Exhibit No.:	
Issue:	*Rate of Return*
Witness:	*David Murray*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Rebuttal Testimony*
Case No.:	*ER-2005-0436*
Date Testimony Prepared:	*November 18, 2005*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

REBUTTAL TESTIMONY

OF

DAVID MURRAY

AQUILA, INC.
d/b/a AQUILA NETWORKS–MPS ELECTRIC AND
AQUILA NETWORKS-L&P-ELECTRIC

CASE NO. ER-2005-0436

Jefferson City, Missouri
November 2005

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Tariff Filing of Aquila, Inc.,	)	
to Implement a General Rate Increase for	)	Case No. ER-2005-0436
Retail Electric Service Provided to Customers	)	Tariff No. YE-2005-1045
in Its MPS and L&P Missouri Service Areas.	)	

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

David Murray, being of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 32 pages to be presented in the above case; that the answers in the following Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

David Murray

Subscribed and sworn to before me this 17th day of November 2005.

Notary

TONI M. CHARLTON
Notary Public - State of Missouri
My Commission Expires December 28, 2008
Cole County
Commission #04474301

TONI M. CHARLTON NOTARY SEAL NOTARY PUBLIC STATE OF MISSOURI

TABLE OF CONTENTS

OF THE REBUTTAL TESTIMONY OF

DAVID MURRAY

AQUILA, INC.

d/b/a AQUILA NETWORKS MPS-ELECTRIC AND

AQUILA NETWORKS L&P-ELECTRIC

CASE NO. ER-2005-0436

REBUTTAL TESTIMONY

OF

DAVID MURRAY

AQUILA, INC.

d/b/a AQUILA NETWORKS MPS-ELECTRIC AND

AQUILA NETWORKS L&P-ELECTRIC

CASE NO. ER-2005-0436

Q. Please state your name.

A. My name is David Murray.

Q. Are you the same David Murray who filed direct testimony in this proceeding for the Staff of the Missouri Public Service Commission (Staff)?

A. Yes, I am.

Q. In your direct testimony, did you recommend a fair and reasonable rate of return on the Missouri jurisdictional electric utility rate base for Aquila, Inc. d/b/a Aquila Networks MPS (MPS) and Aquila Networks L&P (L&P)?

A. Yes, I did.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of Dr. Samuel C. Hadaway, Dr. Ben Johnson and Michael Gorman. Dr. Hadaway sponsored rate-of-return testimony on behalf of Aquila. Dr. Johnson sponsored rate-of-return testimony on behalf of the Office of the Public Counsel (OPC). Mr. Gorman sponsored rate-of-return testimony on behalf of the Federal Executive Agencies (FEA), Sedalia Industrial Energy Users' Association (SIEUA) and the St. Joe Industrial Group (SJIG). Hereinafter, I will refer

to FEA, SIEUA and SJIG as "the intervenors." I will address the issues of appropriate capital structure, embedded cost of long-term debt, and the cost of common equity to be applied to MPS and L&P for ratemaking purposes in this proceeding.

EXECUTIVE SUMMARY

Q. Please explain why Staff's recommended return on common equity (ROE) is lower than any of the other witnesses sponsoring testimony in this case.

A. Staff still believes that the discounted cash flow (DCF) model, using traditional inputs, is the most reliable model in estimating a utility company's current cost of common equity. Consequently, Staff's recommendation in this case is based on its analysis using this model. Staff did check the reasonableness of its DCF model results by evaluating several different scenarios using the Capital Asset Pricing Model (CAPM), and all but one of these results were below Staff's results from its analysis using the DCF model. However, the other witnesses did not rely as heavily on the "traditional" use of this model. Dr. Hadaway's "traditional" constant growth DCF model analysis results in a cost of common equity estimate of 9.5 percent, which compares to his recommendation of 11.5 percent. When I appropriately removed Dr. Hadaway's use of nominal GDP growth of 6.6 percent to determine an average growth rate, Dr. Hadaway's "traditional" constant growth DCF model results would be 9.2 percent – well within the range of Staff's proposed return on common equity. Dr. Johnson's constant growth DCF cost of common equity analysis shows a cost of common equity in the range of 8.0 percent to 9.5 percent, which compares to his final recommendation of 9.95 percent. Mr. Gorman's constant growth DCF cost of common equity analysis shows a cost of common equity of 8.7 percent, which compares to his final

recommendation of 9.8 percent. All of the witnesses' constant-growth DCF model results are within the range recommended by Staff.

Q. In your opinion, did witnesses rely more on the constant growth DCF model in the recent past?

A. Yes. Actually, until a couple of years ago, most of the arguments regarding the appropriate cost of common equity centered on the appropriate growth rates to use in the constant growth DCF model.

Q. If most rate-of-return (ROR) witnesses used to rely on the constant growth DCF model to determine an appropriate cost of common equity, why were there significant differences in recommended costs of common equity in the past?

A. In the past, company witnesses were able to rely on equity research analysts' optimistic projected growth rates. However, Staff would look to other variables to determine if these projected growth rates would be deemed reasonable and sustainable by investors. In many cases, Staff's opinion was that investors, as a whole, would temper the optimistic analysts' growth projections.

In the current environment, analysts have become more reasonable in their growth rate projections, which actually are more in line with sustainable growth rates for the electric utility industry. However, even with analysts' lowered growth rate projections, utility company stock prices haven't decreased. In fact, other than in the past month, utility stock prices have generally increased. This meant that investors were paying a higher price for the same earnings; i.e. the cost of common equity for utility companies came down even further. This is the reason that the lower costs of common equity are directly reflected in all of the witnesses' constant growth DCF analyses.

Q. Please summarize the differences in the embedded costs of debt recommendations.

A. While I do not believe there is a disagreement on the procedure to mechanically calculate the embedded cost of long-term debt, there is a difference in opinion on how debt costs should be assigned to Aquila's various divisions. Staff recommends that the Commission use all of the company's debt issuances, with downward adjustments, to determine an appropriate embedded cost of long-term debt. However, the other witnesses in this case have accepted Aquila's assigned debt costs of 6.70 percent for MPS and 7.96 percent for L&P. Staff believes that the mere fact that MPS's and L&P's respective embedded costs of debt differ by more than 100 basis points provides insight to the possible inequities that could occur with such a process. I will discuss the problems with this process in more detail later in my testimony.

Q. Please summarize the differences in capital structure recommendations.

A. Dr. Hadaway is recommending the use of a hypothetical capital structure. His proposed capital structure is composed of 51.8 percent debt and 48.2 percent common equity. Dr. Hadaway indicates that this hypothetical capital structure is consistent with Aquila's assigned capital structures. If the Commission were to adopt Dr. Hadaway's recommended capital structure, I recommend that the Commission specifically state that it is adopting the hypothetical capital structure proposed by Dr. Hadaway and not Aquila's assigned divisional capital structure. Dr. Johnson's capital structure recommendation is based on Aquila's actual capital structure as of the test year, December 31, 2004. I agree with the use of Aquila's actual capital structure. However, because I had Aquila's financial information as of the update period at the time I was preparing my direct testimony, I chose to use the more recent

information. Mr. Gorman proposes the use of a pro forma capital structure that attempts to estimate Aquila's capital structure after the completion of its recently announced agreements to sell four utility properties. Because there are many uncertainties surrounding what the capital structure would be after the utility sales, I do not recommend that the Commission adopt this approach.

TRUE-UP OF CAPITAL STRUCTURE AND EMBEDDED COST OF LONG-TERM DEBT

Q. Do you have reason to believe that your recommended capital structure will be different when you receive Aquila's financial statements as of the true-up date (October 31, 2005) in this case?

A. Yes. I have evaluated Aquila's September 30, 2005 balance sheet, which was recently released to the public. According to Aquila's September 30, 2005 balance sheet, Aquila's common equity ratio is in the 42 to 43 percent range. If Aquila's common equity ratio as of October 31, 2005 is similar to the equity ratio as of September 30, 2005, then Staff will recommend this equity ratio in its capital structure recommendation.

Q. Will you need to update any other part of your recommendation when you receive financial information as of the true-up date?

A. Yes. I will also need to true-up the embedded cost of long-term debt when I receive this information. I do not anticipate that there will be a dramatic change in Aquila's embedded cost of long-term debt.

DR. HADAWAY'S RECOMMENDED COST OF COMMON EQUITY FOR MPS AND L&P

Q. Please summarize Dr. Hadaway's recommended cost of common equity for MPS and L&P.

A. Dr. Hadaway's recommended cost of common equity is based on three variations of the DCF model and a "risk premium" analysis. Dr. Hadaway dismissed his "traditional" constant growth DCF model results because of "historically low dividend yields and pessimistic analysts' growth forecasts." Not only is this not a valid reason to dismiss the results from this analysis, but it is exactly the type of evidence that the Commission should rely upon to support an allowed return on common equity that is more in line with today's low cost-of-capital environment.

Q. Are you aware of any articles from the financial press that corroborate the reason that Dr. Hadaway's "traditional" constant-growth DCF model results are lower than he is used to seeing?

A. Yes. The October 10, 2005 edition of *The Wall Street Journal* contained an article entitled "Utilities Might Face Ugly Reality: Sector Has Gleamed Recently, But Worries About Energy Prices And Interest Rates Spur Concern" (Schedule 1, attached to this rebuttal testimony). While this article states concerns that utility stocks may suffer in the near future because of the possibility of interest rate increases, the article discusses the run-up in utility stock prices. This article fairly succinctly supports Staff's position regarding the current low cost of capital environment for utility companies.

The article indicates that shares of utilities were about "15% higher so far this year, second only to energy stocks, which are up 32%, according to Dow Jones Indexes." The article expresses a bit of puzzlement as to why utility stocks have been in favor with investors. Specifically the article stated:

> Utilities are more of a puzzle. Grouped together by professional investors with other grimy and unglamorous—or ugly—industries, they usually don't offer much growth

> potential. Yet the Dow Jones Utility Average hit a record last week, capping a nearly 45% gain during the past two years.

However, the article also points to some recent skittishness of investing in the sector. Specifically the article states:

> In the past several trading sessions, however, the sector has slipped amid worries that inflation and interest rates are headed up, that the economy will slow and that energy prices have peaked. That skittishness after such a long run-up reflects marketwide concern over the same issues.

The article states three main reasons for run-up in utility stock prices. These are: low bond yields, high prices in the non-regulated power markets and the high demand for power. When discussing the sectors sensitivity to interest rates the article specifically states:

> Historically, interest-rate increases have pushed utilities stocks down because such reliable dividend payers long have been used as a bond substitute by income-seeking investors. Rising rates make newly issued bonds with higher yields more attractive than existing income-producing stocks and bonds with lower payouts. Despite 11 consecutive rate raises by the Federal Reserve, however, long-term bond yields remain low, allowing dividend-paying utilities to retain their edge.

I would ask that the Commission keep the above excerpt in mind later in my testimony when I discuss the concept of equity risk premium over bond yields. If investors perceive utility stocks as bond substitutes, then they are not going to require as much of an equity risk premium to invest in these stocks versus the rest of the market. Additionally, the required rate of return for utility stocks would be tightly correlated to the changes in interest rates.

The final aspect of the article discusses some of issues regarding the current valuation levels of utility stocks. Specifically, the article states:

> Still, a bet on utilities today is an implicit bet that the "conundrum" of low interest rates on long-term bonds will persist. It's also a bet that the economy will chug through the destruction of property and confidence from this year's hurricanes.

> And whether your yardstick is stock valuations—share prices relative to earnings—or dividend yields, utilities don't look all that inexpensive. Mr. Meara looks at the dividend yields of utilities compared with that of the 10-year Treasury note. Five years ago, utilities were yielding as high as 10%, well above the almost 6% yield of the 10-year note. Today utilities have average yields of 3.4%, compared with more than 4.3% for the note. That makes the Treasury security a better deal, even taking into account lower taxes on dividends.

While this article does express some concern that utility stock valuation levels may adjust to lower levels if interest rates do not continue to be as low as they have been (which, based on a slight run-up in the past month, may have some merit, at least in the short-term) the article explains why the Staff's recommended costs of common equity have been generally declining during rate cases filed during the past five years. Unlike some company witnesses' recommendations during this period, the Staff's recommendations correlate well with the observations in this article.

Q. Why do you believe that Staff's recommendations have reflected the changes that were observed in *WSJ* article?

A. Because Staff has continued to rely on the constant growth DCF model. This model tends to be the most reactive to changes in the capital markets because current stock prices are an input into the model. This directly reports on the valuation levels of stocks. Most investors are very familiar with using price to earnings (p/e) ratios as an indicator of the relative valuation level of the company's stock. If p/e ratios are high, then this means that the stock is pricey for investors (i.e. lower required equity risk premium). If the stock is pricey for investors, then the company's cost of procuring this common equity capital is low. The article indicates that investors will also use dividend yields to determine how expensive a stock may be. These dividend yields are the same dividend yields that are used as an input into the DCF model. Consequently, results from a reasonable application of the DCF model

will directly reflect the changing capital market environment in general and specifically for utilities. I believe one of the most interesting observations in the article is that the average dividend yield on utility companies was actually ***below*** the yield on the ten-year Treasury note. This certainly implies that the risk premium required over current risk-free rates is currently quite low for the utility industry because, as Dr. Hadaway pointed out during his deposition on November 4, 2005, one would not expect the perpetual growth rates of the electric utility industry to change much (Hadaway deposition at p. 56, ll. 10-16). If this is the case, then any changes in the dividend yield will provide a tremendous amount of insight about the required return on common equity. This relationship may be contrary to some equity risk premium estimates based on historical return differences, but it is consistent with the lower cost of common equity estimates achieved with an objective application of the DCF model.

It is important to understand that an increase in stock prices, i.e. lower dividend yield, doesn't necessarily mean that the cost of common equity has decreased. If investors have reacted to increased expectations of the earnings growth rate, then this increased growth rate will offset the decreased dividend yield to at least some degree, and therefore, the overall cost of common equity will not have changed as much as the dividend yield. However, as Dr. Hadaway has observed, these stock price increases have not been in reaction to increases in growth rate expectations. If anything, growth rate projections have decreased on average. Consequently, investors have reacted to other factors, such as the macroeconomic environment, in determining a reasonable valuation level for utility stocks. This reaction has caused the cost of common equity to decrease for utility companies. A reasonable application of the DCF model should reflect this environment. Staff, instead of resisting the

changes in the capital markets, has reported these changes to the Commission in order to ensure that the Commission has the "complete story" when deliberating on its decision on a reasonable allowed return on common equity.

Q. Instead of accepting the insight provided to him from the lower results of his "traditional" constant-growth DCF model, what did Dr. Hadaway do?

A. Instead of accepting the insight that this analysis provided him, Dr. Hadaway instead looked to other atypical variations of the DCF model to justify an end-result oriented cost of common equity recommendation of 11.50 percent. In one of Dr. Hadaway's variations of the DCF model, he decided to rely entirely on his estimate of nominal GDP growth of 6.6 percent as being the growth that investors in electric utility stocks would expect. He used this growth rate for all of the companies in his reference group. Apparently he believes that all electric utility companies will grow at this unsustainable growth rate. This is the first time I have seen such a proposition during my tenure at the Commission. He also used a convoluted two-stage DCF analysis that incorporated the same long-term growth rate of 6.6 percent based on nominal GDP. The most important thing to understand about Dr. Hadaway's two-stage DCF model is that the results of this model are highly sensitive to the long-term growth rate selected. Consequently, the reliability of this model depends on the reasonableness of the selected growth rate.

Q. Do you agree with Dr. Hadaway's conclusions?

A. No. Dr. Hadaway's analysis is unreasonable for many reasons. First of all, even if one were to assume that substituting expected nominal GDP growth for the growth of the industry was appropriate in either the two-stage or constant growth DCF, the assumption

that the economy is going to grow at a 6.6 percent nominal rate is grossly overstated. I will discuss this in more detail later in my testimony.

Dr. Hadaway tested the reasonableness of his novel DCF cost of common equity results with an approach he labeled as a "risk premium analysis." The type of risk premium analysis performed by Dr. Hadaway would only be recognized by individuals that are familiar with utility rate regulation. Risk premium analyses in traditional finance would never use allowed returns on common equity as a variable. Traditional finance risk premium analysis measures either implied required returns on common equity against expected bond returns or actual returns on common equity against actual bond returns. Considering the fact that the Commission relied at least in part on allowed returns on common equity reported by Regulatory Research Associates in the most recent Empire rate case, Case No. ER-2004-0570, this approach may be intuitively appealing to the Commission. However, I do not believe that this approach gives a reliable estimate of the actual current cost of common equity, because it is apparent from Dr. Hadaway's dismissal of the "traditional" constant growth DCF results that, not only are commissions uncomfortable with lower cost of common equity indications from the models, but even some witnesses are uncomfortable with these lower results.

Q. Has Dr. Hadaway always dismissed the "traditional" constant growth DCF model when performing a cost-of-capital analysis?

A. No.

Q. Are you aware of any instances in which Dr. Hadaway actually relied entirely on the "traditional" constant growth DCF model for his recommendations?

A. Yes. In the early 1980s, when interest rates were very high and volatile, Dr. Hadaway held the position of Director of the Economic Research Division at the Public Utility Commission (PUC) of Texas. In his position at the Texas PUC, Dr. Hadaway sponsored rate of return testimony on behalf of the Texas PUC. Dr. Hadaway's recommendations in docket numbers 3780, 4240, 4400 and 4620 relied exclusively on his use of a "traditional" constant growth DCF model. Dr. Hadaway did not rely on a DCF model that incorporated a GDP growth rate.

Q. Did Dr. Hadaway dismiss his "traditional" constant growth DCF model results because he believed that interest rates were too high when he made his recommendations in docket numbers 3473, 3780, 4240, 4400 and 4620?

A. No. In fact, in docket numbers 3780, 4240, 4400 and 4620 his recommended return on common equity was based entirely on his results from his constant growth DCF analysis. In docket number 3473, his constant growth DCF results were in the range of 15.0 percent to 16.0 percent. His final recommendation of 15.2 to 15.5 percent was within this range, but was not determined solely by his use of the "traditional" constant growth DCF model.

Q. If Dr. Hadaway did not dismiss his constant growth DCF results when interest rates were at an all time high in the early 1980s, is it logical for him to dismiss his constant growth DCF results when interest rates are actually more normal, when one considers the history of interest rates?

A. No. The only explanation I can suggest for this logical inconsistency is that in the early 1980s when he supported use of the constant growth DCF methodology,

Dr. Hadaway submitted testimony on behalf of the Texas PUC, but now he submits testimony on behalf of utility companies.

Q. Please compare the interest rate environment in the early 1980s to the current interest rate environment.

A. Actually, the interest rate environment in the early 1980s was the highest it has been for at least the last 85 years. If there was ever a time to be concerned about whether to assume that investors would assume a constant growth rate into the indefinite future, it would have been in the early 1980s. However, Dr. Hadaway did not use a multi-stage DCF model during this anomalous period.

In fact, a review of Schedule 2 attached to this rebuttal testimony indicates that if anything, the current interest rate environment is more normal and stable now than it has been since the early 1960s. Schedule 2 illustrates the anomaly that occurred in the early 1980s and how today's interest rate environment is more typical of interest rates relative to other more stable periods when inflation wasn't out of control. If one were to objectively analyze the history of interest rates, one would conclude that we are much more likely to continue this period of lower long-term interest rates than to return to the high interest rate environment of the late 1970s and early 1980s.

Q. If interest rates are more stable now, then wouldn't this imply that the constant-growth DCF model would provide more reliable cost of common equity estimates than if interest rates were volatile?

A. Absolutely. If investors are confident that the Fed will keep inflation under control, and accordingly that interest rates will be lower and less volatile, then they are much more likely to project a constant growth rate into the future. In a mature industry such as the

electric utility industry, this constant growth rate would be based on the fundamentals of the industry, not on a projected growth rate of the overall economy.

Q. What is one of the primary assumptions underlying the constant-growth DCF model that would be affected by the volatility of interest rates?

A. The assumption that the required rate of return would remain constant.

Q. Did Dr. Hadaway agree during his deposition on November 4, 2005 that this is one of the assumptions underlying the constant growth DCF model?

A. Yes. On page 35, lines 7 through 13 of his deposition, Dr. Hadaway indicated the following in response to Staff Counsel David Meyer's question to Dr. Hadaway that he disagrees with the assumption that the model assumes a constant rate of return:

> No, Mr. Meyer, not at all. I may have misunderstood your question, and I may not have answered the question that you asked to begin with. What I was saying was that over time, K [required rate of return] certainly can change. At any given point in time, certainly we are just estimating one K, one rate of return. And so I think I made a mistake earlier just by misinterpreting what you were asking me. (Hadaway deposition at p. 36, ll. 7-13)

Q. Aren't utility companies' costs of common equity, i.e. required rate of return, highly correlated with changes in interest rates?

A. Yes. Investor publications frequently discuss this characteristic of utility stocks when advising investors on the timeliness of investing in utility stocks. In fact, Dr. Hadaway cites a quotation from Value Line on page 37 of his direct testimony that advises investors to avoid utility stocks right now because they are trading at 52-week highs and if Value Line's projection of rising interest rates is on target, then utility stock prices are likely to fall.

Q. If Value Line believes that utility stocks are not timely right now, does this mean that Value Line believes that utility companies are having trouble attracting capital?

A. No. Actually, it is quite the opposite. Because interest rates have remained low and investors tend to view utility stocks as bond-like investments, investors have been attracted to utility stocks in their search for a better return. This has caused utility companies' cost of common equity to decline considerably. Consequently, instead of utility companies being starved for capital, they are actually quite flush with capital. The untimeliness of utility stocks has nothing to do with regulators not acting favorably to utility companies; rather, it has to do with the current higher valuation levels of utility stocks and the concern that if interest rates rise in the future, that these valuation levels would not be appropriate considering the different macroeconomic environment.

Q. It would appear that interest rates play a vital role for investors when they determine their required rate of return to invest in utility companies. Then wouldn't the confidence in the assumption of a constant required rate of return be highly dependent on the stability of interest rates?

A. Absolutely.

Q. Did Dr. Hadaway admit during his deposition on November 4, 2005 that the cost of common equity, i.e. the required rate of return on common equity, is correlated with the level of interest rates?

A. Yes. He indicated that he agreed with this principle on page 38, line 10 from the transcript of his deposition on November 4, 2005.

Q. Did Dr. Hadaway indicate during his deposition that he believed that the volatility of interest rates makes any of the assumptions of the constant growth DCF model questionable?

A. Dr. Hadaway indicated that he really hadn't thought about this issue much. (Hadaway deposition at p. 39, ll. 14-16)

Q. Did Dr. Hadaway measure the volatility of bond returns when he wrote testimony on behalf of the Texas PUC in the early 1980s?

A. Yes. In the *Application of El Paso Electric Company for Authority to Change Rates,* docket number 4620, Dr. Hadaway submitted rate of return testimony. In that testimony Dr. Hadaway performed a risk premium analysis, and as part of this analysis, Dr. Hadaway showed how the standard deviation of monthly total bond returns had increased significantly in 1980 and 1981. According to his testimony, the standard deviation of monthly total returns for Salomon Brothers High Grade Bonds was 6.00 percent in 1980 and 5.99 percent in 1981.

Q. Did Dr. Hadaway calculate the standard deviation of monthly total returns for Salomon Brothers High Grade Bonds in this case?

A. No.

Q. Did you perform these calculations?

A. Yes. According to my calculations, the standard deviation of monthly total returns on Salomon Brothers High Grade Bonds was 3.51 percent in 2003 and 2.33 percent in 2004.

Q. Wouldn't this imply that today's interest rate environment is more stable than the interest rate environment in the early 1980s?

A. Absolutely.

Q. If interest rates are more stable today than they were in the early 1980s, then wouldn't this mean that investors' required rates of return would also be more stable today then they were in the 1980s?

A. Yes. Because the level of interest rates is a vital factor in the investors' required return when investing in a utility company, then obviously if interest rates are more volatile, this would cause the required rate of return to be more volatile. This would violate one of the fundamental assumptions underlying the "traditional" constant growth DCF model.

Q. Did Dr. Hadaway dismiss the "traditional" constant growth model in the early 1980s because of this volatility?

A. No.

Q. Wouldn't it be logical to conclude that analyst's forecasts of earnings growth would more likely be constant into the indefinite future for the utility industry in a stable interest rate environment rather than in an unstable interest rate environment?

A. Yes. I believe this to be especially true because the utility industry is a mature industry.

Q. When investors are projecting growth rates for utility companies do they consider issues such as the current level of interest rates and the possibility of interest rate increases in the future?

A. Yes. According to the semi-strong form of the efficient market hypothesis (EMH), investors contemplate all publicly available information when determining growth rate estimates. This includes things such as interest rate projections, regulatory decisions,

industry fundamentals, company fundamentals and expectations about the growth in the economy.

Q. Are investors' expectations for the economy and the electric utility industry fully reflected in the stock prices of utility companies?

A. Yes. The semi-strong form of the EMH indicates that all of this information is reflected in stock prices. This is one of the fundamental assumptions underlying the DCF model.

Q. If investors end up being wrong about their expectations, will stock prices change to reflect the new circumstances?

A. Yes.

Q. If this happens, then is it possible that the cost of common equity will increase for utility companies?

A. Yes.

Q. Do you know if investors will be wrong about their expectations?

A. No. As a rate of return witness, I am just informing the Commission as to what I have observed about current investor expectations. Whether these expectations end up being right or wrong is not for me to decide.

Q. Do you believe that Dr. Hadaway has allowed his expectations about the future to become a part of his recommendation in this case?

A. Yes. Dr. Hadaway was asked during his deposition as to whether he had an opinion as to whether utility stocks are currently overvalued. In his response he indicated that he did not believe they were as overvalued as they were about two or three weeks ago, but that maybe they were overvalued a few weeks ago.

This type of answer certainly implies that Dr. Hadaway believes that investors have been placing too much of a premium on utility stocks and that this should be accounted for in the recommended cost of common equity in this case. This would imply that Dr. Hadaway does not believe in the efficient market hypothesis, which would call into question his use of any form of the DCF model because that is a fundamental assumption of the model. I would suggest that if Dr. Hadaway believes that investors are not taking into consideration all known data, such as the possibility of increasing interest rates, when investing in utility stocks, that he discontinue his use of the DCF model to estimate the cost of common equity.

Q. What type of long-term growth is typically expected for the utility industry?

A. OPC's witness, Mr. Travis Allen, testified in the recent Empire rate case, Case No. ER-2004-0570, that an investment in a utility may yield a three to four percent growth rate. Mr. Allen's source for this growth rate expectation was a May 10, 2004 report from Electric Utility Week in which Bill Tilles, portfolio manager for The Kinetic Utility Funds, indicated the following:

> The current trend to "basics" business plans is a signal companies over-reached for growth rates of 8% using unregulated ventures…Utilities should not chase exorbitant growth rates because the best profit potential for the industry will continue to be in the regulated sector…Growth rates for utilities have been trending down, and a 3%-4% rate is more realistic than the rates and expectations of previous years."

If a multi-stage DCF model were used, a long-term growth rate that is considered sustainable by industry standards – not the overall growth rate of the economy – should be used for the second stage of the model.

Q. Why do you believe it would be more appropriate to use an expected industry growth rate for the second stage of Dr. Hadaway's multi-stage DCF model?

A. Because the electric utility industry is a mature industry. This is the very reason that regulated electric utility companies had a dividend payout ratio of approximately 78 percent for the calendar year 2004 (May 2005 AUS Utility Reports) and the S&P 500 only had a dividend payout ratio of 38 percent (June 30, 2005 Franklin Templeton Investment Report) for the calendar year 2004. If one considers that the S&P 500 is considered as a proxy for the entire market, one would assume that the use of nominal GDP growth of the economy would be an appropriate proxy for the S&P 500. However, it would not be considered an appropriate proxy for the electric utility industry. Quite simply, electric utility companies do not retain as much earnings as the rest of the market because they are not driving the growth of our economy. It is the companies that are in their "growth" stages that drive the economy. Consequently, even if one were to accept GDP growth as a proxy for a growth rate to use in a DCF analysis, one would need to reduce this growth rate to consider the fact that mature industries do not grow as fast as the rest of the economy. I would also urge the Commission to consider the article from the *WSJ* that I quoted earlier in my testimony that indicated that investors see utilities, in general, as an industry that doesn't offer much growth potential when deliberating on whether it is appropriate to accept the growth in the overall economy as a reasonable long-term growth rate for utility companies.

Q. If Dr. Hadaway had utilized a two-stage DCF model in the 1980s when he was sponsoring rate-of-return testimony on behalf of Texas PUC and if he had used the same methodology as he did in this case, what GDP growth rate would he have used?

A. If Dr. Hadaway had employed the two-stage DCF model in 1982 using the same methodology he has used to determine a projected GDP growth rate in this case, he would have averaged GDP growth rates back to 1947. This would have resulted in an

average nominal GDP growth rate of 8.8 percent. The actual average nominal GDP growth over the period 1983 to the present was 6.0 percent.

Q. Did Dr. Hadaway indicate during his deposition that he did not believe that perpetual growth rates for utility companies would change much?

A. Yes. He indicated that he felt that a 100 to 200 basis point change in growth rate estimations was not reflective of investors' expectations for perpetual growth. (Hadaway deposition at p. 56, ll. 10-16)

Q. What does perpetual mean?

A. It means everlasting or into the indefinite future.

Q. What was Dr. Hadaway's estimate of perpetual growth for the utility companies that he analyzed at the Texas PUC in docket numbers 3473, 3780, 4240, 4400 and 4620?

A. Dr. Hadaway's estimate of perpetual growth was anywhere from 2.5 to 5.0 percent in these dockets. This is significantly different from the perpetual growth rate Dr. Hadaway proposes in this case of 6.6 percent and is much different from the nominal GDP growth rates of up to 10 percent during the early 1980s.

Q. Based on the iterative process used in Dr. Hadaway's two-stage DCF model, how much weight was applied to the GDP growth rate in order to arrive at his implied growth rate of 6.1 to 6.2 percent in this model?

A. Based on some simple algebra, the weight that Dr. Hadaway applied to the 6.6 percent GDP growth rate was at least 85 percent.

Q. Do you know if the Federal Energy Regulatory Commission (FERC) has ever endorsed the use of any specific method to determine an appropriate growth rate for the DCF model?

A. Yes. Because FERC believes that growth should be calculated based on a weighting of "near-term" analyst growth rates and a long-term projected GDP growth rate, FERC specified the use of two-thirds weight for the near-term growth rate and one-third weight to the long-term growth rate.

Q. Does FERC direct witnesses to use any specific sources for long-term GDP growth when determining the long-term growth rate?

A. Yes. FERC directs witnesses to use an average of the most recently available estimates of GDP available from the Energy Information Administration (EIA), DRI/McGraw-Hill, and Wharton Economic Forecasting Associates (WEFA). DRI and WEFA merged to form Global Insight. As a result, FERC Staff witnesses recently used an average of projections from EIA, Global Insight and the Social Security Administration in the Kern River Gas Transmission Company rate case, Docket No. RP04-274-000. This average projection was 5.35 percent. This growth rate is well below the 6.6 percent growth rate that Dr. Hadaway used in his two-stage DCF model and constant-growth DCF model using GDP as the perpetual growth rate. If Dr. Hadaway had applied one-third weight to this more reasonable projection of GDP growth and two-thirds weight to his near-term projected growth of 3.35 percent, his growth rate would have been about 4 percent. This is much lower than the 6.1 percent to 6.2 percent growth rate that he calculated using his two-stage methodology. If you add this 4 percent projected growth to the 4.5 percent dividend yield,

the result is a cost of common equity of 8.5 percent. This is consistent with the low end of my estimated cost of common equity.

Q. Are you aware of any other inconsistencies that cause you some concern about Dr. Hadaway's quick dismissal of his "traditional" constant growth DCF model results?

A. Yes. When Dr. Hadaway sponsored testimony on behalf of the Texas PUC, he endorsed an upward adjustment to his constant growth DCF results, because utility companies at the time had market-to-book ratios that were below one. Dr. Hadaway believed that if a company had to issue new common stock at a market price below the book value of the common stock, the issuance would dilute (reduce) the earnings per share (EPS) to existing stockholders. In order to keep investors from being harmed from this potential dilution, he sponsored an upward adjustment to the cost of common equity recommendation derived from an application of the constant-growth DCF model.

If one were to apply this logic of making an upward adjustment to avoid shareholder harm resulting from dilution, then when market-to-book ratios are above one a downward adjustment should follow. New issues of common stock would be accretive to (increase) EPS for existing stockholders; in other words, merely by issuing new stock, a company could increase the earnings per share of existing stock. However, instead of proposing a downward adjustment to his "traditional" constant-growth DCF model to eliminate this increase in EPS, he dismissed the results from this model because they were already too low for his client's liking.

Q. Did Dr. Hadaway acknowledge during his deposition that issuing new common stock when market-to-book ratios are above one would be accretive to EPS?

A. Yes. The following Q and A occurred:

> Q. Has your philosophy overall changed since the 1980's, relative to the market-to-book concept and its application in these situations?
>
> A. Well, if the market-to-book ratio is below one, which it hasn't been in a long time, then I think the regulator should look at what do you do if the compan[ies] are having to issue stock to keep them from diluting their earnings by issuing stock below book. When book value is above one, if companies do issue stock, it actually improves their earnings, makes them grow faster than they would have otherwise grown. So I don't think a regulator has to worry about it then. (Hadaway deposition at p. 67, ll. 19-25 through p. 68, ll. 1-5)

Q. Doesn't this appear to be a "win-win" scenario for the shareholder?

A. Yes. Dr. Hadaway's proposition means that the regulator should be concerned if the issuance of new common stock results in a dilution to EPS, but not be concerned if the issuance of new common stock results in an accretion to EPS. This implies that regulators should require ratepayers to pay higher rates (through a higher ROE) in order to mitigate dilution, but that regulators should not take any action that may cause ratepayers to pay lower rates (through a lower ROE) in order to mitigate accretion to shareholders. This argument defies basic logic.

Q. Was Dr. Hadaway asked during his deposition about why he made this adjustment in the early 1980s and why he no longer makes adjustments based on current market-to-book ratios?

A. Yes. The following question and answer exchange occurred during Dr. Hadaway's deposition on November 4, 2005 (Please see Schedule 3 for the transcripts from the entire discussion on market-to-book ratio adjustments):

> Q. Is it true that you made upward adjustments to your DCF results in the early 1980's, when you were working for the Public Utility Commission of Texas?

A. Yes, we routinely adjusted, did a market to book adjustment because stocks were selling for less than book value and a flotation cost because the companies were issuing a lot of stock at that time…(Hadaway deposition at p. 65, ll. 20-25 through p. 66, l. 1)

Q. In this case, in the present case, did you determine what your reference groups average market-to-book ratio was?

A. No.

Q. Why did you not do that?

A. It's in the statistics in ValueLine. I just didn't refer to that. I don't make any kind of upward adjustment some economists do for market-to-book ratios being above one. There are some company witnesses that do that, but I do not endorse that particular adjustment.

Q. Okay.

A. And so I haven't – I haven't done that.

Q. But you do believe that that's worthy of considering in making an adjustment when market-to-book ratios are below one; is that correct?

A. Well, yes, that was appropriate back in the early 1980's. The adjustment that – what you're kind of asking me about now that I've seen other witnesses use is to increase the requested rate of return on equity so that investors somehow are supposed to get a rate of return on market value rather than book value. I don't find that very persuasive. It's an upward adjustment, not a downward adjustment. (Hadaway deposition at p. 66, ll. 21-25 through p. 67 ll. 1-18)

Q. What is the most interesting aspect of Dr. Hadaway's logic on the effect of the level of market-to-book ratios?

A. The most interesting aspect of Dr. Hadaway's logic is that it is completely contrary to other company witnesses' logic that the "traditional" constant growth DCF model underestimates the cost of common equity when market-to-book ratios are above one. In

order to correct this perceived shortcoming of the DCF model, these witnesses have made upward adjustments to their DCF model results. Although Dr. Hadaway and the other witnesses are of the opinion that the "traditional" constant growth DCF model underestimates the cost of common equity for completely different reasons, they have all found ways to adjust their recommendations accordingly.

DR. HADAWAY'S RECOMMENDED CAPITAL STRUCTURE FOR MPS AND L&P

Q. Please summarize Dr. Hadaway's recommended capital structure for MPS and L&P.

A. Dr. Hadaway is recommending a hypothetical capital structure based on his 29-company reference group's average common equity ratio. Dr. Hadaway also indicates that this hypothetical capital structure is consistent with Aquila's internal capital assignment process. If the Commission is inclined to accept Dr. Hadaway's capital structure in this case, then it should appropriately label the capital structure as a hypothetical capital structure.

Q. Are investors, which includes creditors, concerned with Aquila's allocation system for its divisions?

A. No. MPS and L&P are divisions of the corporate entity Aquila. These divisions are kept separate for internal management and regulatory purposes, but investors, including creditors, have no interest in how Aquila "allocates" its capital to its divisions other than the fact that a certain allocated capital structure may allow the company to generate a larger revenue requirement in a rate case.

Aquila issues the debt and equity for the capital needs of its divisions. Therefore, investors are only interested in Aquila's consolidated operations. Aquila's divisions receive capital from the corporate treasury and this corporate treasury can have various mixes of

capital in it at any given point in time when the divisions draw down capital from the treasury. Therefore, it is appropriate to utilize the consolidated capital structure of Aquila, if it is reasonable, because it is verifiable and represents how Aquila's divisions are capitalized. The capital structure through the true-up period should also be reasonable because the common equity ratio should fall within the range of common equity ratios that Aquila had for the ten years prior to its credit rating being downgraded to below investment grade. The common equity ratio as of the true-up period should also be consistent with the range of common equity ratios for my comparable companies, which is shown on Schedule 18 attached to my direct testimony in this case.

Q. What are the average common equity ratios for a representative sample of the electric utility industry?

A. The November 2005 *AUS Utility Reports* indicates an average common equity ratio of 46 percent for the 24 electric companies that it analyzes. The average percentage of common equity for the 16 BBB-rated electric companies that it analyzes is 44.69 percent. It is important to review BBB-rated utilities because this is what Aquila was rated before it encountered financial difficulties and this is the credit rating that Aquila said it will utilize when determining the cost of new debt that it issues for purposes of ratemaking. Therefore, the capital structure used for ratemaking purposes in this case should be consistent with that of a BBB-rated utility.

These figures indicate that an appropriate common equity ratio to use as a hypothetical would be close to 45 percent. Aquila's capital structure through the true-up period in this case is likely to be close to this common equity percentage. However, as stated before, if the actual capital structure is reasonable, verifiable and consistent with how the

Company has been financed in the past under "normal" circumstances, then this capital structure should be used because it more accurately reflects the cost of capital.

Q. According to Schedule 7-2 attached to your direct testimony, has Aquila ever had a consolidated common equity ratio of 48.2 percent during the period it had an investment grade credit rating from1992 through 2001?

A. No. The highest common equity ratio during this period was 44.17 percent.

Q. Why is it important to consider this information?

A. Because if a capital structure were used for ratemaking purposes that differed significantly from the capital structures that Aquila had when it had an investment grade credit rating then there would be a mismatching of costs. If Aquila had consistently maintained a capital structure that contained a ratio of 48 percent equity, then it is likely that Aquila, then UtiliCorp, would have had a better credit rating, which would have resulted in lower debt costs. These possible lower debt costs are not reflected in the embedded cost of debt calculation. Consequently, it is not appropriate to use a hypothetical capital structure that contemplates a 48 percent equity ratio.

Q. What has been the Commission's position on hypothetical versus actual capital structures in recent rate cases in which it has ruled on this issue?

A. In the recent Empire District Electric rate case, Case No. ER-2004-0570, the Commission adopted Empire's actual capital structure rather than its "regulated only" capital structure. In the Missouri Gas Energy rate case, Case No. GR-2004-0209, the Commission adopted Southern Union's actual capital structure rather than the hypothetical capital structure proposed by the Company witness.

DR. JOHNSON'S RECOMMENDED COST OF COMMON EQUITY FOR MPS AND L&P

Q. Dr. Johnson made an upward adjustment of 0.4 percent to his market approach cost of common equity recommendation in order to account for the cost of issuing stock. Didn't Dr. Hadaway indicate during his deposition that no such adjustments are needed when market-to-book ratios are significantly above one?

A. Yes, and in general, utility company market-to-book ratios are currently significantly above one. Dr. Hadaway specifically indicated the following when referring to the need to make an adjustment for the cost of issuing stock:

> Market-to-book a little bit above one so that you would cover the flotation costs. Once you've done that, then generally speaking, some commissions do still give flotation costs because they consider it to be a cost like issuing debt. But you can also make the argument that if the company is selling stock above book value, that you don't need to have flotation costs. That's part of the reason why I do not recommend flotation costs in most cases. If a company has a large need to issue a lot of external equity, then sometimes it does still have to be considered. (Hadaway deposition, p. 71, l. 20 through p. 72, l. 4)

Consequently, even though Staff does not endorse such an adjustment for its own reasons, Aquila's witness doesn't endorse such an adjustment either.

Q. Even if one were inclined to allow for costs associated with issuing common stock, how does Staff address these costs in rate cases?

A. To the extent stock issuance costs should be allowed in a rate case, they should be recovered on a dollar for dollar basis when they are incurred and not as an adjustment to the cost of common equity.

DR. JOHNSON'S AND MICHAEL GORMAN'S ACCEPTANCE OF AQUILA'S DEBT ASSIGNMENT PROCESS

Q. Both Dr. Johnson and Mr. Gorman accept the debt cost assignments made by Aquila to MPS and L&P. Do you believe it is wise for the Commission to accept this process?

A. No. I have already explained my concerns about Aquila's capital assignment process for purposes of determining an appropriate capital structure. These same concerns apply to a process of assigning certain debt issuances for purposes of determining an appropriate embedded cost of debt for L&P and MPS. The mere fact that these costs differ by 126 basis points should cause the Commission to question the equitability of such a process. The Commission's endorsement of a process that can easily be manipulated would not be advisable.

Q. Is there any possible way to know that Aquila hasn't used lower cost debt proceeds for L&P's capital needs?

A. No. Once capital is procured, it goes into Aquila's treasury. This capital can be from any source. Consequently, Aquila's debt issuances should be consolidated for determining the debt cost for MPS and L&P. This prevents any possible inequities from developing.

MR. GORMAN'S RECOMMENDED CAPITAL STRUCTURE

Q. Mr. Gorman indicates that he believes that his capital structure recommendation is appropriate because it is consistent with Value Line's projections of Aquila's capital structure after its recently announced asset sale agreements are completed. Is it possible to reasonably estimate this capital structure?

A. No. There are too many unknown variables that may occur from now until these sales are completed, such as repositioning of the company. In fact, Mr. Rick Dobson, Aquila's Chief Financial Officer, recently concurred with this position during Aquila's third quarter earnings conference call on November 3, 2005. When asked if he could give investors an idea of what Aquila's capital structure would be after the sales are completed, Mr. Dobson declined to speculate as to what it might be. I believe that if Mr. Dobson does not want to speculate on the capital structure when addressing investors, then we should not speculate on a ratemaking capital structure when determining reasonable rates for ratepayers.

SUMMARY AND CONCLUSIONS

Q. Please summarize the conclusions of your rebuttal testimony.

A. My conclusions regarding the capital structure and cost of common equity are listed below.

1. The use of the capital structures proposed by Dr. Hadaway and Mr. Gorman are inappropriate. The calculation of the cost of capital for MPS and L&P should be based on Aquila's actual consolidated capital structure as of June 30, 2005, as shown on Schedule 9 attached to my direct testimony. If true-up information becomes available and the capital structure is still reasonable, then the ratemaking capital structure should be based on this information;

2. My cost of common equity stated in Schedule 20 attached to my direct testimony, which is 8.50 percent to 9.50 percent, would produce a fair and reasonable rate of return of 7.72 percent to 8.08 percent for the Missouri jurisdictional electric utility rate base for MPS and L&P.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

Wall Street Journal, October 10, 2005

MONEY & INVESTING

THE WALL STREET JOURNAL.

Utilities Might Face Ugly Reality

Sector Has Gleamed Recently, But Worries About Energy Prices And Interest Rates Spur Concern

By Ian McDonald
And E.S. Browning

CALLED THE BIG UGLIES on Wall Street, utility stocks have been sights for sore eyes lately. But some fear they might soon live up to their name.

Shares of utilities are about 15% higher so far this year, second only to energy stocks, which are up 32%, according to Dow Jones Indexes. Health-care stocks are the only other sector in the black—up 3%. Broadly, stocks—as measured by the Dow Jones Industrial Average and Standard & Poor's 500-stock index—are in the red by 4.6% and 1.3%, respectively.

ABREAST OF THE MARKET

There's not much mystery as to what's driving energy and health care. Energy shares usually soar with skyrocketing crude-oil prices. Health-care stocks often fare well in doldrums years, because demand for medicine and hospitals remains fairly constant no matter how the economy is doing.

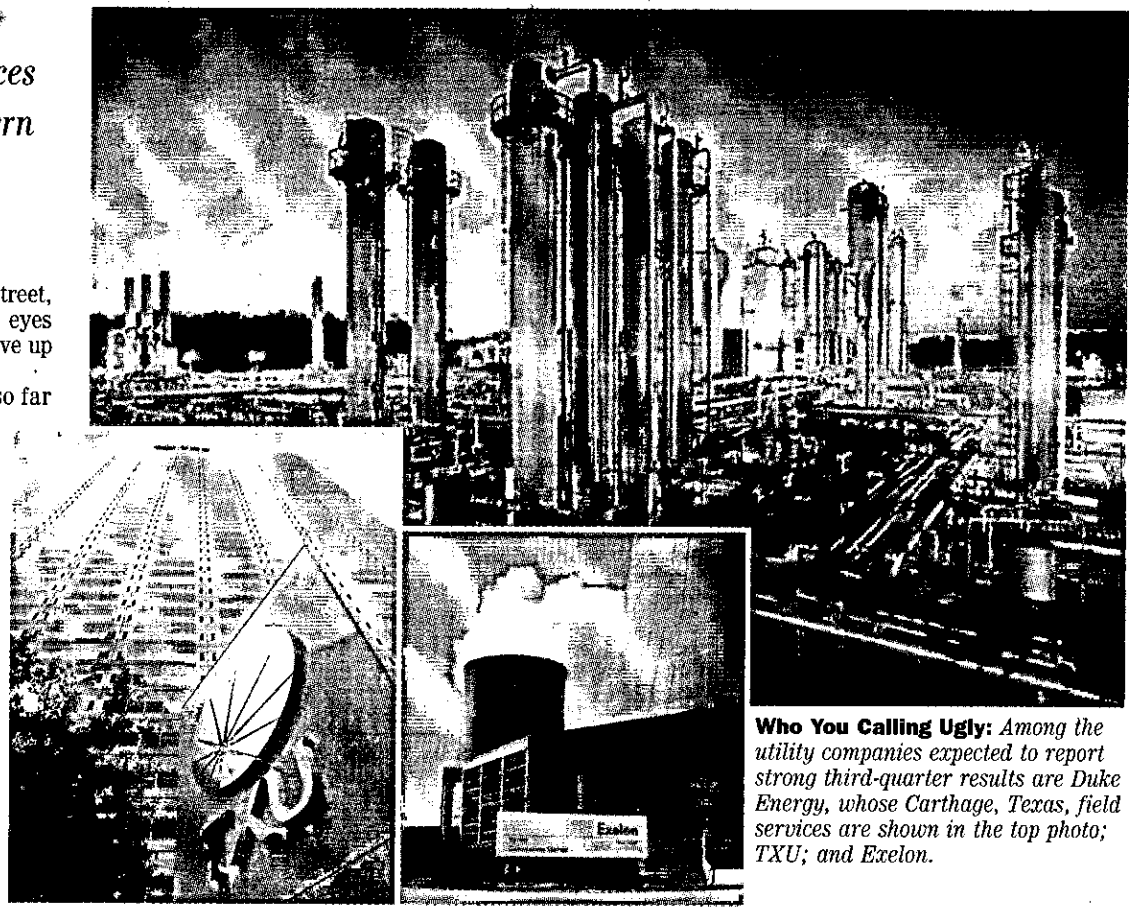
Utilities are more of a puzzle. Grouped together by professional investors with other grimy and unglamorous—or ugly—industries, they usually don't offer much growth potential. Yet the Dow Jones Utility Average hit a record last week, capping a nearly 45% gain during the past two years.

In the past several trading sessions, however, the sector has slipped amid worries that inflation and interest rates are headed up, that the economy will slow and that energy prices have peaked. That skittishness after such a long run-up reflects marketwide concern over the same issues. Major stock indexes suffered one of the year's worst weeks, and the price of crude oil fell sharply.

Utilities' earlier gains resulted from a trio of profitable coincidences.

Historically, interest-rate increases have pushed utilities stocks down because such reliable dividend payers long have been used as a bond substitute by income-seeking investors. Rising rates make newly issued bonds with higher yields more attractive than existing income-producing stocks and bonds with lower payouts. Despite 11 consecutive rate raises by the Federal Reserve, however, long-term bond yields remain low, allow-

Please Turn to Page C11, Column 5



Who You Calling Ugly: *Among the utility companies expected to report strong third-quarter results are Duke Energy, whose Carthage, Texas, field services are shown in the top photo; TXU; and Exelon.*

Utilities Could Return to 'Ugly'

Continued From Page C1

ing dividend-paying utilities to retain their edge.

Then there's deregulation, an echo of the story that last pushed the sector up in 2000 after the stock-bubble burst. Thanks to loosened U.S. rules, some utilities that churn out excess power from relatively low-cost sources like coal or nuclear plants can sell that extra capacity in high-cost markets, making a bundle.

ABREAST OF THE MARKET

Companies like **TXU**, **Duke Energy**, **FPL Group** and **Exelon** are in this camp and appear poised to report strong third-quarter results in coming weeks. These stocks are well up on the year.

"These are hidden energy plays," says Judy Saryan, portfolio manager of the $762 million **Eaton Vance Utilities Fund**, speaking about Exelon and TXU. "Utilities investors are in a different time."

Strong demand for power has helped, too. The U.S. Gulf Coast hurricanes, which have crimped energy supplies from the region, are expected to keep the price of power high.

All this has generated extra cash, which utilities have used to slash debt, boost dividend checks and repurchase stock—which helps drive up share prices.

The sector's fall after last Monday's peak was triggered by worries about all three of the legs that have supported utilities for the past two years—low bond yields, high prices in the unregulated part of the power market, and high demand for power in a booming economy.

Moreover, the run-up has caused utility stocks to become pricier in relation to their earnings. The higher stock prices also have pushed down their dividend yields—the amount of income they produce per dollar invested.

"If something bad happens in the utilities world, you could have a material downside," says John Meara, president of St. Louis money-management firm Argent Capital Management, who has steered clear of the sector. "The risk side of the equation is definitely higher than it was five years ago."

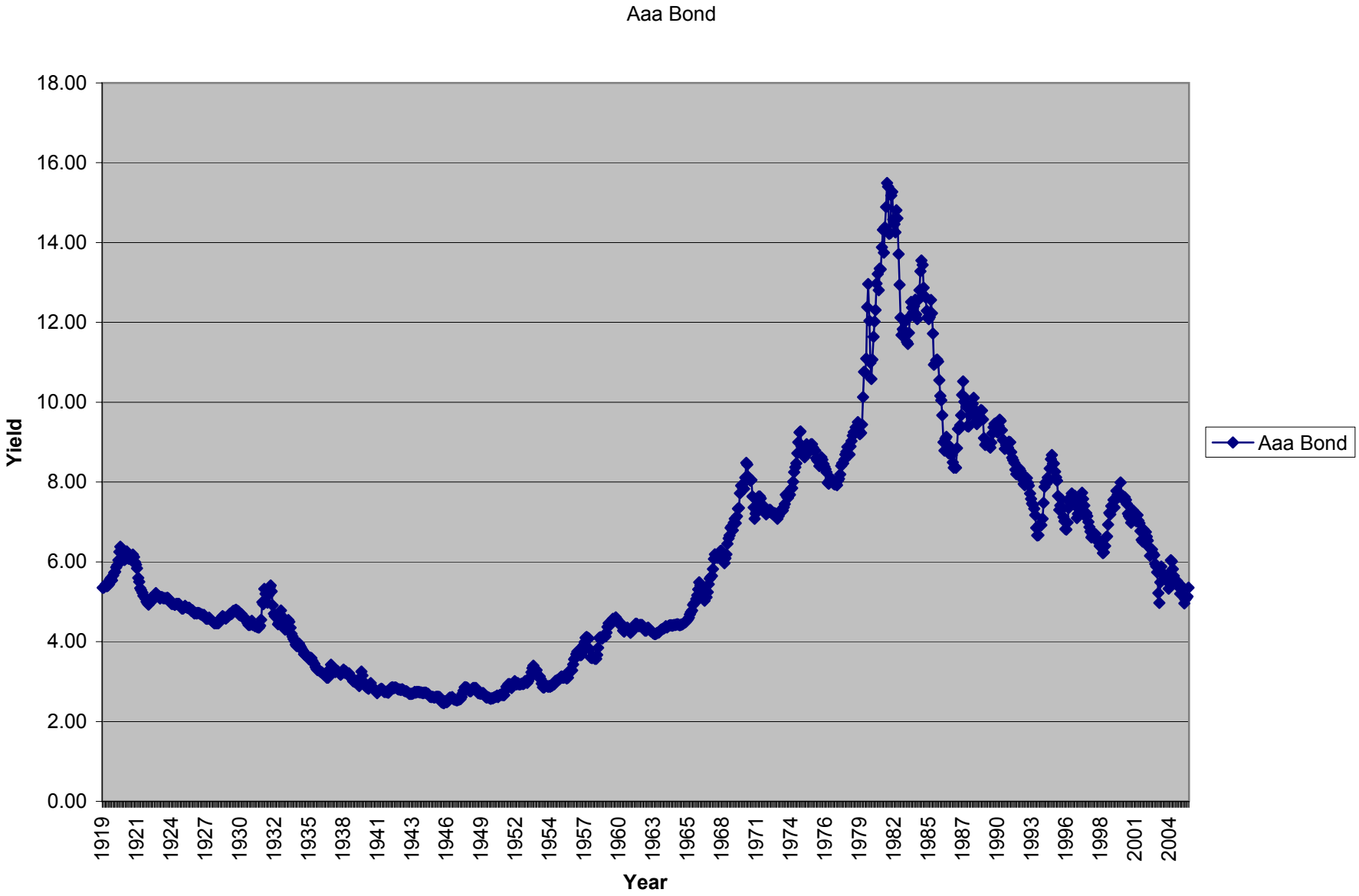
Investors don't have to look far back to see a time when a spurt of enthusiasm in the sector ended badly. Utility stocks last soared in 2000, powered by the likes of Enron, as investors fell in love with companies that traded energy like other commodities. The stocks fell hard as the promise of big profits from that business model unraveled ahead of Enron's collapse.

There are some significant differences between then and now. This run-up has lasted longer. The stocks that have been gaining are more stable than the ones that soared ahead of the Enron disaster.

Still, a bet on utilities today is an implicit bet that the "conundrum" of low interest rates on long-term bonds will persist. It's also a bet that the economy will chug through the destruction of property and confidence from this year's hurricanes.

And whether your yardstick is stock valuations—share prices relative to earnings—or dividend yields, utilities don't look all that inexpensive. Mr. Meara looks at the dividend yield of utilities compared with that of the 10-year Treasury note. Five years ago, utilities were yielding as high as 10%, well above the almost 6% yield of the 10-year note. Today utilities have average yields of 3.4%, compared with more than 4.3% for the note. That makes the Treasury security a better deal, even taking into account lower taxes on dividends.

Some people fear that, even after the fundamental reasons for holding utility stocks have dissipated, investors may hold them, waiting for one last rebound. "Our concerns are mainly about valuations," says Sam Stovall, chief investment strategist at Standard & Poor's. "One reason for the run might have more to do with psychology than fundamentals. Why unload something that has been so good to you?"



Source: St. Louis Federal Reserve Website

Schedule 2

Q. Is it true that you made upward adjustments to your DCF results in the early 1980's, when you were working for the Public Utility Commission in Texas?
A. Yes, we routinely adjusted, did a market to book adjustment because stocks were selling for less than book value and a flotation cost because the companies were

0065

issuing a lot of stock at that time.
Q. I think you just answered that, but was that why you made the upward adjustment, was there any other reason?
A. Yeah, sometimes we would go up in the range because the company was in danger of its construction program being large enough that they might have their bonds downgraded if they didn't meet a coverage test. So sometimes we did make those kinds of adjustments.
Q. Generally, though, it was -- would you -- was it generally because the market-to-book ratios were below one? Is that the net fact?
A. That was the routine adjustment, but the more ad hoc adjustments were things that if a company could demonstrate, and if our analysis showed that their construction requirements were going to cause them to lose a given bond rating, then we typically, in our analysis, would adjust our rate of return up, and we would put more construction work in progress into rate base to try to improve the cash flows to avoid a bond downgrading.
Q. In this case, in the present case, did you determine what your reference groups average market-to-book ratio was?
A. No.
Q. Why did you not do that?

0066

A. It's in the statistics in ValueLine. I just didn't refer to that. I don't make any kind of upward adjustment some economists do for market-to-books being above one. There are some company witnesses that do that, but I do not endorse that particular adjustment.
Q. Okay.
A. And so I haven't -- I haven't done that.
Q. But you do believe that that's worthy of considering in making an adjustment when market-to-book ratios are below one; is that correct?
A. Well, yes, that was appropriate back in the early 1980's. The adjustment that -- what you're kind of asking me about now that I've seen other witnesses use is to

increase the requested rate of return on equity so that investors somehow are supposed get a rate of return on market value rather than book value. I don't find that very persuasive. It's an upward adjustment, not a downward adjustment.

Q. Has your philosophy overall changed since the 1980's, relative to the market-to-book concept and its application in these situations?

A. Well, if the market-to-book ratio is below one, which it hasn't been in a long time, then I think the regulator should look at what do you do if the company's are having to issue stock to keep them from diluting their

0067

earnings by issuing stock below book. When book value is above one, if companies do issue stock, it actually improves their earnings, makes them grow faster than they would have otherwise grown. So I don't think a regulator has to worry about it then.

Q. So do you believe that it's important to consider the effective market-to-book ratios on investors and on ratepayers when market-to-book ratios are above one?

A. Well, that's what I'm saying.

Q. Say that one more time.

A. I don't think that market-to-book ratios above one in any sense harm ratepayers. They avoid the need for a regulator to make any upward adjustment. I have seen witnesses on behalf of companies say that investors should receive a rate of return on market value so that they adjust the allowed rate of return upward from what the DCF model says that is applied to rate base because rate base is less than market price. I do not find that very persuasive.

Q. If market-to-book is below one, and you're applying the constant growth DCF, do you believe that shareholders will be harmed unless the return on equity is adjusted up?

A. It certainly, if the shareholders are having to have other people own more of their company, so that the utility can raise the capital needed to serve its customers,

0068

then those shareholders that previously existed ones are harmed. They are diluted. Their earnings are diluted downward by the very act of issuing stock to provide capital to serve the customers.

If the market-to-book is above one, that's not the case. The company's can, in fact, issue stock if they need to without harming anybody, and can, in fact, benefit

their shareholders, but it doesn't harm the customers of the company. In fact, it supports the customers because it makes it more economical for the company to get new capital to serve those customers.

Q. The adjustment that's made if market-to-book is below one, where would you suggest that that adjustment comes from?

A. It was typically a very cut and dried, like a flotation cost adjustment, simply a judgmental reduction of the price by ten percent, in some cases, in the DCF dividend yield part. In textbooks, the way that's done for flotation costs is you say if a company issues stocks for $100 a share, but they have to pay the investment banker $5 a share to issue that stock, you reduce the denominator, if you will, the price, by five percent. And so routinely, some commissions back in the early 1980's, would reduce the price by ten percent, and they would call that a flotation cost and market-to-book adjustment. It was not very scientific.

0069

Q. Would that reduction actually come from someone's pocket, or where would that reduction actually get born, so to speak?

A. It would lead to a higher rate of return on equity, because the dividend yield, after adjusting the price downward, would be higher. And when you had whatever growth rate you added to it, then the resulting ROE would be higher.

Q. And who would fund that relatively higher rate of return?

A. If that is applied to the rate base, then the customers do pay a higher rate.

Q. Okay. Now, in this setting, then, as you acknowledge, the customers would, in fact, be paying a higher rate. If the situation is reversed, in other words, market-to-book is greater than one, et cetera, do you think that it is appropriate, then, for it to be sort of a reverse scenario?

A. No, and I don't think any economists that I know of is suggesting that you should make a downward adjustment. What I was telling you was that some company witnesses have come up with sort of a, to me, a convoluted approach that suggests that investors, in order not to be harmed by the rate-setting process, should be granted a rate of return on the price they currently pay for the stock, not on rate base.

0070

And to me, that's not consistent with

traditional regulation. And I do not endorse that kind of adjustment. But I haven't seen, I can't recall having seen, people suggest that you would somehow adjust the price up, maybe the reverse of the 1980's market-to-book adjustment, raise the price in the DCF model so that the dividend yield is even lower. I don't believe I've seen anybody do that.

Q. At what market-to-book ratio do you believe shareholders don't have a burden when new shares are issued?

A. If the new shares can be issued net of issuance costs, at book value, then the effect on shareholders is neutral. It doesn't cause accretion in their earnings or dilution of their earnings, so ...

Q. Something along the lines -- sorry.

A. Once that can be done, then certainly there's not any reason to adjust the cost of capital for it, in my opinion.

Q. So that's something along the lines of a one -- one-to-one ratio?

A. Market-to-book a little bit above one so that you would cover the flotation costs. Once you've done that, then generally speaking, some commissions do still give flotation costs because they consider it to be a cost like issuing debt. But you can also make the argument that if the company is selling stock above book value, that you don't

0071

need to have flotation costs. That's part of the reason why I do not recommend flotation costs in most cases. If a company has a large need to issue a lot of external equity, then sometimes it does still have to be considered.

Q. I think if I understand you correctly, then, you do not believe that there is a certain point where you are above the market-to-book ratio of one, that the customers are harmed unless you make an adjustment downward to the DCR ROE?

A. I can't think of the reason why you would want to make a downward adjustment. It's not anything that the customers are paying. It has to do with the expectations, in most of the cases, that there may be further consolidation in the industry, and there are acquisition premiums that may occur out there. Those things, as long as they're not imposed on the customers, should not effect the customers.

Q. Do you believe the return on equity should be adjusted to ensure that earnings per share will not increase if new shares are issued?

A. No, that's what I'm saying. There is no harm to the customers from simply the company's issuing stock

helping to make their earnings per share grow faster. It doesn't cost the customers anything.

Q. I'm going to show you, and I believe this is something that you provided us. The testimony that you filed

0072

in May, 1982, in front of the Public Utility Commission of Texas in Docket No. 4400, and I will draw your attention to Page 26 of that. There's a tab. If I may.

In that testimony, that spot, it appears that you are offering an example of what happens to the earnings per share of a company if it has to issue shares when its market-to-book ratio is below one. Could you take a look at that and tell me if that's a part of your testimony from that case, and if you're familiar with that example, or could become familiar with that example?

A. It's been a long time ago, but that's basically what I was explaining, maybe in a not very concise fashion, to you previously.

Q. Okay. When you've had chance to kind of familiarize yourself.

A. I've read it; I'm familiar with it.

Q. In that example, the market price of the stock is less than the book value by one -- 1.875. I think that's one and seven-eighths. Is that correct?

A. Yes.

Q. What would happen to that example if the market price was one and seven-eighths higher than the book value of the stock? And I think we actually -- we kind of did a workup of what we believe the result would be, and if I can offer that to you to take a look at.

0073

A. Okay.

Q. Would the net result of that one and seven-eighths being switched from being lower to being higher, be essentially an increased in the earnings per share by an additional $.02?

A. In your example?

Q. Yes.

A. Yes, that's correct.

Q. And would that be essentially a manifestation of the accretion that you had mentioned earlier when you were talking about?

A. That's exactly the way it works.

Q. Okay. And if the market-to-book was even lower than the .9 in your example, would that net effect be even higher?

A. If the market-to-book in my example back in 1982 had been lowered, then there would have been more than a $.02 per share effect of an adjustment to get it to market -- you know, get the market and book the same. So are you asking me if --

Q. Is -- I guess what I'm asking is if you adjust that market-to-book in different directions, is there not a net effect overall on the rest of the formula?

A. If you put a market-to-book of two, then it would make the effect much larger.

0074

Q. Okay. Thank you very much.

MR. MEYER: I believe that's all we have.