Exhibit MPG-1T
Dockets UE-190334/UG-190335/UE-190222
Witness: Michael P. Gorman

## BEFORE THE

## WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

| | | |
|---|---|---|
| | ) | |
| WASHINGTON UTILITIES AND | ) | DOCKETS UE-190334, |
| TRANSPORTATION COMMISSION | ) | UG-190335, and UE-190222 |
| | ) | *(Consolidated)* |
| Complainant, | ) | |
| | ) | |
| v. | ) | |
| | ) | |
| AVISTA CORPORATION d/b/a | ) | |
| AVISTA UTILITIES | ) | |
| | ) | |
| Respondent. | ) | |
| | ) | |

## RESPONSE TESTIMONY OF MICHAEL P. GORMAN

## ON BEHALF OF

## THE ALLIANCE OF WESTERN ENERGY CONSUMERS

**October 3, 2019**

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| 1 | **Q.** | **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.** |
|---|---|---|
| 2 | A. | Michael P. Gorman.  My business address is 16690 Swingley Ridge Road, Suite 140, |
| 3 | | Chesterfield, MO 63017. |
| 4 | **Q.** | **WHAT IS YOUR OCCUPATION?** |
| 5 | A. | I am a consultant in the field of public utility regulation and a Managing Principal of |
| 6 | | Brubaker & Associates, Inc., energy, economic and regulatory consultants. |
| 7 8 | **Q.** | **PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.** |
| 9 | A. | These are set forth in Exhibit MPG-2. |
| 10 | **Q.** | **ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?** |
| 11 | A. | I am appearing on behalf of the Alliance of Western Energy Consumers ("AWEC"), an |
| 12 | | association of large energy users, some of whom are customers of Avista Corporation |
| 13 | | ("Avista" or the "Company"). |
| 14 | **Q.** | **WHAT IS THE PURPOSE OF YOUR RESPONSE TESTIMONY?** |
| 15 | A. | My testimony will address the current market cost of equity, and resulting overall rate |
| 16 | | of return, for Avista.  In my analyses, I consider the results of several market models |
| 17 | | and the current economic environment and outlook for the electric utility industry as |
| 18 | | well as the financial integrity of Avista given my recommended return on equity, capital |
| 19 | | structure, and overall rate of return. |
| 20 | | My silence in regard to any issue should not be construed as an endorsement of |
| 21 | | Avista's position. |

|    |    |                                                                          |
|----|----|--------------------------------------------------------------------------|
| 1  |    | **I. SUMMARY**                                                            |
| 2  | Q. | **PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND CONCLUSIONS** |
| 3  |    | **ON RETURN ON EQUITY.**                                                 |

4   A.   I recommend the Washington Utilities and Transportation Commission (the

5        "Commission") award Avista a return on common equity of 8.8%. My recommended

6        return on equity will fairly compensate Avista for its current market cost of common

7        equity and mitigate Avista's claimed revenue deficiency, while fairly balancing the

8        interests of all stakeholders (investors and ratepayers).

9        I propose adjustments to Avista's proposed 2019 ratemaking capital structure.

10       The Company's proposed hypothetical capital structure reflects reductions in debt and

11       increases to common equity that modify the Company's actual capital structure at year-

12       end 2018 to produce a higher equity ratio by year-end 2019. The Company's year-end

13       2018 capital structure represents a reasonable mix of debt and equity that has supported

14       its current bond rating at a "Stable" outlook at reasonable cost to customers. Further,

15       the Company's proposal to increase its common equity ratio of total capital has not been

16       demonstrated to be a reasonable increased cost to customers, or change to capital

17       structure that produces adequate benefits to customers. Avista's proposed increase to

18       its common equity ratio in 2019 is not a known and measurable change to its cost of

19       capital. For these reasons, I recommend a capital structure consisting of 48.1% common

20       equity and 51.9% long-term debt be used to set rates in this case.

21       Based on my recommended return on equity of 8.8% and my proposed

22       ratemaking capital structure consisting of a 48.1% equity, I recommend an overall rate

23       of return of 6.90% be used to set Avista's revenue requirement in this proceeding. This

24       is shown on my Exhibit MPG-3.

| 1 | **Q.** | **WILL YOU RESPOND TO AVISTA'S RATE OF RETURN RECOMMENDATION?** |
| 2 | | |

1 **Q. WILL YOU RESPOND TO AVISTA'S RATE OF RETURN**
2 **RECOMMENDATION?**

3 A.   Yes.  I demonstrate that Avista witness Mr. McKenzie's recommended return on equity

4    range of 9.9% to 10.9%, as well as Avista's point estimate of 9.9%, are excessive and

5    unreasonable, and should be rejected.  I also respond to Avista's capital structure

6    proposal.

7                                   **II.  RATE OF RETURN**

8 **Q.   PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.**

9 A.   In this section of my testimony, I will explain the analysis I performed to determine a

10    reasonable rate of return for Avista in this proceeding and present the results of my

11    analysis.  I begin my estimate of a fair return on equity by reviewing the authorized

12    returns approved by the regulatory commissions in various jurisdictions, and the market

13    assessment of the regulated utility industry's investment risk, credit standing, and stock

14    price performance.  I used this information to get a sense of the market's perception of

15    the risk characteristics of regulated electric utility investments in general, which I then

16    used to produce a refined estimate of the market's return requirement for assuming

17    investment risk similar to Avista's utility operations.

18 **II.A.   Utility Industry Authorized Returns on Equity,**
19       **Access to Capital, and Credit Strength**

20 **Q.   PLEASE DESCRIBE THE OBSERVABLE EVIDENCE ON TRENDS IN**
21    **AUTHORIZED RETURNS ON EQUITY FOR REGULATED UTILITIES.**

22 A.   As illustrated in Figure 1 below, authorized returns on equity for both electric and gas

23    utilities have declined over the last several years, and have been reasonably stable

24    around 9.6% since 2015.

**FIGURE 1**

**Authorized Returns on Equity***
**(Exclude Limited Issue Riders)**
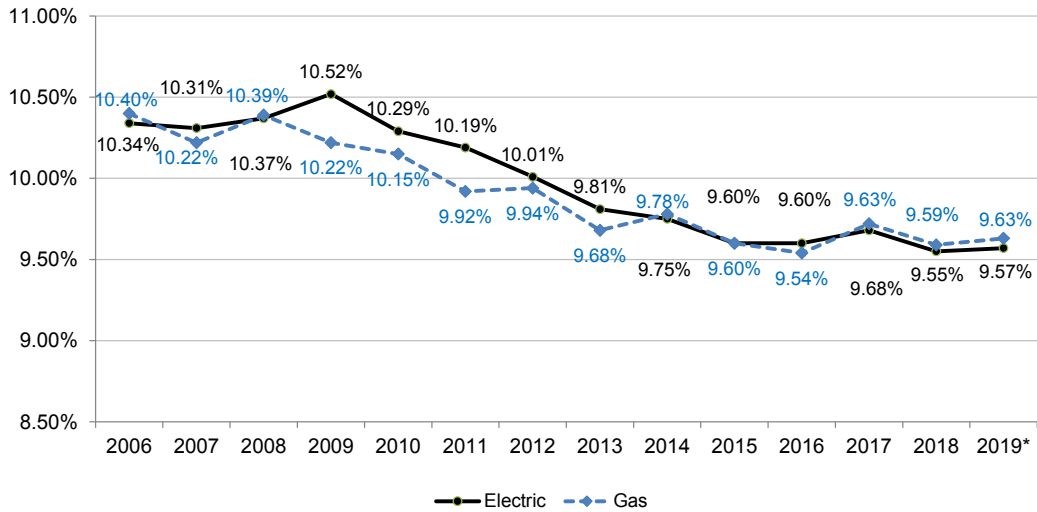


Source and Notes:
[1] *S&P Global Market Intelligenc*e, RRA Regulatory Focus, Major Rate Case Decisions -- January - June 2019, July 22, 2019 at page 1.
* Data includes January - June, 2019.
* Electric Returns exclude Limited Issue Riders.
* RRA excludes the 2017 Alaska ENSTAR decision from its calculations.

1  **Q.    IS THERE REASON TO BELIEVE THAT THE CHANGE IN FEDERAL TAX**
2  **LAW WILL INCREASE UTILITIES' COST OF EQUITY?**

3  A.    No.  The effects of this tax law change are reflected in market values and bond ratings.

4  The change in tax law created by the enactment of the 2017 Tax Cuts and Jobs Act

5  ("TCJA") reduced the federal corporate income tax rate, which reduced utilities' cash

6  flows as a result of declining deferred tax components.  However, the effects of the

7  TCJA are now fully reflected in observable market data including bond ratings and

8  yields.

1 **Q.** **HAVE ELECTRIC AND NATURAL GAS UTILITY COMPANIES BEEN ABLE**
2 **TO MAINTAIN STRONG CREDIT RATINGS DURING PERIODS OF**
3 **DECLINING AUTHORIZED RETURNS ON EQUITY?**

4 **A.** Yes. The credit rating changes for the electric utility industry over the last several years

5 are the result of marked improvement in overall financial health and credit quality in

6 the industry. As shown below in Table 1, in 2008, approximately 69% of the electric

7 utility industry was rated from BBB- to BBB+, while 18% had a bond rating better than

8 BBB+, and around 13% of the industry was rated below investment grade.

9 Over the subsequent decade, the overall industry rating improved steadily. By

10 2016, none of the industry was rated below investment grade, and around 70% were

11 BBB+ or stronger. This trend of improved ratings continued in 2017. In 2018, even

12 after the change in federal tax law, all utilities were able to maintain investment grade

13 credit ratings.

---

**TABLE 1**

**S&P Ratings by Category**
**Electric Utilities**
**(Year End)**

| Description | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A or higher | 8% | 7% | 9% | 8% | 6% | 3% | 3% | 3% | 6% | 6% | 3% |
| A- | 10% | 15% | 14% | 14% | 17% | 20% | 21% | 22% | 28% | 34% | 32% |
| BBB+ | 23% | 22% | 17% | 19% | 14% | 17% | 32% | 33% | 36% | 29% | 32% |
| BBB | 23% | 27% | 31% | 35% | 36% | 49% | 37% | 33% | 22% | 20% | 21% |
| BBB- | 23% | 20% | 17% | 14% | 17% | 6% | 3% | 3% | 8% | 11% | 12% |
| Below BBB- | 13% | 10% | 11% | 11% | 11% | 6% | 5% | 6% | 0% | 0% | 0% |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |

Source:
EEI 2018 Q4 Credit Ratings. Tab V. S&P Rating by Comp. Category

1           As shown in Table 2 below, natural gas delivery companies have also been

2    experiencing an improvement in credit rating over the last several years.

**TABLE 2**

**S&P Ratings by Category**
**Natural Gas Utility Subsidiaries**
**(Year End)**

| Description | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A or higher | 50% | 50% | 50% | 50% | 38% | 38% | 38% | 38% | 38% | 13% | 14% |
| A- | 0% | 0% | 0% | 0% | 25% | 25% | 25% | 25% | 25% | 25% | 29% |
| BBB+ | 13% | 13% | 25% | 25% | 13% | 25% | 38% | 38% | 38% | 50% | 43% |
| BBB | 25% | 25% | 13% | 13% | 0% | 0% | 0% | 0% | 0% | 13% | 14% |
| BBB- | 13% | 13% | 13% | 13% | 25% | 13% | 0% | 0% | 0% | 0% | 0% |
| Below BBB- | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |

Source: S&P CAPITAL IQ, downloaded 9/23/19.
Note: Subsidiary ratings used.

3  **Q.    HAVE UTILITIES BEEN ABLE TO ACCESS EXTERNAL CAPITAL TO**
4           **SUPPORT CAPITAL EXPENDITURE PROGRAMS?**

5  A.    Yes. In its May 1, 2019 Utility Capital Expenditures Update report, *RRA Financial*

6       *Focus*, a division of S&P Global Market Intelligence, made several relevant comments

7       about utility investments generally:

8             • Projected 2019 capital expenditures for the 48 gas and electric
9                utilities in the RRA universe are up to $131.1 billion, over 9% higher
10              than the prior forecast of $119.0 billion in the fall 2018.

11             • Energy utility capex projections for future years increased modestly
12                from our previous analysis in October 2018, rising to $118.3 billion
13                for 2020. We anticipate both the 2020 and 2021 forecasts will
14                increase as companies' plans for future projects solidify and new
15                opportunities arise.

16             • 2018 energy utility capex totaled $115.4 billion, an all-time high for
17                the 48-utility group and 8% above 2017 energy utility investment
18                spending.

19                                    \*    \*    \*

20             • The nation's electric and gas utilities are investing in infrastructure
21                to upgrade aging transmission and distribution systems, build new
22                natural gas, solar and wind generation, and implement new

| | |
|---|---|
| 1 | technologies, including smart meter deployment, smart grid systems, |
| 2 | cybersecurity measures and battery storage. We expect considerable |
| 3 | levels of spending to serve as the basis for solid profit expansion for |
| 4 | the foreseeable future. |

5                                    *   *   *

6   •   The federal tax code changes that took effect at the start of 2018
7        preserved a provision strongly supported by the industry to
8        encourage investment: the deductibility of interest expense for
9        regulated utilities. Being among the most capital-intensive
10       industries, utilities would have had a much higher cost of capital
11       absent this provision, which would have impacted capital investment
12       planning and likely led to higher utility bills.[1/]

13       Regulated utility companies have accessed significant amounts of capital to

14   support substantial capital investments over at least the last ten years.  As shown below

15   in Figure 2, capital expenditures for electric and natural gas utilities have increased

16   considerably over the period 2007 into 2019, and while forecasted capital expenditures

17   are starting to abate, they remain high.
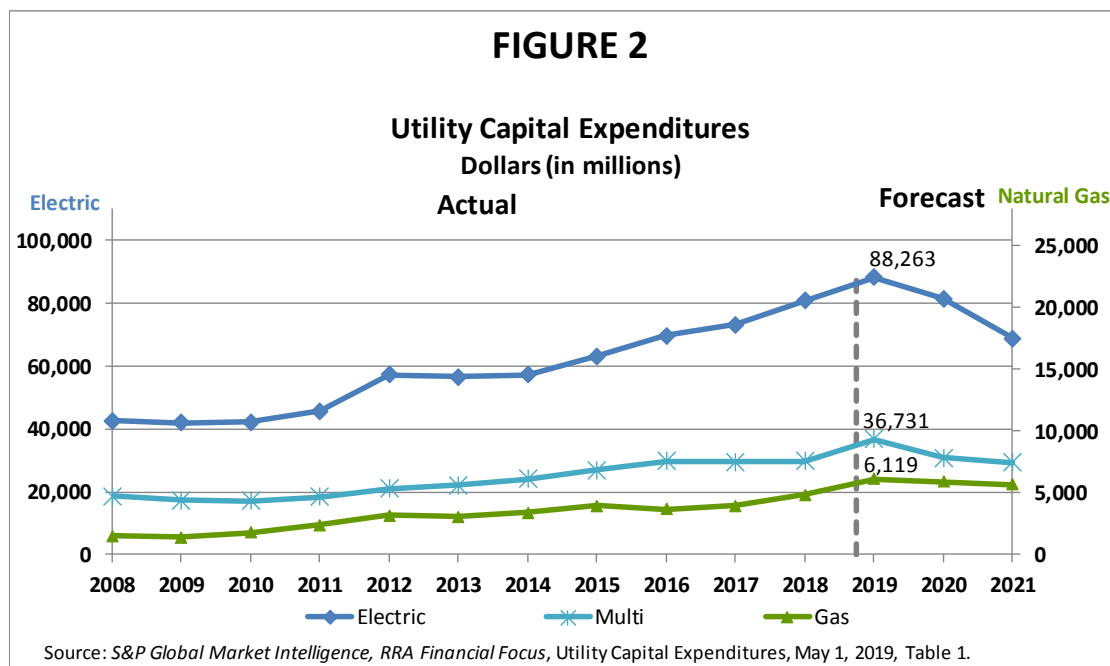
**FIGURE 2**

**Utility Capital Expenditures**
**Dollars (in millions)**



Source: *S&P Global Market Intelligence, RRA Financial Focus*, Utility Capital Expenditures, May 1, 2019, Table 1.

---

[1/]   S&P Global Market Intelligence, RRA Financial Focus:  "Utility Capital Expenditures Update,"
       October 30, 2018.

1　　　　As shown in Figure 2 above, capital investment is significantly higher for the

2　　electric utility industry than the natural gas industry, but the two industries follow the

3　　same trend over the historical and forecasted periods.

4　**Q.**　**IS THERE EVIDENCE OF ROBUST VALUATIONS OF REGULATED**
5　　　**UTILITY EQUITY SECURITIES?**

6　A.　Yes.  Robust valuations are an indication that utilities can sell securities at high prices,

7　　which is a strong indication that they can access equity capital under reasonable terms

8　　and conditions, and at relatively low cost.  As shown on Exhibit MPG-4, the historical

9　　valuation of electric and gas utilities followed by *Value Line*, based on their price-to-

10　earnings ("P/E") ratios, price-to-cash flow ("P/CF") ratios, and market price-to-book

11　value ("M/B") ratios, indicates that utility security valuations today are very strong and

12　robust relative to the last several years.  These strong valuations of utility stocks indicate

13　that utilities have access to equity capital under reasonable terms at relatively low cost.

14　**Q.**　**HOW SHOULD THE COMMISSION USE THIS MARKET INFORMATION IN**
15　　　**ASSESSING A FAIR RETURN FOR AVISTA?**

16　A.　Observable market evidence demonstrates that capital market costs are near historically

17　　low levels.  While authorized returns on equity have fallen to the mid-9% range, utilities

18　　continue to have access to large amounts of external capital, even as they are funding

19　　large capital expenditure programs.  Furthermore, utilities' investment-grade credit

20　　ratings are stable and have improved, due in part to supportive regulatory treatment.

21　　The Commission should carefully weigh all this important observable market evidence

22　　in assessing a fair return on equity for Avista.

1   **II.B.  Market Sentiments and Utility Industry Outlook**

2   **Q.    PLEASE DESCRIBE THE CREDIT RATING OUTLOOK FOR REGULATED**
3   **UTILITIES.**

4   A.   Regulated utilities' credit ratings have improved over the last few years.  Credit analysts

5        have observed that utilities have strong access to capital at attractive pricing (i.e., low

6        capital costs), which has supported very large capital programs.

7            S&P recently published a report titled "Industry Top Trends 2019: North

8        America Regulated Utilities."  In that report, S&P noted the following:

9            **Ratings Outlook**: Rating trends across regulated electric, gas, and
10           water utilities in North America remain mostly stable, reflecting
11           generally supportive regulatory oversight. However, the industry's
12           financial measures weakened in 2018 as a result of U.S. tax reform,
13           robust capital spending, and flat to slightly negative load growth. In
14           general, those utilities most affected by these developments were
15           those who strategically operate with a minimal financial cushion at
16           their current rating.[2]

17           More recently, Moody's placed the regulated utility industry on "Negative"

18       outlook, primarily to reflect the uncertainty and <u>short-term</u> cash flow impacts of the

19       TCJA, but also due to robust capital spending.

20           The outlook for the US regulated utility sector has changed to
21           negative from stable, reflecting increased financial risk due to lower
22           cash flow and holding company leverage at its highest level since
23           2008. These factors will reduce the ratio of funds from operations
24           (FFO) to debt by up to 200 basis points over the next 12-18 months.

25           » **Cash flow will decline due to a lower contribution from**
26           **deferred taxes**. The combination of the loss of bonus
27           depreciation and a lower tax rate as a result of the Tax Cuts &
28           Jobs Act (TCJA) means that utilities and their holding companies
29           will lose some of the cash flow contribution from deferred taxes.
30           Since 2010, deferred taxes have contributed around 14% of
31           consolidated FFO, but we see this falling to around 8% through
32           2019. This will drive down the consolidated ratio of FFO to debt,

---

[2]   *S&P Global Ratings*: "Industry Top Trends 2019: North America Regulated Utilities," at 1
      (Nov. 8, 2018).

| | |
|---|---|
| 1 | for a peer group of 42 utility holding companies, from 17% |
| 2 | toward 15% over the outlook period. |

3 » **Regulatory and management responses may not improve**
4 **financials until 2020**. Some state regulatory commissions have
5 issued credit-supportive rate orders to offset reduced cash flow
6 because of tax reform, and several holding companies are
7 executing plans to strengthen their balance sheets. But it could
8 take longer than 12-18 months before sector-wide financial
9 metrics improve.

10 \* \* \*

11 There are two principal approaches for a utility seeking to take
12 mitigating action against rising financial risk. The first option is to
13 pursue financial relief from regulators, which we see most
14 companies doing across the industry in response to tax reform. The
15 second is "self help," where management teams alter financial
16 policies to improve cash flow or their balance sheet. These efforts
17 could include cutting operating or capital costs, issuing equity,
18 reducing debt, selling non-core assets or slowing dividend growth.
19 Such strategies were popular during the early 2000s period known
20 as "back to basics," when many companies shed unregulated and
21 international assets, reduced debt and focused on strengthening core
22 regulatory relationships.[3/]

23 Similarly, Fitch states:

24 The Tax Cuts and Jobs Act signed into law on Dec. 22, 2017 has negative
25 credit implications for U.S. regulated utilities and utility holding
26 companies over the short-to-medium term, according to Fitch Ratings. A
27 reduction in customer bills to reflect lower federal income taxes and
28 return of excess accumulated deferred income taxes is expected to lower
29 revenues and funds from operations (FFO) across the sector. Absent
30 mitigating strategies on the regulatory front, this is expected to lead to
31 weaker credit metrics and negative rating actions for those issuers that
32 have limited headroom to absorb the leverage creep.

33 \* \* \*

34 Over a longer-term perspective, Fitch views tax reform as modestly
35 positive for utilities. The sector retained the deductibility of interest
36 expense, which would have otherwise significantly impacted cost of
37 capital for this capital intensive sector. The exemption from 100%
38 capex expensing is also welcome news for the sector, which has seen

---

[3/] *Moody's Investors Service Outlook*: "2019 outlook shifts to negative due to weaker cash flows, continued high leverage," at 1, 3 (Jun. 18, 2018)) (emphasis in original).

| | |
|---|---|
| 1 | years of bonus depreciation reduce rate base leading to lower |
| 2 | earnings. Finally, the reduction in federal income taxes lowers cost |
| 3 | of service to customers, providing utilities headroom to increase |
| 4 | rates for capital investments.[4/] |

**5 Q. PLEASE DESCRIBE UTILITY STOCK PRICE PERFORMANCE OVER THE**
**6 LAST SEVERAL YEARS.**

7 A. As shown in Figure 3 below, S&P Global Market Intelligence ("MI") has recorded

8 utility stock price performance compared to the market. The industry's stock

9 performance data from 2004 through 2018 shows that the MI Electric Company and MI

10 Gas Utility Indexes have followed the market through downturns and recoveries.

11 However, utility investments have been less volatile during extreme market downturns.

12 This more stable price performance for utilities supports my conclusion that market

13 participants regard utility stock investments as moderate- to low-risk investments.



**FIGURE 3**

**Index Comparison**

Source: S&P Global Market Intelligence.
*Data through June 2019

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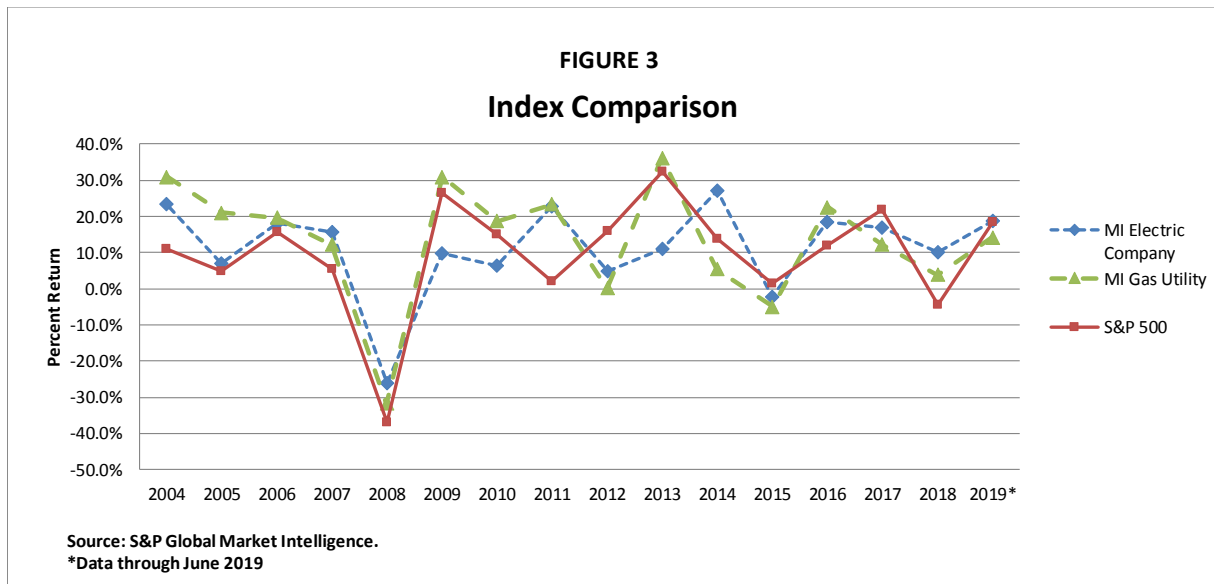
[4/] *Fitch Ratings*: "Tax Reform Creates Near-term Credit Pressure for U.S. Utilities," (Jan. 24, 2018) (emphasis added).

1    **II.C. Federal Reserve and Market Capital Costs Outlook**

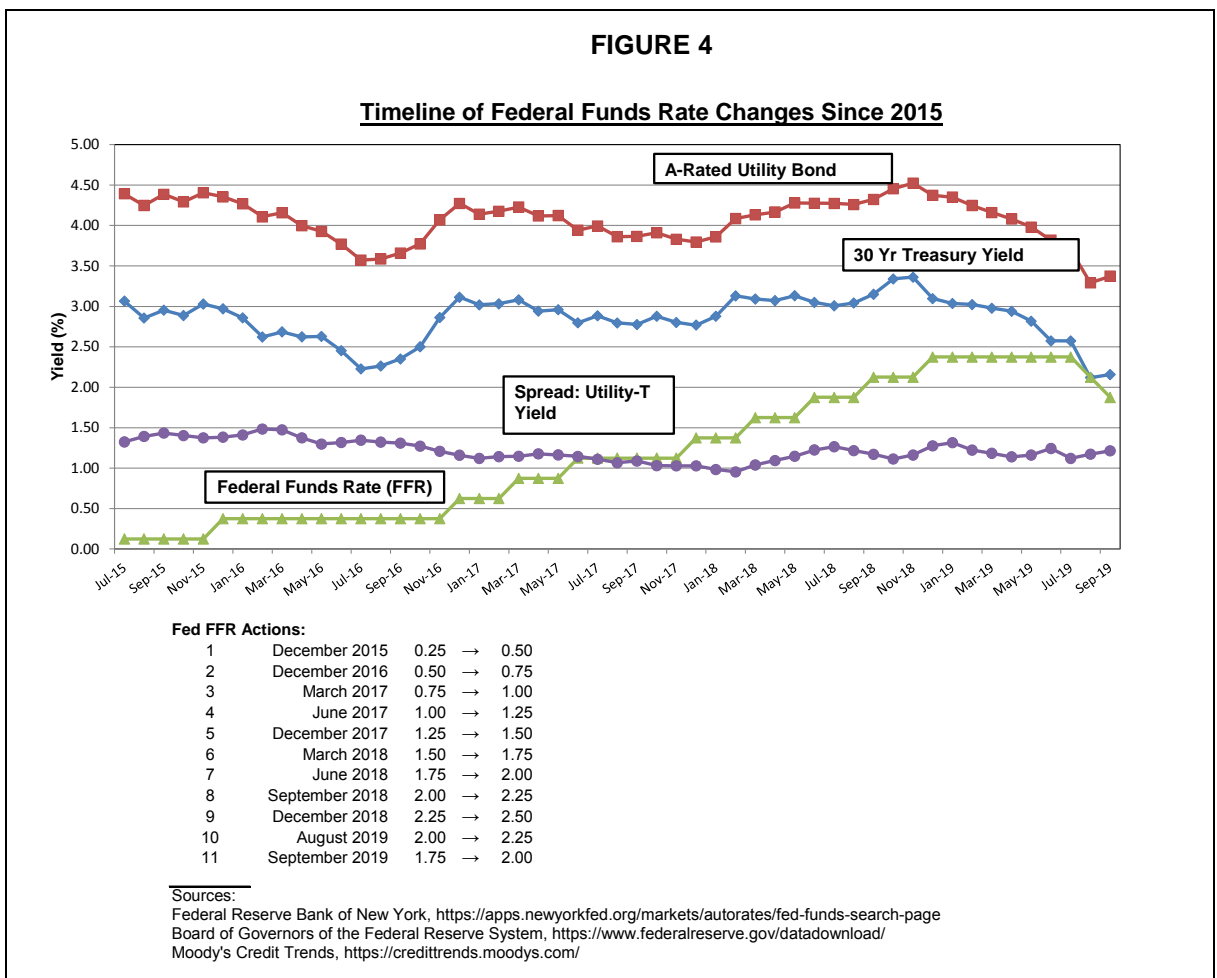2    **Q.    IS    THERE    EVIDENCE    THAT    THE    FEDERAL    RESERVE'S**
3         **NORMALIZATION POLICY HAS HAD MINIMAL IMPACT ON LONG-**
4         **TERM RATES?**

5    A.   Yes.  The Fed has raised the Federal Funds Rate nine times over the last few years,

6         raising the short-end of the yield curve.  However, comparable increases for longer

7         maturity bonds have not been realized.  This has had the effect of flattening the yield

8         curve.  This is illustrated on in Figure 4.



**FIGURE 4**

**Timeline of Federal Funds Rate Changes Since 2015**

Fed FFR Actions:
| | | | | |
|---|---|---|---|---|
| 1 | December 2015 | 0.25 | → | 0.50 |
| 2 | December 2016 | 0.50 | → | 0.75 |
| 3 | March 2017 | 0.75 | → | 1.00 |
| 4 | June 2017 | 1.00 | → | 1.25 |
| 5 | December 2017 | 1.25 | → | 1.50 |
| 6 | March 2018 | 1.50 | → | 1.75 |
| 7 | June 2018 | 1.75 | → | 2.00 |
| 8 | September 2018 | 2.00 | → | 2.25 |
| 9 | December 2018 | 2.25 | → | 2.50 |
| 10 | August 2019 | 2.00 | → | 2.25 |
| 11 | September 2019 | 1.75 | → | 2.00 |

Sources:
Federal Reserve Bank of New York, https://apps.newyorkfed.org/markets/autorates/fed-funds-search-page
Board of Governors of the Federal Reserve System, https://www.federalreserve.gov/datadownload/
Moody's Credit Trends, https://credittrends.moodys.com/

9         As shown in Figure 4 above, the actions taken by the Fed to increase the Federal

10        Funds  Rate  have  simply  flattened  the  yield  curve,  and  have  not  resulted  in  a

11        corresponding increase in long-term interest rates.  Importantly, the Fed's most recent

1  action was to reduce the Federal Funds Rate due to a slowdown in the economy.  In

2  August and again in September of this year the Federal Funds Rate was reduced by

3  0.25%, from 2.50% to 2.00%.  This Fed action suggests there will be limited pressure

4  by the Fed at least over the next several years to increase short-term rates.  Rather, the

5  outlook for near-term Fed monetary policy actions is for further reductions to short-term

6  interest rates.

7       The Fed monitory policy changes are important but  significantly, the Fed

8  actions have largely impacted short-term interest rates but  the cost of common equity

9  is impacted by long-term interest rates.  Hence, the Fed actions have not created pressure

10  for the cost of equity capital to increase.

11  **Q.**  **HAS THE FEDERAL RESERVE BEEN PARTICIPATING IN LONG-TERM**
12       **INTEREST RATE MARKETS?**

13  A.  Yes, it has, but its participation in this market has been significantly reduced and has

14  not been proven to not have pressured long-term interest rates to increase.

15       The Federal Reserve has recently implemented a strategy to begin to unwind its

16  balance sheet position in long-term interest rate securities (Treasury and Mortgage

17  Backed Securities ("MBS")).  The Federal Reserve built up approximately $4.7 trillion

18  of Treasury and MBS security holdings as part of a QE program that spanned 2008 to

19  2014.  During the QE program, the Federal Reserve procured long-term securities to

20  support the Federal Reserve's monetary policy, mitigate long-term interest rates, and to

21  stimulate the economy.  By purchasing these securities, the Federal Reserve was making

22  capital more readily available at lower long-term interest rates.

23       The Federal Reserve has, however, reversed its policy and is reducing its

24  participation in long-term interest rate markets.  In a recent Federal Reserve press

1  release, on March 20, 2019, the Fed announced that it will further reduce its already

2  modest changes to its balance sheet normalization policy.  The Fed noted that it will

3  slow the reduction in holdings of Treasury securities by capping the reduction to

4  $15 billion beginning in May 2019 from $30 billion relative to its monthly redemptions.

5  Further, Jerome H. Powell, Chairman of the Board of Governors of the Federal Reserve

6  System, in testimony provided to the U.S. House of Representatives Committee on

7  Financial Services in Washington, D.C. on July 10, 2019, stated that the Fed will not be

8  targeting an expansionary monetary policy, and will move to reducing short-term

9  interest rates and a lesser impact on long-term interest rate markets.

10 **Q.**  **DO YOU BELIEVE MARKET PARTICIPANTS RECOGNIZE THE FED'S**
11 **MONETARY POLICY IN FORMING THEIR PROJECTIONS ON INTEREST**
12 **RATE MARKETS?**

13 A.  Yes.  Because the Fed's actions are well-followed by market participants and captured

14  in independent economists' outlooks for changes in capital market costs, the Fed's

15  actions, along with all other relevant factors, are considered by consensus professional

16  economists in forming their outlooks for changes in interest rates and capital market

17  conditions.

18 **Q.**  **WHAT DO INDEPENDENT ECONOMISTS' OUTLOOKS FOR FUTURE**
19 **INTEREST RATES INDICATE?**

20 A.  Independent economists expect today's low capital costs to prevail over at least the

21  intermediate term.  This is illustrated in projections for both short- and long-term

22  changes in interest rates.  Further, there is a clear trend in forecasted changes in interest

23  rates over time, indicating that capital market participants are becoming more

24  comfortable with today's low-cost capital market and expect it to prevail over at least

25  the intermediate future.

1      For example, short-term projections suggest that the market expects capital

2      market costs to remain relatively low.  Table 3, below, shows capital cost projections

3      over the next two years.

<div style="border:1px solid">

**TABLE 3**

**Blue Chip Financial Forecasts**
**Projected Federal Funds Rate, 30-Year Treasury Bond Yields, and GDP Price Index**

| Publication Date | 1Q 2019 | 2Q 2019 | 3Q 2019 | 4Q 2019 | 1Q 2020 | 2Q 2020 | 3Q 2020 | 4Q 2020 |
|---|---|---|---|---|---|---|---|---|
| **Federal Funds Rate** | | | | | | | | |
| Apr-19 | 2.4 | 2.4 | 2.4 | 2.4 | 2.5 | 2.5 | 2.4 | |
| May-19 | **2.4** | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | |
| Jun-19 | **2.4** | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | |
| Jul-19 | | 2.4 | 2.2 | 2.0 | 1.9 | 1.9 | 1.8 | 1.8 |
| Aug-19 | | **2.4** | 2.2 | 2.0 | 1.9 | 1.8 | 1.8 | 1.8 |
| Sep-19 | | **2.4** | 2.1 | 1.8 | 1.7 | 1.6 | 1.6 | 1.6 |
| | | | | | | | | |
| **T-Bond, 30 yr.** | | | | | | | | |
| Apr-19 | 3.0 | 3.0 | 3.1 | 3.1 | 3.2 | 3.2 | 3.2 | |
| May-19 | **3.0** | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | 3.2 | |
| Jun-19 | **3.0** | 2.9 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | |
| Jul-19 | | 2.8 | 2.6 | 2.6 | 2.7 | 2.7 | 2.8 | 2.8 |
| Aug-19 | | **2.8** | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 |
| Sep-19 | | **2.8** | 2.3 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 |
| | | | | | | | | |
| **GDP Price Index** | | | | | | | | |
| Apr-19 | 1.7 | 2.2 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | |
| May-19 | **0.9** | 2.3 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | |
| Jun-19 | **0.9** | 2.4 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | |
| Jul-19 | | 2.3 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.0 |
| Aug-19 | | **2.4** | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 |
| Sep-19 | | **2.4** | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 |

Source and Note:
  Blue Chip Financial Forecasts, January through September 2019.
  Actual Yields in Bold

</div>

4      As Table 3 shows, projected Treasury bond yields are not expected to increase

5      significantly over the next two years.  GDP growth is also expected to stay relatively

6      stable over the forecast period.

**TABLE 4**

**30-Year Treasury Bond Yield Actual Vs. Projection**

| Description | Quarterly Average | 2-Year Projected | 5- to 10-Year Projected |
|---|---|---|---|
| 2014 | | | |
| Q1 | 3.79% | 4.40% | 5.0% - 5.5% |
| Q2 | 3.69% | 4.50% | |
| Q3 | 3.44% | 4.40% | 5.3% - 5.6% |
| Q4 | 3.26% | 4.30% | |
| | | | |
| 2015 | | | |
| Q1 | 2.97% | 4.00% | 4.9% - 5.1% |
| Q2 | 2.55% | 3.70% | |
| Q3 | 2.83% | 4.00% | 4.8% - 5.0% |
| Q4 | 2.84% | 3.90% | |
| | | | |
| 2016 | | | |
| Q1 | 2.96% | 3.80% | 4.5% - 4.8% |
| Q2 | 2.72% | 3.60% | |
| Q3 | 2.64% | 3.40% | 4.3% - 4.6% |
| Q4 | 2.29% | 3.10% | |
| | | | |
| 2017 | | | |
| Q1 | 2.82% | 3.70% | 4.2% - 4.5% |
| Q2 | 3.05% | 3.80% | |
| Q3 | 2.91% | 3.70% | 4.3% - 4.5% |
| Q4 | 2.82% | 3.60% | |
| | | | |
| 2018 | | | |
| Q1 | 2.82% | 3.60% | 4.1% - 4.3% |
| Q2 | 3.02% | 3.80% | |
| Q3 | 3.09% | 3.80% | 4.2% - 4.4% |
| Q4 | 3.07% | 3.70% | |
| | | | |
| 2019 | | | |
| Q1 | 3.27% | 3.60% | 3.9% - 4.2% |
| Q2 | 3.01% | 2.60% | |

Sources:

*Blue Chip Financial Forecasts*,
December 2013 through September 2019.

1         However, as Table 4 shows, in Q1 2019, independent economists were

2   projecting relatively low interest rates over the next five to ten years and did not

3   anticipate significant increases in long-term 30-year Treasury bond yields relative to

4   current bond yields.  Table 4 also illustrates that this current outlook is significantly

5   different than the outlook for substantial increases in interest rates that prevailed for

6   most of the last five years, and particularly prior to 2016.  This is clear evidence that

7   market participants are comfortable with today's low capital market costs and expect

8   them to prevail over at least the intermediate period.

9   **II.D.  Avista Investment Risk**

10  **Q.    PLEASE  DESCRIBE  THE  MARKET'S  ASSESSMENT  OF  AVISTA'S**
11  **INVESTMENT RISK.**

12  A.    The market's assessment of Avista's investment risk is described by credit rating

13        analysts' reports.  Avista witness Mr. Mark Thies testified that Avista's current credit

14        ratings from S&P and Moody's are BBB, and Baa2, respectively.  The Company has a

15        stable outlook from both agencies.[5]

16                Specifically, S&P states:

17        **Rating Action Rationale**

18        Our rating action follows the recent passage of legislation in Washington
19        state that we expect will improve Avista's regulatory risk management.
20        This includes authority for the WUTC to approve <u>multiyear rate plans</u>
21        <u>and allow recovery for certain utility investments deemed useful up to 48</u>
22        <u>months after rates are approved.</u>

23        Avista recently filed for a general rate increase under this construct. If
24        approved, we expect this to reduce Avista's historical regulatory lag,
25        strengthening our view of its business risk. <u>As such, we revised our</u>
26        <u>ratings downside threshold of FFO to debt to 14% from 15%. While we</u>
27        <u>acknowledge the company's weaker financial measures for 2018 and</u>
28        <u>2019, our view of potential improvement in Avista's business risk</u>

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[5]    Thies Direct Testimony at 33.

| 1 | mitigates its modestly weaker financial measures. Our base case assumes |
| 2 | FFO to debt of 14%-16% over our forecast period. |

| 3 | Our assessment of Avista's business risk profile primarily reflects its |
| 4 | regulatory risk management, since about 95% of the company's overall |
| 5 | EBITDA is derived from low-risk regulated utility operations. The |
| 6 | company is generally authorized to use various cost recovery |
| 7 | mechanisms to help alleviate regulatory lag but is somewhat exposed to |
| 8 | potential excess power costs, typically tied to an earnings sharing |
| 9 | mechanism in Washington. |

| 10 | We also incorporate our view of its regulatory diversity and generation |
| 11 | mix. Avista primarily operates in Washington and Idaho; Oregon and |
| 12 | Alaska jointly contribute less than 10% of its consolidated revenues. |
| 13 | Moreover, its dependence on hydroelectric generation introduces fuel |
| 14 | replacement risk during periods of unfavorable hydro conditions. |

| 15 | We assess Avista's financial risk profile under our medial volatility |
| 16 | financial benchmark table, reflecting its business risk derived from its |
| 17 | low-risk regulated utility operations and regulatory risk management. |
| 18 | Under our base-case scenario--including capital spending averaging |
| 19 | about $400 million, dividends of about $100 million, and a new |
| 20 | multiyear rate case in Washington, and a merger termination payment to |
| 21 | Avista from Hydro One, we expect FFO to debt of 14%-16% throughout |
| 22 | our forecast period. |

**23  Outlook**

| 24 | The stable outlook reflects our expectation that the potential |
| 25 | improvement to Avista's regulatory risk management strengthens its |
| 26 | business risk profile, mitigating the company's modestly weaker |
| 27 | financial measures, and that we expect FFO to debt of 14%-16% |
| 28 | throughout our forecast period. [6/] |

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[6/]   *Standard & Poor's RatingsDirect, Research Update:* "Avista Corp. 'BBB' Rating Affirmed On New Legislation In Washington State; Outlook Stable," May 20, 2019 at 1-2, emphasis added.

1  **II.E.  Avista's Proposed Capital Structure**

2  **Q.  WHAT IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE?**

3  A.  Avista's witness Mr. Mark Thies sponsors the Company's proposed capital structure,

4      which is shown below in Table 5.  The proposed capital structure is based on the

5      projected debt and equity balances for the rate-effective period December 31, 2019.

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**TABLE 5**

**Avista's
Proposed Capital Structure**

| Description | Weight |
|---|---|
| Total Debt | 50.00% |
| Common Equity | 50.00% |
| Total Regulatory Capital Structure | 100.00% |

Source:  Thies, Exh. MTT-1T at 15.

---

6          Avista witness Mark Thies describes the Company's proposed ratemaking

7      capital structure.  He opines that the proposal to increase the equity weight in the

8      ratemaking capital structure will move the Company closer toward achieving its

9      objective of improving its corporate credit rating from BBB to BBB+[7] and it will send

10     a positive signal to the capital markets.  He believes that Avista has been getting less

11     predictable ratemaking outcomes in Washington where the Company recovers most of

12     its operating revenue (60%).[8]

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[7]  Thies Direct Testimony at 16.
[8]  *Id*. at 17.

1 **Q. DOES AVISTA'S PROPOSED HYPOTHETICAL CAPITAL STRUCTURE**
2 **REASONABLY ALIGN WITH ITS ACTUAL CAPITAL STRUCTURE?**

3 A. No. Avista's actual capital structure for 2018 is shown below in Table 6.

**TABLE 6**

**Actual Capital Structure**

| Description | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|
| Short-Term Debt | 3.36% | 3.22% | 3.43% | 2.88% | 4.90% |
| Long-Term Debt | 49.22% | 49.86% | 49.50% | 49.80% | 49.37% |
| Equity | 47.42% | 46.91% | 47.08% | 47.31% | 45.73% |
| Total Capital | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| | | | | | |
| Long-Term Debt | 50.93% | 51.53% | 51.25% | 51.28% | 51.92% |
| Equity | 49.07% | 48.47% | 48.75% | 48.72% | 48.08% |
| Total | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| | | | | | |
| **S&P Adj. Debt Ratio*** | **54.12%** | **55.59%** | **56.15%** | **55.71%** | **58.13%** |

Source:
SEC, as of December 31, 2014-2018.
*Standard & Poor's, Capital IQ, downloaded September 27, 2019.

4 As shown above in Table 6, when short-term debt is included, the Company's

5 common equity ratio has actually been decreasing over the last several years.

6 Specifically, it has been decreasing from around 47% in 2014 to, down to less than 46%

7 in 2018. Excluding short-term debt, the Company's common equity ratio has been

8 relatively consistent within the range of 48% to 49% over the period 2014-2018.

1  **Q.  IS IT APPROPRIATE FOR AVISTA TO USE A HYPOTHETICAL CAPITAL**
2      **STRUCTURE TO SET RATES IN ORDER TO ACHIEVE ITS BOND RATING**
3      **IMPROVEMENT OBJECTIVE?**

4  A.  No.  Avista's proposal to use a hypothetical capital structure reflects an increased

5      common equity ratio that is largely based on a plan to retire short-term debt and not

6      replace it at current lower market interest rates.  Avista's proposal to refinance this debt

7      with common equity unnecessarily increases its overall cost of capital without any

8      corresponding benefits to customers.

9          Further, the Company's plan to increase its common equity is not well defined,

10     and it is possible that the Company could use a hypothetical capital structure for setting

11     rates with no real plan to increase its actual common equity balance, thereby causing

12     customers to pay prices that reflect an overstatement of Avista's actual capital structure

13     costs.  While the Company's projections show a plan to issue additional debt and equity

14     in order to increase its common equity ratio, it has provided no evidence that allows for

15     that expectation to be regarded as a known and measurable change to its capital

16     structure.  For this reason, I recommend rates be based on a verifiable capital structure

17     mix of debt and equity that is shown to be reasonable.  To the extent the Company

18     actually adjusts its capital structure at some future period to increase its equity ratio to

19     support a stronger bond rating, then the Commission could at that time consider using a

20     more equity thick ratemaking capital structure to set rates.  At this point, the change in

21     equity ratio is simply not known and measurable.

22 **Q.  WHAT CAPITAL STRUCTURE DO YOU PROPOSE BE USED TO SET**
23     **RATES FOR AVISTA IN THIS PROCEEDING?**

24 A.  I propose a capital structure that contains the same weights of capital as Avista's end-

25     of-year 2018 capital structure, adjusted to include only long-term capital.  That capital

1    structure is shown below in Table 7.  I used this as a projected capital structure for year-

2    end 2019.

<table>
<tr><td colspan="2"><b>TABLE 7</b></td></tr>
<tr><td colspan="2"><b><u>Gorman's Proposed Capital Structure</u></b><br>(December 31, 2019)</td></tr>
<tr><td><b><u>Description</u></b></td><td><b><u>Weight</u></b></td></tr>
<tr><td>Long-Term Debt</td><td>51.9%</td></tr>
<tr><td>Common Equity</td><td>48.1%</td></tr>
<tr><td>  Total Regulatory Capital Structure</td><td>100.0%</td></tr>
<tr><td colspan="2">Source:  Exhibit MPG-3.</td></tr>
</table>

3         The Company's year-end 2018 capital structure, reflecting only long-term

4    capital balances, reflects the current known and measurable costs the Company incurs

5    to finance its investment in rate base assets.  I did not include short-term debt at this

6    time because its balance of short-term debt appears to align with its projected balance

7    of Construction Work in Progress.

8  **Q.   DO YOU BELIEVE THAT THIS CAPITAL STRUCTURE IS REASONABLE**
9  **FOR RATEMAKING PURPOSES?**

10  A.   Yes.  I believe it is reasonable because it has shown to be supportive of Avista's actual

11       bond rating over the last five years, as evidenced by a review of its reported adjusted

12       debt ratio by S&P, a factor that was considered in Avista's "Stable" credit rating outlook

13       over this time period.  Importantly, I believe this capital structure is reasonable because

14       it achieves the objective of maintaining Avista's financial integrity and credit standing

15       at a lower cost to retail customers.

1  **II.F.  Embedded Cost of Debt**

2  **Q.  WHAT IS THE COMPANY'S EMBEDDED COST OF LONG-TERM DEBT?**

3  A.  Avista is proposing an embedded cost of long-term debt of 5.15% as developed on Mr.

4  Thies's Exhibit MTT-2.  The Company's embedded cost of debt has been adjusted to

5  reflect refinancing opportunities, and adjustments to manage its interest rate costs.

6  However, the Company's adjusted embedded cost of debt is still well above current

7  market costs, approximately 4.5%, and therefore represents an improvement but still not

8  a level of embedded cost reflecting opportunities to fully reduce its embedded debt

9  interest expense.  While I am not making a recommendation to reduce Avista's long-

10  term debt cost for ratemaking purposes in this case, I encourage the Company to pursue

11  favorable refinancing opportunities to bring its debt costs more in line with the market.

12  **III.  RETURN ON EQUITY**

13  **Q.  PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF**
14  **COMMON EQUITY."**

15  A.  A utility's cost of common equity is the expected return that investors require on an

16  investment in the utility.  Investors expect to earn their required return from receiving

17  dividends and through stock price appreciation.

18  **Q.  PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A**
19  **REGULATED UTILITY'S COST OF COMMON EQUITY.**

20  A.  In general, determining a fair cost of common equity for a regulated utility has been

21  framed by two hallmark decisions of the U.S. Supreme Court:  Bluefield Water Works

22  & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed.

23  Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944).

24  These decisions identify the general financial and economic standards to be

25  considered in establishing the cost of common equity for a public utility.  Those general

1   standards provide the authorized return should: (1) be sufficient to maintain financial

2   integrity; (2) attract capital under reasonable terms; and (3) be commensurate with

3   returns investors could earn by investing in other enterprises of comparable risk.

4   **Q.    PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE**
5   **AVISTA'S COST OF COMMON EQUITY.**

6   A.    I have used several models based on financial theory to estimate Avista's cost of

7         common equity.  These models are: (1) a constant growth Discounted Cash Flow

8         ("DCF") model using consensus analysts' growth rate projections; (2) a constant growth

9         DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF model; (4) a

10        Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM").  I have applied

11        these models to a group of publicly traded utilities with investment risk similar to

12        Avista.

13  **III.A.  Risk Proxy Group**

14  **Q.    PLEASE DESCRIBE HOW YOU IDENTIFIED A PROXY UTILITY GROUP**
15  **THAT COULD BE USED TO ESTIMATE AVISTA'S CURRENT MARKET**
16  **COST OF EQUITY.**

17  A.    I relied on the same proxy group developed by Avista witness Mr. McKenzie with four

18        exceptions.  I excluded Avangrid from the proxy group.  Avangrid is a company that is

19        majority owned by Iberdrola (approximately 83% according to *Value Line*) where less

20        than 20% of its stock is publicly traded.  Because of the control premium likely reflected

21        in the valuation of this stock, its valuation characteristics are not comparable to the other

22        publicly traded proxy group companies, and it should not be included in Avista's proxy

23        group.  I have also excluded El Paso Electric because on June 3, 2019 JP Morgan

24        Investment Management Co. announced that it had reached an agreement to acquire El

25        Paso Electric.  Finally, I excluded Algonquin Power and Utility Corp. and Emera, Inc.

1     because they are both headquartered in Canada. As such, they have inherent risks that

2     are not applicable to Avista, namely foreign country risk and foreign currency risks. For

3     example, in its 2018 SBBI Yearbook, Duff & Phelps shows the summary statistics of

4     annual returns for several global indexes.[9/] Duff & Phelps shows that over the period

5     of 1970-2017, the Canada index returns had a standard deviation of 21.6% compared to

6     17.6% standard deviation for the World index and 17.0% standard deviation for the U.S.

7     index.[10/] Furthermore, Duff & Phelps concludes that the "<u>Canadian index was the</u>

8     <u>riskiest in the 2000s as well as the most recent decade</u>. The domestic U.S. portfolio was

9     the least risky in the most recent decade."[11/] Also, as shown on the Duff & Phelps

10    Exhibit 12.12: Annualized Monthly Standard Deviation by Decade (%), in every time

11    period shown, the Canada index had higher volatility than the U.S. index and the World

12    index.[12/]

13 **Q.**   **WHY IS IT APPROPRIATE TO REMOVE A COMPANY WHERE A**
14       **MAJORITY OF THE OUTSTANDING SHARES ARE OWNED BY A SINGLE**
15       **ENTITY?**

16 A.   The market traded shares of a company like Avangrid reflect a minority interest in the

17    company. Minority shareholders must follow the voting demands of the majority

18    shareholders in terms of financing and management operations, which significantly

19    drive investment performance of shares in the company. Hence, minority interest

20    shareholders' voting rights have *de minimis* value in controlling performance of the

21    company and holding management accountable for performance. For these reasons,

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[9/]    Duff & Phelps, *2019 SBBI Yearbook* at 12-8 through 12-16.
[10/]   *Id.* at 12-14.
[11/]   *Id.* at 12-15 (emphasis added).
[12/]   *Id.*

1      minority shareholders' voting rights have limited value and cannot drive changes in

2      management to correct deficient management performance.

3              Because the rights of the minority shareholders are subordinate to that of the

4      majority shareholder, minority shares typically trade at a discount to other public

5      companies where the control of the companies is not limited to a majority shareholder.

6      These minority share values then reflect a higher rate of return to assume greater

7      investment risk associated with minority ownership.

8              Because it is difficult to assess whether the actual shares are traded based on the

9      true value of the overall company, or whether the publicly traded shares reflect this

10     minority valuation, it is more appropriate to remove it from the cost of capital for the

11     proxy group because the resulting return on equity estimates may not reflect value of

12     the full company but instead may reflect the value of minority ownership.  Such a

13     premium for minority ownership would not represent fair compensation as defined by

14     *Hope* and *Bluefield* because the objective in measuring a fair return is to provide

15     investors a return available in other enterprises of corresponding risk.  Because minority

16     ownership imposes an additional risk on shareholders that can be avoided by purchasing

17     another company's stock without a majority owner, the resulting return on equity

18     estimate is simply not consistent with fair compensation.

19  Q.  **WHY IS IT APPROPRIATE TO EXCLUDE COMPANIES THAT ARE**
20      **INVOLVED IN MERGER AND ACQUISITION ("M&A") ACTIVITY FROM**
21      **THE PROXY GROUP?**

22  A.  M&A activity can distort the market factors used in DCF and risk premium studies.

23      M&A activity can have impacts on stock prices, growth outlooks, and relative volatility

24      in historical stock prices if the market was anticipating or expecting the M&A activity

1      prior to it actually being announced. This distortion in the market data thus impacts the

2      reliability of the DCF and risk premium estimates for a company involved in M&A.

3      Moreover, companies generally enter into M&A in order to produce greater

4      shareholder value by combining companies. The enhanced shareholder value normally

5      could not be realized had the two companies not combined.

6      When companies announce a merger or acquisition, the public assesses the

7      proposed transaction and develops outlooks on the value of the two companies after the

8      combination based on expected synergies or other value-adds created by the M&A.

9      As a result, the stock value before the merger is completed may not reflect the

10      forward-looking earnings and dividend payments for the company absent the merger or

11      on a stand-alone basis. Therefore, an accurate DCF return estimate on companies

12      involved in M&A activities cannot be produced because their stock prices do not reflect

13      the stand-alone investment characteristics of the companies. Rather, the stock price

14      more likely reflects the shareholder enhancement produced by the proposed transaction.

15      For these reasons, it is appropriate to remove companies involved in M&A activities

16      from a proxy group used to estimate a fair ROE for a utility.

17 **Q.**    **PLEASE DESCRIBE WHY YOU BELIEVE YOUR PROXY GROUP IS**
18        **REASONABLY COMPARABLE IN INVESTMENT RISK TO AVISTA.**

19 A.    The proxy group shown in Exhibit MPG-5, has an average credit rating from S&P of

20      BBB+, which is one notch higher than Avista's credit rating from S&P of BBB. The

21      proxy group has an average credit rating from Moody's of Baa2, which is identical to

22      Avista's credit rating from Moody's.

23      The proxy group has an average common equity ratio of 41.6% from S&P and

24      43.8% (excluding short-term debt) from *Value Line* for 2018, which is much lower than

1      Avista's actual common equity ratio of 48.0%. Therefore, the proxy group has a higher

2      financial risk relative to Avista.

3          Based on this information, I believe my proxy group is reasonably comparable

4      in investment risk to Avista and, if anything, produces cost of equity estimates that are

5      higher than Avista requires.

6  **III.B.  Discounted Cash Flow Model**

7  **Q.    PLEASE DESCRIBE THE DCF MODEL.**

8  A.     The DCF model posits that a stock price is valued by summing the present value of

9      expected future cash flows discounted at the investor's required rate of return or cost of

10     capital. This model is expressed mathematically as follows:

11         $$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots \frac{D_\infty}{(1+K)^\infty} \qquad \text{(Equation 1)}$$

13         $P_0$ = Current stock price

14         $D$ = Dividends in periods $1 - \infty$

15         $K$ = Investor's required return

16         This model can be rearranged in order to estimate the discount rate or investor-

17     required return, known as "K." If it is reasonable to assume that earnings and dividends

18     will grow at a constant rate, then Equation 1 can be rearranged as follows:

19         $$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

20         $K$ = Investor's required return

21         $D_1$ = Dividend in first year

22         $P_0$ = Current stock price

23         $G$ = Expected constant dividend growth rate

24     Equation 2 is referred to as the annual "constant growth" DCF model.

1  **Q.  PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF**
2  **MODEL.**

3  A.  As shown in Equation 2 above, the DCF model requires a current stock price, expected

4  dividend, and expected growth rate in dividends.

5  **Q.  WHAT STOCK PRICE DID YOU USE IN YOUR CONSTANT GROWTH DCF**
6  **MODEL?**

7  A.  I relied on the average of the weekly high and low stock prices of the utilities in the

8  proxy group over a 13-week period ending on September 6, 2019.  An average stock

9  price is less susceptible to market price variations than a price at a single point in time.

10  Therefore, an average stock price is less susceptible to aberrant market price

11  movements, which may not reflect the stock's long-term value.

12  A 13-week average stock price reflects a period that is still short enough to

13  contain data that reasonably reflects current market expectations, but the period is not

14  so short as to be susceptible to market price variations that may not reflect the stock's

15  long-term value.  In my judgment, a 13-week average stock price is a reasonable balance

16  between the need to reflect current market expectations and the need to capture

17  sufficient data to smooth out aberrant market movements.

18  **Q.  WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF**
19  **MODEL?**

20  A.  I used the most recently paid quarterly dividend as reported in *Value Line*.[13]  This

21  dividend was annualized (multiplied by 4) and adjusted for next year's growth to

22  produce the $D_1$ factor for use in Equation 2 above.  In other words, I calculate $D_1$ by

23  multiplying the annualized dividend ($D_0$) by $(1+G)$.

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[13]  *The Value Line Investment Survey*, June 14, July 26, and August 16, 2019.

1  **Q.  WHAT DIVIDEND GROWTH RATES DID YOU USE IN YOUR CONSTANT**
2  **GROWTH DCF MODEL?**

3  A.    There are several methods that can be used to estimate the expected growth in dividends.

4         However, regardless of the method, to determine the market-required return on common

5         equity, one must attempt to estimate investors' consensus about what the dividend, or

6         earnings growth rate, will be and not what an individual investor or analyst may use to

7         make individual investment decisions.

8              As predictors of future returns, securities analysts' growth estimates have been

9         shown to be more accurate than growth rates derived from historical data.[14]  That is,

10        assuming the market generally makes rational investment decisions, analysts' growth

11        projections are more likely to influence investors' decisions, which are captured in

12        observable stock prices, than growth rates derived only from historical data.

13             For my constant growth DCF analysis, I have relied on a consensus, or mean, of

14        professional securities analysts' earnings growth estimates as a proxy for investor

15        consensus dividend growth rate expectations.  I used the average of analysts' growth

16        rate estimates from three sources: Zacks, MI, and Reuters.  All such projections were

17        available on September 6, 2019, and all were reported online.

18             Each consensus growth rate projection is based on a survey of securities

19        analysts.  There is no clear evidence whether a particular analyst is most influential on

20        general market investors.  Therefore, a single analyst's projection does not as reliably

21        predict consensus investor outlooks as does a consensus of market analysts' projections.

22        The consensus estimate is a simple arithmetic average, or mean, of surveyed analysts'

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[14]    *See, e.g.,* David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of
        Estimating Share Yield," *The Journal of Portfolio Management*, Spring 1989.

| 1 | | earnings growth forecasts. A simple average of the growth forecasts gives equal weight |
| 2 | | to all surveyed analysts' projections. Therefore, a simple average, or arithmetic mean, |
| 3 | | of analyst forecasts is a good proxy for market consensus expectations. |

4  Q.  **WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT**
5      **GROWTH DCF MODEL?**

6  A.  The growth rates I used in my DCF analysis are shown in Exhibit MPG-6. The average

7      growth rate for my proxy group is 5.18%.

8  Q.  **WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?**

9  A.  As shown in Exhibit MPG-7, the average and median constant growth DCF returns for

10     my proxy group for the 13-week analysis are 8.61% and 8.21%, respectively.

11 Q.  **DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR CONSTANT**
12     **GROWTH DCF ANALYSIS?**

13 A.  Yes. The constant growth DCF analysis for my proxy group is based on a group average

14     long-term sustainable growth rate of 5.18%. The three- to five-year growth rates are

15     higher than my estimate of a maximum long-term sustainable growth rate of 4.10%,

16     which I discuss later in this testimony. Therefore, I believe the constant growth DCF

17     analysis produces a reasonable high-end return estimate.

18 **III.C. Sustainable Growth DCF**

19 Q.  **PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE**
20     **LONG-TERM GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF**
21     **MODEL.**

22 A.  A sustainable growth rate is based on the percentage of the utility's earnings that is

23     retained and reinvested in utility plant and equipment. These reinvested earnings

24     increase the earnings base (rate base). Earnings grow when plant funded by reinvested

25     earnings is put into service, and the utility is allowed to earn its authorized return on

26     such additional rate base investment.

1        The internal growth methodology is tied to the percentage of earnings retained

2     in Avista and not paid out as dividends. The earnings retention ratio is 1 minus the

3     dividend payout ratio. As the payout ratio declines, the earnings retention ratio

4     increases. An increased earnings retention ratio will fuel stronger growth because the

5     business funds more investments with retained earnings.

6        The payout ratios of the proxy group are shown in my Exhibit MPG-8. These

7     dividend payout ratios and earnings retention ratios then can be used to develop a

8     sustainable long-term earnings retention growth rate. A sustainable long-term earnings

9     retention ratio will help gauge whether analysts' current three- to five-year growth rate

10    projections can be sustained over an indefinite period of time.

11       The data used to estimate the long-term sustainable growth rate is based on

12    Avista's current market-to-book ratio and on *Value Line*'s three- to five-year projections

13    of earnings, dividends, earned returns on book equity, and stock issuances.

14       As shown in Exhibit MPG-9, the average sustainable growth rate for the proxy

15    group using this internal growth rate model is 6.39%.

16  **Q.   WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE LONG-**
17  **TERM GROWTH RATES?**

18  A.   A DCF estimate based on these sustainable growth rates is developed in Exhibit

19    MPG-10. As shown there, and using the same formula in Equation 2 above, a

20    sustainable growth DCF analysis produces proxy group average and median DCF

21    results for the 13-week period of 9.85% and 9.65%, respectively.

22       .

1    **III.D.  Multi-Stage Growth DCF Model**

2    **Q.    HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?**

3    A.     Yes.  My constant growth DCF described above is based on consensus analysts' growth

4           rate projections so it is a reasonable reflection of rational investment expectations over

5           the next three to five years.  The limitation on this constant growth DCF model is that

6           it cannot reflect a rational expectation that a period of high or low short-term growth

7           can be followed by a change in growth to a rate that better reflects long-term sustainable

8           growth.  Hence, I performed a multi-stage growth DCF analysis to reflect this outlook

9           of changing growth expectations.

10   **Q.    WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?**

11   A.     Analyst-projected growth rates over the next three to five years will change as utility

12          earnings growth outlooks change.  Utility companies go through cycles in making

13          investments in their systems.  When utility companies are making large investments,

14          their rate base grows rapidly, which in turn accelerates earnings growth.  Once a major

15          construction cycle is completed or levels off, growth in the utility rate base slows and

16          its earnings growth slows from an abnormally high three- to five-year rate to a lower

17          sustainable growth rate.

18          As major construction cycles extend over longer periods of time, even with an

19          accelerated construction program, the growth rate of the utility will slow simply because

20          rate base growth will slow and the utility has limited human and capital resources

21          available to expand its construction program.  Therefore, the three- to five-year growth

22          rate projection can be used as a long-term sustainable growth rate, but not without

23          making a reasonable informed judgment to determine whether it considers the current

1    market environment, the industry, and whether the three- to five-year growth outlook is

2    sustainable.

3  **Q.    PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.**

4  A.    The multi-stage growth DCF model reflects the possibility of non-constant growth for

5        a company over time.  The multi-stage growth DCF model reflects three growth periods:

6        (1) a short-term growth period consisting of the first five years; (2) a transition period,

7        consisting of the next five years (6 through 10); and (3) a long-term growth period

8        starting in year 11 through perpetuity.

9            For the short-term growth period, I relied on the consensus analysts' growth

10       projections described above in relationship to my constant growth DCF model.  For the

11       transition period, the growth rates were reduced or increased by an equal factor

12       reflecting the difference between the analysts' growth rates and the long-term

13       sustainable growth rate.  For the long-term growth period, I assumed each company's

14       growth would converge to the maximum sustainable long-term growth rate.

15 **Q.    WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR**
16 **THE MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?**

17 A.    Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the

18       economy in which they sell services.  Utilities' earnings/dividend growth is created by

19       increased utility investment or rate base.  Such investment, in turn, is driven by service

20       area economic growth and demand for utility service.  In other words, utilities invest in

21       plant to meet sales demand growth.  Sales growth, in turn, is tied to economic growth

22       in their service areas.    Hence, the long-term maximum sustainable growth rate for a

23       utility investment is best proxied by the projected long-term Gross Domestic Product

24       ("GDP").  *Blue Chip Economic Indicators* projects that over the next 5 and 10 years,

1    the U.S. nominal GDP will grow at an annual rate of approximately 4.10%. These GDP

2    growth projections reflect a real growth outlook of around 2.0% and an inflation outlook

3    of around 2.1% going forward. As such, the average growth rate over the next 10 years

4    is around 4.10%, which I believe is a reasonable proxy of long-term sustainable

5    growth.[15/]

6         The U.S. Department of Energy, Energy Information Administration ("EIA")

7    has observed utility sales growth tracks U.S. GDP growth, albeit at a lower level, as

8    shown in Exhibit MPG-11. Utility sales growth has lagged behind GDP growth for

9    more than a decade. As a result, nominal GDP growth is a very conservative proxy for

10   utility sales growth, rate base growth, and earnings growth and is a conservative proxy

11   for the highest sustainable long-term growth rate of a utility.

12   **Q.    IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER**
13   **THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT**
14   **GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?**

15   A.   Yes. This concept is supported in published analyst literature and academic work.

16   Specifically, in a textbook titled "Fundamentals of Financial Management," published

17   by Eugene Brigham and Joel F. Houston, the authors state as follows:

18          The constant growth model is most appropriate for mature companies
19          with a stable history of growth and stable future expectations. Expected
20          growth rates vary somewhat among companies, but <u>dividends for mature</u>
21          <u>firms are often expected to grow in the future at about the same rate as</u>
22          <u>nominal gross domestic product (real GDP plus inflation).</u>[16/]

23          The use of the economic growth rate is also supported by investment

24   practitioners as outlined as follows:

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[15/]    *Blue Chip Financial Forecasts,* June 1, 2019, at 14.
[16/]    *"Fundamentals of Financial Management,"* Eugene F. Brigham and Joel F. Houston, Eleventh
         Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298, emphasis
         added.

| 1 | | **Estimating Growth Rates** |

| 2 | | One of the advantages of a three-stage discounted cash flow model is |
| 3 | | that it fits with life cycle theories in regards to company growth.  In these |
| 4 | | theories, companies are assumed to have a life cycle with varying growth |
| 5 | | characteristics. Typically, the potential for extraordinary growth in the |
| 6 | | near term eases over time and eventually growth slows to a more stable |
| 7 | | level. |

| 8 | | * * * |

| 9 | | Another approach to estimating long-term growth rates is to focus on |
| 10 | | estimating the overall economic growth rate.  Again, this is the approach |
| 11 | | used in the *Ibbotson Cost of Capital Yearbook*.  To obtain the economic |
| 12 | | growth rate, a forecast is made of the growth rate's component parts. |
| 13 | | Expected growth can be broken into two main parts:  expected inflation |
| 14 | | and expected real growth.  By analyzing these components separately, it |
| 15 | | is easier to see the factors that drive growth.[17] |

| 16 | Q. | **ARE THERE ANY ACTUAL INVESTMENT RESULTS THAT SUPPORT THE** |
| 17 | | **NOTION THAT THE GROWTH ON STOCK INVESTMENTS WILL NOT** |
| 18 | | **EXCEED THE NOMINAL GROWTH OF THE U.S. GDP?** |

| 19 | A. | Yes.  This is evident by a comparison of the compound annual growth of the U.S. GDP |

| 20 | | to the geometric growth of the U.S. stock market.  Morningstar measures the historical |

| 21 | | geometric growth of the U.S. stock market over the period 1926-2018 to be |

| 22 | | approximately 5.8%.[18]  During this same time period, the U.S. nominal compound |

| 23 | | annual growth of the U.S. GDP was approximately 6.1%.[19] |

| 24 | | As such, over the past 90 years, the geometric average growth of the U.S. |

| 25 | | nominal GDP has been higher but comparable to the geometric average growth of the |

| 26 | | U.S. stock market capital appreciation.  This historical relationship indicates that the |

| 27 | | U.S. GDP growth outlook is a conservative estimate of the long-term sustainable growth |

| 28 | | of U.S. stock investments. |

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[17] *Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook* at 51 and 52.
[18] *Duff & Phelps, 2019 SBBI Yearbook* at 6-17.
[19] U.S. Bureau of Economic Analysis, April 26, 2019.

| 1 | Q. | **WHAT IS THE GEOMETRIC AVERAGE AND WHY IS IT APPROPRIATE TO** |
| 2 | | **USE THIS MEASURE TO COMPARE GDP GROWTH TO CAPITAL** |
| 3 | | **APPRECIATION IN THE STOCK MARKET?** |

4　A.　The terms geometric average growth rate and compound annual growth rate are used

5　　　interchangeably.　The geometric annual growth rate is the calculated growth rate, or

6　　　return, that measures the magnitude of growth from start to finish.　The geometric

7　　　average is best, and most often, used as a measurement of performance or growth over

8　　　a long period of time.[20]　Because I am comparing achieved growth in the stock market

9　　　to achieved growth in U.S. GDP over a long period of time, the geometric average

10　　　growth rate is most appropriate.

11　Q.　**HOW DID YOU DETERMINE A LONG-TERM GROWTH RATE THAT**
12　　　**REFLECTS THE CURRENT CONSENSUS MARKET PARTICIPANT**
13　　　**OUTLOOK?**

14　A.　I relied on the economic consensus of long-term GDP growth projections.　*Blue Chip*

15　　　*Financial Forecasts* publishes the consensus for GDP growth projections twice a year.

16　　　These GDP growth outlooks are the best available measure of the market's assessment

17　　　of long-term GDP growth.　These analyst projections reflect all current outlooks for

18　　　GDP and are likely the most influential on investors' expectations of future growth

19　　　outlooks.　The consensus projections published GDP growth rate outlook is 4.10% over

20　　　the next 10 years.[21]

21　　　　　Therefore, I propose to use the consensus for projected five- and ten-year

22　　　average GDP growth rates of 4.1%, as published by *Blue Chip Financial Forecasts*, as

23　　　an estimate of long-term sustainable growth. *Blue Chip Financial Forecasts* projections

24　　　provide real GDP growth projections of approximately 2.0% and GDP inflation of

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[20]　*New Regulatory Finance*, Roger Morin, PhD, at 133-134.
[21]　*Blue Chip Financial Forecasts*, June 1, 2019, at 14.

1     2.1%[22] over the five-year and ten-year projection periods, of 4.1% on the nominal

2     projections.  These GDP growth forecasts represent the most likely views of market

3     participants because they are based on published economic consensus projections.

4  **Q.**    **DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP**
5        **GROWTH?**

6  A.    Yes, and these alternative sources corroborate the consensus analysts' projections I

7     relied on.  For example, consider the analysts' projections shown in Table 8 below.

**TABLE 8**

**GDP Forecasts**

| Source | Term | Real GDP | Inflation | Nominal GDP |
|---|---|---|---|---|
| Blue Chip Financial Forecasts | 5-10 Yrs | 2.0% | 2.1% | 4.1% |
| EIA - Annual Energy Outlook | 30 Yrs | 1.8% | 2.3% | 4.2% |
| Congressional Budget Office | 9 Yrs | 1.9% | 2.1% | 3.9% |
| Moody's Analytics | 28 Yrs | 2.0% | 1.9% | 3.9% |
| Social Security Administration | 50 Yrs | | | 4.3% |
| The Economist Intelligence Unit | 25 Yrs | 1.9% | 1.8% | 3.8% |

8        The EIA in its *Annual Energy Outlook* projects real GDP out until 2050.  In its

9     2019 Annual Report, the EIA projects real GDP through 2050 to be 1.9% and a

10    long-term GDP price inflation projection of 2.3%.  The EIA data supports a long-term

11    nominal GDP growth outlook of 4.2%.[23]

12        Also, the Congressional Budget Office ("CBO") makes long-term economic

13    projections.  The CBO is projecting real GDP growth to be 1.9% during the next

---

[22]    *Id.*

[23]    DOE/EIA Annual Energy Outlook 2018 With Projections to 2050, February 2019, Table Macroeconomic Indicators.

1    nine years, with a GDP price inflation outlook of 2.1%.  The CBO's nine-year outlook

2    for nominal GDP based on this projection is 3.9%.[24/]

3         Moody's Analytics also makes long-term economic projections.  In its recent

4    25-year outlook to 2048, Moody's Analytics is projecting real GDP growth of 2.0%

5    with GDP inflation of 1.9%.[25/]  Based on these projections, Moody's Analytics is

6    projecting nominal GDP growth of 3.9% over the next 25 years.

7         The Social Security Administration ("SSA") makes long-term economic

8    projections out to 2095.  The SSA's nominal GDP projection, under its "intermediate

9    cost" scenario of approximately 50 years, is 4.3%.[26/]

10        The Economist Intelligence Unit, a division of The Economist and a third-party

11   data provider to Market Intelligence, makes a long-term economic projection out to

12   2050.  The Economist Intelligence Unit is projecting real GDP growth of 1.9% with an

13   inflation rate of 1.9% out to 2050.  The real GDP growth projection is in line with the

14   consensus.  The long-term nominal GDP projection based on these outlooks is

15   approximately 3.8%.[27/]

16        The real GDP and nominal GDP growth projections made by these independent

17   sources support the use of the consensus for five-year and ten-year projected GDP

18   growth outlooks as a reasonable estimate of market participants' long-term GDP

19   growth.

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[24/]   *CBO:  The Budget and Economic Outlook:  2019-2029*, January 2019.
[25/]   www.economy.com, *Moody's Analytics Forecast*, April 8, 2019.
[26/]   www.ssa.gov, "2019 OASDI Trustees Report," Table VI.G4.
[27/]   *S&P Global Market Intelligence, Economist Intelligence Unit*, downloaded on February 14, 2019.

| 1 | **Q.** | **WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN** |
| 2 | | **YOUR MULTI-STAGE GROWTH DCF ANALYSIS?** |

3   **A.**   I relied on the same 13-week average stock prices and the most recent quarterly dividend

4         payment data discussed above. For stage one growth, I used the consensus analysts'

5         growth rate projections discussed above in my constant growth DCF model. The first

6         stage covers the first five years, consistent with the time horizon of the securities

7         analysts' growth rate projections. The second stage, or transition stage, begins in year

8         6 and extends through year 10. The second stage growth transitions the growth rate

9         from the first stage to the third stage using a straight linear trend. For the third stage, or

10        long-term sustainable growth stage, starting in year 11, I used a 4.10% long-term

11        sustainable growth rate based on the consensus economists' long-term projected

12        nominal GDP growth rate.

| 13 | **Q.** | **WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF** |
| 14 | | **MODEL?** |

15   **A.**   As shown in Exhibit MPG-12, the average and median DCF returns on equity for my

16         proxy group using the 13-week average stock price are 7.74% and 6.93%, respectively.

17   **Q.**   **PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.**

18   **A.**   The results from my DCF analyses are summarized in Table 9 below:

**TABLE 9**

**Summary of DCF Results**

| Description | Proxy Group | |
| --- | --- | --- |
| | Average | Median |
| Constant Growth DCF Model (Analysts' Growth) | 8.61% | 8.21% |
| Constant Growth DCF Model (Sustainable Growth) | 9.85% | 9.65% |
| Multi-Stage Growth DCF Model | 7.74% | 6.93% |

1    I conclude that my DCF studies support a return on equity of 8.8%, which is the

2    midpoint of the DCF range of 8.6% to 9.0%. The low-end of my range reflects my

3    constant growth DCF return using an analysts' growth rate average, and the high-end of

4    9.0% is approximately the midpoint of my constant growth DCF models' median results

5    using analysts' growth and sustainable growth rate projections. These findings reflect

6    today's historically low capital market costs.

7    **III.E.  Risk Premium Model**

8    **Q.    PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.**

9    A.    This model is based on the principle that investors require a higher return to assume

10    greater risk. Common equity investments have greater risk than bonds because bonds

11    have more security of payment in bankruptcy proceedings than common equity and the

12    coupon payments on bonds represent contractual obligations. In contrast, companies

13    are not required to pay dividends or guarantee returns on common equity investments.

14    Therefore, common equity securities are considered to be riskier than bond securities.

15    This risk premium model is based on two estimates of an equity risk premium.

16    First, I quantify the difference between regulatory commission-authorized returns on

17    common equity and contemporary U.S. Treasury bonds. The difference between the

1    authorized return on common equity and the Treasury bond yield is the risk premium.

2    I estimated the risk premium on an annual basis for each year since January 1986

3    through June 2019. The authorized returns on equity were based on regulatory

4    commission-authorized returns for electric utility companies. Authorized returns are

5    typically based on expert witnesses' estimates of the investor-required return at the time

6    of the proceeding.

7         The second equity risk premium estimate is based on the difference between

8    regulatory commission-authorized returns on common equity and contemporary

9    "A" rated utility bond yields by Moody's. I selected the period 1986 through March

10   2019 because public utility stocks consistently traded at a premium to book value during

11   that period. This is illustrated in Exhibit MPG-13, which shows the market-to-book

12   ratio since 1986 for the electric utility industry was consistently above a multiple of

13   1.0x. Over this period, an analyst can infer that authorized returns on equity were

14   sufficient to support market prices that at least exceeded book value. This is an

15   indication that commission authorized returns on common equity supported a utility's

16   ability to issue additional common stock without diluting existing shares. It further

17   demonstrates utilities were able to access equity markets without a detrimental impact

18   on current shareholders.

19        Based on this analysis, as shown in Exhibit MPG-14, the average indicated

20   equity risk premium over U.S. Treasury bond yields has been 5.57%. Since the risk

21   premium can vary depending upon market conditions and changing investor risk

22   perceptions, I believe using an estimated range of risk premiums provides the best

1    method to measure the current return on common equity for a risk premium

2    methodology.

3         I incorporated five-year and ten-year rolling average risk premiums over the

4    study period to gauge the variability over time of risk premiums.  These rolling average

5    risk premiums mitigate the impact of anomalous market conditions and skewed risk

6    premiums over an entire business cycle.  As shown on my Exhibit MPG-14, the five-

7    year rolling average risk premium over Treasury bonds ranged from 4.25% to 6.73%,

8    while the ten-year rolling average risk premium ranged from 4.38% to 6.58%.

9         As shown on my Exhibit MPG-15, the average indicated equity risk premium

10   over contemporary "A" rated Moody's utility bond yields was 4.21%.  The five-year

11   and ten-year rolling average risk premiums ranged from 2.88% to 5.57% and 3.20% to

12   5.43%, respectively.

13  **Q.    DO YOU BELIEVE THAT THE TIME PERIOD USED TO DERIVE THESE**
14  **EQUITY RISK PREMIUM ESTIMATES IS APPROPRIATE TO FORM**
15  **ACCURATE CONCLUSIONS ABOUT CONTEMPORARY MARKET**
16  **CONDITIONS?**

17  A.    Yes.  Contemporary market conditions can change dramatically during the period that

18   rates determined in this proceeding will be in effect.  A relatively long period of time

19   where stock valuations reflect premiums to book value indicates that the authorized

20   returns on equity and the corresponding equity risk premiums were supportive of

21   investors' return expectations and provided utilities access to the equity markets under

22   reasonable terms and conditions.  Further, this time period is long enough to smooth

23   abnormal market movement that might distort equity risk premiums.  While market

24   conditions and risk premiums do vary over time, this historical time period is a

25   reasonable period to estimate contemporary risk premiums.

1          Alternatively, some studies, such as Duff & Phelps referred to later in this

2          testimony, have recommended that use of "actual achieved investment return data" in a

3          risk premium study should be based on long historical time periods. The studies find

4          that achieved returns over short time periods may not reflect investors' expected returns

5          due to unexpected and abnormal stock price performance. Short-term, abnormal actual

6          returns would be smoothed over time and the achieved actual investment returns over

7          long time periods would approximate investors' expected returns. Therefore, it is

8          reasonable to assume that averages of annual achieved returns over long time periods

9          will generally converge on the investors' expected returns.

10          My risk premium study is based on data that inherently relied on investor

11          expectations, not actual investment returns, and, thus, need not encompass a very long

12          historical time period.

13  Q.    **WHAT DOES CURRENT OBSERVABLE MARKET DATA SUGGEST ABOUT**
14          **INVESTOR PERCEPTIONS OF UTILITY INVESTMENTS?**

15  A.    The equity risk premium should reflect the relative market perception of risk in the

16          utility industry today. I have gauged investor perceptions in utility risk today in Exhibit

17          MPG-16, where I show the yield spread between utility bonds and Treasury bonds over

18          the last 39 years. As shown in this exhibit, the average utility bond yield spreads over

19          Treasury bonds for "A" and "Baa" rated utility bonds for this historical period are 1.49%

20          and 1.93%, respectively. The utility bond yield spreads over Treasury bonds for "A"

21          and "Baa" rated utilities for 2018 were 1.14% and 1.56%, respectively. Similarly, the

22          "A" and "Baa" utility spreads through June 2019 are 1.21% and 1.71%, respectively.

23          Both the current average "A" rated and "Baa" rated utility bond yield spreads over

24          Treasury bond yields are lower than the respective 39-year average spreads.

1           A current 13-week average "A" rated utility bond yield of 3.94% when

2           compared to the current Treasury bond yield of 2.36%, as shown in Exhibit MPG-17,

3           implies a yield spread of 118 basis points.  This current utility bond yield spread is lower

4           than the 39-year average spread for "A" rated utility bonds of 1.49%.  The current spread

5           for the "Baa" rated utility bond yield of 1.58% is also lower than the 39-year average

6           spread of 1.93%.

7           These utility bond yield spreads are evidence that the market perceives utility

8           investment risk as relatively low compared to historical valuations and corporate

9           security valuations.   This relative valuation and pricing demonstrate that utilities

10         continue to have strong access to capital and at low costs in the current market.

11  **Q.**    **IS THERE MARKET EVIDENCE TO HELP GAUGE MARKET RISK**
12        **PREMIUMS BASED ON OBSERVABLE MARKET EVIDENCE?**

13  A.    Yes.  Market data does illustrate how the market is pricing investment risk, and gauging

14        the current demands for returns based on securities of varying levels of investment risk.

15        This market evidence includes bond yield spreads for different bond return ratings as

16        implied by the yield spreads for Treasury, corporate and utility bonds.  These spreads

17        provide an indication of the market's return requirement for securities of different levels

18        of investment risk and required risk premiums.

19        Table 10 below shows the utility and corporate bond spreads relative to Treasury

20        bond yields.

**TABLE 10**

**Comparison of Yield Spreads Over Treasury Bonds**

| Description | Utility | | Corporate | |
|---|---|---|---|---|
| | **A** | **Baa** | **Aaa** | **Baa** |
| Average Historical Spread | 1.49% | 1.93% | 0.84% | 1.93% |
| 2017 Spread | 1.10% | 1.48% | 0.85% | 1.55% |
| 2018 Spread | 1.14% | 1.56% | 0.82% | 1.69% |
| 2019 Spread | 1.21% | 1.71% | 0.82% | 1.89% |

_____
Source: Exhibit MPG-16.

1    As shown above in Table 10, the average historical bond yield spread over the

2    period 1980-June 2019 shows a fairly divergent spread for utilities relative to corporate

3    bonds. Specifically, the average historical utility bond yield spread is greater than the

4    current yield spread based on 2017-2019 data. This is an indication that the market is

5    placing a higher value on utility securities currently, and indicating a preference for

6    lower-risk investment securities. Specifically, the 39-year average yield spread for

7    A-rated utilities of 1.49% is greater than the average spread through June 2019 of

8    1.21%. Again, this indicates the market is paying a premium for a lower-risk utility

9    security now compared to the past. This phenomenon is also evident in spreads for

10   general corporate securities. An Aaa-rated corporate bond 39-year average spread is

11   0.84%, which is comparable to the average spread in 2017 and slightly higher than the

12   2018 and 2019 spreads of 0.82%. For higher-risk bonds, utility Baa and corporate bonds

13   reflect reasonably consistent yield spreads, suggesting that these higher-risk utility and

14   corporate bond securities are not receiving the same premium valuation as are the lower-

15   risk A-rated and Aaa-rated utility and corporate bond securities.

1          A relatively low yield for utility and corporate bonds is also reflected in outlooks

2          of real returns on these bond yields compared to the past.  Over the period 1926-2018,

3          long-term corporate bond yields have earned around 5.9%, compared to inflation of

4          around 3.0%.[28]  This implies a historical real return on long-term corporate bonds of

5          around 2.9%.  In 2017-2019, long-term corporate bonds rated Aaa averaged around

6          3.80%.  At that time, future inflation outlooks over the long term were expected to be

7          around 2.0% which implies a current real return outlook on long-term corporate bonds

8          of only 1.80%.  Again, this indicates that bond yields are being priced at a premium by

9          the market participants.

10          This information supports the finding that higher-risk securities are being valued

11          to produce higher-risk spreads relative to low-risk securities in the current marketplace.

12          As such, I believe this information supports using an above-average risk premium in the

13          current marketplace accurately estimate the market's required return an investment in a

14          higher-risk security (common stock) compared to a lower-risk security (utility and

15          Treasury bond yields).  For these reasons, I believe an above-average risk premium is

16          supported by observable market evidence in this proceeding.

17  **Q.**  **WHAT IS YOUR RECOMMENDED RETURN FOR AVISTA BASED ON**
18          **YOUR RISK PREMIUM STUDY?**

19  A.     I am recommending that slightly more weight be given to the high-end risk premium

20          estimates than the low-end.  Hence, I propose to provide 70% weight to my high-end

21          risk premium estimates and 30% to the low-end.  Applying these weights, the risk

22          premium for Treasury bond yields would be approximately 6.1%,[29] which is

---

[28]     *Duff & Phelps 2019 SBBI Yearbook* at 6-17.
[29]      (4.25% x 25%) + (6.73% x 75%) = 6.11%, rounded to 6.1%.

1     considerably higher than the 33-year average risk premium of 5.57% and reasonably

2     reflective of the 2.6% projected Treasury bond yield.  A Treasury bond risk premium of

3     6.1% and projected Treasury bond yield of 2.6% produce a risk premium estimate of

4     8.70%.

5             Similarly, applying these weights to the utility risk premium indicates a risk

6     premium of 4.9%.[30]  This risk premium is above the 33-year historical average risk

7     premium of 4.21%.  Adding this risk premium to the current observable Baa utility bond

8     yield of 3.94% produces an estimated return on equity of approximately 8.84%, rounded

9     to 8.9%.

10            Based on this methodology, my Treasury bond risk premium and my utility bond

11    risk premium indicate a return in the range of 8.70% to 8.90%.  Therefore, I recommend

12    a return on equity for Avista of 8.8% based on my risk premium model.

13   **III.F.  Capital Asset Pricing Model ("CAPM")**

14   **Q.     PLEASE DESCRIBE THE CAPM.**

15   A.    The CAPM method of analysis is based upon the theory that the market-required rate of

16        return for a security is equal to the risk-free rate, plus a risk premium associated with

17        the specific security.  This relationship between risk and return can be expressed

18        mathematically as follows:

19            $R_i = R_f + B_i \times (R_m - R_f)$ where:

20                 $R_i$  =   Required return for stock i

21                 $R_f$  =   Risk-free rate

22                 $R_m$ =   Expected return for the market portfolio

---

[30]     $(2.88\% * 25\%) + (5.57\% * 75\%) = 4.90\%$, rounded to 4.9%.

1          $B_i$ =   Beta - Measure of the risk for stock

2          The stock-specific risk term in the above equation is beta. Beta represents the

3 investment risk that cannot be diversified away when the security is held in a diversified

4 portfolio. When stocks are held in a diversified portfolio, stock-specific risks can be

5 eliminated by balancing the portfolio with securities that react in the opposite direction

6 to firm-specific risk factors (e.g., business cycle, competition, product mix, and

7 production limitations).

8          The risks that cannot be eliminated when held in a diversified portfolio are

9 non-diversifiable risks. Non-diversifiable risks are related to the market in general and

10 referred to as systematic risks. Risks that can be eliminated by diversification are

11 non-systematic risks. In a broad sense, systematic risks are market risks and

12 non-systematic risks are business risks. The CAPM theory suggests the market will not

13 compensate investors for assuming risks that can be diversified away. Therefore, the

14 only risk investors will be compensated for are systematic, or non-diversifiable, risks.

15 The beta is a measure of the systematic, or non-diversifiable risks.

16 **Q.** **PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.**

17 A.   The CAPM requires an estimate of the market risk-free rate, Avista's beta, and the

18      market risk premium.

19 **Q.** **WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE**
20     **RATE?**

21 A.   As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond

22      yield is 2.6%.[31] The current 30-year Treasury bond yield is 2.36%, as shown in Exhibit

---

[31]     *Blue Chip Financial Forecasts*, September 1, 2019 at 2.

1    MPG-17. I used *Blue Chip Financial Forecasts'* projected 30-year Treasury bond yield

2    of 2.6% for my CAPM analysis.

3 **Q.** **WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN**
4   **ESTIMATE OF THE RISK-FREE RATE?**

5 A. Treasury securities are backed by the full faith and credit of the United States

6   government so long-term Treasury bonds are considered to have negligible credit risk.

7   Also, long-term Treasury bonds have an investment horizon similar to that of common

8   stock. As a result, investor-anticipated long-run inflation expectations are reflected in

9   both common stock required returns and long-term bond yields. Therefore, the nominal

10   risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term

11   bond yield is a reasonable estimate of the nominal risk-free rate included in common

12   stock returns.

13    Treasury bond yields, however, do include risk premiums related to

14   unanticipated future inflation and interest rates. As such, in this regard, a Treasury bond

15   yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest

16   rates reflect systematic market risks. Consequently, for companies with betas less than

17   1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis

18   can produce an overstated estimate of the CAPM return.

19 **Q.** **WHAT BETA DID YOU USE IN YOUR ANALYSIS?**

20 A. As shown on my Exhibit MPG-18, the average beta of my proxy group is 0.64. This

21   means that my proxy group is less risky than the market as a whole. On page 2 of

22   Exhibit MPG-18, I review the long-term trend of *Value Line* betas reported for the proxy

23   groups companies. As shown on that page, the proxy group's betas generally range

24   between 0.60 and 0.80, or average of about 0.70. Thus, the current beta of around 0.64

| 1 | | a recent downward trend in utility stock betas, which I believe is mostly attributable to |
|---|---|---|
| 2 | | the market's continued premium paid for low-risk securities. As the market declined |
| 3 | | over the last several months of 2018, utility stock prices remained quite robust. This |
| 4 | | suggests the market continues to recognize utility investments as safe haven investments |
| 5 | | and pay premiums for these securities during times of economic uncertainty. However, |
| 6 | | this increased demand for low-risk securities has artificially lowered the beta estimate |
| 7 | | for utility stocks because the demand for these securities has increased relative to |
| 8 | | general market demands. Therefore, I do not believe this recent market flight to quality |
| 9 | | accurately supports a beta estimate for the utility below the historical average of around |
| 10 | | 0.74. For this reason, I will use the long-term average utility beta in my CAPM analysis |
| 11 | | of approximately 0.74. |
| 12 | **Q.** | **HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?** |
| 13 | A. | I derived two market risk premium estimates: a forward-looking estimate and one based |
| 14 | | on a long-term historical average. |
| 15 | | The forward-looking estimate was derived by estimating the expected return on |
| 16 | | the market (as represented by the S&P 500) and subtracting the risk-free rate from this |
| 17 | | estimate. I estimated the expected return on the S&P 500 by adding an expected |
| 18 | | inflation rate to the long-term historical arithmetic average real return on the market. |
| 19 | | The real return on the market represents the achieved return above the rate of inflation. |
| 20 | | Duff & Phelps' *2019 SBBI Yearbook* estimates the historical arithmetic average |
| 21 | | real market return over the period 1926 to 2018 to be 8.8%.[32] A current consensus for |
| 22 | | projected inflation, as measured by the Consumer Price Index, is 2.0%.[33] Using these |

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[32] Duff & Phelps, *2019 SBBI Yearbook at 6-18.*
[33] *Blue Chip Financial Forecasts*, September 1, 2019 at 2.

| 1 | | estimates, the expected market return is 10.98%.[34] The market risk premium then is the |
| 2 | | difference between the 10.98% expected market return and my 2.6% risk-free rate |
| 3 | | estimate, or 8.4%. |
| 4 | | My historical estimate of the market risk premium was also calculated by using |
| 5 | | data provided by Duff & Phelps in its *2019 SBBI Yearbook*.  Over the period 1926 |
| 6 | | through 2018, the Duff & Phelps study estimated that the arithmetic average of the |
| 7 | | achieved total return on the S&P 500 was 11.9%[35] and the total return on long-term |
| 8 | | Treasury bonds was 5.9%.[36] The indicated market risk premium is 6.0% (11.9% - 5.9% |
| 9 | | = 6.0%). |
| 10 | | The long-term government bond yield of 5.9% occurred during a period of |
| 11 | | inflation of approximately 3.0%, thus implying a real return on long-term government |
| 12 | | bonds of 2.9%. |
| 13 | Q. | **HOW DOES DUFF & PHELPS DERIVE A MARKET RISK PREMIUM?** |
| 14 | A. | Duff & Phelps makes several estimates of a forward-looking market risk premium based |
| 15 | | on actual achieved data from the historical period of 1926 through 2018 as well as |
| 16 | | normalized data.  Using this data, Duff & Phelps estimates a market risk premium |
| 17 | | derived from the total return on the securities that comprise the S&P 500, less the |
| 18 | | income return on Treasury bonds.  The total return includes capital appreciation, |
| 19 | | dividend or coupon reinvestment returns, and annual yields received from coupons |
| 20 | | and/or dividend payments.  The income return, in contrast, only reflects the income |
| 21 | | return received from dividend payments or coupon yields. |

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[34] $\{ (1 + 0.088) * (1 + 0.020) - 1 \} * 100.$
[35] Duff & Phelps, *2019 Yearbook at 6-17*.
[36] *Id.*

1          Duff & Phelps' range is based on several methodologies. First, Duff & Phelps

2       estimates a market risk premium of 6.91% based on the difference between the total

3       market return on common stocks (S&P 500) less the income return on 20-year Treasury

4       bond investments over the 1926-2018 period.[37]

5          Second, Duff & Phelps used the Ibbotson & Chen supply-side model which

6       produced a market risk premium estimate of 6.14%.[38]

7          Duff & Phelps explains that the historical market risk premium based on the

8       S&P 500 was influenced by an abnormal expansion P/E ratios relative to earnings and

9       dividend growth during the period, primarily over the last 30 years. Duff & Phelps

10      believes this abnormal P/E expansion is not sustainable.[39] Therefore, Duff & Phelps

11      adjusted this market risk premium estimate to normalize the growth in the P/E ratio to

12      be more in line with the growth in dividends and earnings.

13         Finally, Duff & Phelps develops its own recommended equity, or market risk

14      premium by employing an analysis that takes into consideration a wide range of

15      economic information, multiple risk premium estimation methodologies, and the current

16      state of the economy by observing measures such as the level of stock indices and

17      corporate spreads as indicators of perceived risk. Based on this methodology, and

18      utilizing a "normalized" risk-free rate of 3.5%, Duff & Phelps concludes the current

19      expected, or forward-looking, market risk premium is 5.5%, implying an expected

20      return on the market of 9.0%.[40]

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[37]   *Duff & Phelps 2019 Valuation Handbook* at 3-1. The numbers are shown on the summary but the details are not available.

[38]   *Id.*

[39]   *Duff & Phelps 2018 Valuation Handbook* at 3-43.

[40]   *Duff & Phelps 2019 Valuation Handbook* at 3-1.

1          Importantly, Duff & Phelps' market risk premiums are measured over a 20-year

2          Treasury bond. Because I am relying on a projected 30-year Treasury bond yield, the

3          results of my CAPM analysis should be considered conservative estimates for the cost

4          of equity.

5  **Q.  HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE**
6  **COMPARE TO THAT ESTIMATED BY DUFF & PHELPS?**

7  A.   The Duff & Phelps analyses indicate a market risk premium falls somewhere in the

8          range of 5.5% to 6.9%. My market risk premium falls in the range of 6.0% to 8.4%.

9          My average market risk premium of approximately 7.2% is slightly above the high end

10         of the Duff & Phelps range.

11  **Q.  WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?**

12  A.  As shown in Exhibit MPG-19, based on my low market risk premium of 6.0% and my

13         high market risk premium of 8.4%, a risk-free rate of 2.6%, and a historical average

14         utility beta of 0.74, my CAPM analysis produces a return in the range of 7.01% to

15         8.77%. Based on my assessment of risk premiums in the market, as discussed above, I

16         will place primary reliance on my high-end CAPM return estimates. This produces a

17         recommended CAPM return estimate of 8.8%.

18  **III.G.  Return on Equity Summary**

19  **Q.  BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY**
20  **ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY**
21  **DO YOU RECOMMEND FOR AVISTA?**

22  A.   Based on my analyses, I estimate Avista's current market cost of equity to be 8.8%.

**TABLE 11**

**Return on Common Equity Summary**

| Description | Results |
|---|---|
| DCF | 8.80% |
| Risk Premium | 8.80% |
| CAPM | 8.80% |

1            A return on equity of 8.8% is supported by all three of my market-based models

2     in this proceeding.

3     **III.H. Financial Integrity**

4     **Q. WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT**
5     **AN INVESTMENT GRADE BOND RATING FOR AVISTA?**

6     A.    Yes. I have reached this conclusion by comparing the key credit rating financial ratios

7          for Avista at my proposed return on equity and embedded debt cost and Avista's

8          proposed capital structure to S&P's benchmark financial ratios using S&P's new credit

9          metric ranges.

10    **Q. PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO CREDIT**
11    **METRIC METHODOLOGY.**

12    A.    S&P publishes a matrix of financial ratios corresponding to its assessment of the

13          business risk of utility companies and related bond ratings. On May 27, 2009, S&P

14          expanded its matrix criteria by including additional business and financial risk

15          categories.[41]

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[41]    S&P updated its 2008 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics. *Standard & Poor's RatingsDirect*: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

1          Based on S&P's most recent credit matrix, the business risk profile categories

2     are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable." Most

3     utilities have a business risk profile of "Excellent" or "Strong."

4          The financial risk profile categories are "Minimal," "Modest," "Intermediate,"

5     "Significant," "Aggressive," and "Highly Leveraged." Most of the utilities have a

6     financial risk profile of "Aggressive." Avista has a "Strong" business risk profile and a

7     "Significant" financial risk profile.

8   **Q.   PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK**
9   **RATIOS IN ITS CREDIT RATING REVIEW.**

10  A.   S&P evaluates a utility's credit rating based on an assessment of its financial and

11    business risks. A combination of financial and business risks equates to the overall

12    assessment of Avista's total credit risk exposure. On November 19, 2013, S&P updated

13    its methodology. In its update, S&P published a matrix of financial ratios that defines

14    the level of financial risk as a function of the level of business risk.

15         S&P publishes ranges for primary financial ratios that it uses as guidance in its

16    credit review for utility companies. The two core financial ratio benchmarks it relies on

17    in its credit rating process include: (1) Debt to Earnings Before Interest, Taxes,

18    Depreciation and Amortization ("EBITDA"); and (2) Funds From Operations ("FFO")

19    to Total Debt.[42]

20  **Q.   HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE**
21  **REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?**

22  A.   I calculated each of S&P's financial ratios based on Avista's cost of service for its retail

23    operations in its Washington service territory. While S&P would normally look at total

---

[42]   *Standard & Poor's RatingsDirect*: "Criteria: Corporate Methodology," November 19, 2013.

1        consolidated Avista financial ratios in its credit review process, my investigation in this

2        proceeding is not the same as S&P's. I am attempting to judge the reasonableness of

3        my proposed cost of capital for rate-setting in Avista's retail regulated utility operations.

4        Hence, I am attempting to determine whether my proposed rate of return will in turn

5        support cash flow metrics, balance sheet strength, and earnings that will support an

6        investment grade bond rating and Avista's financial integrity.

7    **Q.    DID YOU INCLUDE ANY OFF-BALANCE SHEET DEBT EQUIVALENTS?**

8    A.    Yes, I did. I considered off-balance sheet debt allocated to utilities' jurisdictional cost

9        of service. I obtained the total company off-balance sheet debt from S&P Capital IQ.

10        The majority of Avista's off-balance sheet debt is attributed to operating leases,

11        purchased power agreements, asset retirement obligations, and pension obligation as

12        shown on my Exhibit MPG-20. In a recent presentation to the American Gas

13        Association, Avista outlined its total company rate base for its regulated jurisdictions.

14        Based on this presentation, Avista's Washington retail electric and gas rate base

15        represents 62% of the total company rate base. I used this as the allocation factor to

16        assign Avista's total company off-balance sheet imputed interest and amortization

17        expenses to Washington retail operations.

18   **Q    PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS**
19   **AS IT RELATES TO AVISTA'S RETAIL OPERATIONS.**

20   A.    The S&P financial metric calculations for Avista at an 8.8% return are developed on

21        Exhibit MPG-20, page 1. The credit metrics produced below, with Avista's financial

22        risk profile from S&P of "Significant" and business risk profile of "Strong," will be

1        used to assess the strength of the credit metrics based on Avista's retail operations in

2        the state of Washington.

3              Avista's adjusted total debt ratio, based on its requested capital structure is

4        approximately 57%, which is consistent with the industry median adjusted debt ratio of

5        56% for utilities with a BBB bond rating.

6              Based on an equity return of 8.8%, Avista will be provided an opportunity to

7        produce a Debt to Earnings Before Interest, Taxes, Depreciation and Amortization

8        ("EBITDA") ratio of 3.9x.  This is within S&P's "Significant" guideline range of 3.5x

9        to 4.5x,[43] which would support Avista's credit rating based on S&P's reported business

10       risk profile score of "Strong" for Avista.

11             Avista's retail operations FFO to total debt coverage at an 8.8% equity return is

12       18%, which is within S&P's "Significant" metric guideline range of 13% to 23%.

13       Again, this supports an FFO/total debt ratio that will support a ratio consistent with an

14       A- rating with Avista's "Excellent" business profile score from S&P.

15   Q.   **DOES THIS FINANCIAL INTEGRITY ASSESSMENT SUPPORT YOUR**
16        **RECOMMENDED OVERALL RATE OF RETURN FOR AVISTA?**

17   A.   Yes.  As noted above, I believe my return on equity represents fair compensation in

18        today's very low capital market costs, and as outlined above, my overall rate of return

19        will provide Avista an opportunity to earn credit metrics that will support its BBB bond

20        rating.

---

[43]     *Id.*

1      **IV.  RESPONSE TO AVISTA WITNESS MR. ADRIAN M. MCKENZIE**

2      **IV.A.  Summary of Rebuttal**

3      **Q.      WHAT IS THE COMPANIES' RETURN ON EQUITY RECOMMENDATION?**

4      A.      Avista proposes a return on equity of 9.9%, which is at the low end of Mr. McKenzie's

5              recommended range of 9.9% to 10.9%.[44]  His recommendation includes an adjustment

6              of 10 basis points to account for flotation costs.[45]

---

[44]     McKenzie Direct Testimony at 5-6.
[45]     *Id.* at 6.

1        Mr. McKenzie's recommended range, including his proposed flotation cost

2        adjustment, are unreasonable and should be rejected. For the reasons discussed below,

1        his 10 basis point flotation cost adjustment further exacerbates an already overstated

2        "bare bones" fair return on equity for the Company.

3    **Q.    HOW DID MR. MCKENZIE DEVELOP HIS RETURN ON EQUITY RANGE?**

4    A.    Mr. McKenzie developed his return on equity recommendation by applying the DCF,

5          the traditional CAPM, the Empirical CAPM ("ECAPM"), a Risk Premium model, and

6          an Expected Earnings analysis to his utility proxy group.  Then he corroborates his

7          results by developing a non-utility DCF model.

8                As shown above in Table 12, Mr. McKenzie concludes that a "bare-bones"

9          return on equity in the range of 9.8% to 10.8%.  Then, Mr. McKenzie adds his flotation

10         cost adjustment of 10 basis points to produce his recommended range of 9.9% to 10.9%.

11         However, reasonable adjustments to Mr. McKenzie's DCF, CAPM, ECAPM, and Risk

12         Premium studies reduce his return on equity estimate for the Companies to no higher

13         than my recommended return on equity of 8.8%.

14   **IV.B.  Flotation Cost Adjustment**

15   **Q.    PLEASE EXPLAIN MR. MCKENZIE'S FLOTATION COST ADJUSTMENT .**

16   A.    Mr. McKenzie included an upward adjustment of 10 basis points to compensate for

17         flotation costs to his return on equity recommendation.[46]  He acknowledges there is no

18         standard method for reflecting flotation costs in return on equity methodology,[47] so he

19         proposes a methodology that is "[t]he most common method used to account for

20         flotation costs in regulatory proceedings […]".[48]  In effect, he adjusts his proxy group's

21         average dividend yield of 3.5% by a historical average flotation cost of 3.0% he

---

[46]    *Id*.
[47]    *Id*. at 42.
[48]    *Id.* at 45.

1     calculated on his Exhibit AMM-13.  Applying this flotation cost adjustment of 3.0% to

2     his proxy group's dividend yield of 3.5% produces a flotation cost adjustment of 10

3     basis points.[49]  This flotation cost adjustment is intended to recover the actual cost a

4     utility incurs by issuing additional stock to the public.

5  **Q.**    **IS MR. MCKENZIE'S FLOTATION COST RETURN ON EQUITY ADDER**
6        **REASONABLE?**

7  A.    No.  Mr. McKenzie's flotation cost return on equity adder is not reasonable or justified

8     for several reasons.  First, the adder is not based on the recovery of prudent and

9     verifiable actual flotation costs incurred by Avista.  As discussed at page 45 of Mr.

10    McKenzie's direct testimony, he derives a flotation cost adder based on cost information

11    of other publicly traded utility holding companies.  Because he does not show that his

12    adjustment is based on Avista's actual and verifiable flotation expenses, there are no

13    means of verifying whether Mr. McKenzie's proposal is reasonable or appropriate.

14    Stated differently, Mr. McKenzie's flotation cost return on equity adder is not based on

15    known and measurable costs.  Therefore, the Commission should reject a flotation cost

16    return on equity adder for the Companies.

17  **IV.C.1. Mr. McKenzie's DCF Analysis**

18  **Q.**    **PLEASE DESCRIBE MR. MCKENZIE'S DCF ANALYSIS.**

19  A.    Mr. McKenzie applied the traditional DCF model to his utility proxy group.  Based on

20    his utility proxy group, the DCF results average in the range of 9.0% to 10.0% with a

21    midpoint of 9.5%.

---

[49]    *Id.*

1        In developing his recommended DCF range, Mr. McKenzie excluded what he

2        found to be outlier results.  Mr. McKenzie removed 15 low-end outliers and only three

3        high-end outlier from his DCF results.[50]

4   **Q.   IS MR. MCKENZIE'S DCF ANALYSIS RELIABLE?**

5   A.   No.  Mr. McKenzie's proposal to selectively remove what he believes to be low-end

6        and high-end outliers from the proxy group has the effect of manipulating the results of

7        the proxy group study.  Mr. McKenzie simply narrows the range of the proxy group

8        results to produce a result which he finds to be reasonable.  This is hardly an independent

9        assessment of what the current market cost of equity is for Avista.

10  **Q.   CAN MR. MCKENZIE'S DCF ANALYSIS BE ADJUSTED TO PRODUCE A**
11  **REASONABLE RETURN ON EQUITY ESTIMATE?**

12  A.   Yes. A better methodology would be to rely on the results of the proxy group, by

13       assessing the central tendency of the proxy group estimates.  In the presence of outliers,

14       a more accurate method of measuring the central tendency of the proxy group's results

15       would be to measure the median of all the DCF return estimates.  In doing so, this would

16       lower Mr. McKenzie's DCF range of 9.0% to 10.0% down to 8.2% to 9.4% for his

17       utility proxy group.  Importantly, accounting for the central tendency of the group,

18       produces a DCF return no higher than 9.4%, and this includes proxy group companies

19       that are not comparable to Avista, for the reasons I discuss in Section III.A above.

---

[50]      Exh. AMM-6 at 3.

1    **IV.C.2. Mr. McKenzie's CAPM Analysis**

2    **Q.    PLEASE DESCRIBE MR. MCKENZIE'S CURRENT TRADITIONAL CAPM**
3    **ANALYSIS.**

4    A.    Mr. McKenzie developed a traditional CAPM analysis based on the current Treasury

5          bond yields for the six-month period ending March 2019.  Mr. McKenzie estimates a

6          market return of 13.2%.  From this market return estimate he subtracts his current risk-

7          free rate of 3.1% to produce a market risk premium of 10.1%.[51]  He relies on the *Value*

8          *Line* utility betas for the companies included in his proxy group to produce an average

9          cost of equity of 9.4%.[52]   Then he adjusted each of his CAPM return estimates to

10         account for any size adjustment based on each company's market capitalization.  This

11         size adjustment increases his CAPM return from 9.4% to 10.2%.

12   **Q.    IS MR. MCKENZIE'S TRADITIONAL CAPM ANALYSIS REASONABLE?**

13   A.    No.  I have two major concerns with Mr. McKenzie's CAPM analyses.   First, his

14         expected return on the market of 13.2% is based on a growth rate of 10.7%, which is

15         more than twice the expected growth of the U.S. economy. Second, his size adjustment

16         is not reasonable.

17   **Q.    WHY DO YOU BELIEVE MR. MCKENZIE'S EXPECTED RETURN ON THE**
18   **MARKET IS OVERSTATED?**

19   A.    Mr. McKenzie's expected return on the market of 13.2% is based on a dividend yield

20         of 2.5% and an expected growth rate of 10.7%.  The expected growth rate of 10.7%,

21         and ultimately the expected return on the market of 13.2%, is unreasonably high and

22         unsustainable.

---

[51]    Exh. AMM-8.
[52]    *Id*.

1          Mr. McKenzie obtained growth rates for the dividend paying S&P 500

2     companies from three sources including Zacks, Value Line, and IBES.  He uses these

3     growth rates to perform three DCF analyses on the market.  The growth rates Mr.

4     McKenzie relies on include numbers that do not make logical sense from an economic

5     perspective.  For example, Mr. McKenzie's expected growth of the market of 10.7%

6     included companies with expected growth rates well in excess of 20%. Even more

7     illogical, Mr. McKenzie included growth rates as high as 49.75% from IBES, 48.63%

8     from Zacks, and 48.50% from *Value Line*.  As I explained in greater detail above,

9     growth rates of this magnitude cannot be reasonably expected to continue even over the

10    short-term, let alone into perpetuity, which is the time period on which the DCF is based.

11  Q.  **HOW DO MR. MCKENZIE'S MARKET RISK PREMIUMS COMPARE TO**
12      **THOSE ESTIMATED BY DUFF & PHELPS?**

13  A.  As described above, Duff & Phelps has calculated three market risk premiums in the

14    range of 5.09% to 6.91%.  The 5.50% risk premium is the Duff & Phelps recommended

15    normalized risk premium and corresponds with a normalized risk-free rate of 3.5%.

16    Hence, Mr. McKenzie's market risk premium is significantly above all risk premiums

17    identified by Duff & Phelps, and his estimate is more than double the Duff & Phelps

18    normalized market risk premium of 5.50%.  It should be noted that Mr. McKenzie's

19    proposed market risk premium of 10.1% exceeds the maximum market risk premium in

20    the Duff & Phelps Cost of Capital Navigator.

21  Q.  **WHY DO YOU FIND MR. MCKENZIE'S SIZE ADJUSTMENT**
22      **INAPPROPRIATE?**

23  A.  Mr. McKenzie's size adjustment return on equity adder is based on estimates made by

24    Duff & Phelps's 2019 CRSP Deciles Size Study.  Duff & Phelps estimates various size

25    adjustments based on differentials in beta estimates tied to the size of a company.  The

1    main concern with these size adjustments as applied by Mr. McKenzie, is that they are

2    not based on risk comparable companies relative to the utility industry or Avista.

3 **Q.    WHY IS MR. MCKENZIE'S SIZE ADJUSTMENT TO HIS CAPM RETURN**
4 **       NOT RISK COMPARABLE TO AVISTA?**

5 A.    His size adjustment is based on companies that have significantly more systematic risks

6      that are not reflective of the utility industry or Avista.  The size adjustments relied on

7      by Mr. McKenzie reflects companies that have unadjusted beta estimates well in excess

8      of 1.00.[53]  I have provided the beta estimates, as calculated by Duff & Phelps for each

9      decile below in Table 13.

---

**TABLE 13**

**Duff & Phelps Size Adjustments and Corresponding Betas**

| CRSP | Market | Size | Beta | | |
| Decile | Cap | Premium | D&P OLS | VL Proxy | OLS Proxy* |
|---|---|---|---|---|---|
| 1 | $29,428.909 | -0.29% | 0.92 | 0.63 | 0.42 |
| 2 | $13,512.960 | 0.50% | 1.04 | 0.63 | 0.42 |
| 3 | $ 7,275.967 | 0.84% | 1.10 | 0.63 | 0.42 |
| 4 | $ 4,504.066 | 0.82% | 1.13 | 0.63 | 0.42 |
| 5 | $ 2,996.003 | 1.26% | 1.17 | 0.63 | 0.42 |
| 6 | $ 1,961.831 | 1.54% | 1.17 | 0.63 | 0.42 |
| 7 | $ 1,292.791 | 1.58% | 1.25 | 0.63 | 0.42 |
| 8 | $ 730.047 | 1.82% | 1.30 | 0.63 | 0.42 |
| 9 | $ 325.360 | 2.42% | 1.34 | 0.63 | 0.42 |
| 10 | $ 2.455 | 5.23% | 1.39 | 0.63 | 0.42 |

Source:
Duff & Phelps Cost of Capital Navigator, 2019 Cost of Capital:
Annual U.S. Guidance and Examples, (Chapter 7, pp. 10-11, and
CRSP Deciles Size Study).
* Raw Beta = (VL Beta - 0.35) / 0.67.

---

[53]    *Duff & Phelps Cost of Capital Navigator, CRSP Deciles Size Study.*

1          These unadjusted beta estimates are substantially higher than the average

2      adjusted beta of 0.63[54] for the utility proxy group used by Mr. McKenzie as reflective

3      of Avista's investment risk. To put this into more of an apple-to-apples comparison, I

4      have also provided the average unadjusted OLS beta for Mr. McKenzie's proxy group

5      (0.42). As shown above, every decile measured by Duff & Phelps has a much higher

6      beta than Mr. McKenzie's utility group. This should be interpreted as, no matter which

7      decile is being observed, the average company being measured in that decile is

8      somewhere between 2x -3x more sensitive to movements in the market than the average

9      company in Mr. McKenzie's proxy group as measured by beta. In other words, the

10      typical company in each decile is much riskier than the typical utility company. Because

11      of this significant disparity in risk, as measured by beta, Mr. McKenzie's size

12      adjustment produces a CAPM return estimate that does not produce a risk appropriate

13      return for Avista.

14 **Q.** **CAN YOU EXPLAIN HOW BETA CORRESPONDS WITH THE LEVEL OF**
15       **INVESTMENT RISK FOR A COMPANY AND THEREFORE PRODUCES AN**
16       **APPROPRIATE RISK-ADJUSTED RETURN FOR A SUBJECT COMPANY?**

17 A.   Yes. Beta represents a measure of systematic or non-diversifiable, market-related risk.

18      All subject companies' betas are measured relative to that of the overall market and

19      adjusted upward by *Value Line*. The market beta is considered to be 1.0. For companies

20      that have betas greater than 1, they are regarded as having more risk than the overall

21      market. For companies that have betas less than 1, they are regarded to have risk less

22      than the overall market.

---

[54]     McKenzie Direct Testimony at 34.

1    For these reasons, utility companies which consistently and predictably have

2    adjusted betas far less than 1 (usually in the range of 0.60 to 0.80 depending on market

3    conditions) are generally reflective of lower risk investment options.

4  **Q.    CAN MR. MCKENZIE'S CAPM ANALYSIS BE ADJUSTED TO PRODUCE
5          MORE REASONABLE RESULTS?**

6  A.    Yes. Eliminating his size adjustments and using a more reasonable market risk premium

7        can correct his grossly his overstated CAPM return. For example, using my high-end

8        market risk premium of 8.4%, Mr. McKenzie's beta of 0.63, his risk free rate of 3.1%

9        and eliminating the size adjustments will produce average cost of equity estimates no

10       higher than 8.4%.

11 **IV.C.3. Mr. McKenzie's ECAPM Analysis**

12 **Q.    DID MR. MCKENZIE ALSO PERFORM AN ECAPM ANALYSIS?**

13 A.    Yes. Mr. McKenzie performed an ECAPM analysis that relied on the same market risk

14       premium of 10.1%, the same risk-free rate of 3.1% and the same average *Value Line*

15       betas that he used in his traditional CAPM analysis.

16       He then uses an ECAPM model that applies a 25% weighting factor to the

17       market beta of 1, and a 75% weighting factor to the utility beta. This produces an

18       ECAPM return of 10.4%.

19       Finally, Mr. McKenzie applied a size adjustment of approximately 0.70% to his

20       ECAPM estimates to produce an ECAPM return of 11.1%.[55]

---

[55]    Exh AMM-9.

1   **Q.   IS MR. MCKENZIE'S ECAPM ANALYSIS REASONABLE?**

2   A.   No.  Mr. McKenzie's ECAPM analysis share all of the same flaws as his traditional

3          CAPM analysis.  More importantly, Mr. McKenzie's proposal to apply an ECAPM

4          using Value Line adjusted betas is flawed and should be disregarded.

5   **Q.   PLEASE EXPLAIN THE ISSUES YOU HAVE WITH MR. MCKENZIE'S**
6          **ECAPM ANALYSIS.**

7   A.   Mr. McKenzie's ECAPM analysis is flawed because his model was developed using

8          *Value Line* "adjusted" utility betas.  An ECAPM analysis is designed for "raw"

9          regression betas, not adjusted betas such as the ones published by *Value Line*.  The beta

10         adjustments used by *Value Line* have virtually the same impact on the CAPM return

11         estimate as does the ECAPM analysis.  Both flatten the security market line by raising

12         the intercept point at the risk-free rate.  ECAPM analysis is not designed to be used with

13         adjusted betas, but rather is designed to be used with unadjusted betas.  Mr. McKenzie's

14         proposal to use adjusted betas within an ECAPM analysis is unreasonable and double

15         counts the attempt to flatten the security market line and increase the CAPM return

16         estimates for companies with betas below 1 and decrease CAPM return estimates for

17         companies with betas greater than 1.

18   **Q.   DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING THE ECAPM**
19          **AND ADJUSTED BETAS?**

20   A.   Yes.  Mr. McKenzie asserts that it is appropriate to use *Value Line* betas within an

21         ECAPM study.[56]  He asserts that the two are not complementary of one another.  First,

22         he states that *Value Line* beta adjustments necessary to convert historical beta for a

23         forward-looking beta recognize that betas tend to converge on the market beta of 1 over

---

[56]   Exh. AMM-3 at 28-29.

1    time. He goes on to state that the ECAPM analysis does not make an adjustment to beta

2    whatsoever.  He states that the ECAPM analysis has the effect of adjusting the

3    risk/return tradeoff to flatten the security market line relative to that predicted by the

4    CAPM.

5         The fallacy in Mr. McKenzie's analysis is he simply does not show the

6    mathematical correlation between the beta adjustment and the ECAPM analysis.  Both

7    of these methodologies have the effect of flattening the security market line and raising

8    the intercept point when the beta has the effect of zero.  Both of these methodologies

9    will increase the CAPM return estimate for a company with a beta less than 1 and

10   decrease the CAPM return estimate for a company with a beta greater than 1.  Both of

11   them are designed to adjust the CAPM return estimate produced from just historical raw

12   beta, to make it more reflective of the expected risk and a forward-looking return for

13   the security.

14        Probably more importantly, there is no academic support for using a *Value Line*

15   beta in an ECAPM analysis.  At footnote 31 of his testimony, Mr. McKenzie does cite

16   to a textbook published by Dr. Roger Morin, *New Regulatory Finance*, published in

17   2006.  However, and importantly, Dr. Morin's textbook is not an academic textbook,

18   but rather is a trade textbook.  Dr. Morin is a rate of return expert that *testifies on behalf*

19   *of utilities*.  His textbook simply assesses the methodologies typically used by experts

20   in utility rate cases.  The opinions on the ECAPM concerning the use of *Value Line*

21   betas are Dr. Morin's, not those of an independent academic testing the appropriateness

22   of using a capital asset methodology to project appropriate risk and return for companies

23   in forward markets.

| 1 | **Q.** | **DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING THE ECAPM** |
| 2 | | **AND ADJUSTED BETAS?** |

3    A.    Yes. The notion that an adjustment to beta is only a horizontal axis adjustment is not

4          true. The *Value Line* beta adjustment alters the CAPM return at both the vertical axis

5          (the intercept point) and the horizontal axis, the slope of the CAPM return line (along

6          the horizontal axis). This is depicted in Figure 5 below.

7          As shown in Figure 5 below, I have modeled the expected returns at various

8          levels of raw beta using both the traditional CAPM and ECAPM methodologies

9          assuming a risk-free rate of 3.50%, and a market risk premium of 7.50%. I also show

10          the expected CAPM and ECAPM returns using the associated adjusted (*Value Line*)

11          beta estimates for each raw beta estimate. As shown in Figure 5 below, the impact on

12          the traditional CAPM return using a raw beta and a traditional CAPM using an adjusted

13          beta has the effect of increasing the intercept point at a zero raw beta (y axis) from: (1)

14          risk-free rate to (2) the combination of the risk-free rate plus 35% of the market risk

15          premium. Further, as the unadjusted beta is increased above zero, the adjusted beta

16          increases the CAPM return when the raw beta is less than one, and decreases the CAPM

17          return when the raw beta is greater than one. In other words, the beta adjustment raises

18          the CAPM return at the vertical axis point and flattens the security market across the

19          horizontal axis as the raw beta increases above zero.

20          The ECAPM using raw betas has the same impact on the traditional CAPM

21          using an adjusted beta: the ECAPM increases the CAPM return at a zero raw beta from:

22          (1) the risk-free rate, to (2) the risk-free rate plus 25% of the market risk premium.

23          Further, the ECAPM using raw betas flattens the traditional CAPM return line across

24          the horizontal axis as the raw betas increase above zero.

**Figure 5**



**Variations of the CAPM**
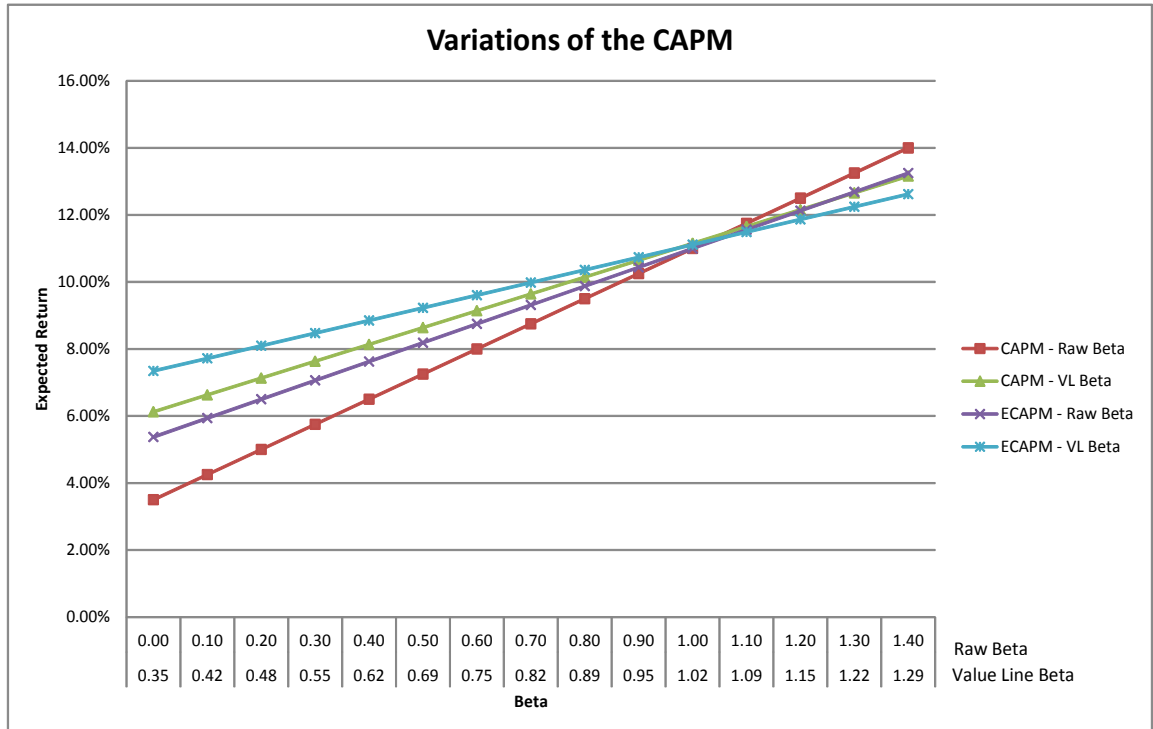
Assumptions:
Market Risk Premium is 7.50%
Risk-Free Rate is 3.50%

1    As shown in the graph above, compared to the traditional CAPM using a raw

2    beta, the traditional CAPM using an adjusted beta raises the intercept point (a y axis

3    impact) and flattens the slope of the security market line (an x axis impact). Similarly,

4    using a raw beta estimate, the ECAPM raises the intercept point at the y axis and flattens

5    the CAPM return for all raw beta estimates.

6    Significantly, if an adjusted beta is used in an ECAPM return model, the CAPM

7    return at the y axis increases from: (1) the risk-free rate, up to (2) the risk-free rate plus

8    approximately 51% of the market risk premium. Further, the CAPM return for betas

9    less than one starts at an inflated y axis intercept point and increases as the raw beta

10   increases above zero.

1    Mathematically, *Value Line*'s beta adjustments produce nearly the same effect

2    on the estimated CAPM return as does an ECAPM using a raw beta. Using an adjusted

3    beta in an ECAPM model, as Mr. McKenzie has proposed, produces a flawed and

4    inflated CAPM return estimate.

5  **Q.  IS THERE ANY ACADEMIC SUPPORT FOR MR. MCKENZIE'S PROPOSED**
6  **USE OF AN ADJUSTED BETA IN AN ECAPM STUDY?**

7  A.  No. I am unaware of any peer reviewed academic study showing that the empirical

8    CAPM is more accurate using adjusted betas. To my knowledge, the ECAPM has been

9    tested and published with raw beta estimates. Further, Mr. McKenzie has not provided

10   any academic research that was subjected to academic peer review which supports his

11   proposed use of an adjusted beta in an ECAPM study. As such, the practice of using an

12   adjusted beta in an ECAPM study is simply not supported by academic research. There

13   is, however, considerable academic support for the use of a raw beta in an ECAPM

14   study. For the reasons outlined above, Mr. McKenzie's ECAPM analyses should be

15   rejected.

16  **Q.  HOW WOULD MR. MCKENZIE'S ECAPM RETURN ESTIMATE CHANGE**
17  **IF THE CORRECT BETA WERE USED?**

18  A.  The average *Value Line* adjusted beta is 0.63.[57] This would equate to an unadjusted

19   beta estimate of 0.42.[58] Applying his market risk premium estimate of 10.1%, a raw

20   beta of 0.42, and his risk-free rate of 3.1% will produce an ECAPM return of 8.8%.[59]

21      Again, Mr. McKenzie's ECAPM methodology does not produce reliable results

22   and should be rejected.

---

[57]   Exh. AMM-3 at 40.
[58]   (Adj. Beta – 0.35)/0.67 = Raw Beta. Hence, Raw Beta = (0.63 – 0.35)/0.67 = 0.42.
[59]   Current ECAPM = 3.1% + 0.25 x 10.1% + 0.75 x 10.1% x 0.42 = 8.8%.

1    **IV.C.4. Mr. McKenzie's Risk Premium Analysis**

2    **Q.    PLEASE DESCRIBE MR. MCKENZIE'S UTILITY RISK PREMIUM**
3    **ANALYSIS.**

4    A.    Mr. McKenzie's utility bond yield versus authorized return on common equity risk

5          premium is shown in his Exh. AMM-10.  As shown on page 3 of this exhibit, Mr.

6          McKenzie estimated an annual equity risk premium by subtracting Moody's utility bond

7          yield from the electric utility regulatory commission authorized return on common

8          equity over the period 1974 through 2018.  Based on this analysis, Mr. McKenzie

9          estimates an average indicated equity risk premium over utility bond yields of 3.75%.

10               Mr. McKenzie then adjusts this average equity risk premium using a regression

11         analysis based on an expectation that there is an ongoing inverse relationship between

12         interest rates and equity risk premiums.  Using this regression analysis, Mr. McKenzie

13         increases his equity risk premium from 3.71%, up to 5.35% and 4.93% relative to

14         current and projected Baa-rated bond yields.[60]  He then adds these inflated equity risk

15         premiums to the current and his projected Baa-rated utility bond yield of 4.87% to

16         5.85%, to produce a return on equity of 10.22% to 10.78%.[61]

17               Mr. McKenzie's risk premium analysis is overstated because of a highly suspect

18         and inflated projected Baa-rated bond yield of 5.85%, and his development of risk

19         premiums is based on the flawed and incomplete assumption that equity risk premiums

20         change by only changes in interest rates.  Academic literature is clear that equity risk

21         premiums change based on differences in the perceived risk of equity securities versus

22         bond securities, not simply changes in nominal interest rates.

---

[60]    Exh. AMM-10.
[61]    *Id*.

| 1 | Q. | **DO YOU HAVE ANY COMMENTS CONCERNING MR. MCKENZIE'S** |
|---|---|---|
| 2 | | **PROJECTED UTILITY YIELD OF 5.85%?** |

3    A.    Yes.  Mr. McKenzie uses a projected AA-rated utility bond yield for the period 2019

4          through 2020 in the range of 5.02% to 5.32%, with a midpoint of 5.17%.  He then

5          measures the current average Baa-utility bond yield spread over the AA utility bond

6          yield.  This spread is 0.68%.  He then adds this current yield spread 0.68% to the

7          projected AA-utility bond yield of 5.17% to produce his projected yield of 5.85%.[62/]

8          This projected yield is overstated.    Current AA-rated utility bond yields are

9          approximately 3.4% as of the 13-week period ending September 6, 2019.   Mr.

10         McKenzie's projected increase to AA-rated utility bond yields does not reflect

11         consensus market outlooks.

12                Importantly, Mr. McKenzie's projected Baa-rated bond yield of 5.85% exceeds

13         the current Baa-rated bond yield of 3.94% by 191 basis points.  A near-term forecasted

14         spread of that magnitude is unreasonable and should not be relied upon.

| 15 | Q. | **WHY IS MR. MCKENZIE'S USE OF ONLY A SIMPLE INVERSE** |
|---|---|---|
| 16 | | **RELATIONSHIP BETWEEN INTEREST RATES AND EQUITY RISK** |
| 17 | | **PREMIUMS UNREASONABLE?** |

18   A.    Mr. McKenzie's belief that there is a simple inverse relationship between equity risk

19         premiums and interest rates is unsupported by academic research.  While academic

20         studies have shown that, in the past, there has been an inverse relationship with these

21         variables, researchers have found that the relationship changes over time and is

22         influenced by changes in perception of the risk of bond investments relative to equity

23         investments, and not simply changes to interest rates.[63/]

---

[62/]    Exh. AMM-3 at 21.

[63/]     "The Market Risk Premium:  Expectational Estimates Using Analysts' Forecasts," Robert S.
         Harris and Felicia C. Marston, *Journal of Applied Finance*, Volume 11, No. 1, 2001 and "The

1           In the 1980s, equity risk premiums were inversely related to interest rates, but

2      that was likely attributable to the interest rate volatility that existed at that time.  Interest

3      rate volatility currently is much lower than it was in the 1980s.[64]  As such, when interest

4      rates were more volatile, the relative perception of bond investment risk increased

5      relative to the investment risk of equities.  This changing investment risk perception

6      caused changes in equity risk premiums.

7           In today's marketplace, interest rate variability is not as extreme as it was during

8      the 1980s.  Nevertheless, changes in the perceived risk of bond investments relative to

9      equity investments still drive changes in equity premiums.  However, a relative

10     investment risk differential cannot be measured simply by observing nominal interest

11     rates.  Changes in nominal interest rates are highly influenced by changes to inflation

12     outlooks, which also change equity return expectations.  As such, the relevant factor

13     needed to explain changes in equity risk premiums is the relative changes to the risk of

14     equity versus debt securities investments, not simply changes to interest rates.

15          Importantly, Mr. McKenzie's analysis ignores investment risk differentials.  He

16     bases his adjustment to the equity risk premium exclusively on changes in nominal

17     interest rates.  This is a flawed methodology and does not produce accurate or reliable

18     risk premium return on equity estimates.  His results should be rejected by the

19     Commission.

---

Risk Premium Approach to Measuring a Utility's Cost of Equity," Eugene F. Brigham, Dilip K.
Shome, and Steve R. Vinson, *Financial Management*, Spring 1985.
[64] *Duff & Phelps, 2016 SBBI Yearbook* at 6-7 to 6-10.

| 1 | Q. | **CAN MR. MCKENZIE'S RISK PREMIUM ANALYSES BASED ON** |
| 2 | | **PROJECTED YIELDS BE MODIFIED TO PRODUCE MORE REASONABLE** |
| 3 | | **RESULTS?** |

4   A.   Yes. By eliminating the inverse relationship adjustment to the equity risk premium of

5        3.75% and the current Baa-rated utility yield of 3.94%, will result in a risk premium

6        return on equity of 7.7% (3.75% + 3.94%). Using the last 10 years of Mr. McKenzie's

7        risk premium data as shown on page 3 of his Exh. AMM-3 will produce a risk premium

8        of 5.32%. Therefore, based on this methodology a reasonable return will be no higher

9        than 9.4% (5.32% + 3.94%).

10   **IV.C.5. Mr. McKenzie's Expected Earnings Analysis**

11   Q.   **PLEASE DESCRIBE MR. MCKENZIE'S EXPECTED EARNINGS ANALYSIS.**

12   A.   Mr. McKenzie's expected earnings analysis is based on *Value Line*'s projected earned

13        return on book equities for his proxy group, adjusted to reflect average year equity

14        returns. Based on a review of projected earnings over the next three to five years, Mr.

15        McKenzie estimates a return on equity for Avista of 10.7%.[65]

| 16 | Q. | **IS THE EXPECTED EARNINGS ANALYSIS A REASONABLE METHOD FOR** |
| 17 | | **ESTIMATING A FAIR RETURN ON EQUITY FOR AVISTA?** |

18   A.   No. An expected earnings analysis does not measure the return an investor requires in

19        order to make an investment. In other words, the accounting measure of the earned

20        return on equity does not measure the opportunity cost of capital. Rather, it measures

21        the earned return on book equity that companies have experienced in the past or are

22        projected to achieve in the future. The returns investors require in order to assume the

23        risk of an investment are measured from prevailing stock market prices.

---

[65]    Exh. AMM-11.

1    Additionally, the historical and projected earned return on equity for these

2    holding companies can be significantly influenced by the financial performance of

3    nonregulated operations.  For these reasons, Mr. McKenzie's expected earnings analysis

4    should be disregarded.

5    **IV.C.6. Mr. McKenzie's Non-Utility DCF Analysis**

6    **Q.    DO YOU HAVE ANY ADDITIONAL COMMENTS IN REGARDS TO MR.**
7    **MCKENZIE'S RETURN ESTIMATES?**

8    A.    Yes.  Mr. McKenzie also performed a DCF model on a non-utility proxy group, which

9    he found to be a reasonable risk proxy for Avista.  The DCF results of his non-utility

10    group range are presented on his Exh. AMM-12.  The average DCF result falls in the

11    range 9.5% 10.3%.  While Mr. McKenzie did not include the results of his non-utility

12    DCF analysis in arriving at his recommended range of reasonableness,[66] he did opine

13    that the analysis is relevant in evaluating a fair return on equity for Avista.[67]  I disagree

14    with his assessment.

15    **Q.    WHY DO YOU CONSIDER MR. MCKENZIE'S NON-UTILITY GROUP**
16    **UNREASONABLE?**

17    A.    The companies included in Mr. McKenzie's non-utility proxy group are subject to risks

18    that are different from those affecting Avista's regulated utility operations.  As noted by

19    the major credit rating agencies, the utility industry has relatively low risk in comparison

20    with the market.  Indeed, the regulatory process itself provides an effective mechanism

21    to mitigate some of the market risks influencing the U.S. economy.  Therefore, using

22    Mr. McKenzie's non-utility proxy group, which is much riskier than the utility industry,

23    will produce an unreliable and inflated return on equity for a low-risk utility like Avista.

---

[66]    Exh. AMM-4.
[67]    Exh. AMM-3 at 38-40

1  Therefore, the Commission should disregard the results of Mr. McKenzie's non-utility

2  group DCF.

3  **Q.  CAN YOU PROVIDE AN EXAMPLE OF WHY MR. MCKENZIE'S**
4  **NON-UTILITY GROUP IS NOT A COMPARABLE RISK PROXY GROUP**
5  **FOR AVISTA?**

6  A.  Yes.  One criterion that Mr. McKenzie uses to select a comparable risk non-utility group

7  in order to estimate Avista's return on equity, is to compare Avista's bond rating to that

8  of the non-regulated group.[68]  While this is a reasonable method of estimating and

9  identifying comparable proxy groups within the industry, doing it across industries is

10  not as straightforward and not as reliable.  For example, if bond rating alone would

11  adequately help to identify comparable risk companies across industries, then there

12  should not be any observable clear differences in the investment cost for securities that

13  had the same bond ratings.  However, the industry or circumstances behind the security

14  have a material role in the market's assessment of a fair compensation.

15        While "AAA" rated corporate bonds and U.S. Treasuries have comparable bond

16  ratings, the risk differential is significant largely because of the operating risk

17  differences between the securities.  The U.S. government has virtually minimal default

18  risk on its bond issuances, whereas even a "AAA" rated corporate bond has measurable

19  default risk.  Similarly, regulated utility operations and the ability to adjust prices to cost

20  of service provide far less default risk than that of non-regulated companies.  A

21  regulated company generally has a franchise to a monopolistic service territory, the

22  ability to set prices based on the cost of service, and minimal, if any, competition.  In

23  significant contrast, a non-regulated entity does not have a franchised or monopolistic

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[68]  Exh. AMM-3 at 40.

1    customer base, must price its services consistent with what the market will permit, and

2    has far more uncertainty of selling products that produce cash flows that support

3    financial obligations.  Therefore, the DCF results produced by Mr. McKenzie's non-

4    utility group should be rejected.

5    **IV.D.  Additional Risks**

6    **Q.    DID MR. MCKENZIE CONSIDER ADDITIONAL BUSINESS RISKS TO**
7    **JUSTIFY A RETURN ON EQUITY WITHIN HIS RANGE?**

8    A.    Mr. McKenzie believes that Avista is exposed to several additional risks that should be

9    accounted for: (1) Avista's reliance on hydro generation (2) Avista's planned capital

10    expenditure, (3) environmental risks, and the Company's size.[69]   Mr. McKenzie

11    believes that these additional risks should be considered in determining the return on

12    equity for Avista.

13    **Q.    WHY DO YOU BELIEVE THAT AVISTA FACES RISKS THAT ARE**
14    **COMPARABLE TO THE RISKS FACED BY MR. MCKENZIE'S AND YOUR**
15    **PROXY GROUP COMPANIES?**

16    A.    The major business risks identified by Mr. McKenzie are considered in the assigning of

17    a credit rating by the various credit rating agencies.

18    As shown on my Exhibit MPG-5, the average S&P credit rating for my proxy

19    group of BBB+ is lower but comparable to Avista's credit rating of BBB from S&P.

20    Similarly, the group average credit rating from Moody's of Baa2 is identical to Avista's

21    credit rating.  The relative risks discussed in Mr. McKenzie's testimony are already

22    incorporated in the credit ratings of the proxy group companies.  S&P and other credit

23    rating agencies go through great detail in assessing a utility's business risk and financial

24    risk in order to evaluate their assessment of its total investment risk.   This total

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[69]    McKenzie Direct Testimony at 9-13.

1      investment risk assessment of Avista, in comparison to a proxy group, is fully absorbed

2      into the market's perception of Avista's risk.  The use of my proxy group fully captures

3      the investment risk of Avista.

4   Q.   **HOW DOES S&P ASSIGN CORPORATE CREDIT RATINGS FOR**
5        **REGULATED UTILITIES?**

6   A.   In assigning corporate credit ratings, the credit rating agency considers both business

7        and financial risks.  Business risks, among others, include a company's size, competitive

8        position, generation portfolio, and capital expenditure programs, as well as

9        consideration of the regulatory environment, current state of the industry, and the

10       economy as whole.  Specifically, S&P states:

11                 To determine the assessment for a corporate issuer's business risk
12                 profile, the criteria combine our assessments of industry risk, country
13                 risk, and competitive position.  Cash flow/leverage analysis determines
14                 a company's financial risk profile assessment.  The analysis then
15                 combines the corporate issuer's business risk profile assessment and its
16                 financial risk profile assessment to determine its anchor.  In general, the
17                 analysis weighs the business risk profile more heavily for investment-
18                 grade anchors, while the financial risk profile carries more weight for
19                 speculative-grade anchors.[70]

20  Q.   **DO AVISTA'S CAPITAL EXPENDITURE FORECASTS PRESENT RISKS**
21       **THAT ARE OUT OF LINE WITH THE UTILITY INDUSTRY?**

22  A.   No.  As shown on my Exhibit MPG-4, currently the industry as a whole is expected to

23       require access to the external capital markets due to producing less cash flow per share

24       than capital spending per share.  Importantly, this is expected to change in the three-to

25       five-year period.  As can be seen on that exhibit, the industry is expected to produce

26       more internal cash relative to projected capital expenditures during the 2021-2023 time

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[70]    Standard & Poor's RatingsDirect:  "Criteria/Corporates/General:  Corporate Methodology,"
        November 19, 2013.

1       period. Hence, Mr. McKenzie's assertion that Avista will need to access the capital

2       markets in the near term is not unique to Avista.

3  **Q.**  **DID MR. MCKENZIE ALSO OFFER AN ASSESSMENT OF CURRENT**
4      **MARKET CONDITIONS IN SUPPORT OF HIS RECOMMENDED RETURN**
5      **ON EQUITY RANGE?**

6  A.  Yes. Mr. McKenzie observes several factors that influence the current market

7       environment: (1) that the current Federal Reserve policy presents an ongoing

8       uncertainty and (2) the expectations for increasing interest rates.

9       While I agree that these factors cause market uncertainty, I find Mr. McKenzie's

10      contention that interest rates are going to increase unreasonable because he is not

11      considering the highly likely outcome that current observable interest rates will prevail

12      during the period in which rates determined in this proceeding will be in effect. This is

13      important because, while current observable interest rates are actual market data that

14      provides a measure of the current cost of capital, the accuracy of forecasted interest rates

15      is problematic at best.

16  **Q.**  **WHY DO YOU BELIEVE THAT THE ACCURACY OF FORECASTED**
17      **INTEREST RATES IS HIGHLY PROBLEMATIC?**

18  A.  Over the last several years, observable current interest rates have been a more accurate

19      predictor of future interest rates than economists' consensus projections. Exhibit

20      MPG-21 illustrates this point. On this exhibit, under Columns 1 and 2, I show the actual

21      market yield for Treasury bonds at the time a projection is made, and the corresponding

22      projection for Treasury bond yields two years in the future, respectively.

23      As shown in Columns 1 and 2, over the last several years, Treasury yields were

24      projected to increase relative to the actual Treasury yields at the time of the projection.

25      In Column 4, I show what the Treasury yield actually turned out to be two years after

1    the forecast.  In Column 5, I show the actual yield change at the time of the projections

2    relative to the projected yield change.

3           As shown in this exhibit, economists have consistently been projecting that

4    interest rates will increase over the near term.  However, as shown in Column 5, those

5    yield projections have turned out to be overstated in almost every case.  Indeed, actual

6    Treasury yields have decreased or remained flat over the last several years rather than

7    increasing as the economists' projections indicated.  As such, current observable interest

8    rates are just as likely to accurately predict future interest rates as are economists'

9    projections.

10   **Q.    DO YOU HAVE ANY FURTHER COMMENTS ON MR. MCKENZIE'S**
11   **INTEREST RATE PROJECTIONS?**

12   A.    Yes.  First, it is simply not known how much, if any, long-term interest rates will increase

13   from current levels or whether they have already fully accounted for the termination of

14   the Fed's QE program and the increase in the Federal Funds Rate.  Nevertheless, I do

15   agree that this Fed program introduced risk or uncertainty in short-term interest rate

16   markets.  However, the increase in short-term interest rates had no impact on longer-term

17   yields.  In fact, as the EEI pointed out: "Interest rates would likely fall if economic data

18   turns weak, as they did in Q4."[71/]  This notion is also supported by the president of the

19   Saint Louis Federal Reserve, who stated that even though the short-term interest rates

20   have increased the longer-term yields remain at historically low levels, which is referred

21   to as "flattening" of the yield curve."[72/]  Moreover, as discussed above, the Fed is further

22   slowing its already modest unwinding of its balance sheet position in long-term interest

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[71/]    *EEI Q4, 2018 Financial Update:* "Stock Performance" at 6.
[72/]    Assessing the Risk of Yield Curve Inversion: An Update, July 20, 2018.

1  rate securities, and is considering reducing short-term interest rates due to economic

2  events. All this suggests that Federal Reserve actions will not be working toward

3  increasing interest rates for the intermediate period, but rather may allow interest rates

4  to decrease.

5  Second, I would note Avista is largely shielded from significant changes in

6  capital market costs. To the extent long-term interest rates ultimately increase above

7  current levels, which may have an impact on required returns on common equity, at that

8  point in time, Avista, like all other utilities, can file to change rates to restate its

9  authorized rate of return at the prevailing market levels.

10  **Q.**  **DOES THIS CONCLUDE YOUR RESPONSE TESTIMONY?**

11  A.  Yes, it does.