BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NOS. UE-050482 / UG-050483

REBUTTAL TESTIMONY OF

WILLIAM E. AVERA

REPRESENTING AVISTA CORPORATION

REBUTTAL TESTIMONY OF WILLIAM E. AVERA

TABLE OF CONTENTS

EXHIBIT NO.____(WEA-4)

Schedule WEA-10 – Electric Utility (West) Industry, 1984 Market-to-Book Ratio

I. INTRODUCTION

Q. Please state your name and business address.

A. William E. Avera, 3907 Red River, Austin, Texas, 78751.

Q. Are you the same William E. Avera that previously submitted direct testimony in this case?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. My purpose is to address the testimony of Stephen G. Hill, submitted on behalf of Public Counsel, and Michael Gorman, on behalf of the Industrial customers of Northwest Utilities (collectively, "Intervenors"), concerning a fair rate

of return on common equity ("ROE") for the jurisdictional electric and gas utility operations of Avista Corporation ("Avista" or "the Company"). I understand that a Settlement Agreement between Avista and other Signing Parties was filed with the Washington Utilities and Transportation Commission (the "Commission" or ("WUTC") on August 12, 2005. While Avista has agreed to accept a 10.4% ROE in that agreement, my rebuttal testimony will show that a higher ROE is warranted in this case.

Q. What is your conclusion regarding Intervenors' ROE recommendations?

A. Investors have many potential options for their funds and Avista must compete for investment dollars. As documented in my rebuttal testimony, the 9.25% and 9.8% cost of equity recommendations of Mr. Hill and Mr. Gorman, respectively, are significantly downward-biased and out of touch with the requirements of real-world investors in the capital markets. Considering investors' ongoing awareness of the risks associated with the utility industry generally, and western energy markets specifically, supportive regulation remains crucial to maintaining Avista's access to capital.

This imperative is amplified by Avista's relatively weaker credit standing and the greater exposure to market volatility associated with the Company's significant reliance on hydroelectric generation. Providing Avista with the opportunity to earn

a return that reflects these realities is an essential ingredient to strengthen the Company's financial position, which ultimately benefits customers by ensuring Avista's continued ability to meet customers' needs at lower long-run costs. Intervenors' recommendations would compromise these regulatory objectives and deny Avista the opportunity to earn its required rate of return.

Q. What are the key findings of your rebuttal testimony?

A. My conclusions are based on the following findings:

- The Intervenors' ROE recommendations fail the most fundamental test of reasonableness because they do not provide Avista with the opportunity to earn returns that are comparable with those available from alternative investments of comparable risk:
  - On average, rates of return recently authorized for other electric and gas utilities significantly exceed Intervenors' cost of equity recommendations;
  - Mr. Hill's sample group is presently authorized an average rate of return on equity of 10.67%, or approximately 142 basis points more than his ROE recommendation;
  - Data reported by Mr. Gorman's own sources indicate an average authorized ROE for the utilities in his comparable group of 10.95%, which exceeds his recommended ROE by 115 basis points; and
  - While Intervenors recommend ROEs in the single-digits, Value Line reports that its analysts expect an average rate of return on common equity for the electric utility industry of 11.0% for 2008-2010, while the firms in the natural gas distribution industry are expected to earn an average rate of return on common equity of 12.5%.
- The inadequacy of intervenors' ROE recommendations is reinforced by the fact that the level of investment risk that investors associate with

Avista exceeds that of most firms in the utility sector, including Puget Sound Energy, Inc. and the firms in Intervenors' sample groups.

- Setting an ROE that fails to provide investors with an opportunity to earn returns commensurate with companies of comparable risk would weaken Avista's financial integrity, violate the capital attraction standard, and send the wrong signal to investors at a time when access to capital markets is crucial for the Company.
- The financial impact of an inadequate ROE would almost certainly forestall Avista's ability to achieve an investment grade credit rating, which ultimately implies higher costs for customers.

II. THRESHOLD ISSUE

Q. Dr. Avera, is it possible to distill the many complexities associated with estimating investors' required rate of return into a single, threshold issue?

A. While the details underlying a determination of the cost of equity are all near and dear to my heart, there is one fundamental requirement that any ROE recommendation must satisfy before it can be considered reasonable. Competition for capital is intense, and utilities such as Avista must be granted the opportunity to earn an ROE comparable to contemporaneous returns available from alternative investments if they are to maintain their financial flexibility and ability to attract capital.

Rather than becoming bogged down in lengthy, pedantic arguments over the merits of one quantitative approach versus another, the Commission can make a determination on the key, threshold question, "Do the Intervenors' ROE recommendations meet the threshold test of reasonableness required by established

regulatory and economic standards governing a fair rate of return on equity?" Based on the evidence discussed subsequently, the answer is clearly, "No."

Q. What role does regulation play in ensuring Avista's access to capital?

A. Considering investors' heightened awareness of the risks associated with the electric power industry, supportive regulation remains crucial in preserving Avista's access to capital. Capital markets recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity, particularly during times of adverse conditions. Moreover, considering the magnitude of the events that have transpired since the third quarter of 2000, investors' sensitivity to market and regulatory uncertainties has increased dramatically.

The recent decision of Standard & Poor's Corporation ("S&P") and Fitch Ratings ("Fitch") to downgrade Central Vermont from triple-B to below investment grade highlights the importance of constructive regulation. In explaining its rationale, S&P and Fitch cited an unfavorable rate order by the Vermont Public Service Board. S&P concluded that:

> The rate order represents an adverse shift in the company's regulatory environment, which heightens its business risk for the foreseeable future. …It also limits the company's ability to generate adequate and stable cash flows over the foreseeable future. To be considered highly

creditworthy, a utility with a marginal financial profile must operate in a regulatory environment that provides for financial stability.[1]

Business Wire reported to investors that Central Vermont "will now have to provide cash collateral for some power supply arrangements" and pay "increased financing costs for debt," with the end result being "higher customer costs."[2] As the investment advisory report referenced by Mr. Hill made clear, "downgrades imply not only higher borrowing costs but also carry a negative psychological impediment toward new investment."[3]

Q. Do you and Intervenors agree that a utility's ability to attract capital must be considered in establishing a fair rate of return?

A. Yes. Mr. Hill recognized clearly the fundamental standards underlying a determination of a fair rate of return on equity, noting that investors "should be given the opportunity to earn returns that are sufficient to attract capital and are comparable to returns investors would expect in the unregulated sector for assuming the same degree of risk."[4] Both Mr. Hill (p. 8) and Mr. Gorman (p. 11) acknowledged the Supreme Court's *Bluefield* and *Hope* decisions, which established that a regulated utility's authorized returns on capital must be sufficient to assure investors' confidence that, if the utility is efficient and prudent on a prospective

---

[1] "S&P Downgrades CVPS Corporate Credit Rating," *Business Wire* (Jun. 14, 2005).
[2] *Id.*
[3] A.G. Edwards, "Gas Utilities Quarterly Review," April 4, 2005.
[4] Hill Direct at 8.

basis, it will have the opportunity to provide returns commensurate with those expected for other investments involving comparable risk.[5]

Q. What benchmarks are useful in evaluating the ability of the Intervenors' ROE recommendations to meet this fundamental regulatory requirement?

A. Reference to allowed rates of return for other utilities provides one useful guideline that can be used to assess the extent to which Intervenors' 9.25% and 9.8% ROE recommendations are comparable and sufficient. The rates of return on common equity authorized electric utilities by regulatory commissions across the U.S. are compiled by Regulatory Research Associates ("RRA") and published in its *Regulatory Focus* report. RRA reported average authorized ROEs of 10.91% and 10.36% for electric utilities for the fourth quarter of 2004 and first half of 2005, respectively. Meanwhile, the ROEs authorized for gas utilities averaged 10.66% and 10.56% during these same periods. These recent authorized returns significantly exceed Intervenors' recommendations for Avista.

With respect to the group of fifteen utilities that Mr. Hill concluded were most comparable to Avista, data from C. A. Turner, the source of Mr. Hill's equity ratios,[6] indicated that these firms are presently authorized an average rate of return on

---

[5] Knecht Direct at Attachment RLK-2, pp. 1-32
[6] Hill Direct at Exhibit No.___(SGH-7), p. 4.

equity of 10.67%, or approximately 142 basis point more than Mr. Hill's ROE recommendation. Similarly, the C.A. Turner report relied on by Mr. Gorman and included in his workpapers reported an average authorized ROE for the utilities in his comparable group of 10.95%, which exceeds his recommended ROE by 115 basis points.

Q. How do the results of other recent regulatory settlements compare with Intervenors' recommendations?

A. Other recent settlements also indicate that Intervenors' ROE recommendations are at odds with the mainstream. Consider the example of Consolidated Edison, Inc. ("ConEd"), which was granted approval of a settlement by New York regulators on March 24, 2005.[7] Under ConEd's settlement, base rates were established using an ROE of 10.3%, but as Value Line reported to the investment community, the settlement allows for the opportunity to earn up to 11.4%, with a portion of earnings above this threshold being deferred for the benefit of customers:

> **The regulators have granted Consolidated Edison higher electric rates.** ...Starting last April 1st rates rose by $104.6 million. The increase will be followed by a one-year freeze, then a $220.4 million hike in April, 2007. Too, equity returns between 11.4% and 13.0% will be shared equally with customers. Shareholders will keep 25% above that return.[8]

---

[7] 2005 N.Y. PUC LEXIS 138; 240 P.U.R.4th 1

[8] The Value Line Investment Survey (June 3, 2005) at 160 (emphasis original).

The Florida Public Service Commission ("FPSC") also recently approved a settlement of a rate proceeding involving for Florida Power & Light Company ("FPL").[9] While the settlement did not specify an ROE range for the purposes of setting earnings levels, the FPSC concurred with the settlement that "an ROE of 11.75% shall be used for all other regulatory purposes."[10]

As shown on Mr. Hill's Exhibit No.___(SCH-8), ConEd and FPL are both rated single-A, with ConEd being defined by Mr. Hill as a "wires" company. Because of these factors, Mr. Hill determined that the investment risks of ConEd and FPL were *too low* for them to be considered comparable to Avista. Despite his conclusion that these firms are less risky than the other utilities in his sample group, Mr. Hill's ROE recommendation for Avista falls far short of the returns specific in these recently approved settlement agreements.

Q. What other factors must be considered when evaluating these benchmark ROEs?

A. As explained in detail in my direct testimony, the level of investment risk that investors associate with Avista exceeds that of most firms in the utility sector. Avista is one of a small minority of utilities with a below investment grade

---

[9] Order Approving Stipulation and Settlement, Docket No. 050045-EI, *Florida Public Service Commission* (September 14, 2005).

[10] *Id.* at 3. The settlement also specifies that if base rate earnings fall below an ROE of 10% in any month during the term of the settlement, FPL may petition to amend its rates.

credit rating, which restricts the Company's financial flexibility and access to capital relative to other utilities and implies significantly higher risks and a higher required return on equity. In addition, because close to one-half of Avista's energy requirements are provided by hydroelectric generation, the Company is exposed to additional risks that other utilities do not face.

While hydropower confers advantages in terms of fuel cost savings and diversity, reduced hydroelectric generation due to below-average water conditions forces Avista to rely more heavily on power purchased in the wholesale markets or on more costly thermal generating capacity, which is subject to dramatic fluctuations in gas costs due to ongoing price volatility in the spot markets. In the minds of investors, these factors entail significant additional risk, especially for a utility located in the west. Because greater risks translate into higher required returns, the allowed ROEs cited above understate investors' required rate of return for Avista. Accordingly, this provides further confirmation that Intervenors' recommendations fall significantly short of a reasonable rate of return for the Company.

Q. What other barometers indicate that Intervenors' ROE recommendations are insufficient to allow Avista to attract capital?

A. Reference to rates of return available from alternative investments of comparable risk can also provide a useful guideline in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract

capital. This comparable earnings approach is consistent with the economic underpinnings for a fair rate of return established by the Supreme Court. Moreover, it avoids the complexities and limitations of capital market methods and instead focuses on the returns earned on book equity, which are readily available to investors. The most recent editions of Value Line reports that its analysts expect an average rate of return on common equity for the electric utility industry of 11.0% over its three-to-five year forecast horizon,[11] while the firms in the natural gas distribution industry are expected to earn an average rate of return on common equity of 12.0% in 2005 and 2006, and 12.5% for 2008-2010.[12]

Q. Do Mr. Hill's references to selected regulatory decisions (p. 6-7) provide support for his conclusion that a 9.25% ROE is reasonable for Avista?

A. No. Mr. Hill asserts that an ROE in the single digits is now routine because there have been instances of authorized rates of return that fall below 10%. As Mr. Hill stated:

> [T]here have been many single-digit equity return awards over the past couple of years.[13]

Of course, what Mr. Hill's statement ignores is the fact that, over the past two years, the vast majority of authorized ROEs for electric and gas utilities have been well in

---

[11] The Value Line Investment Survey (Sep. 2, 2005) at 156.
[12] The Value Line Investment Survey (Sep. 16, 2005) at 459.
[13] Hill Direct at 6.

excess of his 10 percent threshold. In fact, in the thirty years since RRA began compiling data, average annual authorized rates of return for utilities have *never* fallen below the 10 percent level that Mr. Hill now characterizes as reasonable.

Moreover, the fact that there have been isolated instances in which utilities have been awarded lower returns says nothing about Avista's specific risks and circumstances. The hodgepodge of cases cited by Mr. Hill encompass water and telephone utilities, which have little in common with Avista's integrated electric utility operations. Meanwhile, two of the companies specifically referenced by Mr. Hill – Jersey Central Power & Light Company ("JCPL") and Connecticut Light and Power Company – operate in states that have undergone industry restructuring. As part of this restructuring, the operations of formerly integrated electric utilities have been disaggregated into three primary components – generation, transmission, and distribution. As a result of this unbundling, authorized returns for these utilities are predicated on a set of circumstances that differs markedly from those currently faced by Avista.

Q. Can you provide an example?

A. Yes. Consider JCPL; in August 2002 the New Jersey Board of Public Utilities ("BPU") authorized a rate of return on equity for JCPL of 9.5 percent. But as the BPU made clear in its order, this ROE was premised on its belief that JCPL had experienced a "significant reduction in the risks it faces" as a result of the divestiture

of its generating assets brought about by restructuring.[14] As the BPU summarized:

> Most notably, the Board believes that the overall risks facing the electric utility distribution companies in New Jersey have decreased as a result of the various provisions of [the Electric Discount and Energy Competition Act]. Foremost is the Basic Generation Service Auction process that the Board has adopted for the procurement of power for the electric companies in New Jersey. The BGS process eliminates the risks associated with the companies' planning, construction and operation of generation facilities. The resulting "wires only" distribution companies should therefore require a lower cost of capital that ratepayers are required to support in their retail rates.[15]

Mr. Hill apparently agrees with this premise, noting that:

> I have eliminated from consideration companies that are only "wires" companies, which have less operational risk than fully-integrated electrics.[16]

Under this reasoning, however, the risks of Avista would imply a significantly higher cost of equity; a fact that was lost in Mr. Hill's flawed comparison.

Moreover, apart from the fact that the low-risk premise underlying this single-digit cost of equity does not apply to Avista, the 9.5% ROE cited by Mr. Hill also included an ROE penalty for poor system reliability. As the BPU stated:

> The Board will use the allowed return on equity as the most direct and powerful signal that they can send to the company to improve their system reliability and do it as soon as practicable.[17]

---

[14] *New Jersey Board of Public Utilities*, Final Order, Docket No. ER02080506, et al. at p. 38.
[15] *Id.*
[16] Hill Direct at 56.
[17] *New Jersey Board of Public Utilities*, Final Order, Docket No. ER02080506, et al. at 39.

Despite the fact that Mr. Hill's 9.5% "benchmark" ROE was for an investment grade utility with no generation (hydroelectric or otherwise) and incorporated a penalty for poor performance, it exceeds Mr. Hill's recommendation for Avista by 25 basis points. As a result, while Mr. Hill's comparison provides no meaningful information regarding a fair ROE for Avista, it quite effectively demonstrates the unreasonableness of his own, downward biased recommendation.

Q. Does Mr. Hill's reference to market-to-book ratios for electric utilities demonstrate the reasonableness of his 9.25% percent recommended cost of equity for Avista?

A. No. In addition to other problems,[18] the argument that regulators should set a required rate of return to produce a market-to-book value of approximately 1.0 is fallacious. For example, *Regulatory Finance: Utilities Cost of Capital* noted that:

> The stock price is set by the market, not by regulators. The M/B ratio is the end result of regulation, and not its starting point. The view that regulation should set an allowed rate of return so as to produce a M/B of 1.0, presumes that investors are masochistic. They commit capital to a utility with a M/B in excess of 1.0, knowing full well that they will be inflicted a capital loss by regulators. This is not a realistic or accurate view of regulation.[19]

---

[18] Market-to-book ratios are impacted by other external factors unrelated to utility operations. For example, current or anticipated diversification into non-regulated activities may cause the market price of a utility's stock to deviate significantly from its book value.

[19] Morin, Roger A., "Regulatory Finance: Utilities' Cost of Capital," *Public Utility Reports* (1994) at 256.

Indeed, while Mr. Hill reports that investors' expect electric utilities to earn 11.5 percent on common equity, he suggests that regulators should allow his sample group to earn slightly greater than 9%. With market-to-book ratios above 1.0 times, Mr. Hill apparently believes that, unless book value grows rapidly, regulators should establish equity returns that will cause share prices to fall.

Within the paradigm of DCF theory, a drop in stock prices means negative growth, and if investors expect negative growth then this is the relevant "g" to substitute in the constant growth DCF model. In turn, a negative growth rate implies a DCF cost of equity for utilities less than their dividend yields. This, of course, is truly a nonsensical result, and a manifestation of Mr. Hill's confusion between DCF theory and practice.

Q. Have regulators previously recognized the fallacy of relying on market-to-book ratios in evaluating cost of equity estimates?

A. Yes. For example, the Presiding Judge in *Orange & Rockland* concluded, and the Federal Energy Regulatory Commission ("FERC") affirmed that:

> The presumption that a market-to-book ratio greater than 1.0 will destroy the efficacy of the DCF formula disregards the realities of the market place principally because the market-to-book ratio is rarely equal to 1.0.[20]

[20] *Orange & Rockland Utilities, Inc.*, Initial Decision, 40 FERC ¶ 63,053, 1987 WL 118,352 (F.E.R.C.).

The Initial Decision found that there was no support in Commission precedent for the use of market-to-book ratios to evaluate market derived cost of equity estimates and concluded that such arguments were to be treated as "academic rhetoric" unworthy of consideration.

Q. Do you agree with Mr. Hill that changes in dividend taxation enacted in 2003 have led to a significant decline in investors' required rate of return on equity?

A. No. While dividend taxation is certainly one factor that may be considered by investors, the impact of changes in dividend taxation on the cost of equity for Avista is unclear. First, the important role that pension funds and tax deferred accounts play in the capital markets dilutes any effect that tax rate changes might have on investors' required rate of return. This is because the reduction in the taxation of dividends has no impact on the returns for tax-free investors.

Moreover, using current capital market data to estimate the cost of equity, such as my forward-looking CAPM approach (Schedule WEA-8), already incorporate any effects of changes in tax policies. While Mr. Hill implies that changes in dividend taxation suggest a lower cost of equity than in the past, this ignores other significant factors that influence required returns. In particular, as a result of events during the past several years, investors' risk perceptions for electric

utilities shifted sharply upward, which would more than offset any decline in the equity risk premium due to changes in dividend taxation.

Finally, investors recognize that there is no guarantee that the reduction in dividend taxation will continue. The current law is set to expire in 2008, and with the combined burden of continued conflict in Iraq and responding to Hurricane Katrina, investors understand that ballooning federal budget deficits are apt to force changes in fiscal policy.

Q. Does the fact that bond yields are "low relative to the interest rate levels that existed in the mid-1980s"[21] imply that Mr. Hill's recommended 9.25% ROE is reasonable?

A. No. While interest rates represent one logical reference point, the impact of fluctuating capital market conditions on the cost of equity is not readily determined. As Mr. Hill noted:

> ...equity capital cost rates and bond yields do not move in lock-step fashion over time.[22]

In fact, there is substantial evidence that equity risk premiums tend to move inversely with interest rates. In other words, when interest rates rise, equity risk premiums narrow, and when interest rates fall, equity risk premiums are greater.

---

[21] Hill Direct at 22.
[22] *Id* at 23.

This inverse relationship has been recognized in the financial literature and by regulators.

Moreover, the allowed return on equity should presumably reflect evidence that interest rates will increase going forward. As explained in my direct testimony, capital market participants generally anticipate that as economic growth strengthens, interest rates will begin to rise. For example, the Energy Information Administration, a statistical agency of the U.S. Department of Energy, anticipates that the double-A public utility bond yield will increase to approximately 7.4% by 2009 and average 7.0% over the period 2006-2009.[23] Similarly, GlobalInsight, a widely referenced forecasting service, calls for double-A public utility bond yields to increase from 6.41 percent in 2006 to 7.16% by 2009.[24] Indeed, Mr. Hill noted in his testimony that "the current expectation is that … interest rates will increase,"[25] while the A.G. Edwards publication he referenced concluded that "interest rates will rise as the overall economy expands."[26]

Finally, as noted earlier, while capital market conditions are essentially unchanged since the WUTC's February 2005 decision for Puget Energy, Mr. Hill's

---

[23] Energy Information Administration, *Annual Energy Outlook 2005* (January 2005) at Table 19.
[24] Energy Information Administration, Annual Energy Outlook 2003, Table 20 (Nov. 20, 2002).
[25] Hill Direct at 25.
[26] A.G. Edwards, "Gas Utilities Quarterly Review," April 4. 2005.

recommended ROE here is over 100 basis points lower, notwithstanding the higher risks implied by Avista's below-investment grade credit ratings.

Q. Does the single investment analyst report cited by Mr. Hill support his allegation that investors' return expectations for utilities are especially low?

A. No. On page 19 of his testimony, Mr. Hill resorts to a selected cite from A. G. Edwards in an attempt to support his position. But the 8.4% return figure cited in this report is simply another example of a mechanical application of the constant growth DCF model. It is not uncommon for stock research reports to include a perfunctory application of the DCF or CAPM models, but these results hardly represent an in-depth analysis of investors' expectations or their required rates of return. The fact that this 8.4% figure falls some 85 basis points below even Mr. Hill's anemic ROE recommendation amply demonstrates that this provides no insight as to a fair return on equity for Avista.

Q. Do the selected academic studies referenced by Mr. Hill make economic sense?

A. No. Mr. Hill claims that "new research" suggests that the market risk premium "is much, much lower – in the range of 3% to 4.5%."[27] But multiplying a midpoint market equity risk premium of 3.75% by Mr. Hill's beta of 0.78 for his sample group, and combining the resulting 2.93% risk premium with his 4.31% risk-

[27] *Id.* at 21.

free rate, results in an indicated cost of equity for a regulated utility of approximately 7.24%. By any objective measure, such results fall woefully short of required returns from an investment in common equity. Mr. Hill's interpretation of recent academic research has little relation to the expectations of real-world investors and no value as a benchmark in evaluating the reasonableness of his recommendations.

Q. Based on your review of ROE benchmarks, what did you conclude with respect to the reasonableness of Intervenors' recommendations?

A. My review of authorized and earned rates of return conclusively demonstrates that the ROE recommendations of Mr. Hill and Mr. Gorman fail the threshold requirement of regulation and economics, because they do not provide Avista with the opportunity to earn a competitive rate of return on equity, commensurate with those that investors expect for other utilities.

Q. What are the implications of disregarding Avista's investment risks in setting the allowed rate of return on equity?

A. If the greater risks associated with Avista's operations and credit standing are not incorporated in the allowed rate of return on equity, the result will fail to meet the comparable earnings standard that Intervenors agree is fundamental in determining the cost of capital. From a more practical perspective, failing to provide investors with the opportunity to earn a rate of return commensurate with

Avista's risks will only serve to hamper the Company's efforts to strengthen its financial position, while impeding Avista's ability to attract the capital needed to meet the economic and reliability needs of its service area.

Q. What are the potential consequences of authorizing a rate of return less than what is required to meet the financial end-result test?

A. Given that the Company's bond ratings are already below investment grade, and considering the significant risks faced by Avista, the perception of lack of regulatory support will place downward pressure on current ratings. Setting an ROE that fails to provide investors with an opportunity to earn returns commensurate with companies of comparable risk would weaken Avista's financial integrity, violate the capital attraction standard, and send the wrong signal to investors at a time when access to capital markets is crucial for the Company.

III. STEPHEN G. HILL

Q. What overall rate of return did Mr. Hill propose for Avista's jurisdictional utility operations?

A. Mr. Hill proposed an overall rate of return for Avista of 8.64%. Along with Avista's requested component costs of debt and preferred stock, Mr. Hill combined a rate of return on equity of 9.25% with a capital structure composed of 40.00% common equity, 1.57% preferred stock, 5.84% trust preferred securities, and a total debt ratio of 52.59%, including long- and short-term debt.

Q. Briefly describe how Mr. Hill arrived at his recommended cost of equity for Avista.

A. Following a general description of economic and capital market conditions, Mr. Hill applied the constant growth DCF model to a group of fifteen other electric utilities. He then used three other methods – the Capital Asset Pricing Model ("CAPM"), earnings-price ratio, and market-to-book ratio – to check his DCF results. Based on these analyses, Mr. Hill concluded that the cost of equity for the firms in his comparable group is in the range of 8.75% to 9.50%, with a midpoint of 9.125%. Based on the fact that his recommended capital structure contains less common equity than is maintained by his comparable group, Mr. Hill selected a slightly higher return on equity of 9.25% for Avista. Mr. Hill argued against any upward adjustment to the return on equity for flotation costs, concluding that it was "unnecessary."

A. DCF Analysis

Q. Did Mr. Hill properly apply the constant growth DCF model?

A. No. Mr. Hill began his DCF analysis by correctly stating:

> The DCF model relies on the equivalence of the market price of the stock (P) with the present value of the cash flows **investors expect from the stock**, providing the discount rate equals the cost of capital.[28]

[28] Hill Direct at 53.

Nevertheless, his application of the DCF model to his proxy group of utilities departed from this fundamental proposition because of his strict reliance on the mathematical DCF theory instead of the realities of investors' actual expectations in financial markets. The use of DCF models to estimate the cost of equity is essentially an attempt to replicate the market pricing mechanism that led to the observed stock price, with investors' required rate of return simply being inferred. In contrast, Mr. Hill applied the DCF model based on a strict interpretation of the academic theory underlying its derivation.

Q. What is wrong with adhering strictly to the theory underlying the constant growth DCF model?

A. Enumerated in my direct testimony,[29] many unrealistic assumptions are required to derive the constant growth form of the DCF model, with Mr. Hill noting some of these infirmities in his testimony:

> The model also assumes that the company whose equity cost is to be measured exists in a steady state environment, i.e., the payout ratio and the expected return are constant and the earnings, dividends, book value and stock price all grow at the same rate, forever.[30]

Because the assumptions underlying the constant growth DCF model are never met in practice, the constant growth DCF model can, at best, only be considered an

---

[29] Avera Direct, Exhibit No.___(WEA-2), Appendix B at 11.
[30] *Id.* at 54.

abstraction of reality. As such, the DCF model cannot universally produce correct measures of the cost of equity; rather, it can only serve as a potential guide to investors' required rate of return. Mr. Hill granted this limitation of the DCF model in his testimony:

> As with all mathematical models of real-world phenomena, the DCF theory does not exactly "track" reality.[31]

Therefore, the only inputs (i.e., cash flows) that matter in implementing the DCF model are those that investors used to value the utility's stock. Any application of the DCF model that does not focus exclusively on investors' actual expectations is a misuse of the DCF model to estimate the cost of equity.

Q. Can you provide an example of how Mr. Hill disregards this principle?

A. Yes. Consider Mr. Hill's discussion of his hypothetical firm in Exhibit No. ___(SGH-3) to his testimony. He stated that certain actual growth rates can be "unreliable" within DCF theory, and concluded that the proper growth rate to use with the DCF model is the theoretical "sustainable growth rate". But Mr. Hill's contention is wrong. The only correct growth rate to be used in the DCF model is the long-term growth rate investors actually incorporated into the observed stock

[31] *Id.*

price, irrespective of whether Mr. Hill considers it "ridiculous" or inconsistent with "the underlying fundamentals of growth in the DCF model."[32]

The fact is Mr. Hill confused the theory of the DCF model with its application. Professor Myron J. Gordon's complete mathematical DCF model is tautological. In other words, the constant growth DCF model is true by virtue of the strict assumptions made to derive it, and given these assumptions, any number of propositions can be "demonstrated" (Exhibit No. ___(SGH-3, p. 5). But to the extent that these assumptions are not met in practice and the DCF model does not "track reality", the theoretical DCF model will not conform to the real world. In turn, cost of equity estimates that are based solely on mathematical identities instead of investors' actual long-term growth expectations will not accurately measure their required rate of return. In a case recently decided by the New Hampshire Public Service Commission, regulators specifically concluded that Mr. Hill's DCF growth analysis "does not in our view reflect true market conditions."[33]

Q. Can you provide an example of Mr. Hill's confusion between the theory and practice of the constant growth DCF model?

A. Yes. Mr. Hill stated that:

---

[32] Hill Direct at Exhibit No.___(SGH-3), p.3-5.
[33] Order No. 24,473, *New Hampshire Public Utilities Commission* (June 8, 2005).

> ...a reasonable estimate of investors' expectations for utility price/book ratios is that it will range between current levels and 1.0. …I have used the average as an estimate of investors' expectations for the future.[34] (p. 30)

But consider the implication of Mr. Hill's statement for Entergy Corporation ("ETR")), one of the companies included in Mr. Hill's comparable group. According to Mr. Hill, ETR's $76.36 average share price implies a market-to-book ratio of 1.91 times.[35] Based on Mr. Hill's assumption, investors expect ETR's market-to-book ratio to fall to 1.45 times (halfway between 1.91 and 1.00). Applying this market-to-book ratio to Value Line's 2008-2010 projected book value of $49.15 for ETR implies that investors expect these shares to sell at less than $71 four years hence, or below their current price.

According to Mr. Hill, investors expect zero growth in ETR share price over the next four years. But under the strict, steady-state assumptions underlying DCF theory, if investors expect no growth in share price, then the only return they will realize from an investment in ETR is dividend yield. However, ETR's dividend yield is currently only 3.00 percent,[36] which falls below the yields available from risk-free government bonds. This nonsensical end-result amply demonstrates Mr. Hill's confusion between DCF theory and practice, and that his theoretical application of

---

[34] Hill Direct at 62.
[35] *Id.* at Exhibit No.___(SGH-16), p. 1.
[36] *Id.* at Exhibit No.___(SGH-11).

the DCF model has little relevance in estimating investors' actual required rates of return from ETR or the other firms in his comparable group.

Q. Do you believe that the results of Mr. Hill's DCF analysis mirror investors' long-term expectations in the capital markets?

A. No. There is every indication that Mr. Hill's results are biased downward and fail to reflect investors' required rate of return. Short-term projected growth rates may be colored by current uncertainties regarding the near-term direction of the economy in general and the spate of challenges faced by utilities specifically. This short-term "hangover" is exemplified by Value Line, which has assigned its Utilities sector the lowest ranking of all 10 sectors it covers for year-ahead stock price performance,[37] while noting that "[t]he electric utility industry carries a below-average industry Timeliness rank."[38] While this cautious outlook may be indicative of relatively low near-term growth projections, it is not necessarily indicative of investors' long-term expectations for the industry.

As Mr. Hill correctly observed, the "*g*" component of the DCF model must reflect of the growth "that investors expect to continue into the indefinite future."[39] But as he went on to note, the steady-state environment presumed by the constant

---

[37] The Value Line Investment Survey, *Selection & Opinion* (July 29, 2005) at 1606.
[38] The Value Line Investment Survey (July 1, 2005) at 695.
[39] Hill Direct at 53.

growth DCF approach does not exist in reality, and key parameters "do change over time."[40] If the growth projections used to apply the DCF model do not fully reflect the long-term expectations investors have built into stock prices, the resulting cost of equity estimates will be biased downward.

Indeed, as shown on page 2 of Exhibit No.__(SGH-10), Mr. Hill's growth rate selection was based in part on average historical dividend growth rates of 2.98% and 2.45%. Combining these growth rates with Mr. Hill's 3.76% average dividend yield results in cost of equity estimates based on his historical DPS growth measures of 6.7% to 6.2%. Meanwhile, Moody's reported an average yield on triple-B public utility bonds of approximately 5.8 percent for July 2005,[41] with the DCF estimate implied by Mr. Hill's historical DPS growth rates exceeding this threshold by less than 100 basis points. Considering the risk-return tradeoff principle fundamental to financial theory, it is inconceivable that investors are not requiring a substantially higher rate of return for holding residual common stock, the riskiest of a utility's securities.

---

[40] *Id.* at 54.

[41] Moody's Investors Service, *Credit Perspectives* (Aug. 15, 2005).

Q. Is there a downward bias inherent in Mr. Hill's sustainable, br+sv growth rates?

A. Yes. Mr. Hill based his calculation of the internal, "br" growth rate on data from Value Line, which reports end-of-period results. If the rate of return, or "r" component of the "br" growth rate is based on end-of-year book values, such as those reported by Value Line, it will understate actual returns because of growth in common equity over the year. This downward bias, which has been recognized by regulators,[42] is illustrated in the table below.

Consider a hypothetical firm that begins the year with a net book value of common equity of $100. During the year the firm earns $15 and pays out $5 in dividends, with the ending net book value being $110. Using the year-end book value of $110 to calculate the rate of return produces an "r" of 13.6 percent. As the FERC recognized, however, this year-end return "must be adjusted by the growth in common equity for the period to derive an average yearly return."[43] In the example below, this can be accomplished by using the *average* net book value over the year ($105) to compute the rate of return, which results in a value for "r" of 14.3 percent. Use of the average rate of return over the year is consistent with the theory of this

---

[42] See, *e.g.*, *Southern California Edison Company*, Opinion No. 445 (Jul. 26, 2000), 92 FERC ¶ 61,070.
[43] *Id.*

approach to estimating investors' growth expectations, and as illustrated below, it can have a significant impact on the calculated br+sv growth rate:

Beginning Net Book Value	$100
Earnings	15
Dividends	5
Retained Earnings	10
Ending Net Book Value	$110

"br" Growth – Average	End-of-Year	Average
Earnings	$ 15	$ 15
Book Value	$110	$105
"r"	13.6%	14.3%
"b"	66.7%	66.7%
"br" Growth	**9.1%**	**9.5%**

Because Mr. Hill did not adjust to account for this reality in his analysis, the "br" growth rates that he considered are downward-biased and the resulting DCF cost of equity is understated.

Q. Do the results of alternative methods support Mr. Hill's DCF findings in this case?

A. No. Even without incorporating expectations for higher interest rates, as noted in my direct testimony, application of the risk premium approach based on allowed rates of return for electric utilities resulted in a current cost of equity of 10.8%, while applying the CAPM based on forward-looking expectations that are

more consistent with the underlying theory of this approach produced an estimated cost of equity of 12.5%.[44]

Q. What other evidence indicates that Mr. Hill's DCF result is biased downward?

A. As noted earlier, reference to allowed rates of return for other utilities also provides further confirmation that Mr. Hill's DCF result, and his ultimate ROE recommendation, fall significantly short of a reasonable rate of return. The rates of return on common equity authorized for electric and gas utilities averaged 10.36 and 10.56 percent for the first half of 2005, respectively, or 10.91% and 10.66% during the last quarter of 2004. This provides further confirmation that Mr. Hill's DCF results, which formed the basis of his recommendations, are far below the returns required by real-world investors.

Q. Is Mr. Hill accurate to suggest (p. 74) that the results of the constant growth DCF model are only being questioned by "utility-sponsored" rate of return witnesses?

A. No. While the DCF model has been routinely relied on in regulatory proceedings as one guide to investors' required return, it is a blunt tool that should never be used exclusively, and regulators have customarily considered the results of alternative approaches in determining allowed returns. It has become increasingly

---

[44] Avera Direct at 44.

evident to rate of return witnesses, regardless of whether they represent commissions, intervenors, or utilities, that conventional applications of the constant growth DCF model do not always provide accurate estimates of investors' required rates of return.

Accordingly, increased reliance is being placed on other methods to estimate the cost of equity, including alternative forms of the DCF model (e.g., "two-stage" DCF models) and risk premium methods. The need to consider alternative methods is especially important where the results of one approach deviate significantly from cost of equity estimates produced by other applications, with risk premium methods suggesting a cost of equity far in excess of DCF values.

Q. Has the fallibility of the constant growth DCF model been recognized by regulators?

A. Yes. For example, the Public Utility Commission of Texas ("PUCT"), which I can assure you is not "utility-sponsored", made the following Findings of Fact in a case involving El Paso Electric Company:

> 109. Under present market and utility industry conditions, the constant discounted cash flow model does not provide reliable results.[45]

Mr. Hill refers to a dated article from Public Utility Reports (p. 75) in support of his claim that state regulators continue to rely on the DCF approach. But the DCF

[45] Final Order, Docket No. 9945, *Public Utility Commission of Texas.*

techniques that regulators are currently relying on may not be the constant growth methods advocated by Mr. Hill. In Florida, one of the states that Mr. Hill cites as continuing to rely on "standard" DCF techniques, the FPSC concluded in an April 29, 1998 decision that:

> Upon consideration, we find that the multi-stage DCF model employed by AT&T/MCI witness Cornell is superior to the single-stage DCF model used by BellSouth witness Billingsley for estimating the cost of capital of BellSouth. Witness Cornell testifies that the form of the DCF model he uses is well supported in the financial community. (p. 22)

Similarly, the Federal Communications Commission ("FCC") has recognized the need for pragmatism when evaluating a fair return on equity, citing the need for an "accommodating and flexible position" that is not restricted to a single methodology.[46] More recently, in a 2003 decision establishing a fair rate of return for local service network elements, the FCC's Wireline Competition Bureau specifically considered and rejected the use of the DCF model, concluding that "the CAPM is the better mechanism for estimating the cost of equity in this proceeding."[47] With respect to the constant growth DCF approach advocated by Mr. Hill, the Wireline Competition Bureau expressed serious doubts about this model's ability to accurately reflect investors' expectations in today's capital markets. Considering the

---

[46] Federal Communications Commission, Report and Order 42-43, CC Docket No. 92-133 (1995).
[47] *Memorandum Opinion and Order*, CC Docket Nos. 00-218, 00-251, DA 03-2738 (Aug. 29, 2003) (*Virginia Arbitration Order*). at P. 71.

deviation between Mr. Hill's results and other, objective benchmarks, considerable caution is warranted when evaluating the usefulness of DCF cost of equity estimates.

Q. Do you agree with Mr. Hill's assertions that certain companies should be excluded from your proxy group?

A. No. While Mr. Hill argued that certain companies should be dropped based on subjective arguments concerning the impact of non-regulated operations or absence of generation operations, he failed to demonstrate how these subjective criteria translate into differences in the investment risks perceived by investors. Moreover, there are significant errors and inconsistencies associated with his approach that justify rejecting Mr. Hill's proxy group altogether.

As I amply demonstrated in my direct testimony (p. 38), a comparison of objective indicators indicates that investment risks for the firms in my proxy group of western utilities are relatively homogeneous. There are important factors distinguishing western utilities from those located in other regions and the Supreme Court has recognized the relevance of geographical location.[48] My direct testimony demonstrated that investors are likely to regard my proxy group as facing similar market conditions and having comparable risks and prospects.

---

[48] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

Q. Did Mr. Hill demonstrate a nexus between the subjective criteria he used to define his proxy group and objective measures of investment risk?

A. No. Mr. Hill claimed that utilities with less that 40% of operating revenues from regulated electric operations or companies that had divested generation assets should be eliminated when determining a proxy group. But under the regulatory standards established by *Hope* and *Bluefield*, the salient criteria in establishing a meaningful proxy group to estimate investors' required return is relative risk, not the source of the revenue stream or ownership of generating assets. As Mr. Hill correctly recognized:

> The Supreme Court of the United States has established, as a guide to assessing an appropriate level of profitability for regulated operations, that investors in [utilities] are to be given an opportunity to earn returns that are sufficient to attract capital and are comparable to returns investors would expect in the unregulated sector for assuming the same degree of risk.[49]

Mr. Hill presented no evidence that there is a connection between the subjective criteria that he employed and the views of real-world investors in the capital markets.

---

[49] Hill Direct at 8 (emphasis added).

Q. What objective evidence can be evaluated to confirm the conclusion that these subjective criteria are not synonymous with comparable risk in the minds of investors?

A. Bond ratings are perhaps the most objective guide to utilities' overall investment risks and they are widely cited in the investment community and referenced by investors. While the bond rating agencies are primarily focused on the risk of default associated with the firm's debt securities, bond ratings and the risks of common stock are closely related. As noted in *Regulatory Finance: Utilities' Cost of Capital*:

> Concrete evidence supporting the relationship between bond ratings and the quality of a security is abundant. … The strong association between bond ratings and equity risk premiums is well documented in a study by Brigham and Shome (1982).[50]

Indeed, Mr. Hill also relied on bond ratings as one criteria in developing his comparable group. As Mr. Hill noted, the companies he selected "had to have a bond rating from one major rating agency ranging from 'BB+' to 'A-'".[51] Meanwhile, a review of Mr. Hill's Exhibit No.___(SGH-8), which presents the basis of his sample group selection, indicates that each of the firms excluded by Mr. Hill based on his electric revenue and generating asset tests also had bond ratings within this range. Considering that credit ratings provide the most widely referenced benchmark for

---

[50] Morin, Roger A., "Regulatory Finance: Utilities' Cost of Capital," *Public Utility Reports* (1994) at 81.
[51] Hill Direct at 56.

investment risks, a comparison of this objective risk indicator demonstrates that the range of risks for the companies eliminated under the subjective criteria proposed by Mr. Hill are virtually identical to the companies included in his sample group.

Q. What do you conclude from this review of credit ratings?

A. Contrary to the allegations of Mr. Hill, comparisons of objective, published indicators that incorporate consideration of a broad spectrum of risks confirm that there is no link between the subjective tests he applied to define his proxy groups and the risk perceptions of investors.

Q. What errors and inconsistencies are associated with the proxy group proposed by Mr. Hill?

A. While Mr. Hill screened all electric and combination electric and gas utilities followed by Value Line, his revenue test was based solely on electric revenues and ignored the impact of gas utility operations. Considering that the purpose of this proceeding is to establish and ROE for both jurisdictional gas and electric utility operations, and the fact that Mr. Hill focused on combination utilities, his failure to incorporate gas utility revenues in implementing his test is inconsistent and makes no sense.

Many of the figures Mr. Hill relied on in evaluating the proportion of revenues from electric utility operations are incorrect or misleading. For example, DTE Energy reported in its 2004 Form-10K report (Note 16) that operating revenues

from electric "utility" sources totaled approximately $3.57 billion, or 50% of total operating revenues of $7.11 billion – not the 18% relied on by Mr. Hill. Meanwhile, DTE Energy also noted that its gas utility operations contributed $1.68 billion in revenues during 2004. Thus, total electric and gas utility revenues were $5.25 billion, or 73.8% of the total. Similarly, Vectren Corporation's utility group posted 2004 revenues of $1.5 billion, or 88% of the $1.7 billion in total revenues (2004 Form-10K at Note 16), while Mr. Hill reported that regulated electric revenues amounted to only 22%.[52]

Q. Apart from these errors are there problems associated with the criteria proposed by Mr. Hill?

A. Yes. Due to differences in business segment definition and reporting between utilities, it is often impossible to accurately apportion financial measures, such as total revenues, between utility and non-utility sources. Consider the example of OGE Energy, which Mr. Hill argued should be excluded from his sample group. OGE Energy classifies its operations into two primary segments – Electric Utility and Natural Gas Pipeline, with revenues attributable to the electric utility segment accounting for approximately 32% of consolidated revenues in 2004 (Form

[52] While Mr. Hill would have excluded SCANA, Sempra Energy, and Vectren Corporation from his sample group based on other criteria, this nonetheless illustrates the inaccuracies inherent in his selection process.

10-K at Note 16). However, this does not present an accurate picture of revenues coming from "integrated gas and electric utility operations" because a portion of the revenues included in the Natural Gas Pipeline segment also relate to rate regulated operations. As ONG Energy reported to investors in its 2004 Form-10K:

> The operations of the Natural Gas Pipeline segment are conducted through Enogex Inc. and its subsidiaries ("Enogex") and consist of three related businesses: (i) the transportation and storage of natural gas, (ii) the gathering and processing of natural gas and (iii) the marketing of natural gas. … Enogex also owns a controlling interest in and operates Ozark Gas Transmission, L.L.C. ("Ozark"), a FERC regulated interstate pipeline that extends from southeast Oklahoma through Arkansas to southeast Missouri.

Similarly, Mr. Hill excluded Duke Energy based solely on his determination that electric utility revenues were 22% of total. Once again, however, this 22% figure used to apply Mr. Hill's electric revenue criteria is unrelated to the actual percentage of regulated revenues for Duke Energy. In addition to its Franchised Electric business segment, Duke Energy also reports revenues for Natural Gas Transmission and Field Services segments, both of which encompass regulated operations, as Duke Energy made clear in its 2004 Form-10K Report:

> Most of Natural Gas Transmission's pipeline and storage operations in the U.S. are regulated by the FERC. … In addition, certain operations are subject to state regulatory commissions.[53]

---

[53] Duke Energy Form 10-K Report (2004) at 10.

> The intrastate natural gas and NGL pipelines owned by Field Services are subject to state regulation. To the extent that the natural gas intrastate pipelines provide services under Section 311 of the Natural Gas Policy Act of 1978, they are also subject to FERC regulation. The interstate natural gas pipeline owned and operated by Field Services is subject to FERC regulation…[54]

Taken together, Duke Energy's electric, gas transmission, and field services segments account for 81.1% of total revenues. As a result, even ignoring the fact that there is no clear link between the source of a utility's revenues and investors' risk perceptions, it is not possible to accurately apply Mr. Hill's criteria.

B. Risk Premium Approach

Q. What is the fundamental problem associated with Mr. Hill's approach to applying the CAPM?

A. Like the DCF model, the CAPM is an *ex-ante*, or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return the CAPM must be applied using data that reflects the expectations of actual investors in the market. However, while Mr. Hill noted that "[c]ost of capital analysis is a decidedly forward-looking, or *ex-ante*, concept,"[55] his application of the CAPM method was entirely premised on *historical* – not projected – rates of return. The primacy of current expectations was recognized by Ibbotson Associates:

---

[54] *Id.* at 13.

[55] Hill Direct at Exhibit No.___(SGH-5), p. 2.

> The cost of capital is always an expectational or forward-looking concept. While the past performance of an investment and other historical information can be good guides and are often used to estimate the required rate of return on capital, the expectations of future events are the only factors that actually determine cost of capital.[56]

By failing to look directly at the returns investors are currently requiring in the capital markets, as I did on Schedule WEA-8, Mr. Hill's CAPM estimate significantly understates investors' required rate of return.

Q. Was Mr. Hill justified in relying on geometric means as a measure of average rate of return when applying the CAPM?

A. No, absolutely not. Both the arithmetic and geometric means are legitimate measures of average return; they just provide different information. Each may be used correctly, or misused, depending upon the inferences being drawn from the numbers. The geometric mean of a series of returns measures the constant rate of return that would yield the same change in the value of an investment over time. The arithmetic mean measures what the expected return would have to be each period to achieve the realized change in value over time.

In estimating the cost of equity, the goal is to replicate what investors expect going forward, not to measure the average performance of an investment over an assumed holding period. Under the realized rate of return approach, investors

---

[56] Ibbotson Associates, *2003 Yearbook, Valuation Edition* at 23.

consider the equity risk premiums in each year independently, with the arithmetic average of these annual results providing the best estimate of what investors might expect in future periods. *Regulatory Finance: Utilities' Cost of Capital* had this to say:

> One major issue relating to the use of realized returns is whether to use the ordinary average (arithmetic mean) or the geometric mean return. *Only arithmetic means are correct for forecasting purposes and for estimating the cost of capital.* When using historical risk premiums as a surrogate for the expected market risk premium, the relevant measure of the historical risk premium is the arithmetic average of annual risk premiums over a long period of time.[57]

Similarly, Ibbotson Associates concluded that:

> For use as the expected equity risk premium in either the CAPM or the building block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number. … The geometric mean is more appropriate for reporting past performance, since it represents the compound average return.[58]

One does not have to get deep into finance theory to see why the arithmetic mean is more consistent with the facts of this case. The WUTC is not setting a constant return that Avista is guaranteed to earn over a long period. Rather, the exercise is to set an expected return based on test year data. In the real world, Avista's yearly return will be volatile, depending on a variety of economic and industry factors, and investors do not expect to earn the same return each year.

---

[57] Morin, Roger A., *Regulatory Finance: Utilities' Cost of Capital*, Public Utilities Reports (1994) at 275, (emphasis added).

[58] Ibbotson Associates, *2004 Yearbook, Valuation Edition* at 71.

Q. What does this imply with respect to the conclusions of Mr. Hill's CAPM analysis?

A. For a variable series, such as stock returns, the geometric average will always be less than the arithmetic average. Accordingly, Mr. Hill's reference to geometric average rates of return provides yet another element of downward bias.

Q. Do the short-term T-Bill rates referenced by Mr. Hill provide an appropriate basis to estimate the cost of equity using the CAPM?

A. No. Common equity is a perpetuity and as a result, any application of the CAPM to estimate the return that investors require must be predicated on their expectations for the firm's long-term risks and prospects. This does not mean that every investor will buy and hold a particular common stock into perpetuity. Rather, it recognizes that even an investor with a relatively short holding period will consider the long-term, because of its influence on the price that he or she ultimately receives from the stock when it is sold. This is also the basic assumption underpinning the DCF model, which in theory considers the present value of all future dividends expected to be received by a share of stock.

Shannon P. Pratt, a leading authority in business valuation and cost of capital, recognized in "Cost of Capital, Estimation and Applications," that the cost of equity is a long-term cost of capital and that the appropriate instrument to use in applying the CAPM is a long-term bond:

> The consensus of financial analysts today is to use the 20-year U.S. Treasury yield to maturity as of the effective data of valuation for the following reasons:
>
> - It most closely matches the often-assumed perpetual lifetime horizon of an equity investment.
> - The longest-term yields to maturity fluctuate considerably less that short-term rates and thus are less likely to introduce unwarranted short-term distortions into the actual cost of capital.
> - People generally are willing to recognize and accept the fact that the maturity risk is impounded into this base, or otherwise risk-free rate.
> - It matches the longest-term bond over which the equity risk premium in measured in the Ibbotson Associates data series.[59]

Similarly, in applying the CAPM Ibbotson Associates recognized that the cost of equity is a long-term cost of capital and the appropriate interest rate to use is a long-term bond yield:

> The horizon of the chosen Treasury security should match the horizon of whatever is being valued. … Note that the horizon is a function of the investment, not the investor. If an investor plans to hold a stock in a company for only five years, the yield on a five-year Treasury note would not be appropriate since the company will continue to exist beyond those five years.[60]

Accordingly, proper application of the CAPM should focus on long-term government bonds – not the short-term T-bill notes reference by Mr. Hill – in estimating the cost of equity for an electric utility.

---

[59] Pratt, Shannon P., "Cost of Capital, Estimation and Applications," John Wiley & Sons, Inc. (1998) at 60.

[60] Ibbotson Associates, *2003 Yearbook* (Valuation Edition) at 53.

Q. Does Mr. Hill's CAPM analysis accurately reflect the risk premium data reported by Ibbotson Associates?

A. No. While Mr. Hill claims to premise his analysis on data from Ibbotson Associates, he chooses to ignore the most recent market risk premium reported directly from this source. For example, as part of a table entitled "Key Variables in Estimating the Cost of Capital," Ibbotson Associates notes in its *2005 Yearbook, Valuation Edition* that the long-horizon equity risk premium based on realized returns is 7.2%, versus the 6.6% and 5.0% figures used by Mr. Hill.[61]

Q. Do Mr. Hill's applications of the CAPM provide a meaningful guide to investors' required rate of return for Avista?

A. No. Mr. Hill's CAPM results are biased downward for a number of important reasons. As indicated above, his analysis ignored investors' current expectations and focused entirely on historical data. In addition, Mr. Hill's reliance on geometric mean returns and short-term T-bill rates are both inconsistent with using the CAPM to estimate the cost of equity and produced understated results. Finally, although Mr. Hill referenced data from Ibbotson Associates, his CAPM analysis did not incorporate the most current market risk premium reported by this source.

---

[61] Hill Direct at Exhibit No.___(SGH-5), p. 6.

Q. Do you agree with Mr. Hill that it is not appropriate to consider expected increases in capital costs when establishing the allowed ROE for Avista?

A. No. While Mr. Hill observes that the projected long-term bond yields referenced in my analysis have not yet been realized, he also grants that yields are currently at all-time lows compared with the recent past and that "over the next year or two capital costs may increase."[62] In fact, it is this very realization, and the general expectation that long-term capital costs will move higher, that warrants consideration of widely referenced forecasts of future bond yields.

On September 20, 2005 the Federal Reserve raised interest rates for the eleventh time since June 2004 and signaled to investors that higher rates were likely in the future. Expectations remain that these actions will also translate into higher long-term bond yields. Value Line recently noted the impact that readjustments in capital market conditions – in the form of higher interest rates – would have on investors' assessment of utility stocks:

> [I]f interest rates continue to rise, as we are projecting, some positive attributes that come with owning an income stock may be reduced.[63]

Consideration of interest rate forecasts does not presume that financial markets are wrong; rather, it recognizes that investors' required returns can and do shift over time with changes in capital market conditions.

---

[62] Hill Direct at 66.

[63] The Value Line Investment Survey (Mar. 18, 2005) at 459.

Utilities such as Avista must be granted the opportunity to earn an ROE comparable to contemporaneous returns available from alternative investments if they are to maintain their financial flexibility and ability to attract capital. Expected capital market conditions during the time when rates established in this proceeding will be in effect are certainly one very valid barometer in ensuring that this fundamental economic and regulatory test is met.

Q. Has your opinion concerning the usefulness of risk premium methods changed over time, as claimed by Mr. Hill?

A. No. On pages 84-86 of his testimony, Mr. Hill quotes from an affidavit I filed in Docket No. 84-800 (*In the Matter of Authorized Rates of Return for the Interstate Services of AT&T Communications and Exchange Telephone Carriers*) before the FCC. Then, as now, my position is that there is no infallible quantitative method to estimate the cost of equity. All of the available tools, including DCF and risk premium methods, must be used carefully and with common sense.

Because of the unobservable nature of cost of equity and the complexities of capital markets, I have consistently taken the position that no one quantitative method of estimating the cost of equity should be accepted without testing the reasonableness of the results against other methods. Indeed, Mr. Hill's use of multiple methods suggests that he agrees with this fundamental principle, although, as discussed earlier, he failed to follow it to any significant degree.

In Docket No. 84-800, the FCC proposed to use a risk premium formula to adjust the prescribed rate of return. My testimony in that case was that no single risk premium application should be relied upon in isolation. It was not that risk premium methods are useless, as Mr. Hill insinuates by quoting out of context, but that each method of estimating equity risk premium suffers from some infirmity that limits its suitability for the type of "automatic pilot" rate of return determination that was being considered by the FCC. Mr. Hill apparently agrees, noting that "it is necessary to perform an independent cost of capital analysis, rather than to simply 'index' the cost of capital to current interest rates."[64]

Q. Is there anything wrong with the approach that you employed to determine the equity risk premium for your forward-looking CAPM analysis (Schedule WEA-8)?

A. No. As explain in my direct testimony, I estimated the current equity risk premium by first applying the DCF model to estimate investors' current required rate of return for the firms in the S&P 500 and then subtracting the yield on government bonds. Mr. Hill contends that this CAPM analysis is flawed because of an alleged upward bias in the market risk premium. In fact, however, the use of forward-looking expectations in estimating the market risk premium is well accepted in the financial literature. For example, in "The Market Risk Premium:

[64] Hill Direct at p. 23.

Expectational Estimates Using Analysts' Forecasts" [*Journal of Applied Finance*, Vol. 11 No. 1, 2001], Robert S. Harris and Felicia C. Marston employed the DCF model and earnings growth projections from IBES – just as I did in Schedule WEA-8.

Mr. Hill's complaints about my forward-looking CAPM approach seem to hinge on the fact that this method produces an equity risk premium for the S&P 500 that is considerably higher than the unrealistic benchmarks he cites. But as I explained earlier, the benchmarks cited by Mr. Hill fail even the most rudimentary tests of economic logic. Estimating investors' required rate of return by reference to current, forward-looking data, as I have done, is entirely consistent with the theory underlying the CAPM methodology, which is an *ex-ante*, or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of required rates of return, the CAPM is best-applied using data that reflects the expectations of actual investors in the market. Rather than look backwards to risk premiums based on historical data, as Mr. Hill advocates, my analysis appropriately focused on the expectations of actual investors in today's capital markets.

Q. Is Mr. Hill correct that the inverse relationship between equity risk premiums and interest rates is unreliable (pp. 94-96)?

A. No. Mr. Hill readily acknowledged that there is a strong correlation between equity risk premiums and interest rates, but he then claims that this

relationship may not be meaningful because of "auto-correlation" between the variables. First, Mr. Hill has confused correlation, which measures the strength of the association between variables, with auto-correlation, which measures the relationship between residuals from a regression equation. Even if auto-correlation exists, this only means that the variance around the terms of the equation (e.g., intercept and slope) is greater than the regression statistics indicate, not that the regression terms themselves are "unreliable". Indeed, because the inverse relationship between interest rates and equity risk premiums is so strong, the existence of auto-correlation does not undermine the validity of the observed relationship.

C. Other Methods

Q Is there any substance to Mr. Hill's modified earnings-price ratio ("MEPR") analysis?

A. None whatsoever. Mr. Hill's statement that the earnings-price ratio understates the cost of equity when the utility's market-to-book ratio is greater than one, and vice versa,[65] is generally correct. But there is absolutely no theoretical justification for Mr. Hill's averaging the earnings-price ratio with a rate of return on book equity, either current or expected, as he did in his Exhibit No.___(SGH-15).

---

[65] Hill Direct at Exhibit No.___(SGH-5), p. 9.

Nor is such an averaging justified even if the FERC may have sometime in the past utilized the expected rate of return on book value as a check of reasonableness in establishing an upper bound to investors' required rate of return.

Q. Does Mr. Hill's market-to-book ratio ("MTB") analysis provide any new or additional information as to the rate of return required by investors from his proxy group of utilities?

A. Absolutely none. As Mr. Hill acknowledged:

> This method is derived algebraically from the DCF model and, therefore, cannot be considered a strictly independent check of that method.[66]

That Mr. Hill's MTB analysis is nothing more than a rehash of his previous DCF analysis is also evident from his exhibits. In particular, there is little difference between Mr. Hill's average cost of equity of 9.01% using his DCF method[67] and the 9.08% using his MTB method based on Value Line's projections.[68] This similarity is not because the results of two different methods are converging, but because the DCF and MTB methods are essentially the same, only packaged slightly differently. And just as Mr. Hill's DCF analysis is fundamentally flawed because it is tied to tautological DCF theory rather than investors' actual expectations, so too is his MTB

---

[66] Hill Direct at Exhibit No.___(SGH-5), p. 12.
[67] *Id.* at Exhibit No.___(SGH-12).
[68] *Id.* at Exhibit No.___(SGH-16), p. 2.

analysis since it is derived from the very same theoretical model and uses virtually identical inputs.

Q. Please comment on the table displayed on page 66 of Mr. Hill's testimony.

A. While at first blush this table might suggest that Mr. Hill performed four different analyses that all indicated a cost of equity for his sample group falling within a fairly narrow range, this is not the case. As discussed earlier, Mr. Hill's CAPM analyses are flawed because they 1) include geometric mean risk premiums, 2) rely in part on short-term interest rates, 3) do not reflect the most recent market risk premium reported by his own source, and 4) ignore investors' current expectations. Moreover, Mr. Hill's DCF and MTB analyses are, for all intents and purposes, one and the same and his MEPR analysis is meaningless, since he averaged "apples and oranges" to arrive at the values shown.

Q. Did Mr. Hill include an adjustment to recognize common stock flotation costs in his recommended fair rate of return on equity?

A. No. Mr. Hill asserted that an adjustment for flotation costs was unnecessary because:

- Electric utility common stocks are selling above book value;
- Issuance expenses are not out-of-pocket expenses;
- "Savvy" investors have already accounted for issuance costs in their expectations;
- His DCF growth rate included an upward adjustment to recognize

expectations of stock sales above book value; and,

- "Research" has shown that an adjustment for issuance expenses is unnecessary.

Q. Do these five assertions justify Mr. Hill's decision to ignore flotation costs in determining his recommended rate of return for Avista?

A. No. While Mr. Hill's first reason may be factually correct, it says nothing about whether or not a flotation cost adjustment is warranted for Avista. The fact that market prices are above book value does not alter the fact that a portion of the capital contributed by equity investors is not available to earn a return because it is paid out as flotation costs. In fact, even if Avista is not expected to issue additional common stock, a flotation cost adjustment is necessary to compensate for flotation costs incurred in connection with <u>past</u> issues of common stock.

Mr. Hill's second argument that flotation costs "are not an expense" is simply wrong. Mr. Hill apparently believes that if investors in past common stock issues had paid the full issuance price directly to Avista and Avista had then paid underwriters' fees by issuing a check to its investment bankers, that flotation cost would be a legitimate expense. Mr. Hill's observation merely highlights the absence of an accounting convention to properly accumulate and recover these legitimate and necessary costs.

Next, Mr. Hill argues that flotation costs have somehow already been accounted for in the price investors are willing to pay for new common stock.

Regulatory Finance: Utilities' Cost of Capital noted that this double-counting argument is fallacious, concluding that:

> The simple fact of the matter is that whatever stock price is set by the market, the company issuing stock will always net an amount less than the stock price due to the presence of intermediation and flotation costs. As a result, the company must earn slightly more on its reduced rate base in order to produce a return equity to that required by shareholders.[69]

With respect to his contention that his DCF growth rate included an upward adjustment to recognize future sales of common stock above book value, the growth investors might expect resulting from sales of new stock above book value is a different issue than past or future flotation costs paid to third parties.

Finally, contrary to Mr. Hill's assertions, the necessity of an adjustment for past flotation costs has been recognized in the literature. For example, in an article entitled "Common Equity Flotation Costs and Rate Making" published in *Public Utilities Fortnightly* (May 2, 1985), E.F. Brigham, D.A. Aberwald, and L.C. Gapenski demonstrate that even if no further stock issues are contemplated, a flotation cost adjustment in all future years is required to keep shareholders whole, and that the flotation cost adjustment must consider total equity, including retained earnings. Similarly, *Regulatory Finance: Utilities' Cost of Capital* contains the following discussion:

---

[69] Morin, Roger A., *Regulatory Finance: Utilities' Cost of Capital*, Public Utilities Reports (1994) at 174.

> Some argue that flotation costs are real and should be recognized in calculating the fair rate of return on equity, but only at the time when the expenses are incurred. In other words, the flotation cost allowance should not continue indefinitely, but should be made in the year in which the sale of securities occurs, with no need for continuing compensation in future years. This argument implies that the company has already been compensated for these costs and/or the initial contributed capital was obtained freely, devoid of any flotation costs, which is an unlikely assumption, and certainly not applicable to most utilities. … The flotation cost adjustment cannot be strictly forward-looking unless all past flotation costs associated with past issues have been recovered.[70]

D. Capital Structure

Q. Has Mr. Hill presented any evidence that undermines the reasonableness of Avista's requested equity ratio of 44%?

A. No. Apart from demonstrating the reasonableness of the 40% equity ratio incorporated under the Settlement Agreement, Mr. Hill presents no meaningful evidence to discredit the capital structure requested in Avista's initial filing.

Q. What was the crux of Mr. Hill's argument for a lower common equity ratio?

A. Despite the fact that Avista is the only corporate entity that actually issues debt and equity capital, Mr. Hill ignored the Company's actual capitalization on the theory that it is not representative of utility operations. Starting with Avista's consolidated capital structure, Mr. Hill derived a "utility-only" capitalization based

---

[70] Morin, Roger A., *Regulatory Finance: Utilities' Cost of Capital*, Public Utilities Reports (1994) at 175.

on a separate, divisional equity balance and assigning all of Avista's outstanding debt to utility operations. Based on this arithmetic, Mr. Hill concluded that Avista's jurisdictional utility operations were actually financed with 29.26 percent common equity.

Q. Do the figures that Mr. Hill derived represent a meaningful benchmark for the purposes of evaluating an appropriate capital structure in this case?

A. No. Avista does not have a holding company structure. Consequently, a separate balance sheet is not reported for Avista's utility activities, with the capital for its various business lines being provided from general corporate funds. Moreover, investors can only the purchase debt and common stock of Avista, and their assessment of investment risks and required rates of return is driven solely by Avista's consolidated financial leverage, not a theoretical capitalization derived by apportioning capital sources among various utility and non-utility operating divisions.

Q. What specific problems are associated with the industry benchmarks Mr. Hill used to evaluate Avista's capital structure?

A. The industry common equity ratios that Mr. Hill cites as benchmarks are distorted and inconsistent with the premise of the capitalization he derived for

Avista. For example, Hawaiian Electric Industries' ("HEI") June 30, 2005 Form 10-Q Report reflected the following capital structure balances:

Component	$ (Mil)	Percent
Short-term Borrowings	$ 126.9	5.0%
Long-term Debt	1,168.1	45.9%
Preferred Stock	34.3	1.3%
Common Equity	1,216.1	47.8%
Total	$ 2,545.4	100.0%

But in contrast to the 47.8% equity ratio reflected above, Mr. Hill reported an equity ratio of 28% for HEI.[71] The only possible explanation for the vastly lower equity ratio relied on by Mr. Hill is that it considered short-term deposit liabilities associated with HEI's unregulated banking subsidiaries. Of course, this directly contradicts the approach Mr. Hill advocated for Avista, which sought to apportion capital among operating divisions.

Meanwhile, the average capital structure ratios presented by Mr. Hill are also distorted because they include downward-biased equity ratios associated with speculative grade companies. For example, while Mr. Hill included 8% and 32% equity ratios for AES Corporation and Aquila Energy in his industry benchmark, both of these firms are rated single-B, with S&P recently observing that "Aquila's near-term liquidity is characterized as marginal, given negative cash flow at the

[71] Hill Direct at Exhibit___(SGH-7), p. 4.

company's non-regulated operations."[72] Similarly, the 5% common equity ratio for TXU Corporation can hardly be considered a meaningful guide in evaluating a reasonable capital structure for Avista.

Q. Is the 44% equity ratio contained in Avista's initial filing consistent with a more balance view of capital structures maintained in the industry?

A. Yes. As discussed in my direct testimony,[73] Avista's requested common equity ratio falls below the 48.5% average for my proxy group at year-end 2004, after adjusting for comparable short-term debt balances, and is well short of the 53.4% equity ratio based on Value Line's expectations for other western utilities over the near-term. Similarly, Avista's 44.0% requested equity ratio is entirely consistent with the 43% average reported by Mr. Hill for the sample group of utilities he believes is most comparable.

Q. What did you conclude regarding the reasonableness of Avista's requested equity ratio?

A. Considering Avista's ongoing efforts to improve its financial standing, and the need to support the Company's financial flexibility, there is no justification for Mr. Hill's recommendation to depart from Avista's proposed capital structure. The recent decision of S&P and Fitch to downgrade Central Vermont from triple-B to

---

[72] Standard & Poor's Corporation, "Report Card: Short-Term Speculative-Grade Ratings," *RatingsDirect* (Aug. 10, 2005).
[73] Avera Direct at 28-34.

below investment grade highlights the importance of maintaining sufficient common equity to preserve the utility's creditworthiness, even during times of stress. Despite a common equity ratio that exceeds 60%, S&P and Fitch determined that Central Vermont's financial position was inadequate to support an investment grade rating in the face of an unfavorable regulatory order.[74]

Avista's proposed capital structure is just one reflection of the Company's ongoing efforts to enhance its credit standing and maintain access to capital on reasonable terms in order to ensure its ability to meet its obligations to customers. The reasonableness of Avista's requested capital structure is reinforced by the ongoing uncertainties associated with the electric power industry, Avista's relative risks and circumstances, the need to support continued system investment, and the imperative of maintaining continuous access to capital, even during times of adverse industry and market conditions. As the experience of Central Vermont illustrates, even a healthy equity cushion may not be sufficient to support a utility's credit ratings when investors perceive a lack of regulatory support.

---

[74] "S&P Downgrades CVPS Corporate Credit Rating," *Business Wire* (June 14, 2005); "Fitch Ratings Downgrades CVPS," *Business Wire* (June 20, 2005).

IV. MICHAEL GORMAN

Q. How did Mr. Gorman arrive at his recommended cost of equity?

A. Mr. Gorman's recommendation was based on his application of the constant growth DCF model, a risk premium approach based on allowed rates of return for electric utilities, and an application of the CAPM based on historical realized rates of return. Mr. Gorman averaged the three cost of equity estimates determined using these approaches, resulting in his recommended ROE of 9.8%.

Q. How did Mr. Gorman apply the constant growth DCF model?

A. Using a group of fifteen utilities, Mr. Gorman calculated a dividend yield based on a thirteen-week average stock price, and combined this with an average growth rate, calculated as the average of the earnings growth projections published by Zacks, Reuters, and Thompson Financial. As shown on Mr. Gorman's Exhibit No.___(MPG-6), this resulted in individual cost of equity estimates ranging from 7.13% to 12.19%, with the average being 8.8%.

Q. Is there anything that insulates Mr. Gorman's DCF application from the difficulties your discussed earlier in your response to Mr. Hill?

A. No. The near-term projections that Mr. Gorman relied on exclusively as a surrogate for the long-term expectations of investors suffer from the same inherent problems discussed earlier. Again, because these near-term earnings growth projections do not necessarily reflect the long-term expectations investors

have built into stock prices, the resulting DCF cost of equity estimates are likely to be biased downward. Whereas Mr. Gorman claims that a DCF result of 8.8% exhibits "sound investment fundamentals,"[75] nothing could be further from the truth. For example, the comparable earnings benchmarks for electric utilities and the gas distribution industry cited earlier exceed Mr. Gorman's DCF result by 270 to 370 basis points. Reference to allowed rates of return for other utilities also provides further confirmation that Mr. Gorman's DCF results fall significantly short of a reasonable rate of return. As noted earlier, the C.A. Turner report relied on by Mr. Gorman and included in his workpapers reported an average authorized ROE for utilities in his comparable group of 10.95%. Considering the benchmarks discussed above, Mr. Gorman's DCF result clearly fails to meet the threshold regulatory test of reasonableness.

Q. Do you agree with Gorman's decision not to consider historical trends in estimating investors' growth expectations?

A. No. While the basis for any cost of equity determination should be investors' expectations for the future, investors routinely consider historical trends in their assessment of the future. As noted in *Regulatory Finance: Utilities' Cost of*

---

[75] Gorman Direct at 15.

Capital, along with the projections of securities analysts, historical growth rates can provide useful guidance as to investors' expectations:

> Historical growth rates in dividends, earnings, and book value are often used as proxies for investors' expectations in DCF analysis. Investors are certainly influenced to some extent by historical growth rates in formulating their future growth expectations. In addition, these historical indicators are widely used by analysts, investors, and expert witnesses. … Historical indicators are also used extensively in scholarly research.[76]

As shown on Schedule WEA-4 to my direct testimony, historical earnings growth rates for the proxy group of utilities averaged 6.5% and 6.8% over the last 10- and 5-year periods, respectively. This alternative source of estimated growth rates supports my contention that the near-term projections embodied in Mr. Gorman's DCF analysis fails to fully reflect investors' expectations and requirements and his 4.57% average growth rate (Exhibit No.___(MPG-5)) is biased downward.

Ironically, in attempting to rebut my forward-looking application of the CAPM model (p. 33), Mr. Gorman turns the tables and claims that historical growth back to 1929 is somehow relevant. The fact that recent 5- and 10-year historical measures for the proxy group of utilities result in growth rates higher than near-term projections provides no basis to ignore this recognized proxy for investors' expectations.

---

[76] Morin, Roger A., "Regulatory Finance: Utilities' Cost of Capital," Public Utilities Reports (1994) at 140-141.

Q. Does Mr. Gorman's reference to GDP growth rates support his DCF analysis?

A. No. Mr. Gorman suggests that it would be illogical for investors to expect long-term growth for an electric utility that exceeds the rate of growth of the economy, asserting that GDP growth "should be considered the maximum, sustainable growth for electric utility companies in the DCF model."[77] The real issue here is not Mr. Gorman's sense of logic, but rather, the expectations of investors. In this regard, considering the cautious short-term outlook for utilities, the near-term growth projections Mr. Gorman used in his DCF analysis are apt to understate long-term expectations for the electric utility industry.

Contrary to Mr. Gorman's artificial constraint, however, it is entirely logical for investors to recognize the potential for certain companies to grow faster that the overall economy. Investors understand that, while some firms grow more slowly, others can and do experience growth that exceeds the average for the economy without "taking over the entire economy." Multex Investor, a Reuters service that publishes financial research and investment information, advised that "all equity investors … should look for growth rates that are at least as strong as growth of Real GDP and Inflation."[78] Moreover, as a practical matter, investors do not look to that

---

[77] Gorman Direct at 16.
[78] www.multexinvestor.com

distant horizon where all companies must grow at the rate of the economy. Not only is it impossible to predict the distant future, it simply doesn't matter. In terms of the DCF model, the present value of cash flows in far distant years – beyond the foreseeable future – is so small as to have little effect on investment decisions today.

Q. Are the results of Mr. Gorman's risk premium approach based on authorized returns any more reliable than his DCF analysis?

A. No. While I relied on the entire series of available data to apply my risk premium analysis using authorized rates of return, Mr. Gorman subjectively chose to ignore all data prior to 1986. Mr. Gorman explained that this period was selected "because over this period public utility equities have consistently traded at a premium to book value,"[79] but such manipulation of this data runs counter to the assumptions underlying the study of historical risk premiums. Ibbotson Associates noted the pitfalls of such a subjective approach:

> Some analysts estimate the expected risk premium using a shorter, more recent time period on the basis that recent events are more likely to be repeated in the near future … This view is suspect …[80]

By choosing to ignore available data, Mr. Gorman unnecessarily introduces a subjective bias that taints his analysis and artificially lowers his results.

---

[79] Gorman Direct at 16.

[80] Ibbotson Associates, *2005 Yearbook, Valuation Edition* at 80.

Apart from the fact that there is no valid theoretical basis for Mr. Gorman's market-to-book litmus test, his observations are inconsistent and do not necessarily apply to the electric utilities in his benchmark group. Indeed, Mr. Gorman's own data indicates that in 1985, one of the years excluded from his risk premium analysis, market-to-book ratios were greater than 1.00.[81] In addition, there is no direct nexus between the market-to-book ratio data that Mr. Gorman relied on to define his study period and electric utilities. For example, as shown on Schedule WEA-10 the average market-to-book ratio for the firms included in Value Line's Electric Utility (West) industry group was 1.18 in 1984, yet Mr. Gorman excluded this year from his risk premium analysis. In short, the sort of selective manipulation proposed by Mr. Gorman is inconsistent with the assumptions underlying the use of historical studies and any inferences from such an analysis are suspect and should be disregarded.

Q. What other flaws are associated with Mr. Gorman's risk premium application?

A. Mr. Gorman failed to incorporate the inverse relationship between interest rates and equity risk premiums in his analysis of historical authorized rates of return. Contrary to Mr. Gorman's contention that there is "no credible support" for this inverse relationship, there is considerable empirical evidence that when

[81] Gorman Direct at Exhibit No.___(MPG-8).

interest rates are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums are greater. As noted in *Regulatory Finance: Utilities' Cost of Capital*:

> Published studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992), Arelton, Chambers, and Lakonishok (1983), McShane (1993) and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates – rising when rates fell and declining when rates rose.[82]

Consistent with my findings on Schedule WEA-6, studies in the financial literature imply that a 100 basis point change in bond yields imply a 50 basis point increase in the equity risk premium.[83] As noted by Mr. Gorman (p. 31), "current interest rates are less that one-half the rates that existed in the early 1980s." Given that interest rates are currently near recent historic lows, current equity risk premiums should be relatively high, which Mr. Gorman's analysis entirely ignores.

Q. Is there any basis for Mr. Gorman's contention (p. 30) that the inverse relationship "is based on a false financial premise"?

A. None whatsoever. As explained in a 1985 study published in *Financial Management*,[84] the inverse relationship is due to changing perceptions of the relative risks of stocks and bonds associated with fluctuations in interest rates. When

---

[82] Morin, Roger A., "Regulatory Finance: Utilities' Cost of Capital," Public Utilities Reports, Inc. (1994) at 291.
[83] *Id.* at 292.
[84] Brigham, E.F., Shome, D.K., and Vinson, S.R., "The Risk Premium Approach to Measuring a Utility's Cost of Equity," Financial Management (Spring 1985) at 33-45.

interest rates rise, bondholders suffer capital losses. Meanwhile, common stockholders are ultimately concerned with the firm's ability to generate earnings. The *Financial Management* article posited that during periods of rising interest rates, bondholders' fear of interest rate risk exceeds investors' fear of reduced earnings power, leading to a narrower risk differential between bonds and stocks and a smaller risk premium. Conversely, when interest rates are falling, bondholders' interest rate fears abate and the risk differential between bonds and stocks will widen, leading to a higher equity risk premium. Thus, the inverse relationship is entirely consistent with Mr. Gorman's view that "[e]quity risk premiums would logically be expected to change with expected changes in relative risk differentials between equity and bond investments."[85]

Q. What is the primary difference between Mr. Gorman's "forward-looking" CAPM analysis and the approach described in your direct testimony?

A. As Mr. Gorman observed, the appropriate "R_m" to use in applying the CAPM is the "[e]xpected return for the market portfolio."[86] The fundamental difference between my approach and that of Mr. Gorman is that, while my analysis actually looked to the future expectations of investors in the capital markets, Mr.

---

[85] Gorman Direct at 30.
[86] *Id.* at 20.

Gorman's "forward-looking" CAPM was actually based almost entirely on historical data. As Mr. Gorman explained:

> I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market.[87]

In other words, while the relatively small portion of Mr. Gorman's "forward-looking" market return constituting inflation was based on projected data, the actual return on the market itself was completely backward looking. Thus, Mr. Gorman essentially presented two variants of a CAPM using historical data, neither one of which is consistent with the forward-looking expectations that are presumed in applying this approach to estimate the cost of equity.

Q. What about Mr. Gorman's complaints that your forward-looking estimate of the market rate of return is "highly inflated"?

A. The fallacy of Mr. Gorman's arguments were largely addressed earlier in response to Mr. Hill. Mr. Gorman relies on the very same DCF approach to estimate the cost of equity for his comparable group that I employed in my forward-looking CAPM analysis, and as noted earlier, the use of forward-looking expectations in estimating the market risk premium is well accepted in the financial literature.

---

[87] *Id.* at 23.

Q. Does Mr. Gorman's reference to historical growth rates for the S&P 500 (p. 33) provide any meaningful basis to evaluate your results?

A. No. First, I find it ironic that Mr. Gorman would advocate using historical growth rates to evaluate my forward-looking DCF estimate of the market rate of return, considering his rejection of this same approach for his sample group. Second, Mr. Gorman claims that historical growth rates imply a cost of equity for the S&P 500 of 9.7%. Considering that this return falls below the ROE that Mr. Gorman recommends for Avista's regulated electric and gas utility operations, it is simply illogical and tells us nothing about the requirements of real-world investors. Under the CAPM approach, the only way that the ROE for a utility could be greater than the return on the market as a whole is if the beta value for utilities was greater than 1.00. Meanwhile, Mr. Gorman reports an average beta of 0.86 (Exhibit No.___(MPG-12)). This fundamental inconsistency demonstrates the lack of logic underlying Mr. Gorman's references to historical data.

Q. Does Mr. Gorman's analysis of historical realized rates of return reflect the risk premium data reported by Ibbotson Associates?

A. No. Like Mr. Hill, Mr. Gorman also ignored the 7.2% market risk premium reported by Ibbotson Associates, while simultaneously claiming to premise his analysis on data from this source. Instead, Mr. Gorman claims that the risk premium developed by Ibbotson Associates is "inappropriate" and "not a proper

application of historical data."[88] In fact, however, Ibbotson Associates has fully articulated the logic behind their risk premium calculation. Considering that this is the most widely referenced and accepted source of data concerning the use of historical returns to estimate the cost of equity, there is simply no basis for Mr. Gorman's assertion that Ibbotson Associates' risk premium data should be rejected.

Q. What about Mr. Gorman's criticisms of your risk premium analysis based on historical realized returns for electric utilities?

A. Mr. Gorman characterizes the 1945-2003 time period of my study as "relatively short,"[89] which is ironic in light of his decision to pare twelve years of observations from my analysis of authorized rates of return. Mr. Gorman's only other complaint is that industry and capital market conditions have changed over the time period covered by my study. While I grant that Mr. Gorman is correct, this alone provides no basis to reject the results of this study. In fact, the very same observation can be made regarding the historical data from 1926-2004 that served as the basis for Mr. Gorman's application of the CAPM. Mr. Gorman also cites "the substantial decline in interest rates," but as documented earlier, considering the inverse relationship between equity risk premiums and interest rates, the fact that bond yields have declined suggests that my study of historical returns for electric

---

[88] *Id.* at 34-35.
[89] Gorman Direct at 31.

utilities is more likely to understate the current equity risk premium. Similarly, Mr. Gorman notes (p. 31) that increasing competition impacted investors' risk perceptions for utilities. While I don't dispute this observation, Mr. Gorman's inference that the utility industry has returned to the halcyon days of the past is contradicted by investors' ongoing concerns regarding volatile energy markets and the impact of structural change. In short, Mr. Gorman has provided no reasonable basis to disregard my analysis of historical risk premiums for electric utilities.

Q. Did Mr. Gorman recognize the need to incorporate a flotation cost adjustment?

A. No. Mr. Gorman failed to address the need to adjust his recommendation for flotation costs, which are properly considered in establishing a fair rate of return on equity for Avista.

Q. What other aspects of Mr. Gorman's recommendations run contrary to the goals of constructive regulation?

A. Mr. Gorman asserts (p. 9) that Avista should be required to suspend its common dividend payments until the Company reaches a target equity ratio.

Q. What would be the likely impact on Avista of eliminating common dividend payments?

A. Given investors' perceptions regarding the risks of electric utilities and the importance of regulatory support, slashing or eliminating dividends would

undoubtedly be perceived as an unexpected, and extremely negative, development by the capital markets. Considering investors' heightened sensitivity, this would represent a dramatic increase in investment risk and likely be interpreted as an unfavorable signal regarding Avista's future prospects. The collapse in the Company's stock price that would certainly result from such an unexpected shift in dividend policy would severely hamper Avista's efforts to strengthen its finances. A regulatory mandate to eliminate common dividend payments, as Mr. Gorman seems to advocate, would likely be perceived by investors as a draconian and punitive measure that would only serve to undermine efforts to enhance Avista's financial integrity and ongoing access to capital.

Q. Is there evidence that documents the impact of common dividend reductions on utility share prices?

A. Yes. The drastic share price reactions to some early dividend cuts in the electric utility industry have been well publicized, in particular the drop in Consolidated Edison Company's stock value from $18 to $8 within two weeks of omitting its second quarter dividend in 1974. Since that time, various studies have been conducted to estimate the impact of dividend announcements. For example, based on an analysis of dividend decreases from 1974 to 1993, a 1997 study concluded that publicly traded corporations experienced a 10 percent loss in equity

value.[90] After comparing utility dividend reduction and omission announcements with similar announcements by firms in unregulated industries, the study also found significantly more negative reaction to the public utility dividend announcements.

Q. What would be the outcome of a dramatic decline in the price of Avista's common stock?

A. The collapse in Avista's stock price that would result from an elimination of common dividends would completely undermine investor confidence precisely at the time when it is most necessary. As noted earlier, access to capital depends on maintaining investors' confidence, especially during times of capital market adversity and financial stress. The drastic capital losses that would be experienced by Avista's existing shareholders if common dividends were eliminated would severely hamper the Company's ability to raise additional equity capital on reasonable terms. Eliminating dividends would send a decidedly negative message to investors and all but eliminate the Company's financial flexibility.

Q. Does this conclude your pre-filed rebuttal testimony?

A. Yes.

---

[90] Impson, M., "Market reaction to dividend-decrease announcements: public utilities vs. unregulated industrial firms", *Journal of Financial Research*, p. 407-423 (Fall 1997).

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NOS. UE-050482 /UG050483

EXHIBIT NO. _____ (WEA-4)

WILLIAM E. AVERA

REPRESENTING AVISTA CORPORATION

ELECTRIC UTILITY (WEST) INDUSTRY

Exhibit __ (WEA-4)
Schedule WEA-10
Page 1 of 1

1984 MARKET-TO-BOOK RATIO

Company	(a) 12/24/84 Market Price	(b) 1984 Book Value	Market to Book Ratio
AZP Group	$23.00	$24.18	0.95
Citizens Utilities	$29.00	$15.86	1.83
Hawaiian Electric	$21.00	$16.99	1.24
Idaho Power	$38.00	$16.74	2.27
Montana Power	$19.00	$27.68	0.69
Nevada Power	$29.00	$24.45	1.19
Pacific Gas & Electric	$17.00	$17.18	0.99
Pacificorp	$25.00	$22.47	1.11
Portland General Electric	$17.00	$19.05	0.89
Public Service of Colorado	$19.00	$17.31	1.10
Public Service New Mexico	$25.00	$25.28	0.99
Puget Sound Power & Light	$13.00	$15.42	0.84
San Diego Gas & Electric	$23.00	$19.48	1.18
Sierra Pacific Power	$16.00	$15.23	1.05
Southern California Edison	$24.00	$19.96	1.20
Tucson Electric Power	$41.00	$25.05	1.64
Utah Power & Light	$22.00	$18.42	1.19
Washington Water Power	$19.00	$22.40	0.85
AVERAGE			**1.18**

NA -- Not Available

(a) The Value Line Investment Survey, "Summary and Index" (Jan. 4, 1985).
(b) The Value Line Investment Survey (Sep. 6, 1985).