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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

REBUTTAL TESTIMONY

OF

DAVID MURRAY

UNION ELECTRIC COMPANY
d/b/a Ameren Missouri

FILE NO. ER-2011-0028

Jefferson City, Missouri
March 2011

*** ***Denotes Highly Confidential Information*** ***

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Q. Please state your name.

A. My name is David Murray.

Q. Are you the same David Murray who prepared the Rate of Return Section of the Staff's Cost of Service Report ("Staff Report")?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of Robert B. Hevert, Michael Gorman and Billie Sue LaConte. Mr. Hevert sponsored rate-of-return (ROR) testimony on behalf of Ameren Missouri. Mr. Gorman sponsored ROR testimony on behalf of the Missouri Industrial Energy Consumers ("MIEC"). Ms. LaConte sponsored ROR testimony on behalf of the Missouri Energy Group ("MEG"). I will address the issues related to the appropriate cost of common equity to be applied to Ameren Missouri's electric utility rate base for ratemaking purposes in this proceeding.

EXECUTIVE SUMMARY

Q. What areas will you address in your rebuttal testimony?

A. I will first provide summaries of all of the ROR witnesses' recommendations in this case. I will also generally compare and contrast their approaches. I will then discuss

various cost of equity indicators from analysts not involved in the rate case process that I believe provide a good basis for testing the reasonableness of the various parties' cost of equity estimates in this case. I will then address some of the specific technical concerns that I have with the various parties' recommendations in this case.

SUMMARY OF MR. HEVERT'S, MR. GORMAN'S AND MS. LACONTE'S COST OF EQUITY ESTIMATES

Q. Please summarize Mr. Hevert's estimated cost of common equity and his resulting recommended return on common equity.

A. Mr. Hevert's recommended return on common equity is 10.90 percent, based primarily on his use of two DCF methodologies, a constant-growth DCF and a multi-stage DCF. Mr. Hevert recommends an ROE of 10.90 percent, which is within his range of cost of common equity estimates of 10.50 percent to 11.25 percent. Mr. Hevert also applies the CAPM and the risk premium methods to test the reasonableness of his DCF estimates. Mr. Hevert's CAPM results are based on two different forward looking equity risk premium estimates. The first is based on his application of the DCF to the S&P 500 to determine an expected market return. The second is based on a novel approach that involves analyzing excess returns as compared to option volatility (Sharpe/Vix ratio). Mr. Hevert's risk premium methodology is based on the spread of allowed ROEs as they compare to 30-year Treasury bond yields over an historical period.

Q. Please summarize Ms. LaConte's estimated cost of common equity and resulting recommended return on common equity.

A. Ms. LaConte's estimated cost of common equity is based primarily on her use of two DCF methods, a constant-growth DCF and a multi-stage DCF, and a risk premium

method. Ms. LaConte recommends a range of cost of equity estimates of 9.7 percent to 10.6 percent based on her DCF and risk premium results. Ms. LaConte ultimately recommends a return on common equity of 9.7 percent to 9.9 percent if the Commission allows an Environmental Cost Recovery Mechanism ("ECRM") or a 10.2 percent return on common equity if an ECRM is not allowed. Ms. LaConte also tests the reasonableness of her DCF and risk premium estimates by using the CAPM.

Q. Please summarize Mr. Gorman's estimated cost of common equity and resulting recommended return on common equity.

A. Mr. Gorman's recommended return on common equity is 9.75 percent, based on an estimated cost of common equity range of 9.50 percent to 10.0 percent. Mr. Gorman uses three primary methodologies (DCF, CAPM and risk premium). Mr. Gorman applied his DCF and CAPM to the same proxy group selected by Mr. Hevert. Mr. Gorman applied three variants of the DCF – a constant-growth DCF using equity analysts' growth rates, a constant-growth DCF using sustainable growth rates, and a multi-stage DCF analysis (see Table 2 on page 24 of Mr. Gorman's Direct Testimony). Mr. Gorman's cost of equity estimates for the various methodologies were as follows: 9.90 percent using the DCF, 9.50 percent using the CAPM and 10.0 percent using a risk premium method (see Table 3 on page 35 of Mr. Gorman's Direct Testimony).

Q. Please compare and contrast the cost of equity methodologies of Mr. Hevert, Mr. Gorman and Ms. Laconte.

A. All three witnesses use variations of the same three methodologies, the discounted cash flow (DCF) method, risk premium method and the CAPM method.

All three witnesses perform a constant-growth DCF using equity analysts' 5-year EPS forecasts as their assumed constant growth rate. Although there are various reasons why each witness' constant-growth DCF estimate is different from the others, the primary driver of above-10-percent-cost-of-equity estimates using this approach is the assumption that dividends per share ("DPS") can grow in perpetuity at the same rate as equity analysts' 5-year EPS projections. Staff has **never** seen an equity analyst use his/her EPS projections in this fashion to estimate a fair value for utility stocks. If equity analysts' investment advice is not based on this valuation approach, it is not logical to assume that this approach is embodied in stock prices.

All three witnesses perform multi-stage DCF analyses. For at least one version of their multi-stage DCF analyses, all witnesses assume that regulated electric utility companies' DPS will grow in perpetuity at the same rate as a long-term projected overall economic growth rate, as measured by gross domestic product ("GDP"). Staff provided historical information in the Staff Report that demonstrates that electric utility companies' DPS have not grown anywhere near the rate of economic growth since approximately 1960. Although it is possible that investors may dismiss this historical information, it is highly unlikely considering the downward trend in electric demand as it relates to GDP growth. Moreover, Staff has never seen an investment analyst make this assumption when directly estimating the value of electric utility assets or indirectly through the valuation of electric utility stocks. Although all three witnesses use a GDP growth rate for their perpetual growth rate, Staff considers Mr. Gorman's projected economic growth rate of 4.7 percent to 4.8 percent to be more consistent with long-term economic growth projections from sources

such as the Congressional Budget Office ("CBO") than the 5.75 percent used by Mr. Hevert and Ms. LaConte.

Mr. Hevert also performs a multi-stage DCF analysis estimating the terminal value of his proxy group by applying a projected price-to-earnings ("P/E") multiple to his terminal projected earnings per share ("EPS"). While this approach has practical appeal considering that many equity analysts estimate the expected return on stocks by projecting EPS and an estimated terminal stock price based on a multiple of expected EPS, because Mr. Hevert's exit P/E multiple is applied after 15 years of high compound growth rates, his estimated terminal value is inflated.

All three witnesses perform a similar risk premium methodology. Each of the three witnesses evaluates the historical spread between allowed ROEs and a selected bond yield index. Unlike Mr. Hevert, Mr. Gorman and Ms. LaConte do not adjust their spreads based on a regression analysis. The problem with performing a regression analysis on the spread between allowed ROEs and a bond yield index is that this analysis is not based on market-driven required returns on equity. Mr. Hevert's adjustment perpetuates the inherent circularity of setting the allowed ROE based on other allowed ROEs rather than market-driven cost of equity estimates.

Finally, all three witnesses perform some type of CAPM analysis. This methodology provides the most widely divergent results between all three witnesses. Mr. Hevert's much higher CAPM results can be attributed to his ex-ante, i.e., forward-looking, equity risk premium estimates that are far higher than those used in mainstream investment analysis. Although Mr. Hevert did not rely on his CAPM to directly estimate the cost of equity in this case, Staff will provide information from mainstream investment analysts to show the

upward bias in Mr. Hevert's cost of equity analysis when compared to firms directly involved in evaluating investments. Mr. Gorman and Ms. LaConte estimate their equity risk premiums based on historical data. Ms. LaConte dismisses her CAPM results and Mr. Gorman uses his to support the low end of his range.

CONTRADICTORY COST OF COMMON EQUITY ESTIMATES FROM ANALYSTS OUTSIDE THE UTILITY RATEMAKING PROCESS

Q. Are you aware of any recent cost of equity estimates provided on Ameren Missouri's regulated utility operations and Ameren's diversified utility operations that provide a test of reasonableness of the various parties cost of equity estimates in this case?

A. Yes.

Q. How did Staff discover these other cost of equity estimates?

A. Through the formal discovery process. Staff issued Data Request No. 248 requesting any and all internal and 3rd party valuation analyses performed on any of Ameren's or Ameren Missouri's utility properties since January 1, 2009. Staff also issued Staff Data Request No. 245 requesting all investment analyst correspondence and reports, such as equity research reports.

Q. What information was provided in response to Staff Data Request No. 248?

A. Ameren Missouri provided valuation information performed in conjunction with Ameren's periodic testing of its goodwill asset for impairment.

Q. Does Staff believe Ameren Missouri provided all valuation analyses performed on Ameren's and Ameren Missouri's utility properties since January 1, 2009?

A. No. Staff has reason to believe that Ameren Missouri did not provide all valuation analyses performed on Ameren and Ameren Missouri utility properties since January 1, 2009?

Q. Did Staff request this information in any other data requests?

A. Yes. Staff Data Request No. 15 specifically requested external financial advisor analysis related to Ameren's merchant generation operations. Ameren indicated no such analysis existed.

Q. Why does Staff believe this information exists?

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Q. What is the status of Staff's request for this information?

A. It is my understanding that Staff Counsel is pursuing this matter with Ameren Missouri counsel.

Q. What information was provided in response to Staff Data Request No. 245?

A. Ameren Missouri provided copies of recent credit facility agreements entered into by Ameren, Ameren Missouri, Ameren Illinois and Ameren Genco. Ameren Missouri indicated it would allow Staff to review other investment analyst information, such as equity

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research reports, on-site at Ameren's corporate headquarters. Staff reviewed this information, but Ameren Missouri did not allow Staff to make copies of these documents.

GOODWILL IMPAIRMENT TESTING

Q. Can you describe the process of goodwill asset impairment testing?

A. Yes. Ameren is required by Accounting Standards Codification ("ASC") 350 to test the goodwill asset recorded on its balance sheet for impairment at least annually, if not more frequently if certain events occur, such as unexpected changes in the business climate or an adverse action by a regulator, that may cause the carrying value of the asset to be greater than an estimate of the fair value of the asset. Testing Ameren's goodwill for possible impairment involves an estimate of the fair value of the three reporting units of Ameren – Ameren's Missouri regulated operations, i.e., Ameren Missouri; Ameren's Illinois Regulated operations, i.e., Ameren Illinois; and Competitive Generation Operations, i.e. Ameren Energy Generating Company ("GENCO"). Estimating the fair value of each of Ameren's reporting units involves a discounted cash flow analysis of the projected cash flows of each unit. In order to discount these cash flows, a cost of capital is estimated and applied to these cash flows to estimate a current fair value.

Q. Why is the cost of capital estimated in goodwill asset impairment testing relevant to the estimation of cost of capital in utility ratemaking?

A. In both cases the objective is to estimate a market-driven cost of equity appropriate for the risk of the cash flows associated with the subject asset. Goodwill asset impairment testing requires careful analysis and accurate and reliable inputs because the results of this analysis convey to investors the current financial condition of the company through its financial statements. If a company inappropriately manipulates its analysis in

goodwill impairment testing, then its financial statements cannot be considered reliable for assessing the company's financial condition. Consequently, an unreliable cost of equity estimate can cause unreliable financial reporting.

Q. Does Ameren perform its goodwill impairment analyses in-house or does it hire a third party consultant to perform such analysis?

A. Both. It appears that Ameren performs the initial analysis in-house and then it consults with Duff & Phelps, LLC ("D&P") for review and assistance.

Q. When is the last time Ameren tested its goodwill for impairment?

A. August 31, 2010 (see attached highly confidential Schedule 1).

Q. Did Ameren or D&P estimate the cost of equity for Ameren's Missouri regulated utility operations for purposes of this goodwill impairment analysis?

A. Yes. Schedule A.3 attached to D&P's November 3, 2010, memorandum to Ameren concerning the August 31, 2010, interim goodwill impairment test provides D&P's cost of equity estimates. D&P's cost of equity estimate for Ameren Missouri's regulated utility operations was ** ____ **.

Q. Did D&P provide a company-specific estimated cost of equity estimate for Ameren?

A. Yes. D&P estimated a cost of equity of ** ____ ** for Ameren.

Q. Do Ameren's Competitive Generation Operations increase the business risk profile of Ameren?

A. Absolutely. The Competitive Generation Operations have been a major drag on Ameren's financial performance because of lower power prices as a result of the recent

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recession and lower natural gas prices. The profitability of Ameren's Competitive Generation Operations is not protected by the regulated ratemaking system.

Q. Does D&P recognize the additional risk associated with Ameren's merchant generation operations when estimating an appropriate cost of equity to apply to cash flows generated from these operations?

A. Yes. Page 56 of the D&P memorandum shows an estimated cost of equity of ** ____ ** for the Competitive Generation Operations. This cost of equity differential for regulated versus non-regulated utility operations should be considered when testing the reasonableness of an allowed ROE in this case. Ameren's lower risk, regulated electric utility operations provide financial stability to Ameren's overall financial condition, which allows the Competitive Generation Operations to attract capital at lower costs than it could if it were a stand-alone company. If the regulated operations provide lower business risk due to their ability to pass higher costs on to captive ratepayers, then the Commission should authorize a lower allowed ROE to reflect the value created by this lower risk.

Q. What cost of equity methodology did D&P use to estimate the cost of common equity for both the regulated and merchant generation operations?

A. The CAPM.

Q. Did D&P provide their estimates of individual components of the CAPM, such as the estimated equity risk premium?

A. Yes. D&P's current equity risk premium estimate was ** ____ **. This equity risk premium is consistent with that estimated by Bank of America/Merrill Lynch, as reported in a recent article in the *Wall Street Journal ("WSJ").* The *WSJ* article indicated the following:

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> As well, the so-called equity risk premium—the extra return investors demand to lure them into stocks and out of the safety of government bonds – remains higher than the historical norm. The risk premium moves lower as investors become more comfortable with owning stocks. The 50-year average for the equity risk premium is around 3.5%.
>
> Right now, it is at 5.5% by Bank of America Merrill Lynch's reckoning, an elevated level that suggests investors are still reluctant to move back into stocks.[1]

Although Bank of America/Merrill Lynch is valuing stocks and D&P is directly valuing assets, the goal of estimating a reasonable cost of equity is the same. Consequently, the equity risk premiums should not vary by a large degree regardless of the purpose of the estimation. Hence, the equity risk premiums estimated in rate cases should not be much different than those used in valuation. Actually, the ROR witness' equity risk premium estimates should be very similar to those of financial advisors since they influence the prices investors are willing to pay for assets. A market-driven cost of equity estimate is based on market fundamentals, whether the cost of equity is being estimated for a utility rate case, utility stock valuation assessments, or valuing assets for possible impairment for financial reporting purposes.

Q. How do these equity risk premium estimates compare to those used by Mr. Hevert for purposes of his CAPM analyses?

A. They are approximately 400 basis points lower. Mr. Hevert's estimated equity risk premiums are far above those used in mainstream investment analysis. Mr. Hevert used an estimated equity risk premium of 9.32 percent in one CAPM analysis and 10.08 percent in his other CAPM analysis. These equity risk premium estimates are above

[1] Matt Phillips, "Anxiety Lingers Following Dow Rally," *The Wall Street Journal*; March 7, 2011, pp. C1-C2 (see Schedule 2).

what most investors expect for a total return in the market, much less a risk premium above the expected risk-free return. Although Mr. Hevert only uses his CAPM to test the reasonableness of his DCF estimates, Mr. Hevert's inclination to inflate his equity risk premiums well above mainstream estimates should cause concern about Mr. Hevert's tendency to use higher estimates regardless of the cost of equity methodology he uses.

Tests of reasonableness should be based on independent 3rd party analyses (preferably from analysts not involved in the utility regulatory rate case process), not the same analyst using different models with a bias introduced in each methodology. Staff has provided such information to demonstrate the reasonableness of its cost of equity estimates.

Q. What beta did D&P use for its cost of equity estimate for Ameren's regulated utility operations?

A. ** __ **.

Q. How does this compare to the beta Mr. Hevert suggests is appropriate for estimating a current cost of equity?

A. Again, Mr. Hevert's estimate is much higher. Mr. Hevert suggests that a beta of 0.886 should be used to estimate the cost of equity in the current market environment.

Q. Is it typical for regulated electric utility companies to have betas as high as that suggested by Mr. Hevert?

A. No. While there was a period before the financial crisis in which electric utility companies had increasing betas, this can be attributed to the significant outperformance of diversified electric utility company stocks during this period, which gave the appearance that electric utility companies were increasing in risk. Historically, betas of regulated electric utility companies have consistently been 0.75 or lower.

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Q. Again, what is the relevance of the above information to setting the allowed ROE in utility ratemaking settings?

A. The estimation of the market cost of equity does not depend on the purpose of the assignment. There seems to be a major disconnect in the zone of reasonableness for cost of equity estimates for utility ratemaking and the zone of reasonableness for cost of equity estimates for valuation purposes. Staff has discovered that experts involved in the field of asset valuation consistently apply a much lower cost of equity to cash flows generated from regulated utility operations as compared to the estimates of the cost of equity from not only company ROR witnesses, but all ROR witnesses involved in the utility ratemaking process.

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EQUITY ANALYST COST OF EQUITY ESTIMATE FOR AMEREN

Q. Are you aware of any cost of equity estimates used by equity analysts for purposes of estimating a fair price to pay for Ameren's stock?

A. Yes. UBS Investment Research ("UBS") performed a DCF analysis on Ameren in a June 15, 2010, research report.[2] UBS estimated a cost of equity of 9.0% for Ameren using the CAPM. UBS used the following specific inputs for its CAPM:

-Risk-free rate (Rf): 4%

-Equity Risk Premium: 6.5%

-Equity Beta: 0.77

Q. What perpetual growth rate did UBS assume in its DCF analysis?

[2] Julien Dumoulin-Smith, Ronald J. Barone and Kevin M. Anderson, "Ameren Corp. – Appropriately Discounted," June 15, 2010, Table 11, p. 15, UBS Investment Research.

A. 2.5%. This is consistent with the perpetual growth rates that Staff has seen in most mainstream investment analysis of regulated utility investments. This perpetual growth rate is less than half of that assumed by Mr. Hevert in both his constant-growth DCF and his multi-stage DCF analysis. This perpetual growth rate is even lower than that assumed by Staff.

Q. Did the Commission dismiss the use of equity analyst information in the last AmerenUE rate case, Case No. ER-2010-0036?

A. Yes.

Q. On what basis?

A. The Commission based its decision on the oral testimony of The Office of the Public Counsel witness, Daniel J. Lawton, in which he indicated that most investors don't have access to specific equity analyst reports.

Q. Did Mr. Lawton's testimony contradict that of AmerenUE's own witness in the last rate case?

A. Yes. AmerenUE hired Julie M. Cannell to provide investor perspectives and expectations regarding electric utility investments. She indicated that her previous experience as a securities analyst qualified her to provide this testimony.

As Staff identified in its surrebuttal testimony in AmerenUE's last rate case, Ms. Cannell's testimony was that investors do rely on equity research reports to evaluate prospective utility stock investments and that these reports are generally available to investors.[3]

[3] In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to Increase Its Annual Revenues for Electric Service, File No. ER-2010-0036, Surrebuttal of David Murray, p. 26.

Q. Even if the Commission maintains its position that these reports are not available to investors, does this render cost of capital estimates from capital market analysts' irrelevant to setting the allowed ROE in a utility ratemaking setting?

A. No. To my knowledge, all of the parties to this case are recommending that the Commission set the allowed ROE based on a market-determined cost of equity. It could not be any clearer from Staff's review of the UBS equity research report that this is UBS' estimated cost of equity for Ameren. This should not be confused with a projected return from the analyst on the stock over the near-term. The cost of equity used by UBS is their estimate of an appropriate required return on equity over the long-term for an investment in Ameren's stock.

MR. HEVERT'S COST OF CAPITAL ESTIMATION IN VALUATION ASSIGNMENTS

Q. Has Mr. Hevert estimated the cost of capital for valuation purposes?

A. Mr. Hevert's direct testimony indicates he has estimated the cost of equity in the context of asset valuation assignments.[4]

Q. Have you been able to review the analysis performed in these assignments?

A. No. Mr. Hevert indicated that other than one regulatory assignment performed on Atlantic City Electric Company, the other analysis he has performed in the context of valuation assignments is protected by confidentiality agreements.

Q. Does Mr. Hevert believe that estimating the cost of equity for both valuation and utility ratemaking is based on investors' market return requirements?

[4] Hevert Direct, p. 2, ll. 1-2.

A. Yes. Mr. Hevert stated the following in his deposition on March 10, 2011:

> In both cases, in both cases for the purpose of estimating the cost of equity, both in the regulated utility proceeding as well as for the purposes of the discount rate in valuation, the objective is to infer investors' return requirements based on market data.

Q. What companies compete with Mr. Hevert's employer, Concentric, in valuation assignments?

A. Typically investment banks.[5]

Q. Is this consistent with Staff's understanding of the entities that normally provide valuation advice?

A. Yes. Staff has analyzed valuation assignments performed for purposes of either fairness opinions or general asset valuation and these appear to be the main "players" involved in performing this type of analysis.

Q. Are investment banks' cost of equity estimates for regulated utility operations generally higher, lower or the same as those estimated by Mr. Hevert?

A. Generally much lower.

Q. ** _____ _____ **

A. ** __ **

Q. Would this provide the Commission with first-hand information to test the reasonableness of the cost of equity estimates in this case?

A. Yes.

[5] Hevert Deposition, p. 91, ll. 21-25

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STAFF'S SPECIFIC CONCERNS WITH MR. HEVERT'S COST OF COMMON EQUITY ANALYSIS

Q. What are the primary reasons for the wide discrepancy between Mr. Hevert's and your cost of equity estimates in this case?

A. Terminal value and growth rate assumptions. Mr. Hevert and I rely primarily on the DCF methodology to estimate the cost of equity. Therefore, the assumptions we use in our DCF analyses are the primary cause for our different cost of equity estimates. I will focus primarily on his multi-stage DCF assumptions, since we both place emphasis on this methodology. However, I will also address the unreasonableness of Mr. Hevert's assumed constant-growth rate in his single-stage DCF analysis.

Mr. Hevert estimates the terminal value in his multi-stage DCF analysis using two different methods. The first is very similar to my multi-stage methodology. However, Mr. Hevert assumes a much higher perpetual growth rate of 5.75 percent compared to my range of estimated perpetual growth rates of 3 percent to 4 percent. This is one of the primary causes for the differences in our cost of equity estimates using this methodology. Another primary cause for the significant difference in our cost of equity estimates is the mere fact that regulated electric utility stocks performed very well in the last half of the year. After Staff excluded Progress Energy and Northeast Utilities from Mr. Hevert's proxy group because they both announced possible mergers, based on Mr. Hevert's 90-day ending average stock price through August 13, 2010, compared to the three-month ending average stock price through December 31, 2010, the price-weighted increase in the stock prices of Mr. Hevert's proxy group was 9.02 percent (see Schedule 3). Assuming Mr. Hevert does not increase his estimated growth rates to offset this change in stock prices, this would lower his

implied cost of equity estimates. Staff will evaluate any possible updates in Mr. Hevert's rebuttal testimony and address this more fully in surrebuttal testimony.

Mr. Hevert performs another multi-stage DCF analysis using an estimated multiple of P/E for the terminal value, rather than a constant perpetual growth rate. The cost of equity estimate using this methodology is very sensitive to the reasonableness of the terminal earnings per share ("EPS") estimate and the assumed terminal P/E ratio. Mr. Hevert's inflated cost of equity estimate using this method can be summed up in one word – compounding. Of course, the terminal value using a P/E ratio is going to be high if the terminal EPS is high. The higher the terminal value estimate, the higher the discount rate needed to cause these future estimated cash flows to equal the current price required to purchase the stock. Staff provided information in the Staff Report that demonstrated that the actual EPS growth of electric utilities was around 3.6 percent for the period 1968 through 1999. Mr. Hevert's P/E multiple is applied to an EPS that was compounded at a rate of around 5.75 percent for 15 years. Considering the state of the electric utility industry, I don't think investors are that naïve.

Mr. Hevert's constant-growth DCF analysis naively assumes that his proxy groups' DPS will grow in perpetuity at the same rate as the average of equity analysts' 5-year EPS forecasts. Because the average equity analysts' 5-year EPS forecasts (5.69%) are approximately the same as Mr. Hevert's estimated perpetual growth rate (5.75%) in his multi-stage DCF analysis using a constant-growth model for the terminal stage, this causes very similar mean cost of equity estimates for these two methods. Consequently, these two estimates are redundant.

Although Mr. Hevert also performed a CAPM analysis and a risk premium analysis to corroborate his DCF estimates, Staff will not delve into the details of these methods because they were only used for corroboration. However, as Staff has already discussed in this testimony, equity risk premiums used by mainstream investment analysts are much lower than those estimated by Mr. Hevert. Because the objective in estimating the cost of equity is to emulate what investors use for their assumptions when valuing utility stocks, Staff believes this type of information is critical to evaluating the reasonableness of Mr. Hevert's assumptions.

Q. Do you have any substantial concerns regarding Mr. Hevert's selected proxy group?

A. No. Mr. Hevert's proxy group selection process has resulted in a proxy group that is quite similar in size and mix as the proxy group I selected. Our proxy groups have seven companies in common.

I do not have a significant dispute with the other four companies Mr. Hevert included in his proxy group, which were The Empire District Electric Company ("Empire"), Northeast Utilities ("Northeastern"), Progress Energy ("Progress") and Portland General Electric ("PGE"). However, if Mr. Hevert were to update his cost of equity analysis, his proxy group criterion regarding involvement in mergers would likely cause him to exclude Northeastern and Progress because of their intention to merge with NSTAR and Duke, respectively. Staff excluded Empire because of lack of projected 5-year EPS data from equity analysts, but apparently these growth rates were available at the time Mr. Hevert performed his analysis. Staff excluded PGE because of lack of 10-years of historical data, but this criterion in and of itself does not make PGE incomparable to Ameren Missouri.

Staff prefers to have 10-years of historical data to review in order to test the reasonableness of projected growth rates.

MULTI-STAGE DCF ANALYSES

Q. What is your primary concern about Mr. Hevert's multi-stage DCF analyses?

A. His multi-stage DCF analyses assume a rather lofty expected terminal value for the final stage of his model. The higher the terminal value assumed in a multi-stage analysis, the higher the discount rate, i.e., cost of equity, needs to be to reduce this high future terminal value to the current stock price.

Q. How does Mr. Hevert estimate the terminal values that he uses in his multi-stage DCF analyses?

A. In one instance he simply uses the constant-growth DCF to estimate the terminal value of the stock in his final stage (hereinafter referred to as the "Perpetual Growth Multi-Stage DCF"). The upward bias of his terminal value using this method is driven by his assumption that his proxy group of electric utility companies can grow at the same rate as the overall economy in perpetuity. Mr. Hevert compounds this upward bias by assuming that GDP will grow at a rate of 5.75 percent in perpetuity.

In the second instance, Mr. Hevert estimates the terminal value by applying a projected P/E ratio for each company to his estimate of EPS for each company in 2024 (hereinafter referred to as the "P/E Multi-Stage DCF"). Although Mr. Hevert's P/E ratio is higher than the 13.0x Goldman Sachs[6] currently uses to value regulated electric utility stocks,

[6] Michael Lapides, Jaidep Malik, and Neil Mehta, United States: Utilities: Diversified "A rough winter remains, downward estimate revisions still coming" December 8, 2010, Goldman Sachs.

the biggest driver of Mr. Hevert's upward bias in his estimated terminal value in this multi-stage analysis is his assumed EPS estimate in 2024.

Q. Mr. Hevert's "Perpetual Growth Multi-Stage DCF" assumes that his electric utility industry proxy group will grow at the same rate of the economy in perpetuity. Why is this assumption unreasonable?

A. The simplest way to illustrate the fallacy of Mr. Hevert's use of GDP growth in his "Perpetual Growth Multi-Stage DCF" as the assumed perpetual growth rate for the electric utility industry is to consider the impact of the application of this logic to the S&P 500 index. Because the S&P 500 index is considered a proxy for the U.S. stock market, it intuitively makes sense that the expected long-term growth of the S&P 500 may be consistent with the expected growth in GDP. However, because the companies in the S&P 500 tend to have better growth prospects on average than the electric utility industry, the dividend payout ratio and the dividend yield is lower than that of the electric utility industry. This would imply that the growth rate for the electric utility industry would have to be lower than an aggregate growth rate, i.e. GDP, used for the U.S. market, i.e. the S&P 500. Using Mr. Hevert's assumed GDP growth rate of 5.75 percent in a multi-stage DCF analysis of the S&P 500 index results in an implied cost of equity of 8.61 percent for the market as a whole (see Schedule 4).[7] Applying this same assumption to Mr. Hevert's proxy group of electric utility companies results in an implied cost of equity of 10.69 percent to 10.86 percent. The cost of equity estimates derived from Mr. Hevert's multi-stage DCF analysis using GDP as a proxy for electric utility perpetual growth defies basic risk and return principles. The S&P 500 has a beta of 1.0 because it is considered to be the market of

[7] http://www.standardandpoors.com/indices/sp-500/en/us/?indexId=spusa-500-usduf--p-us-l--

available investments. Electric utilities tend to have an average beta of 0.7, which implies that they are 30% less risky than the market. Mr. Hevert's DCF assumptions result in cost of equity estimates that contradict the principles of risk and return.

Q. If investors assumed that the perpetual growth rate of the S&P 500 was higher than expected GDP growth, would this not provide a higher implied cost of equity for the S&P 500?

A. Yes. This is exactly why the debate on a DCF estimated cost of equity revolves around the constant growth rate in a single-stage DCF and the perpetual growth rate in a multi-stage DCF analysis.

Q. Are you aware of support from the curriculum in Chartered Financial Analyst ("CFA") Program that suggests that an implied expected long-term rate of return for the S&P 500 can be determined based on the logic you applied to your multi-stage DCF analysis of the S&P 500?

A. Yes. The curriculum states the following:

> Analysts have frequently used the Gordon (constant) growth model form of the dividend discount model [same as the constant-growth DCF in utility ratemaking terms], solved for the required rate of return, to formulate the long-term expected return of equity markets. The Gordon growth model assumes that there is a long-term trend in dividends and corporate earnings, which is a reasonable approximation for many developed country economies…
>
> …The quantity *g* can be estimated most simply as the growth rate in nominal gross domestic product (nominal GDP), a money measure of the goods and services produced within a country's borders. Nominal GDP can be estimated as the sum of the estimated real growth rate in GDP plus the expected long-run inflation rate. A more advanced analysis can take account of any perceived differences between the expected growth of the overall economy and that of the constituent companies of the particular equity index that the analyst has chosen to represent equities. The analyst can use

Earnings growth rate = GDP growth rate + Excess corporate growth
(for the index companies)

> where the term excess corporate growth may be positive or negative depending on whether the sectoral composition of the index companies is viewed as higher or lower growth than the overall economy. If the analyst has chosen a broad-based equity index, the excess corporate growth adjustment, if any, should be small **. . .** (emphasis added)[8]

Consequently, the use of GDP for a generic perpetual growth is more aptly used when estimating the implied cost of equity of a broader index, such as the S&P 500. Additionally, this material indicates that a growth rate other than GDP for a broad-based equity index, e.g., the S&P 500, should not deviate much from GDP. However, if the equity index involves a sector that is expected to grow at a rate lower than that of the economy, e.g. a utility index, then a negative excess corporate growth rate would be considered.

Q. What are your primary concerns regarding Mr. Hevert's "P/E Multi-Stage DCF"?

A. The use of a high compound EPS growth rate over 15 years results in a very optimistic ending EPS estimate, which inflates the estimated terminal value. On its face, this methodology is appealing because it is similar to how equity analysts evaluate stocks. However, Staff is not aware of any equity investment analysis that compounds EPS growth by 5.69 percent to 5.75 percent annually over a 15-year period. This results in an inflated terminal value estimate. The equity valuation analysis Staff has seen may project an EPS estimate 2-3 years in the future and then apply a P/E multiple to this estimate to determine a projected exit price.

[8] John P. Calverley, Alan M. Meder, CFA, Brian D. Singer, CFA, and Renato Staub. "Capital Market Expectations." In *Capital Market Expectations in Portfolio Management.* CFA Program Curriculum, Level III, vol. 3, pp. 33-34. Charlottesville, VA: CFA Institute.

Also, although Mr. Hevert could not control the timing of the filing of his testimony, as Staff indicated earlier, regulated electric utility stocks increased significantly during the last half of the year. Assuming Mr. Hevert uses the same growth rates he used in his direct testimony, this would reduce his cost of equity estimate by approximately 90 basis points to approximately 9.65 percent (see Schedule 5).[9]

Further, Staff is unsure why Mr. Hevert decided to compound EPS growth by 5.75 percent for an additional 5 years before he estimated the terminal value, but if he had estimated the terminal value at the stage in which he expected constant growth to begin, his cost of equity estimate would be reduced by approximately another 40 basis points to 9.25 percent (see Schedule 5).

Q. What if you further assumed the transition of the first stage growth to a more reasonable EPS growth rate of 3.5 percent?

A. This assumption would reduce Mr. Hevert's estimated cost of equity by another 72 basis points (see Schedule 5). This would reduce his 90-day "P/E Multi-Stage DCF" cost of equity even further to approximately 8.55 percent.

Q. If you applied this 200 basis point decrease in Mr. Hevert's 90-day "P/E Multi-Stage DCF" cost of equity to his overall cost of equity estimate of 10.9 percent, what would this imply about a reasonable cost of equity estimate?

A. A cost of equity estimate close to 9 percent, which is much closer to the mainstream than those estimated by Mr. Hevert.

[9] The cost of equity results determined by Staff are different than Mr. Hevert's results due to Staff's use of annual compounding rather than the mid-year convention used by Mr. Hevert.

CONSTANT-GROWTH DCF

Q. What is your primary concern regarding Mr. Hevert's constant-growth DCF cost of equity estimate?

A. He assumes that equity analysts' 5-year EPS forecasted growth rates are indicative of expected dividends per share ("DPS") growth in perpetuity. These EPS projections are intended to reflect expectations over a 5-year period. As a result, these growth rates are not sustainable into perpetuity and do not reflect the long-term fundamentals of the electric utility industry.

Q. What is the primary reason that Mr. Hevert's constant-growth DCF cost of equity estimate is unreliable?

A. Mr. Hevert assumes that his proxy group can grow into perpetuity at an unsustainable annual growth rate of 5.69 percent. It is not logical to expect electric utilities' DPS to grow at a constant rate of 5.69 percent into the indefinite future. This growth rate is not only above what is reasonable to expect for the regulated electric utility industry, but it is also much higher than what investors expect for the growth in the overall economy.

While I do not believe the perpetual growth rate for the electric utility industry should be equivalent to the expected growth in GDP, expected long-term growth in GDP does influence expected growth for the electric utility industry. In this respect, an accurate measure of GDP is relevant, but not determinative. Because the electric utility industry's DPS, EPS and book value per share ("BVPS")[10] have not grown anywhere near the same rate of GDP in the past, it would take a leap of faith from investors to anticipate this higher rate of growth when determining a fair price to pay for electric utility stocks.

[10] Per share figures that are often analyzed to determine a sustainable long-term growth rate for the DCF methodology.

DIRECT RESPONSE TO MR. GORMAN'S AND MS. LACONTE'S COST OF EQUITY ESTIMATES

Q. Generally, what are your concerns about Mr. Gorman's and Ms. LaConte's analysis?

A. Both witnesses use projected interest rates when providing risk premium estimates. This is akin to performing a DCF analysis on projected stock prices. Current bond prices reflect investors' expectations about the risks of volatility and changes in interest rates.

Both witnesses give at least some weight to a constant-growth DCF that assumes that equity analysts' 5-year EPS forecasted growth should be used to estimate dividend growth in perpetuity. These growth rates are approximately twice the perpetual growth rates used by investment analysts to discount cash flows.

Both Mr. Gorman's and Ms. LaConte's risk premium analyses assume that allowed ROEs represent a market-determined cost of equity for purposes of determining required returns. While Staff believes that investment analysts use allowed returns to model cash flows, these are not necessarily the returns required by investors.

Q. Do you have any specific concerns about Ms. LaConte's analysis?

A. Yes. Ms. LaConte uses Mr. Hevert's high estimated GDP growth rate of 5.75 percent for one of her constant-growth DCF analyses and for one of her two-stage DCF analyses. Although Staff did not discuss this when addressing Mr. Hevert's direct testimony, not only is this growth rate beyond what investors would expect for a regulated electric utility, but Mr. Hevert's estimation methodology for nominal GDP is technically inaccurate. Nominal GDP is estimated by combining real GDP and the GDP price deflator. Mr. Hevert estimates future GDP growth by adding an estimated growth in the consumer price

index ("CPI") to an historical real GDP average. CPI is almost always higher than a projected GDP price deflator. According to the CBO's "Budget and Economic Outlook: Fiscal Years 2011 to 2021," the projected GDP price deflator should be around 2 percent.[11] Ms. LaConte should have considered some of Mr. Hevert's technical inaccuracies before she adopted his estimates.

SUMMARY AND CONCLUSIONS

Q. Please summarize the conclusions of your rebuttal testimony.

A. Based on Staff's review of cost of equity estimates from sources other than ROR witnesses in utility rate cases, a cost of equity estimate for regulated utility companies is much higher than investors required returns on equity for these safe investments. Staff's review of mainstream investment media and reports (the very information investors review in making investment decisions) consistently indicates that the required return on equity for regulated utilities is at the very least below 10 percent. Staff believes a true test of reasonableness of cost of equity estimates should not necessarily come from a witness' use of other models, but from analysis outside the rate case process. Staff has provided this information and Staff believes this information supports the reasonableness of its cost of equity estimate in this case.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

[11] http://www.cbo.gov/ftpdocs/120xx/doc12039/EconomicTables[1].pdf

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE's Tariff to Increase Its Annual Revenues for Electric Service	))))	File No. ER-2011-0028

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

David Murray, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 28 pages to be presented in the above case; that the answers in the foregoing 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 25th day of March, 2011.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071

Notary Public

SCHEDULE 1 - 1

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

SCHEDULE 1 - 2

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

NASDAQ 2784.67 ▲ 0.13% 10-YR. TREAS. ▼ 19/32, yield 3.494% OIL $104.42 ▲ $6.54 EURO $1.3986 YEN 82.32 See more at WSJMarkets.com

ıam's Biggest Bet Yet

ent to Testify Is the 'Hardest Decision...in Any Trial'

Stand and Deliver?

L. Dennis Kozlowski

Didn't take stand in first trial; testified at second trial. Found guilty in 2005 of looting Tyco (with a co-defendant) of more than $150 million.

Martha Stewart

Didn't testify at her 2004 trial. Found guilty of obstruction of justice.

John Rigas

Didn't take stand in 2004 fraud trial; likely will at tax trial next year. Found guilty of lying about the financial condition of Adelphia Communications.

Bernard Ebbers

Testified at 2005 trial in effort to undermine government's star witness. Found guilty of being mastermind of $11 billion fraud at WorldCom.

Getty Images (Kozlowski, Stewart); Associated Press (Rigas, Ebbers)

ross-examination by prosecu-ors. In 2005, WorldCom Inc. ounder Bernard Ebbers was ound guilty of an $11 billion raud at the telecommunications company. Jurors said afterward that they couldn't square Mr. Ebbers's insistence that he was unaware of the fraud with his hands-on image.

Former Enron Corp. President Jeffrey Skilling and **Tyco International** Ltd.'s former finance chief Mark Swartz also took the

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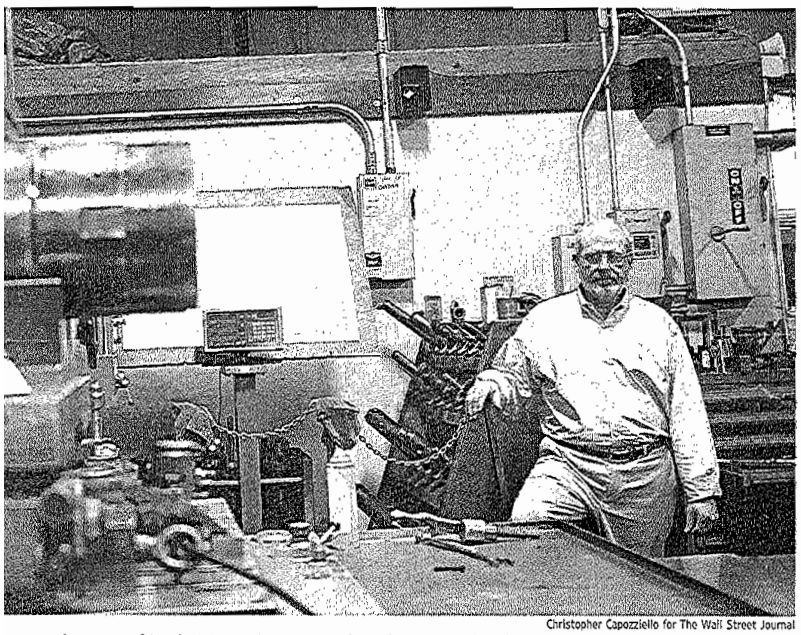


Christopher Capozziello for The Wall Street Journal

r was a key part of its decision to increase credit to his Connecticut business, J.L. Lucas Machinery Co.

Back to the People Business

Webster Financial Corp., ased in Waterbury, Conn., ushes loan officers to scrutinize ıe tough decisions business wners made to help keep their ompanies afloat during the re-ession.

At **PNC Financial Services roup** Inc., the "call sheet" filled ut by some bankers as part of nesses rate themselves against rivals.

Jordan Peterson, a PNC senior vice president, says the questions are helping the Pittsburgh bank make or renew loans that it would have passed up if bankers weren't trying so hard to gauge a borrower's character.

For decades, deep customer pecially at small financial institutions. That ended at many regional and big banks with the rise of computer-driven credit-scoring models, which are fast and cheap but have sometimes backfired.

"We got somewhat lulled to sleep because things were great for so long," said Robb Hilson,

Anxiety Lingers Following Dow Rally

By Matt Phillips

It has been two years and one epic rally since the market bottomed in March 2009.

The Standard & Poor's 500-stock index, at 1321.15 on Friday, is almost double its closing low of 676.53 on March 9, 2009. The Dow Jones Industrial Average is at 12169.88, up 86% from its low of 6547.05.

The difference between now and then is stark. Back then, money was flooding out of stock mutual funds. Now, it is returning. Companies are expected to report record profits this year, and the economy is generating jobs. The market is calmer, too. The Chicago Board Options Exchange's Volatility Index, commonly known as the "fear" index, is at just over 19, down from above 49 in March 2009.

ABREAST OF THE MARKET

Yet many investors remain skeptical about the market's strength. They worry the economy isn't strong enough to stand on its own once the Federal Reserve ends its latest round of support in June, and they fear high oil prices and inflation from other commodities may quash the nascent recovery and weigh on the market. And after such a blockbuster rally, a correction must be around the corner, the reasoning goes.

"Things are really renormalizing. But they're renormalizing because of historical measures by the Fed and others to really relubricate the system and keep it going," said Jonathan Golub, chief U.S. equity strategist at UBS. "There's this lack of conviction that everything would be fine by itself."

That doubt is reflected in several market measures.

Investors are willing to pay only a bit more than 13 times expected earnings for the next 12 months. While that is above the roughly 10 times they were paying in March 2009, it is below the 10-year average of about 15.5, according to FactSet Research Systems. When the market is very bullish, investors tend to pay a higher price for earnings, and the price/earnings ratio goes up.

Thanks to cost cutting, companies have returned to levels of

Please turn to the next page

April Nymex crude oil futures were up 83 cents at $105.25 per

its deal to buy Netherlands-based **Wim Bosman Group.**

SKEPTICAL EYE? The New York Stock Exchange, seen here, and the Nasdaq Stock Market report short-selling positions on Tuesday.

* Thomson Financial earnings-per-share estimates don't include extraordinary items (Losses in parentheses)
Note: Forecasts are from Dow Jones weekly survey of economists

Investor Anxiety Lingers Following Stocks' Strong Rebound

Continued from the prior page

profitability last seen before the recession. And analysts expect earnings to hit records later this year. But the price investors are willing to pay for those earnings betrays the begrudging nature of the rally.

As well, the so-called equity risk premium—the extra return investors demand to lure them into stocks and out of the safety of government bonds—remains higher than the historical norm. The risk premium moves lower as investors become more comfortable with owning stocks. The 50-year average for the equity risk premium is around 3.5%.

ABREAST OF THE MARKET

Right now, it is at 5.5% by Bank of America Merrill Lynch's reckoning, an elevated level that suggests investors are still reluctant to move back into stocks.

As a result, it seems many have missed out on the biggest stock-market rally since the Eisenhower administration. Those who parked in Treasurys would have received a total return of 4.55%, according to Barclays Capital index data. Even picking stocks, it would have been hard to go wrong. Of the S&P 500's stocks, 287 have doubled in price, and 405 have jumped by at least 50%.

And the market continues to forge ahead without them. Even amid turmoil in the Middle East, oil prices rising above $100 a barrel and mild disappointment in Friday's jobs data, the Dow rose last week—and it is up in four of the past five weeks.

There are signs that doubts are ever-so-slowly being overcome.

The levels of cash flowing into stock mutual funds have turned higher recently. Over the five weeks ending Feb. 23, more than $21 billion poured into stock-market mutual funds, outpacing the less than $7 billion that went into bond funds, according to the Investment Company Institute.

That is in direct contrast to the preferences of investors over the past couple years, when they vastly preferred bond funds to stock funds.

It is understandable that some investors seem to have trouble shaking off the traumatic effects of the stock-market collapse they endured.

In early 2009, investors were looking at an investment landscape of utter destruction. The Dow closed at a 12-year low of 6547.05; the S&P 500 was at its lowest since 1996.

From the October 2007 peak, the decline in S&P 500 stocks destroyed $7.91 trillion in market capitalization by March 9, 2009. The biggest pain was inflicted in the financials. The S&P financial index sank 83% in that time. It still remains 53% below what it was at its peak.

William Lefkowitz, of vFinance Investments, told The Wall Street Journal at the time: "I don't know if I've ever heard as many people being negative on the market as what's happening right now."

Two years later, Mr. Lefkowitz, a 49-year-old options strategist, still describes investors' attitude as "very cautious." He has witnessed the 1987 crash, the dot-com bust, and the rout following the September 2001 terrorist attacks. Investors were able to get over those steep drops much more easily than the collapse that ended two years ago, he said, when reached Friday afternoon.

"It's hard for them. They're not going to forget what happened," he says. "It might take a whole generation. We're not really sure."

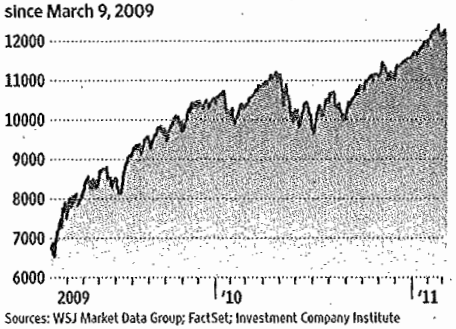
That echoes Billy Horn's feeling. The 71-year-old retiree says he feels more optimistic than he did during the dark days of the financial crisis, but he isn't counting on further stock gains.

"When I see a common stock run like many of them did in 2010, and I own them and have a 30% gain, I sell them," said Mr. Horn, who lives in Houston. "I take my profit and float back into cash and start looking for something else."

He sums up his mood: "While optimistic, I'm also very cautious." *—Mark Gongloff contributed to this article.*

Back From the Bottom

The Dow Jones Industrial Average is up 86% since March 9, 2009



Sources: WSJ Market Data Group; FactSet; Investment Company Institute

	NOW	THEN
P/E ratio (next 12 months)	13.6	10
February nonfarm payrolls (job growth)	+192,000	-726,000
VIX ('fear' index)	19.9	49.7
Inflows to U.S. stock-mutual funds	+$1.5 billion as of Feb. 23	-$13.66 billion

FOREX VIEW Currencies

SCHEDULE 2 - 2

Union Electric Company d/b/a Ameren Missouri
File No. ER-2011-0028

Company	Ticker		90-day Stock Price Through 8/13/2010	3-month Stock Price Through 12/31/2010
American Electric Power	AEP		$ 33.77	$ 36.32
Cleco Corp.	CNL		$ 27.22	$ 30.70
DPL, Inc.	DPL		$ 25.85	$ 26.29
Empire District Electric	EDE		$ 19.06	$ 21.38
IDACORP, Inc.	IDA		$ 34.58	$ 36.70
Pinnacle West Capital	PNW		$ 37.26	$ 41.36
Portland General	POR		$ 19.21	$ 21.28
Southern Co.	SO		$ 34.31	$ 37.91
Westar Energy	WR		$ 22.85	$ 25.09
		Average	$ 28.24	$ 30.78

Price-Weighted Capital Return 9.02%

SCHEDULE 3

Union Electric Company d/b/a Ameren Missouri
File No. ER-2011-0028

Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity for the Standard & Poor's 500 Index

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Company Name	Annualized Quarterly Dividend	Growth Years 1-5	6	7	Growth Years 8	9	10	Growth in Perpetuity	Cost of Equity
S&P 500	$24.14	11.17%	10.27%	9.36%	8.46%	7.56%	6.65%	5.75%	8.61%

Quarterly Dividend = $6.03

Source: http://www.standardandpoors.com/indices/sp-500/en/us/?indexId=spusa-500-usduf--p-us-l--

SCHEDULE 4

Hevert Original "P/E Multi-Stage DCF" Determined Without Solver Equation

Dividends per Share & Terminal Market Value

Company	Ticker		**Outflow**	2011	2012	2013	**2014**	2015	2016	2017	2018	**2019**	2020	2021	2022	2023	**2024**	Terminal Price	Terminal P/E Ratio
American Electric Power	AEP	11.64%	$ (33.77)	$ 1.92	$ 1.93	$ 1.94	$ 1.94	$ 2.12	$ 2.33	$ 2.55	$ 2.80	$ 3.07	$ 3.25	$ 3.43	$ 3.63	$ 3.84	$ 83.86	$ 79.80	13.26
Cleco Corp.	CNL	9.82%	$ (27.22)	$ 0.90	$ 1.03	$ 1.17	$ 1.32	$ 1.45	$ 1.60	$ 1.76	$ 1.93	$ 2.12	$ 2.24	$ 2.37	$ 2.50	$ 2.65	$ 58.99	$ 56.19	13.56
DPL, Inc.	DPL	12.12%	$ (25.85)	$ 1.16	$ 1.24	$ 1.32	$ 1.41	$ 1.59	$ 1.78	$ 1.99	$ 2.21	$ 2.45	$ 2.59	$ 2.74	$ 2.90	$ 3.06	$ 72.04	$ 68.80	14.33
Empire District Electric	EDE	11.90%	$ (19.06)	$ 1.26	$ 1.25	$ 1.24	$ 1.21	$ 1.26	$ 1.32	$ 1.37	$ 1.42	$ 1.47	$ 1.55	$ 1.64	$ 1.74	$ 1.84	$ 49.69	$ 47.75	16.59
IDACORP, Inc.	IDA	10.01%	$ (34.58)	$ 1.28	$ 1.36	$ 1.43	$ 1.51	$ 1.73	$ 1.97	$ 2.24	$ 2.53	$ 2.85	$ 3.02	$ 3.19	$ 3.37	$ 3.57	$ 76.39	$ 72.62	13.00
Pinnacle West Capital	PNW	10.03%	$ (37.26)	$ 1.80	$ 1.87	$ 1.94	$ 2.01	$ 2.15	$ 2.30	$ 2.46	$ 2.63	$ 2.80	$ 2.96	$ 3.13	$ 3.31	$ 3.50	$ 78.77	$ 75.07	13.68
Portland General	POR	10.39%	$ (19.21)	$ 1.07	$ 1.08	$ 1.07	$ 1.07	$ 1.15	$ 1.25	$ 1.35	$ 1.45	$ 1.57	$ 1.66	$ 1.75	$ 1.86	$ 1.96	$ 40.49	$ 38.42	12.50
Southern Co.	SO	8.76%	$ (34.31)	$ 1.85	$ 1.90	$ 1.95	$ 2.00	$ 2.10	$ 2.21	$ 2.32	$ 2.44	$ 2.58	$ 2.72	$ 2.88	$ 3.05	$ 3.22	$ 55.30	$ 51.89	10.28
Westar Energy	WR	10.32%	$ (22.85)	$ 1.02	$ 1.06	$ 1.11	$ 1.16	$ 1.28	$ 1.40	$ 1.53	$ 1.66	$ 1.80	$ 1.91	$ 2.02	$ 2.13	$ 2.25	$ 51.12	$ 48.73	13.80
		10.55%																Median	13.56

Hevert "P/E Multi-Stage DCF" Updated Stock Prices Assuming No Change in Growth Rates

Dividends per Share & Terminal Market Value			[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker		**Outflow**	2011	2012	2013	**2014**	2015	2016	2017	2018	**2019**	2020	2021	2022	2023	**2024**	Terminal Price	Terminal P/E Ratio
American Electric Power	AEP	10.87%	$ (36.32)	$ 1.92	$ 1.93	$ 1.94	$ 1.94	$ 2.12	$ 2.33	$ 2.55	$ 2.80	$ 3.07	$ 3.25	$ 3.43	$ 3.63	$ 3.84	$ 83.86	$ 79.80	13.26
Cleco Corp.	CNL	8.64%	$ (30.70)	$ 0.90	$ 1.03	$ 1.17	$ 1.32	$ 1.45	$ 1.60	$ 1.76	$ 1.93	$ 2.12	$ 2.24	$ 2.37	$ 2.50	$ 2.65	$ 58.99	$ 56.19	13.56
DPL, Inc.	DPL	11.94%	$ (26.29)	$ 1.16	$ 1.24	$ 1.32	$ 1.41	$ 1.59	$ 1.78	$ 1.99	$ 2.21	$ 2.45	$ 2.59	$ 2.74	$ 2.90	$ 3.06	$ 72.04	$ 68.80	14.33
Empire District Electric	EDE	10.67%	$ (21.38)	$ 1.26	$ 1.25	$ 1.24	$ 1.21	$ 1.26	$ 1.32	$ 1.37	$ 1.42	$ 1.47	$ 1.55	$ 1.64	$ 1.74	$ 1.84	$ 49.69	$ 47.75	16.59
IDACORP, Inc.	IDA	9.43%	$ (36.70)	$ 1.28	$ 1.36	$ 1.43	$ 1.51	$ 1.73	$ 1.97	$ 2.24	$ 2.53	$ 2.85	$ 3.02	$ 3.19	$ 3.37	$ 3.57	$ 76.39	$ 72.62	13.00
Pinnacle West Capital	PNW	8.96%	$ (41.36)	$ 1.80	$ 1.87	$ 1.94	$ 2.01	$ 2.15	$ 2.30	$ 2.46	$ 2.63	$ 2.80	$ 2.96	$ 3.13	$ 3.31	$ 3.50	$ 78.77	$ 75.07	13.68
Portland General	POR	9.32%	$ (21.28)	$ 1.07	$ 1.08	$ 1.07	$ 1.07	$ 1.15	$ 1.25	$ 1.35	$ 1.45	$ 1.57	$ 1.66	$ 1.75	$ 1.86	$ 1.96	$ 40.49	$ 38.42	12.50
Southern Co.	SO	7.71%	$ (37.91)	$ 1.85	$ 1.90	$ 1.95	$ 2.00	$ 2.10	$ 2.21	$ 2.32	$ 2.44	$ 2.58	$ 2.72	$ 2.88	$ 3.05	$ 3.22	$ 55.30	$ 51.89	10.28
Westar Energy	WR	9.37%	$ (25.09)	$ 1.02	$ 1.06	$ 1.11	$ 1.16	$ 1.28	$ 1.40	$ 1.53	$ 1.66	$ 1.80	$ 1.91	$ 2.02	$ 2.13	$ 2.25	$ 51.12	$ 48.73	13.80
		9.66%																Median	13.56

SCHEDULE 5 - 1

Hevert "P/E Multi-Stage DCF" Updated Stock Prices Assuming No Change in Growth Rates and Truncated Final Stage

Dividends per Share & Terminal Market Value			[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[60]	[61]
Company	Ticker		**Outflow**	2011	2012	2013	**2014**	2015	2016	2017	2018	**2019**	2020	Terminal Price	Terminal P/E Ratio
American Electric Power	AEP	10.79%	$ (36.32)	$1.92	$1.93	$1.94	$1.94	$2.12	$2.33	$2.55	$2.80	$3.07	$67.06	$63.81	13.26
Cleco Corp.	CNL	7.95%	$ (30.70)	$0.90	$1.03	$1.17	$1.32	$1.45	$1.60	$1.76	$1.93	$2.12	$47.17	$44.93	13.56
DPL, Inc.	DPL	12.30%	$ (26.29)	$1.16	$1.24	$1.32	$1.41	$1.59	$1.78	$1.99	$2.21	$2.45	$57.61	$55.02	14.33
Empire District Electric	EDE	10.86%	$ (21.38)	$1.26	$1.25	$1.24	$1.21	$1.26	$1.32	$1.37	$1.42	$1.47	$39.74	$38.18	16.59
IDACORP, Inc.	IDA	8.90%	$ (36.70)	$1.28	$1.36	$1.43	$1.51	$1.73	$1.97	$2.24	$2.53	$2.85	$61.08	$58.07	13.00
Pinnacle West Capital	PNW	8.39%	$ (41.36)	$1.80	$1.87	$1.94	$2.01	$2.15	$2.30	$2.46	$2.63	$2.80	$62.99	$60.03	13.68
Portland General	POR	8.72%	$ (21.28)	$1.07	$1.08	$1.07	$1.07	$1.15	$1.25	$1.35	$1.45	$1.57	$32.38	$30.72	12.50
Southern Co.	SO	6.40%	$ (37.91)	$1.85	$1.90	$1.95	$2.00	$2.10	$2.21	$2.32	$2.44	$2.58	$44.22	$41.49	10.28
Westar Energy	WR	8.92%	$ (25.09)	$1.02	$1.06	$1.11	$1.16	$1.28	$1.40	$1.53	$1.66	$1.80	$40.87	$38.97	13.80
		9.25%												Median	13.56

Hevert "P/E Multi-Stage DCF" Updated Stock Prices Assuming No Change in Growth Rates, Truncated Final Stage and 3.5% Terminal Growth

Dividends per Share & Terminal Market Value			[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[60]	[61]
Company	Ticker		**Outflow**	2011	2012	2013	**2014**	2015	2016	2017	2018	**2019**	2020	Terminal Price	Terminal P/E Ratio
American Electric Power	AEP	10.06%	$ (36.32)	$1.92	$1.93	$1.94	$1.94	$2.12	$2.30	$2.49	$2.70	$2.91	$62.19	$59.18	13.26
Cleco Corp.	CNL	7.23%	$ (30.70)	$0.90	$1.03	$1.17	$1.32	$1.45	$1.58	$1.72	$1.86	$2.00	$43.76	$41.68	13.56
DPL, Inc.	DPL	11.56%	$ (26.29)	$1.16	$1.24	$1.32	$1.41	$1.58	$1.76	$1.94	$2.13	$2.32	$53.45	$51.04	14.33
Empire District Electric	EDE	10.13%	$ (21.38)	$1.26	$1.25	$1.24	$1.21	$1.26	$1.30	$1.34	$1.37	$1.39	$36.87	$35.43	16.59
IDACORP, Inc.	IDA	8.17%	$ (36.70)	$1.28	$1.36	$1.43	$1.51	$1.73	$1.95	$2.19	$2.44	$2.70	$56.65	$53.86	13.00
Pinnacle West Capital	PNW	7.68%	$ (41.36)	$1.80	$1.87	$1.94	$2.01	$2.14	$2.28	$2.41	$2.53	$2.65	$58.44	$55.69	13.68
Portland General	POR	8.01%	$ (21.28)	$1.07	$1.08	$1.07	$1.07	$1.15	$1.23	$1.32	$1.40	$1.49	$30.04	$28.50	12.50
Southern Co.	SO	5.72%	$ (37.91)	$1.85	$1.90	$1.95	$2.00	$2.09	$2.18	$2.27	$2.36	$2.44	$41.01	$38.49	10.28
Westar Energy	WR	8.21%	$ (25.09)	$1.02	$1.06	$1.11	$1.16	$1.27	$1.39	$1.50	$1.61	$1.71	$37.94	$36.17	13.80
		8.53%												Median	13.56

SCHEDULE 5 - 2