	-2.0%
Xcel Energy Inc. (NYSE-XEL)	-2.5%	-4.0%	-0.5%	1.0%	-4.0%	1.0%
Mean	3.1%	0.8%	2.8%	5.5%	1.5%	4.7%
Median	3.5%	1.5%	3.5%	3.3%	0.8%	2.8%
Data Source: *Value Line Investment Survey.*	Average of Mean and Median =			2.8%		

Panel B
Vander Weide Proxy Group

Company	*Value Line* Historic Growth					
	Past 10 Years			Past 5 Years		
	Earnings	Dividends	Book Value	Earnings	Dividends	Book Value
Ameren Corporation (NYSE-AEE)	0.5%	0.0%	3.5%	-1.5%	0.0%	5.0%
American Electric Power Co. (NYSE-AEP)	-0.5%	-4.0%	NA	0.0%	-6.0%	2.5%
Consolidated Edison, Inc. (NYSE-ED)	1.0%	1.0%	3.0%	1.5%	1.0%	3.5%
Dominion Resources, Inc. (NYSE-D)	7.5%	1.5%	2.5%	5.5%	2.5%	1.5%
DPL Inc.(NYSE-DPL)	3.5%	1.5%	-1.0%	7.0%	2.0%	2.5%
Edison International (NYSE-EIX)	7.0%	1.5%	6.0%	13.5%	0.0%	14.5%
Entergy Corporation (NYSE-ETR)	9.5%	4.5%	4.0%	10.5%	13.0%	3.0%
Exelon Corporation (NYSE-EXC)	NA	NA	NA	10.5%	15.0%	4.5%
FirstEnergy Corporation (NYSE-FE)	7.5%	3.0%	5.0%	12.5%	6.5%	3.0%
FPL Group, Inc. (NYSE-FPL)	7.0%	5.5%	7.0%	9.5%	7.0%	8.0%
Northeast Utilities (NYSE-NU)	NA	3.5%	1.0%	3.0%	8.5%	2.0%
PG&E Corporation (NYSE-PCG)	4.5%	0.5%	1.5%	26.5%	0.0%	18.0%
Pinnacle West Capital Corp. (NYSE-PNW)	0.0%	6.5%	3.5%	-1.0%	5.0%	3.0%
Pepco Holdings, Inc. (NYSE-POM)	NA	NA	NA	-2.0%	17.5%	1.5%
Portland General Electric (NYSE-POR)	NA	NA	NA	NA	NA	NA
Progress Energy Inc. (NYSE-PGN)	-0.5%	2.5%	5.5%	-6.5%	2.0%	2.5%
SCANA Corporation (NYSE-SCG)	3.0%	1.5%	4.5%	3.5%	6.5%	4.0%
SEMPRA Energy (NYSE-SRE)	9.0%	-2.0%	9.0%	9.0%	5.0%	16.0%
Southern Company (NYSE-SO)	3.0%	2.0%	1.5%	4.0%	3.0%	5.5%
TECO Energy, Inc. (NYSE-TE)	-4.0%	-4.0%	-2.0%	-5.0%	-9.0%	-6.5%
Vectren Corporation (NYSE-VVC)	NA	NA	NA	2.5%	3.5%	4.0%
Wisconsin Energy Corporation (NYSE-WEC)	7.5%	-4.0%	4.5%	6.0%	4.5%	7.5%
Westar Energy, Inc. (NYSE-WR)	1.5%	-6.5%	-4.0%	21.5%	-0.5%	1.0%
Xcel Energy Inc. (NYSE-XEL)	-2.5%	-4.0%	-0.5%	1.0%	-4.0%	1.0%
Mean	3.4%	0.5%	2.9%	5.7%	3.6%	4.7%
Median	3.0%	1.5%	3.5%	4.0%	3.0%	3.0%
Data Source: *Value Line Investment Survey.*	Average of Mean and Median =			3.2%		

Exhibit JRW-10

Progress Energy Florida, Inc.
DCF Equity Cost Growth Rate Measures
***Value Line* Projected Growth Rates**

Panel A
Electric Proxy Group

Company	*Value Line* Projected Growth Est'd. '06-'08 to '12-'14			*Value Line* Sustainable Growth		
	Earnings	Dividends	Book Value	Return on Equity	Retention Rate	Sustainable Growth
ALLETE, Inc. (NYSE-ALE)	-1.0%	3.0%	3.5%	9.0%	28.0%	2.5%
American Electric Power Co. (NYSE-AEP)	3.0%	3.0%	5.0%	10.5%	46.0%	4.8%
Central Vermont Public Serv. Corp. (NYSE-CV)	3.0%	0.0%	6.5%	6.5%	49.0%	3.2%
Cleco Corporation (NYSE-CNL)	9.5%	10.0%	5.5%	11.5%	38.0%	4.4%
DPL Inc.(NYSE-DPL)	8.0%	3.5%	11.0%	19.5%	50.0%	9.8%
Edison International (NYSE-EIX)	3.5%	4.5%	7.0%	11.0%	66.0%	7.3%
Entergy Corporation (NYSE-ETR)	6.0%	6.5%	6.5%	14.0%	54.0%	7.6%
FirstEnergy Corporation (NYSE-FE)	4.0%	4.5%	4.5%	14.0%	50.0%	7.0%
IDACORP, Inc. (NYSE-IDA)	4.5%	0.0%	5.0%	7.5%	56.0%	4.2%
Northeast Utilities (NYSE-NU)	8.0%	6.5%	5.0%	8.5%	49.0%	4.2%
NSTAR (NYSE-NST)	8.0%	5.5%	5.5%	14.5%	39.0%	5.7%
PG&E Corporation (NYSE-PCG)	6.5%	7.5%	6.5%	12.5%	50.0%	6.3%
Progress Energy Inc. (NYSE-PGN)	6.0%	1.0%	2.0%	9.5%	28.0%	2.7%
UIL Holdings Corporation (NYSE-UIL)	2.5%	0.0%	1.5%	11.0%	21.0%	2.3%
Xcel Energy Inc. (NYSE-XEL)	6.5%	3.0%	4.5%	10.5%	46.0%	4.8%
Mean	5.2%	3.9%	5.3%	11.3%	44.7%	5.1%
Median	6.0%	3.5%	5.0%	11.0%	49.0%	4.8%
Average of Mean and Median Figures =		4.8%			Average =	5.0%

Data Source: *Value Line Investment Survey.*

Panel B
Vander Weide Proxy Group

Company	*Value Line* Projected Growth Est'd. '06-'08 to '12-'14			*Value Line* Sustainable Growth		
	Earnings	Dividends	Book Value	Return on Equity	Retention Rate	Sustainable Growth
Ameren Corporation (NYSE-AEE)	2.5%	-6.5%	3.5%	8.0%	49.0%	3.9%
American Electric Power Co. (NYSE-AEP)	3.0%	3.0%	5.0%	10.5%	46.0%	4.8%
Consolidated Edison, Inc. (NYSE-ED)	2.5%	1.0%	4.0%	15.0%	45.0%	6.8%
Dominion Resources, Inc. (NYSE-D)	8.0%	7.0%	7.5%	15.0%	45.0%	6.8%
DPL Inc.(NYSE-DPL)	8.0%	3.5%	11.0%	19.5%	50.0%	9.8%
Edison International (NYSE-EIX)	3.5%	4.5%	7.0%	11.0%	66.0%	7.3%
Entergy Corporation (NYSE-ETR)	6.0%	6.5%	6.5%	14.0%	54.0%	7.6%
Exelon Corporation (NYSE-EXC)	7.5%	5.5%	9.0%	23.5%	58.0%	13.6%
FirstEnergy Corporation (NYSE-FE)	4.0%	4.5%	4.5%	14.0%	50.0%	7.0%
FPL Group, Inc. (NYSE-FPL)	10.0%	6.0%	8.5%	13.5%	60.0%	8.1%
Northeast Utilities (NYSE-NU)	8.0%	6.5%	5.0%	8.5%	49.0%	4.2%
PG&E Corporation (NYSE-PCG)	6.5%	7.5%	6.5%	12.5%	50.0%	6.3%
Pinnacle West Capital Corp. (NYSE-PNW)	3.0%	1.0%	1.0%	9.0%	33.0%	3.0%
Pepco Holdings, Inc. (NYSE-POM)	3.0%	0.0%	2.5%	8.5%	42.0%	3.6%
Portland General Electric (NYSE-POR)	5.5%	7.0%	3.0%	9.0%	43.0%	3.9%
Progress Energy Inc. (NYSE-PGN)	6.0%	1.0%	2.0%	9.5%	28.0%	2.7%
SCANA Corporation (NYSE-SCG)	4.0%	3.0%	4.5%	10.5%	39.0%	4.1%
SEMPRA Energy (NYSE-SRE)	5.0%	8.5%	8.0%	12.0%	63.0%	7.6%
Southern Company (NYSE-SO)	4.5%	4.0%	5.5%	14.0%	34.0%	4.8%
TECO Energy, Inc. (NYSE-TE)	4.5%	2.5%	4.5%	12.0%	36.0%	4.3%
Vectren Corporation (NYSE-VVC)	5.5%	3.0%	6.0%	10.0%	33.0%	3.3%
Westar Energy, Inc. (NYSE-WR)	4.0%	4.5%	6.0%	8.0%	36.0%	2.9%
Wisconsin Energy Corporation (NYSE-WEC)	8.0%	13.5%	6.0%	12.0%	52.0%	6.2%
Xcel Energy Inc. (NYSE-XEL)	6.5%	3.0%	4.5%	10.5%	46.0%	4.8%
Mean	5.4%	4.2%	5.5%	12.1%	46.1%	5.7%
Median	5.3%	4.3%	5.3%	11.5%	46.0%	4.8%
Average of Mean and Median Figures =		5.0%			Average =	5.3%

Data Source: *Value Line Investment Survey.*

Exhibit JRW-10

Progress Energy Florida, Inc.
DCF Equity Cost Growth Rate Measures
Analysts Projected EPS Growth Rate Estimates

Panel A
Electric Proxy Group

Company	Yahoo First Call	Zack's	Reuters	Average
ALLETE, Inc. (NYSE-ALE)	6.0%	4.0%	7.5%	5.8%
American Electric Power Co. (NYSE-AEP)	3.0%	4.3%	4.3%	3.9%
Central Vermont Public Serv. Corp. (NYSE-CV)	8.9%	N/A	N/A	8.9%
Cleco Corporation (NYSE-CNL)	11.7%	14.5%	13.2%	13.1%
DPL Inc.(NYSE-DPL)	9.3%	6.3%	12.5%	9.4%
Edison International (NYSE-EIX)	1.3%	6.3%	4.6%	4.1%
Entergy Corporation (NYSE-ETR)	9.0%	7.3%	8.8%	8.4%
FirstEnergy Corporation (NYSE-FE)	6.7%	7.3%	6.0%	6.7%
IDACORP, Inc. (NYSE-IDA)	5.0%	5.0%	5.0%	5.0%
Northeast Utilities (NYSE-NU)	8.3%	12.4%	7.8%	9.5%
NSTAR (NYSE-NST)	6.3%	6.4%	5.8%	6.1%
PG&E Corporation (NYSE-PCG)	7.1%	7.1%	6.9%	7.0%
Progress Energy Inc. (NYSE-PGN)	5.4%	4.7%	5.2%	5.1%
UIL Holdings Corporation (NYSE-UIL)	4.5%	4.1%	4.5%	4.3%
Xcel Energy Inc. (NYSE-XEL)	6.6%	5.3%	6.2%	6.0%
Median				6.1%

Data Sources: www.zacks.com,http://quote.yahoo.com, www.investor.reuters.com.

Panel B
Vander Weide Proxy Group

Company	Yahoo First Call	Zack's	Reuters	Average
Ameren Corporation (NYSE-AEE)	4.0%	4.0%	4.5%	4.2%
American Electric Power Co. (NYSE-AEP)	3.0%	4.3%	4.3%	3.9%
Consolidated Edison, Inc. (NYSE-ED)	2.4%	4.3%	4.0%	3.6%
Dominion Resources, Inc. (NYSE-D)	6.4%	5.5%	6.8%	6.2%
DPL Inc.(NYSE-DPL)	9.3%	6.3%	12.5%	9.4%
Edison International (NYSE-EIX)	1.3%	6.3%	4.6%	4.1%
Entergy Corporation (NYSE-ETR)	9.0%	7.3%	8.8%	8.4%
Exelon Corporation (NYSE-EXC)	2.7%	6.5%	5.0%	4.7%
FirstEnergy Corporation (NYSE-FE)	6.7%	7.3%	6.0%	6.7%
FPL Group, Inc. (NYSE-FPL)	9.6%	9.0%	9.3%	9.3%
Northeast Utilities (NYSE-NU)	8.3%	12.4%	7.8%	9.5%
PG&E Corporation (NYSE-PCG)	7.1%	7.1%	6.9%	7.0%
Pinnacle West Capital Corp. (NYSE-PNW)	5.7%	6.3%	3.6%	5.2%
Pepco Holdings, Inc. (NYSE-POM)	3.7%	4.0%	4.7%	4.1%
Portland General Electric (NYSE-POR)	7.0%	6.7%	7.2%	7.0%
Progress Energy Inc. (NYSE-PGN)	5.4%	4.7%	5.2%	5.1%
SCANA Corporation (NYSE-SCG)	5.4%	4.6%	7.2%	5.7%
SEMPRA Energy (NYSE-SRE)	6.6%	6.5%	6.5%	6.5%
Southern Company (NYSE-SO)	5.0%	7.5%	5.0%	5.8%
TECO Energy, Inc. (NYSE-TE)	9.0%	10.2%	11.8%	10.3%
Vectren Corporation (NYSE-VVC)	6.4%	7.1%	5.7%	6.4%
Wisconsin Energy Corporation (NYSE-WEC)	9.0%	8.5%	8.6%	8.7%
Westar Energy, Inc. (NYSE-WR)	3.3%	5.7%	3.7%	4.2%
Xcel Energy Inc. (NYSE-XEL)	6.6%	5.3%	6.2%	6.0%
Median				6.1%

Exhibit JRW-10

Progress Energy Florida, Inc.
DCF Growth Rate Indicators

Growth Rate Indicator	Electric Proxy Group	Vander Weide Proxy Group
Historic *Value Line* Growth in EPS, DPS, and BVPS	2.8%	3.2%
Projected *Value Line* Growth in EPS, DPS, and BVPS	4.8%	5.0%
Sustainable Growth ROE * Retention Rate	5.0%	5.3%
Projected EPS Growth from Yahoo, Zacks, and Reuters	6.1%	6.1%
Average of Historic and Projected Growth Rates	4.7%	4.9%

Exhibit JRW-11

Progress Energy Florida, Inc.
Capital Asset Pricing Model
Panel A
Electric Proxy Group

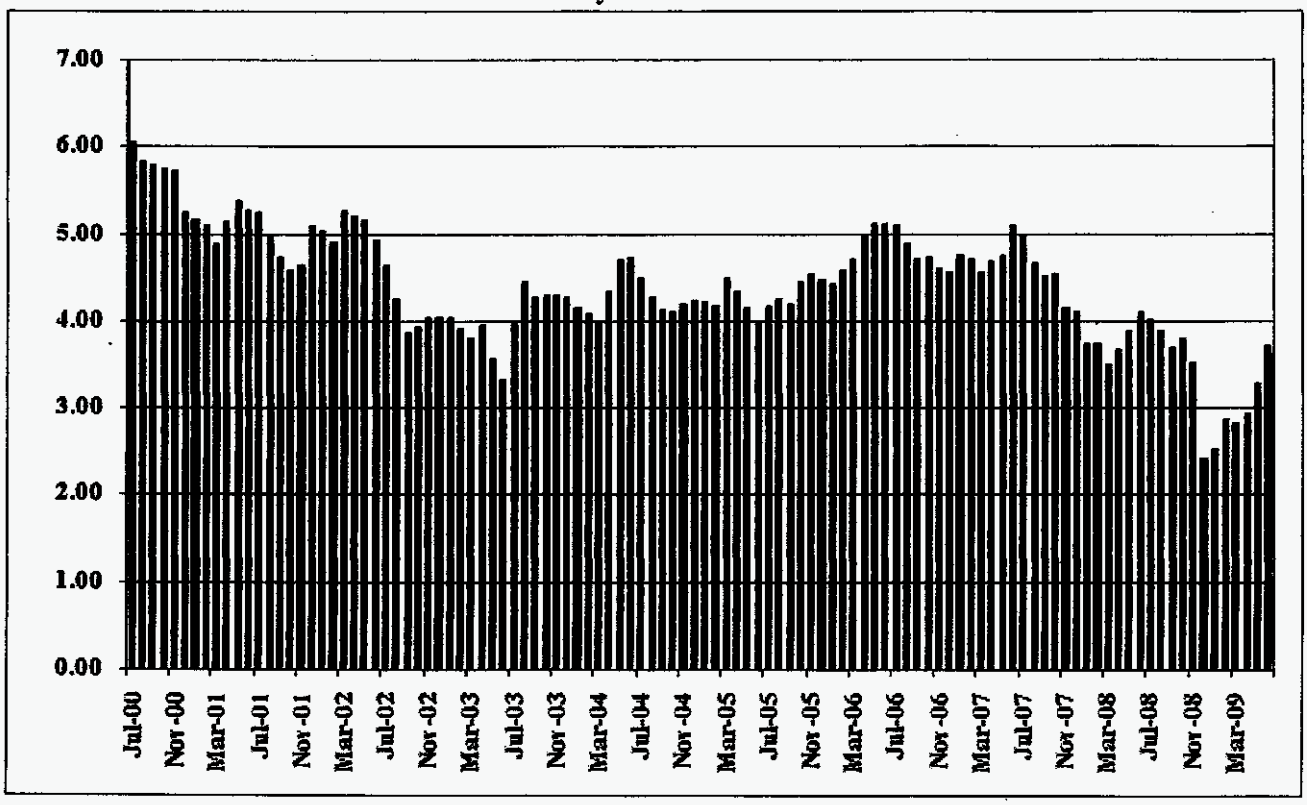
Risk-Free Interest Rate	**4.50%**
Beta*	**0.70**
Ex Ante Equity Risk Premium**	**4.37%**
CAPM Cost of Equity	**7.6%**

* See page 3 of Exhibit JRW-11

** See pages 5 and 6 of Exhibit JRW-11

Exhibit JRW-11

Panel A
Ten-Year U.S. Treasury Yields
January 2000-June 2009

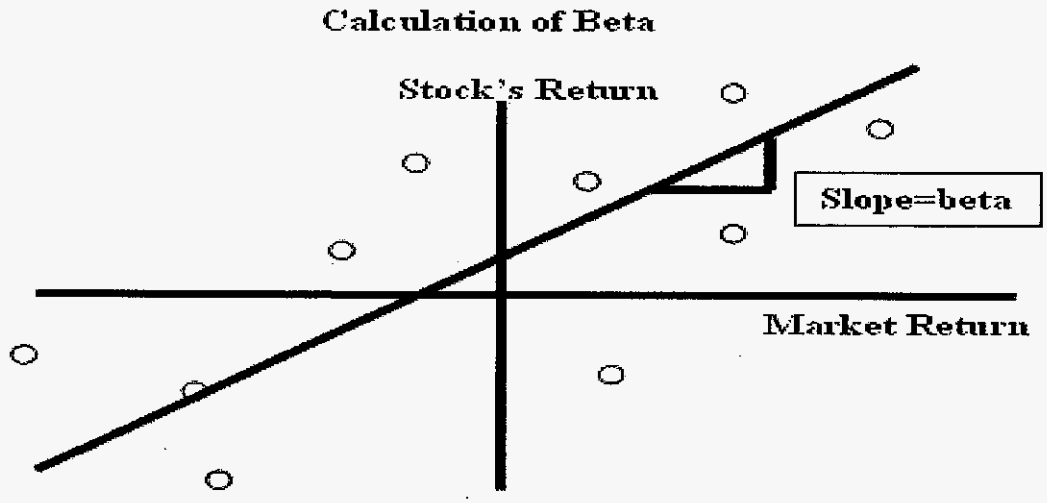


Panel B
Current Rates

U.S. Treasuries

	COUPON	MATURITY DATE	CURRENT PRICE/YIELD
3-MONTH	0.000	10/29/2009	0.17 / .18
6-MONTH	0.000	01/28/2010	0.24 / .25
12-MONTH	0.000	07/29/2010	0.46 / .47
2-YEAR	1.000	07/31/2011	99-24+ / 1.11
3-YEAR	1.500	07/15/2012	99-24 / 1.59
5-YEAR	2.625	07/31/2014	100-16½ / 2.51
7-YEAR	3.250	07/31/2016	100-21½ / 3.14
10-YEAR	3.125	05/15/2019	97-02+ / 3.48
30-YEAR	4.250	05/15/2039	99-06 / 4.30

Panel A



Panel B

Electric Proxy Group

Electric Proxy Group

Company	Beta
ALLETE, Inc. (NYSE-ALE)	0.70
American Electric Power Co. (NYSE-AEP)	0.75
Central Vermont Public Serv. Corp. (NYSE-CV)	0.80
Cleco Corporation (NYSE-CNL)	0.70
DPL Inc.(NYSE-DPL)	0.60
Edison International (NYSE-EIX)	0.80
Entergy Corporation (NYSE-ETR)	0.70
FirstEnergy Corporation (NYSE-FE)	0.85
IDACORP, Inc. (NYSE-IDA)	0.70
Northeast Utilities (NYSE-NU)	0.70
NSTAR (NYSE-NST)	0.65
PG&E Corporation (NYSE-PCG)	0.60
Progress Energy Inc. (NYSE-PGN)	0.65
UIL Holdings Corporation (NYSE-UIL)	0.70
Xcel Energy Inc. (NYSE-XEL)	0.65
Mean	0.70

Data Source: *Value Line Investment Survey.*

Company	Beta
Ameren Corporation (NYSE-AEE)	0.80
American Electric Power Co. (NYSE-AEP)	0.75
Consolidated Edison, Inc. (NYSE-ED)	0.65
Dominion Resources, Inc. (NYSE-D)	0.70
DPL Inc.(NYSE-DPL)	0.60
Edison International (NYSE-EIX)	0.80
Entergy Corporation (NYSE-ETR)	0.70
Exelon Corporation (NYSE-EXC)	0.85
FirstEnergy Corporation (NYSE-FE)	0.85
FPL Group, Inc. (NYSE-FPL)	0.75
Northeast Utilities (NYSE-NU)	0.65
PG&E Corporation (NYSE-PCG)	0.70
Pinnacle West Capital Corp. (NYSE-PNW)	0.70
Pepco Holdings, Inc. (NYSE-POM)	0.80
Portland General Electric (NYSE-POR)	0.70
Progress Energy Inc. (NYSE-PGN)	0.65
SCANA Corporation (NYSE-SCG)	0.70
SEMPRA Energy (NYSE-SRE)	0.90
Southern Company (NYSE-SO)	0.55
TECO Energy, Inc. (NYSE-TE)	0.80
Vectren Corporation (NYSE-VVC)	0.75
Westar Energy, Inc. (NYSE-WR)	0.75
Wisconsin Energy Corporation (NYSE-WEC)	0.65
Xcel Energy Inc. (NYSE-XEL)	0.65
Mean	0.73

Data Source: *Value Line Investment Survey.*

Exhibit JRW-11

Risk Premium Approaches

	Historical Ex Post Excess Returns	Surveys	Ex Ante Models and Market Data
Means of Assessing the Equity-Bond Risk Premium	Historical average is a popular proxy for the ex ante premium – but likely to be misleading	Investor and expert surveys can provide direct estimates of prevailing expected returns/premiums	Current financial market prices (simple valuation ratios or DCF-based measures) can give most objective estimates of feasible ex ante equity-bond risk premium
Problems/Debated Issues	Time variation in required returns and systematic selection and other biases have boosted valuations over time, and have exaggerated realized excess equity returns compared with ex ante expected premiums	Limited survey histories and questions of survey representativeness. Surveys may tell more about hoped-for expected returns than about objective required premiums due to irrational biases such as extrapolation.	Assumptions needed for DCF inputs, notably the trend earnings growth rate, make even these models' outputs subjective. The range of views on the growth rate, as well as the debate on the relevant stock and bond yields, leads to a range of premium estimates.

Source: Antti Ilmanen, Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003).

Exhibit JRW-11

Progress Energy Florida, Inc.
Capital Asset Pricing Model
Equity Risk Premium

Category	Study Authors	Publication Date	Time Period Of Study	Methodology	Return Measure	Range Low	Range High	Midpoint of Range	Mean	Average
Historical Risk Premium										
	Ibbotson	2009	1926-2008	Historical Stock Returns - Bond Returns	Arithmetic				5.60%	
					Geometric				3.90%	
	Bate	2008	1900-2007	Historical Stock Returns - Bond Returns	Geometric				4.50%	
	Shiller	2006	1926-2005	Historical Stock Returns - Bond Returns	Arithmetic				7.00%	
					Geometric				5.50%	
	Damodoran	2006	1926-2005	Historical Stock Returns - Bond Returns	Arithmetic				6.70%	
					Geometric				5.10%	
	Siegel	2005	1926-2005	Historical Stock Returns - Bond Returns	Arithmetic				6.10%	
					Geometric				4.60%	
	Dimson, Marsh, and Staunton	2006	1900-2005	Historical Stock Returns - Bond Returns	Arithmetic				5.50%	
	Goyal & Welch	2006	1872-2004	Historical Stock Returns - Bond Returns					4.77%	
	AVERAGE									5.39%
Ex Ante Models (Puzzle Research)										
	Claus Thomas	2001	1985-1998	Abnormal Earnings Model					3.00%	
	Arnott and Bernstein	2002	1810-2001	Fundamentals - Div Yld + Growth					2.40%	
	Constantinides	2002	1872-2000	Historical Returns & Fundamentals - P/D & P/E					6.90%	
	Cornell	1999	1926-1997	Historical Returns & Fundamental GDP/Earnings		3.50%	5.50%	4.50%	4.50%	
	Easton, Taylor, et al	2002	1981-1998	Residual Income Model					5.30%	
	Fama French	2002	1951-2000	Fundamental DCF with EPS and DPS Growth		2.55%	4.32%		3.44%	
	Harris & Marston	2001	1982-1998	Fundamental DCF with Analysts' EPS Growth					7.14%	
	Best & Byrne	2001								
	McKinsey	2002	1962-2002	Fundamental (P/E, D/P, & Earnings Growth)		3.50%	4.00%		3.75%	
	Siegel	2005	1802-2001	Historical Earnings Yield	Geometric				2.50%	
	Grabowski	2006	1926-2005	Historical and Projected		3.50%	6.00%	4.75%	4.75%	
	Maheu & McCurdy	2006	1885-2003	Historical Excess Returns, Structural Breaks,		4.02%	5.10%	4.56%	4.56%	
	Bostock	2004	1960-2002	Bond Yields, Credit Risk, and Income Volatility		3.90%	1.30%	2.60%	2.60%	
	Bakshi & Chen	2005	1982-1998	Fundamentals - Interest Rates					7.31%	
	Donaldson, Kamstra, & Kramer	2006	1952-2004	Fundamental, Dividend yld., Returns,, & Volatility		3.00%	4.00%	3.50%	3.50%	
	Campbell	2008	1982-2007	Historical & Projections (D/P & Earnings Growth)		4.10%	5.40%		4.75%	
	Best & Byrne	2001	Projection	Fundamentals - Div Yld + Growth					2.00%	
	Fernandez	2007	Projection	Required Equity Risk Premium					4.00%	
	DeLong & Magin	2008	Projection	Earnings Yield - TIPS					3.22%	
	Damodoran	2009	Projection	Fundamentals - Implied from FCF to Equity Model					6.43%	
	Social Security									
	Office of Chief Actuary		1900-1995							
	John Campbell	2001	1860-2000	Historical & Projections (D/P & Earnings Growth)	Arithmetic	3.00%	4.00%	3.50%	3.50%	
			Projected for 75 Years		Geometric	1.50%	2.50%	2.00%	2.00%	
	Peter Diamond	2001	Projected for 75 Years	Fundamentals (D/P, GDP Growth)		3.00%	4.80%	3.90%	3.90%	
	John Shoven	2001	Projected for 75 Years	Fundamentals (D/P, P/E, GDP Growth)		3.00%	3.50%	3.25%	3.25%	
	AVERAGE									4.12%
Surveys										
	Survey of Financial Forecasters	2009	10-Year Projection	About 50 Financial Forecastsers					1.94%	
	Duke - CFO Magazine Survey	2009	10-Year Projection	Approximately 500 CFOs					4.11%	
	Welch - Academics	2008	30-Year Projection	Random Academics		5.00%	5.74%	5.37%	5.94%	
	Fernandez - Academics	2009	Long-Term	Fernandez - Academics				6.50%		
	AVERAGE									4.00%
Building Block										
	Ibbotson and Chen	2009	1926-2008	Historical Supply Model (D/P & Earnings Growth)	Arithmetic			5.73%	4.68%	
					Geometric			3.62%		
	Woolridge		2009	Current Supply Model (D/P & Earnings Growth)					3.30%	
	AVERAGE									3.99%
OVERALL AVERAGE										**4.37%**

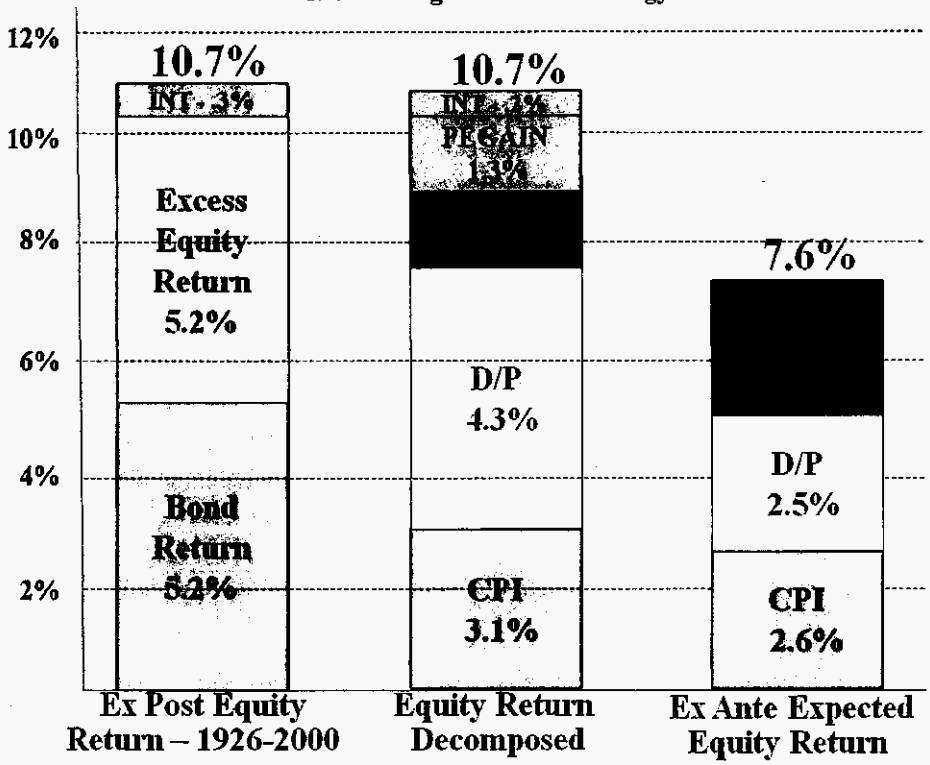
Exhibit JRW-11

Progress Energy Florida, Inc.
Capital Asset Pricing Model
Equity Risk Premium

Category	Study Authors	Publication Date	Time Period Of Study	Methodology	Return Measure	Range Low	Range High	Midpoint of Range	Mean	Average
Historical Risk Premium										
	Ibbotson	2009	1926-2008	Historical Stock Returns - Bond Returns	Arithmetic				5.60%	
					Geometric				3.90%	
	Bate	2008	1900-2007	Historical Stock Returns - Bond Returns	Geometric				4.50%	
	AVERAGE									4.67%
Ex Ante Models (Puzzle Research)										
	Campbell	2008	1982-2007	Historical & Projections (D/P & Earnings Growth)		4.10%	5.40%		4.75%	
	DeLong & Magin	2008	Projection	Earnings Yield - TIPS					3.22%	
	Damodoran	2009	Projection	Fundamentals - Implied from FCF to Equity Model					6.43%	
	AVERAGE									4.80%
Surveys										
	Survey of Financial Forecasters	2009	10-Year Projection	About 50 Financial Forecastsers					1.94%	
	Duke - CFO Magazine Survey	2009	10-Year Projection	Approximately 500 CFOs					4.11%	
	Welch - Academics	2008	30-Year Projection	Random Academics		5.00%	5.74%	5.37%	5.94%	
	Fernandez - Academics	2009	Long-Term	Fernandez - Academics				6.50%		
	AVERAGE									4.00%
Building Block										
	Ibbotson and Chen	2009	1926-2008	Historical Supply Model (D/P & Earnings Growth)	Arithmetic			5.73%	4.68%	
					Geometric			3.62%		
	Woolridge		2009	Current Supply Model (D/P & Earnings Growth)					3.30%	
	AVERAGE									3.99%
OVERALL AVERAGE										**4.36%**

Exhibit JRW-11

Progress Energy Florida, Inc.
Decomposing Equity Market Returns
The Building Blocks Methodology



Source: Antti Ilmanen, Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003).

Exhibit JRW-11

Progress Energy Florida, Inc.

2009 Survey of Professional Forecasters
Philadelphia Federal Reserve Bank
Long-Term Forecasts

Table Seven
LONG-TERM (10 YEAR) FORECASTS

SERIES: CPI INFLATION RATE	
STATISTIC	
MINIMUM	1.130
LOWER QUARTILE	2.000
MEDIAN	2.400
UPPER QUARTILE	2.750
MAXIMUM	3.800
MEAN	2.410
STD. DEV.	0.600
N	39
MISSING	4

SERIES: REAL GDP GROWTH RATE	
STATISTIC	
MINIMUM	2.000
LOWER QUARTILE	2.300
MEDIAN	2.560
UPPER QUARTILE	2.800
MAXIMUM	3.750
MEAN	2.580
STD. DEV.	0.380
N	37
MISSING	6

SERIES: PRODUCTIVITY GROWTH	
STATISTIC	
MINIMUM	1.200
LOWER QUARTILE	1.700
MEDIAN	1.900
UPPER QUARTILE	2.000
MAXIMUM	3.000
MEAN	1.900
STD. DEV.	0.380
N	34
MISSING	9

SERIES: STOCK RETURNS (S&P 500)	
STATISTIC	
MINIMUM	2.400
LOWER QUARTILE	5.000
MEDIAN	6.500
UPPER QUARTILE	8.000
MAXIMUM	11.400
MEAN	6.620
STD. DEV.	2.030
N	29
MISSING	14

SERIES: BOND RETURNS (10-YEAR)	
STATISTIC	
MINIMUM	2.000
LOWER QUARTILE	4.250
MEDIAN	4.850
UPPER QUARTILE	5.100
MAXIMUM	6.000
MEAN	4.680
STD. DEV.	0.820
N	32
MISSING	11

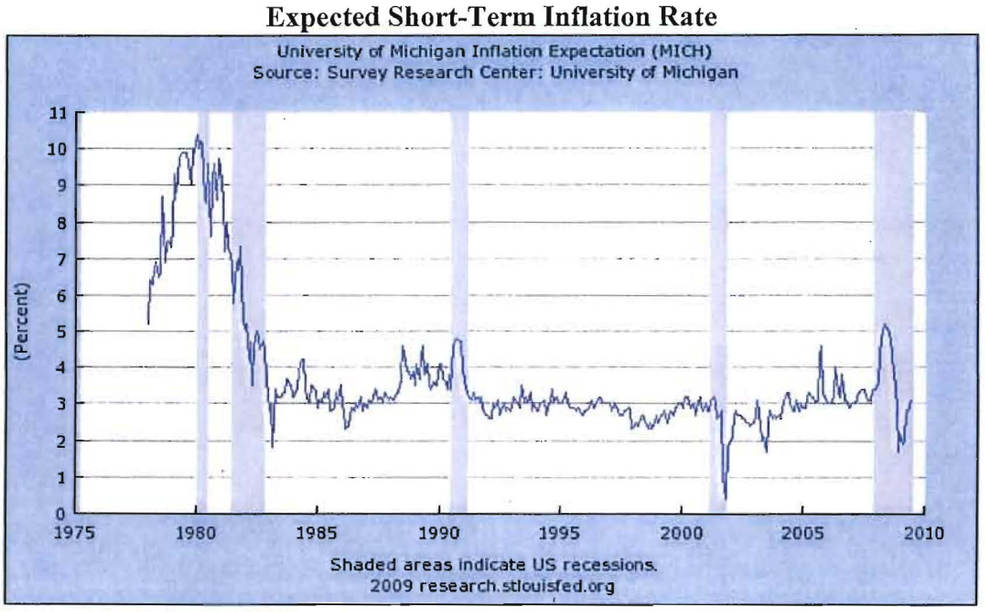
SERIES: BILL RETURNS (3-MONTH)	
STATISTIC	
MINIMUM	1.100
LOWER QUARTILE	2.500
MEDIAN	3.000
UPPER QUARTILE	4.000
MAXIMUM	5.100
MEAN	3.190
STD. DEV.	0.940
N	32
MISSING	11

Source: Philadelphia Federal Researve Bank, Survey of Professional Forecasters, February 13, 2009.

Exhibit JRW-11

Progress Energy Florida, Inc.

University of Michigan Survey Research Center
Expected Short-Term Inflation Rate

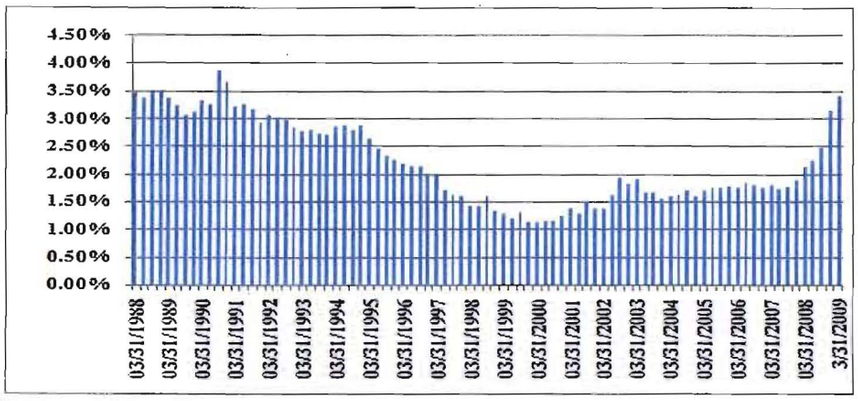


Data Source: http://research.stlouisfed.org/fred2/series/MICH?cid=98

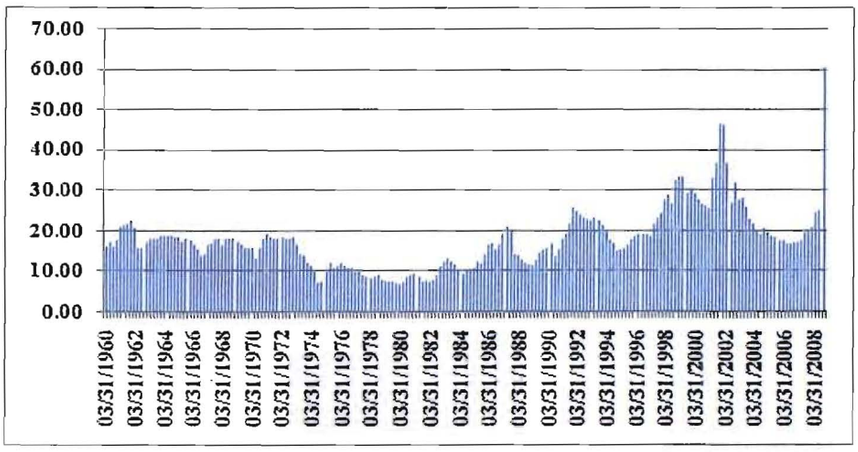
Exhibit JRW-11

National Grid
Decomposing Equity Market Returns
The Building Blocks Methodology

S&P 500 Dividend Yield



S&P 500 PE Ratios



Current S&P 500 Dividend Yield and P/E Ratio

S&P 500 Statistics
As of June 30, 2009

Total Market Value ($ Billion)	8,045
Mean Market Value ($ Million)	16,090
Median Market Value ($ Million)	6,532
Weighted Ave. Market Value ($ Million)	68,624
Largest Cos. Market Value ($ Million)	341,141
Smallest Cos. Market Value ($ Million)	643
Median Share Price ($)	27.875
P/E Ratio*	134.01
Indicated Dividend Yield (%)	2.35

NM - Not Meaningful

*Based on As Reported Earnings.

Data Source: www.standardandpoors.com.

Exhibit JRW-11

Progress Energy Florida, Inc.
CAPM
Real S&P 500 EPS Growth Rate

Year	S&P 500 EPS	Annual Inflation CPI	Inflation Adjustment Factor	Real S&P 500 EPS	
1960	3.10	1.48		3.10	
1961	3.37	0.07	1.01	3.35	
1962	3.67	1.22	1.02	3.59	
1963	4.13	1.65	1.04	3.99	
1964	4.76	1.19	1.05	4.55	
1965	5.30	1.92	1.07	4.97	
1966	5.41	3.35	1.10	4.90	
1967	5.46	3.04	1.14	4.80	
1968	5.72	4.72	1.19	4.81	
1969	6.10	6.11	1.26	4.83	10-Year
1970	5.51	5.49	1.34	4.13	2.89%
1971	5.57	3.36	1.38	4.04	
1972	6.17	3.41	1.43	4.33	
1973	7.96	8.80	1.55	5.13	
1974	9.35	12.20	1.74	5.37	
1975	7.71	7.01	1.86	4.14	
1976	9.75	4.81	1.95	4.99	
1977	10.87	6.77	2.08	5.22	
1978	11.64	9.03	2.27	5.13	
1979	14.55	13.31	2.57	5.66	10-Year
1980	14.99	12.40	2.89	5.18	2.30%
1981	15.18	8.94	3.15	4.82	
1982	13.82	3.87	3.27	4.23	
1983	13.29	3.80	3.40	3.91	
1984	16.84	3.95	3.53	4.77	
1985	15.68	3.77	3.66	4.28	
1986	14.43	1.13	3.70	3.90	
1987	16.04	4.41	3.87	4.15	
1988	22.77	4.42	4.04	5.64	
1989	24.03	4.65	4.22	5.69	10-Year
1990	21.73	6.11	4.48	4.85	-0.65%
1991	19.10	3.06	4.62	4.14	
1992	18.13	2.90	4.75	3.81	
1993	19.82	2.75	4.88	4.06	
1994	27.05	2.67	5.01	5.40	
1995	35.35	2.54	5.14	6.88	
1996	35.78	3.32	5.31	6.74	
1997	39.56	1.70	5.40	7.33	
1998	38.23	1.61	5.48	6.97	
1999	45.17	2.68	5.63	8.02	10-Year
2000	52.00	3.39	5.82	8.93	6.29%
2001	44.23	1.55	5.92	7.48	
2002	47.24	2.38	6.06	7.80	
2003	54.15	1.88	6.17	8.77	
2004	67.01	3.26	6.37	10.51	5-Year
2005	68.32	3.42	6.60	10.35	3.00%
2006	81.96	2.54	6.77	12.11	
2007	87.51	4.08	7.04	12.43	
2008	65.39	0.09	7.05	9.28	
Data Source: http://pages.stern.nyu.edu/~adamodar/				Real EPS Growth	**2.3%**

Exhibit JRW-12
Cost of Capital Recommendation
Progress Energy Florida, Inc.

Weighted Average Cost of Capital - Regulatory Capital Structure

Capital Source	Capitalization Ratio	Cost Rate	Weighted Cost Rate
Short Term Debt	0.62%	5.25%	0.03%
Long-Term Debt	42.38%	6.42%	2.72%
Preferred Stock	0.32%	4.51%	0.01%
Common Equity	50.52%	12.54%	6.34%
Customer Deposits	1.79%	5.95%	0.11%
Customer Deposits (inactive)	0.02%		0.00%
Investment Tax Credits '70	0.01%	9.70%	0.00%
Deferred Income Taxes	6.24%	0.00%	0.00%
FAS 109 - DIT - Net	-1.84%		
Total Capital	100.0%		9.21%

Weighted Average Cost of Capital - Conventional Capital Structure

Capital Source	Capitalization Ratio	Cost Rate	Weighted Cost Rate
Short Term Debt	0.66%	5.25%	0.03%
Long-Term Debt	45.10%	6.42%	2.90%
Preferred Stock	0.34%	4.51%	0.02%
Common Equity	53.90%	12.54%	6.76%
Total	100.00%		9.70%

Panel A

Summary of Dr. Vander Weide's Equity Cost Rate Approaches and Results

Approach	Cost of Equity
DCF	12.30%
Ex Ante Risk Premium	11.20%
Ex Post Risk Premium	11.40%
Historical CAPM	10.70%
DCF CAPM	11.80%
Average	11.50%
Capital Structure Adjustment	1.04%
Equity Cost Rate	12.54%

Panel B

Summary of Dr. Vander Weide's DCF Results

	Utility Proxy Group
Average Adjusted Dividend Yield*	5.00%
Growth**	7.30%
DCF Result	12.30%

* Includes adjustments for quarterly payments and flotation costs
** Expected EPS Growth from IBES

Panel C

Summary of Dr. Vander Weide's Ex Ante Risk Premium Results

	Ex Ante Risk Premium
'A' Rated PU Yield	6.33%
Ex Ante Risk Premium*	4.90%
Equity Cost Rate	11.23%

* Flotation Cost included in risk premium

Panel D

Summary of Dr. Vander Weide's Ex Post Risk Premium Results

	Ex Ante Risk Premium
'A' Rated PU Yield	6.33%
Historic Risk Premium*	4.80%
Equity Cost Rate	11.13%
Flotation Cost Adjustment	0.25%
Adjusted CAPM Result	11.38%

* Midpoint of 4.6% and 5.0%

Panel E

Summary of Dr. Vander Weide's Historical CAPM Results

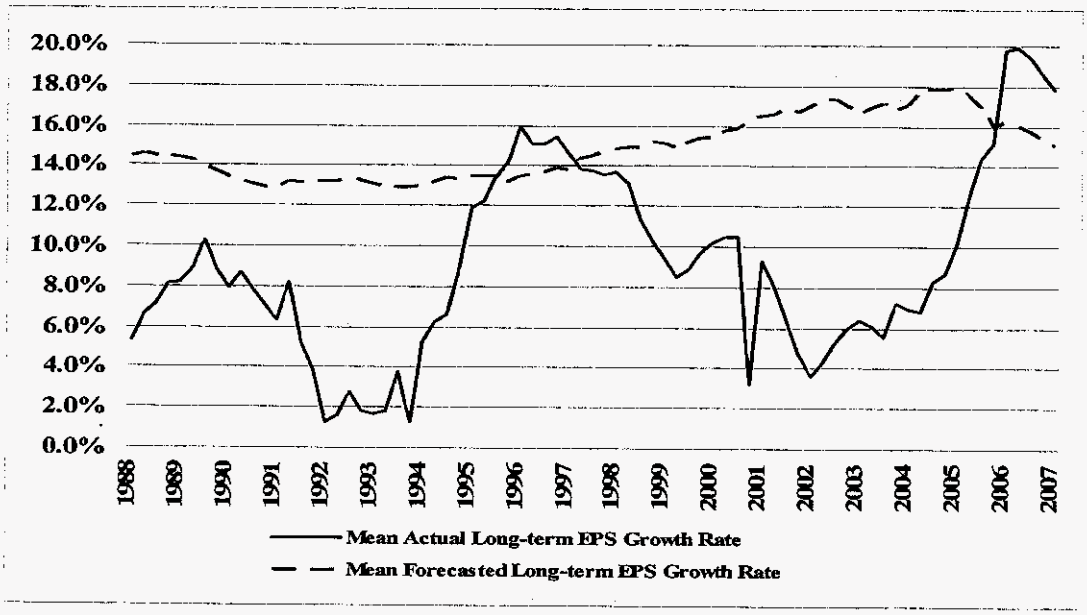
	Utility Proxy Group
Risk-Free Rate	4.87%
Beta	0.79
Equity Risk Premium	7.10%
CAPM Result	10.48%
Flotation Cost Adjustment	0.25%
Adjusted CAPM Result	10.73%

Panel F

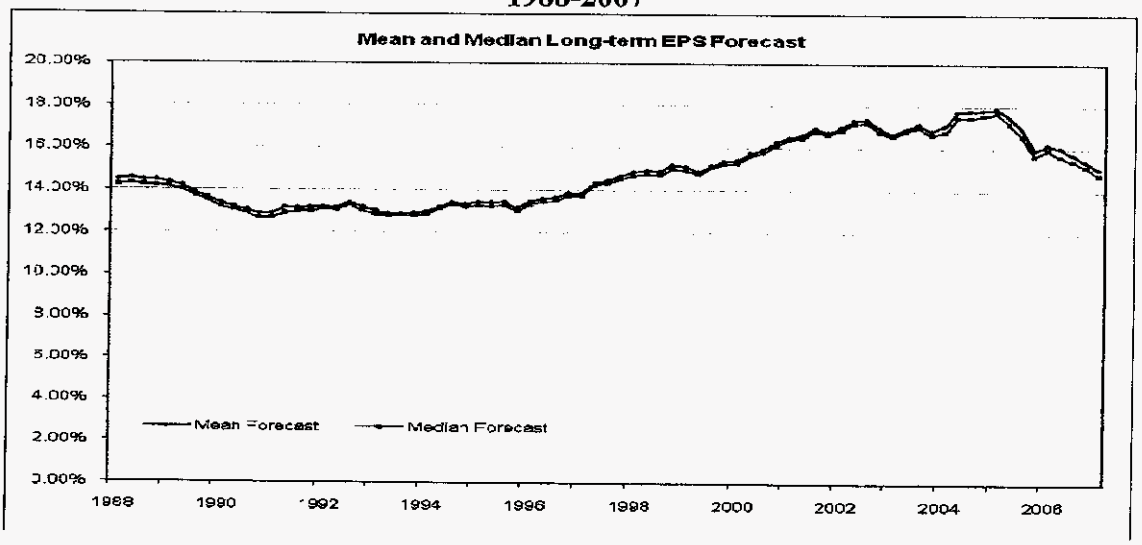
Summary of Dr. Vander Weide's Expected CAPM Results

	Utility Proxy Group
Risk-Free Rate	4.87%
Beta	0.79

Panel A
Long-Term Forecasted Versus Actual EPS Growth Rates
1988-2007



Panel B
Long-Term Forecasted EPS Growth Rates
1988-2007



Source: Patrick J. Cusatis and J. Randall Woolridge, "The Accuracy of Analysts' Long-Term Earnings Per Share Growth Rate Forecasts," (July, 2008).

THE WALL STREET JOURNAL.

Study Suggests Bias in Analysts' Rosy Forecasts

By ANDREW EDWARDS
March 21, 2008; Page C6

Despite an economy teetering on the brink of a recession -- if not already in one -- analysts are still painting a rosy picture of earnings growth, according to a study done by Penn State's Smeal College of Business.

The report questions analysts' impartiality five years after then-New York Attorney General Eliot Spitzer forced analysts to pay $1.5 billion in damages after finding evidence of bias.

"Wall Street analysts basically do two things: recommend stocks to buy and forecast earnings," said J. Randall Woolridge, professor of finance. "Previous studies suggest their stock recommendations do not perform well, and now we show that their long-term earnings-per-share growth-rate forecasts are excessive and upwardly biased."

The report, which examined analysts' long-term (three to five years) and one-year per-share earnings expectations from 1984 through 2006 found that companies' long-term earnings growth surpassed analysts' expectations in only two instances, and those came right after recessions.

Over the entire time period, analysts' long-term forecast earnings-per-share growth averaged 14.7%, compared with actual growth of 9.1%. One-year per-share earnings expectations were slightly more accurate: The average forecast was for 13.8% growth and the average actual growth rate was 9.8%.

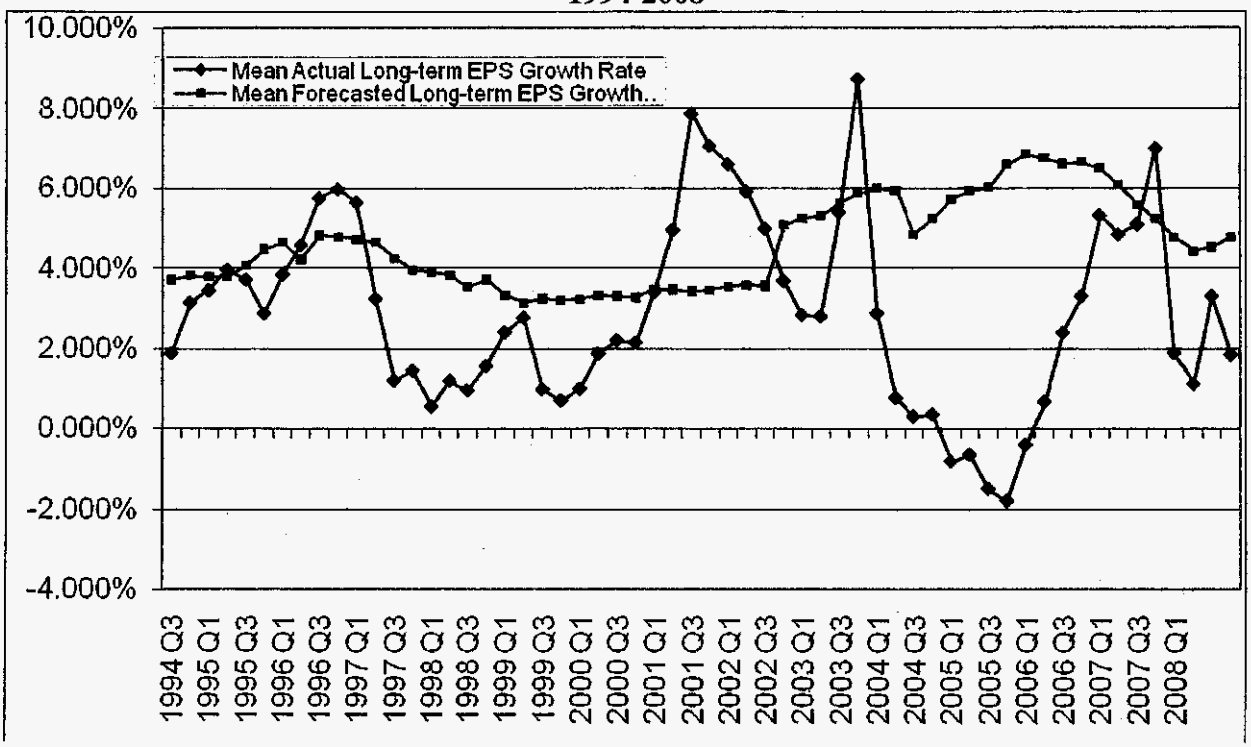
"A significant factor in the upward bias in long-term earnings-rate forecasts is the reluctance of analysts to forecast" profit declines, Mr. Woolridge said. The study found that nearly one-third of all companies experienced profit drops over successive three-to-five-year periods, but analysts projected drops less than 1% of the time.

The study's authors said, "Analysts are rewarded for biased forecasts by their employers, who want them to hype stocks so that the brokerage house can garner trading commissions and win underwriting deals."

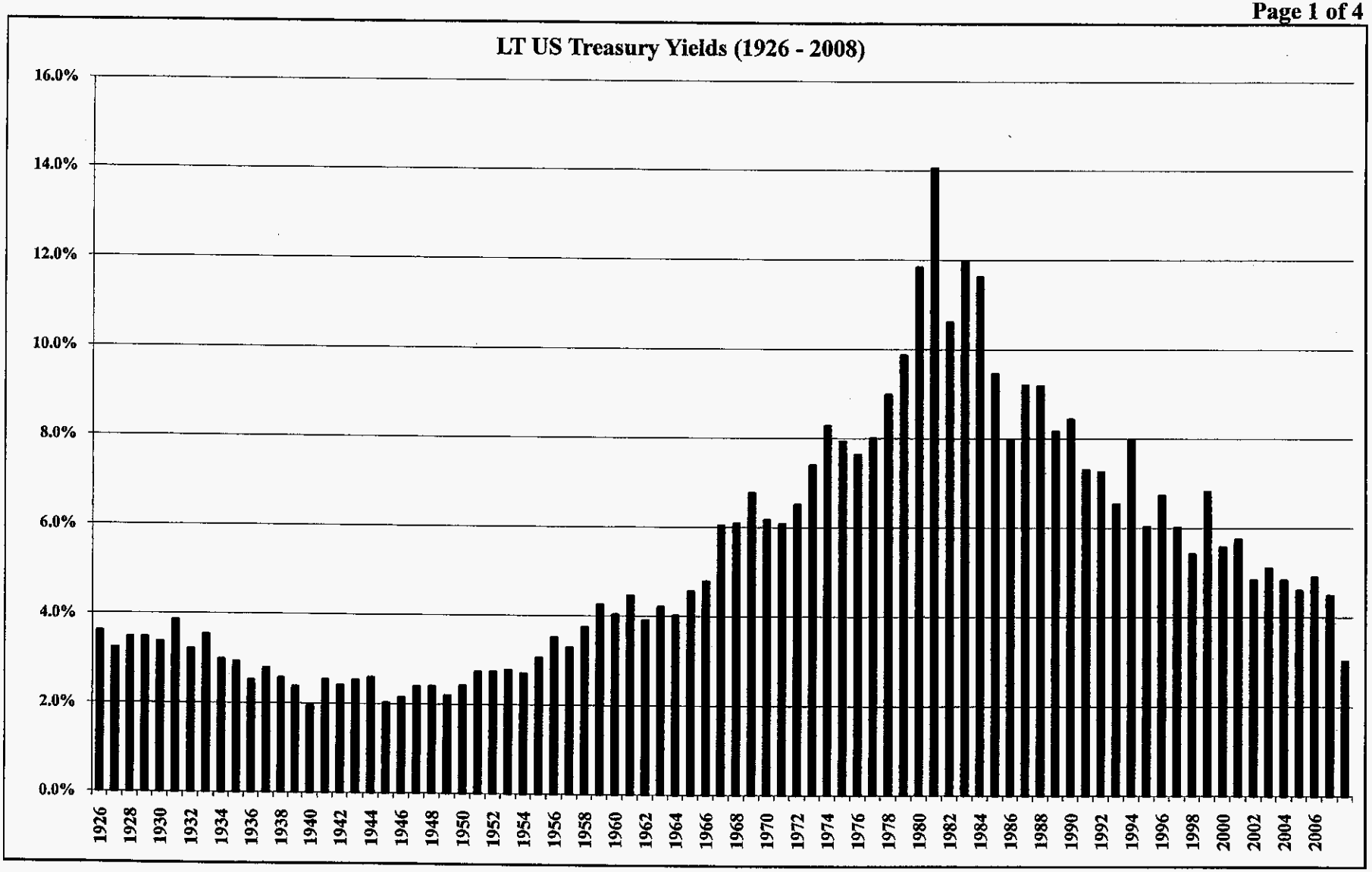
They also concluded that analysts are under pressure to hype stocks to generate trading commissions, and they often don't follow stocks they don't like.

Write to Andrew Edwards at andrew.edwards@dowjones.com

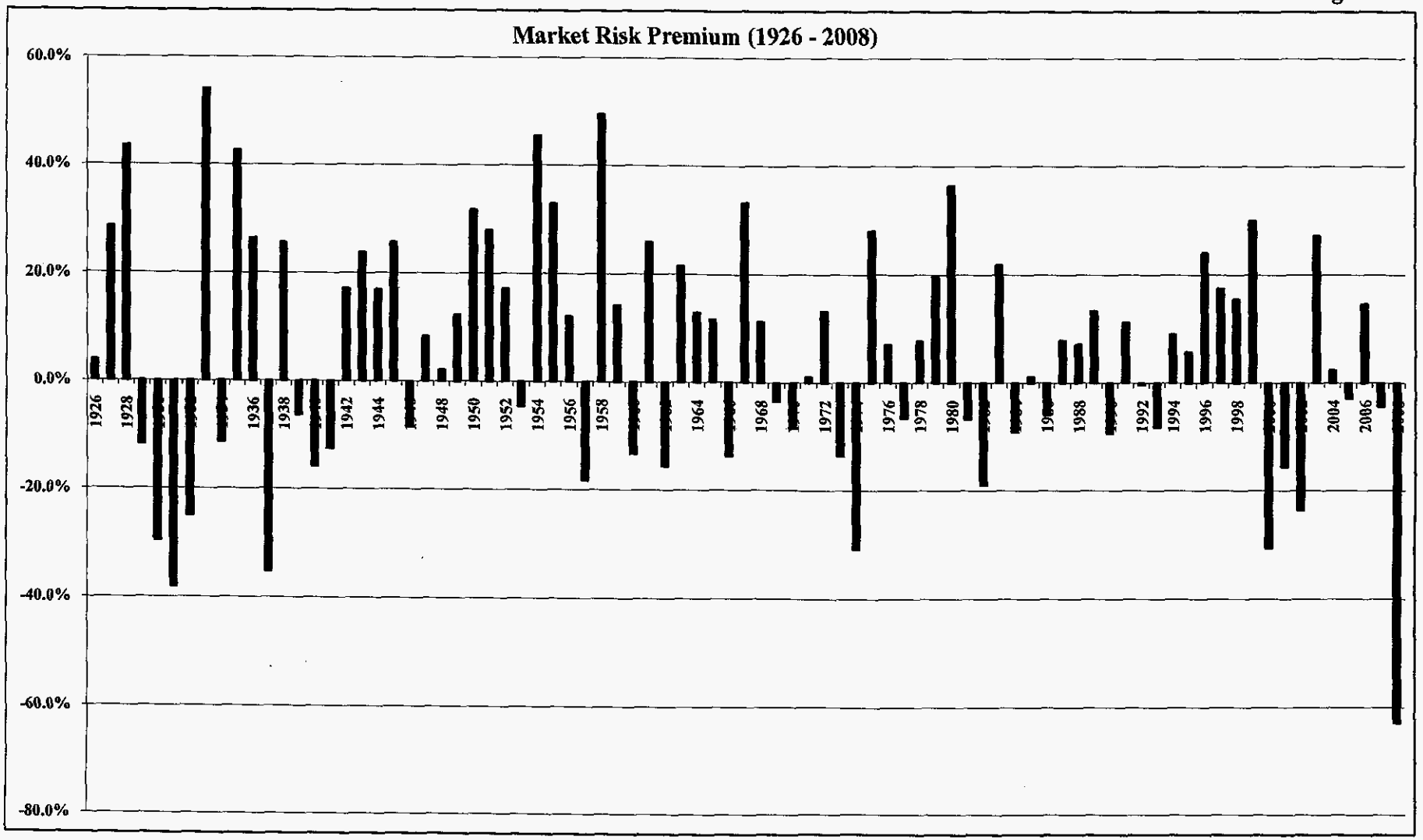
Long-Term Forecasted Versus Actual EPS Growth Rates
Electric Utility Companies
1994-2008



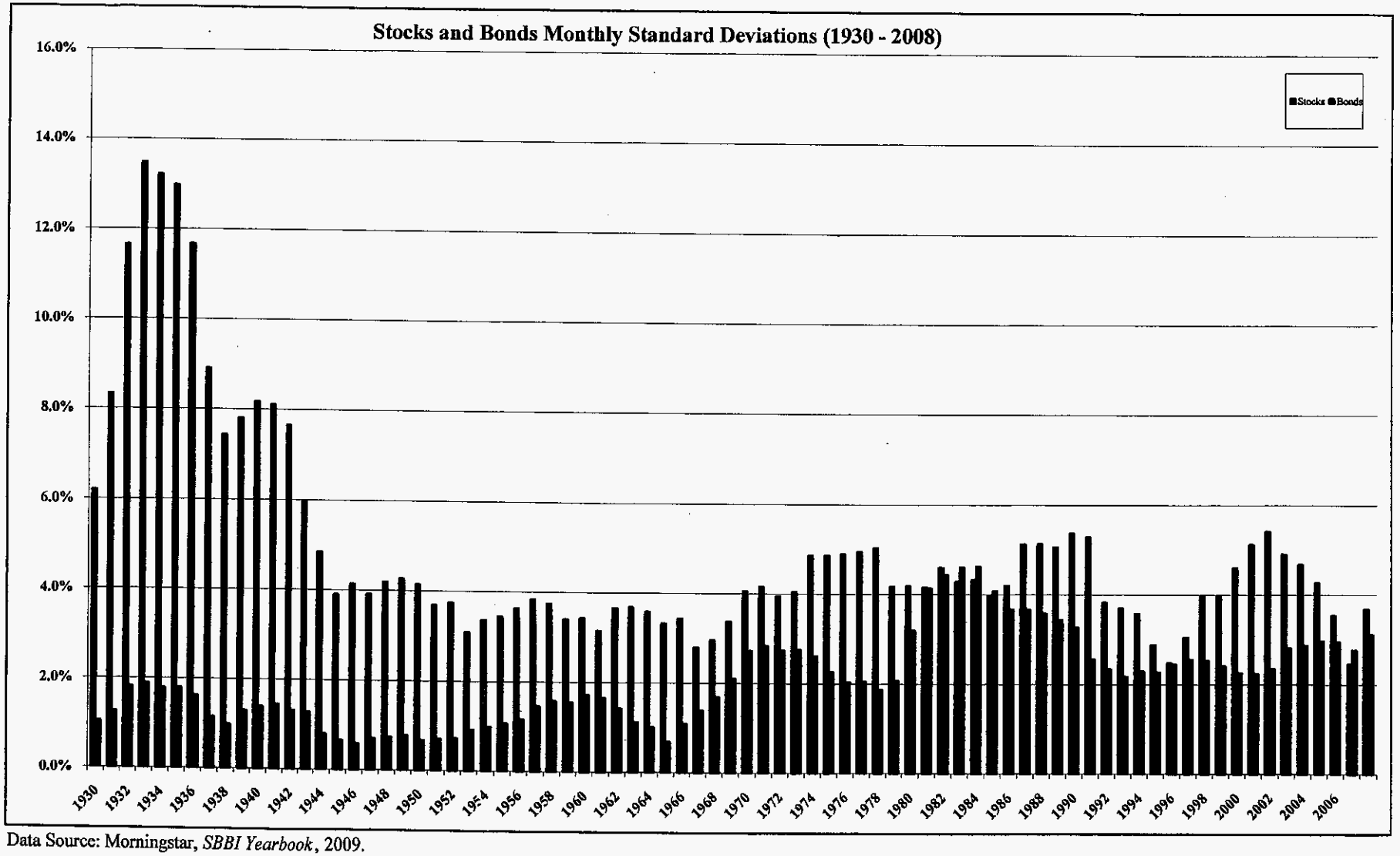
Data Source: IBES



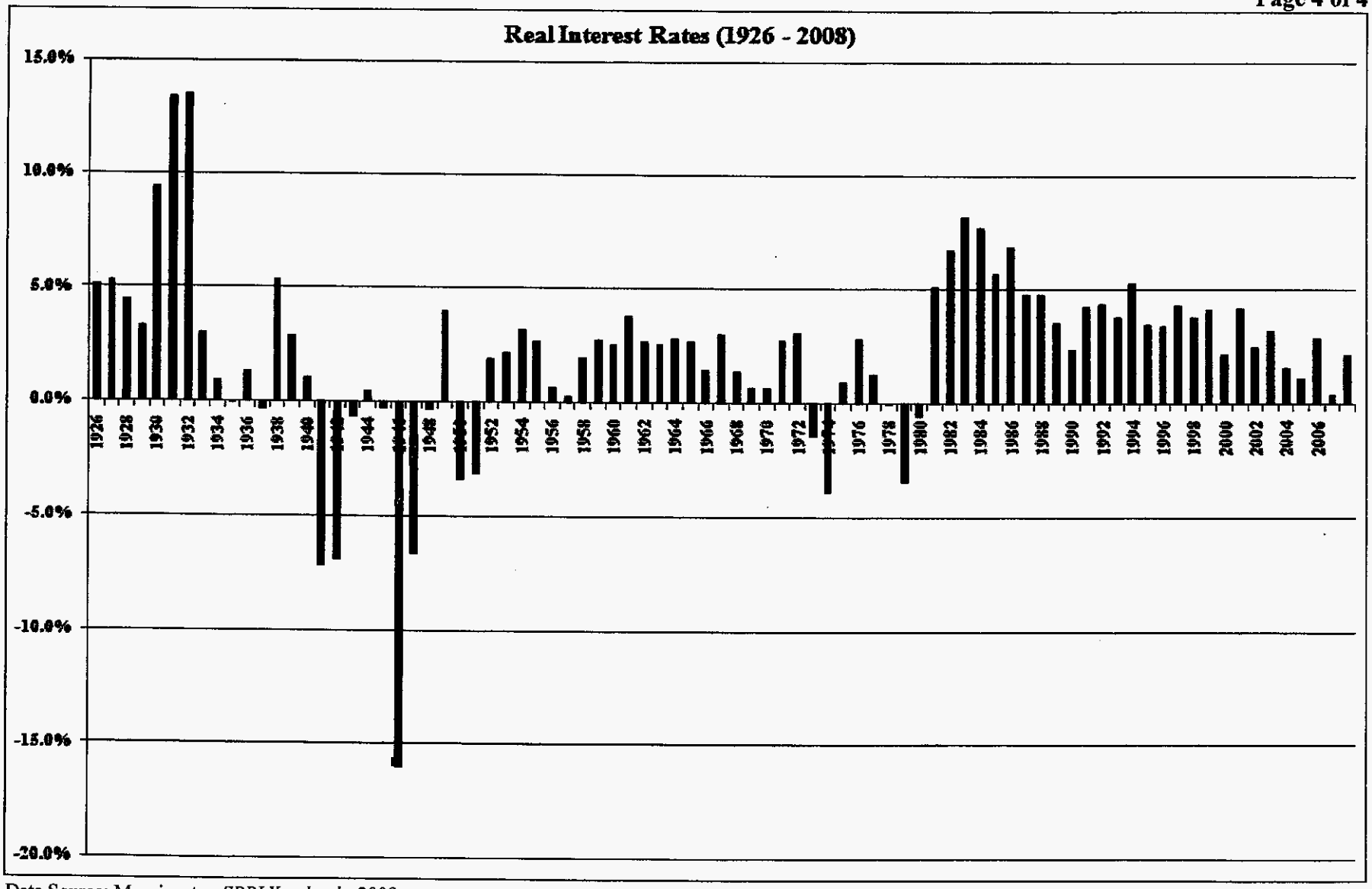
Data Source: Morningstar, *SBBI Yearbook*, 2009.



Data Source: Morningstar, *SBBI Yearbook*, 2009.



Data Source: Morningstar, *SBBI Yearbook*, 2009.



Data Source: Morningstar, *SBBI Yearbook*, 2009.

Growth Rates
GNP, S&P 500 Price, EPS, and DPS

	GDP	S&P 500	Earnings	Dividends	
1960	526.4	58.11	3.10	1.98	
1961	544.7	71.55	3.37	2.04	
1962	585.6	63.1	3.67	2.15	
1963	617.7	75.02	4.13	2.35	
1964	663.6	84.75	4.76	2.58	
1965	719.1	92.43	5.30	2.83	
1966	787.8	80.33	5.41	2.88	
1967	832.6	96.47	5.46	2.98	
1968	910.0	103.86	5.72	3.04	
1969	984.6	92.06	6.10	3.24	
1970	1038.5	92.15	5.51	3.19	
1971	1127.1	102.09	5.57	3.16	
1972	1238.3	118.05	6.17	3.19	
1973	1382.7	97.55	7.96	3.61	
1974	1500.0	68.56	9.35	3.72	
1975	1638.3	90.19	7.71	3.73	
1976	1825.3	107.46	9.75	4.22	
1977	2030.9	95.1	10.87	4.86	
1978	2294.7	96.11	11.64	5.18	
1979	2563.3	107.94	14.55	5.97	
1980	2789.5	135.76	14.99	6.44	
1981	3128.4	122.55	15.18	6.83	
1982	3255.0	140.64	13.82	6.93	
1983	3536.7	164.93	13.29	7.12	
1984	3933.2	167.24	16.84	7.83	
1985	4220.3	211.28	15.68	8.20	
1986	4462.8	242.17	14.43	8.19	
1987	4739.5	247.08	16.04	9.17	
1988	5103.8	277.72	22.77	10.22	
1989	5484.4	353.4	24.03	11.73	
1990	5803.1	330.22	21.73	12.35	
1991	5995.9	417.09	19.10	12.97	
1992	6337.7	435.71	18.13	12.64	
1993	6657.4	466.45	19.82	12.69	
1994	7072.2	459.27	27.05	13.36	
1995	7397.7	615.93	35.35	14.17	
1996	7816.9	740.74	35.78	14.89	
1997	8304.3	970.43	39.56	15.52	
1998	8747.0	1229.23	38.23	16.20	
1999	9268.4	1469.25	45.17	16.71	
2000	9817.0	1320.28	52.00	16.27	
2001	10128.0	1148.09	44.23	15.74	
2002	10469.6	879.82	47.24	16.08	
2003	10960.8	1111.91	54.15	17.88	
2004	11685.9	1211.92	67.01	19.41	
2005	12433.9	1248.29	68.32	22.38	
2006	13194.7	1418.3	81.96	25.05	
2007	13841.3	1468.36	87.51	27.73	
2008		903.25	65.39	28.05	**Average**
Growth	**7.20%**	**5.88%**	**6.56%**	**5.68%**	**6.33%**

Data Sources: GDPA - http://research.stlouisfed.org/fred2/categories/106
S&P 500, EPS and DPS - http://pages.stern.nyu.edu/~adamodar/