

**BEFORE THE
PUBLIC SERVICE COMMISSION OF UTAH**

IN THE MATTER OF THE)	
APPLICATION OF DOMINION)	
ENERGY UTAH TO INCREASE)	DOCKET NO. 22-057-03
DISTRIBUTION RATES AND)	
CHARGES AND MAKE TARIFF)	
MODIFICATIONS)	

Surrebuttal Testimony and Exhibit of

Christopher C. Walters

On behalf of

Federal Executive Agencies

October 13, 2022

FEA Exhibit 3.0



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Surrebuttal Testimony of Christopher C. Walters

I. INTRODUCTION

1 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A My name is Christopher C. Walters. My business address is 16690 Swingley
3 Ridge Road, Suite 140, Chesterfield, MO 63017.

4 **Q ARE YOU THE SAME CHRISTOPHER C. WALTERS WHO FILED DIRECT**
5 **TESTIMONY DATED AUGUST 26, 2022 IN THIS CASE?**

6 A Yes, I am.

7 **Q ON WHOSE BEHALF ARE YOU TESTIFYING?**

8 A I am offering testimony on behalf of the Federal Executive Agencies (“FEA”),
9 including Hill Air Force Base (“Hill AFB”), a customer in the Transportation
10 Service (“TS”) class of Dominion Energy Utah (“DEU” or “the Company”).

1 **Q WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

2 A In my surrebuttal testimony, I will respond to certain assertions and arguments
3 made by DEU witness Ms. Jennifer Nelson as they relate to my Direct testimony.
4 My silence with respect to any position taken by DEU or any other parties in this
5 proceeding should not be interpreted as an endorsement of that position.

II. RESPONSE TO CRITICISMS OF MS. NELSON

6 **A. Multi-Stage DCF**

7 **Q PLEASE SUMMARIZE THE CRITICISMS OF YOUR MULTI-STAGE DCF**
8 **ANALYSIS OFFERED BY MS. NELSON.**

9 A Ms. Nelson has two primary concerns with my multi-stage DCF analysis: (1) she
10 asserts that my multi-stage DCF analysis should be rejected because the
11 premise that energy sales are linked to GDP is faulty¹ and (2) she asserts that
12 the utility has grown , and can continue grow, at a rate faster than the economy.²

13 **Q PLEASE RESPOND.**

14 A Ms. Nelson mischaracterizes the premise laid out in my testimony in support of
15 the multi-stage DCF as it relates to GDP and energy usage. As an initial matter,
16 in my testimony I clearly acknowledge earnings growth is driven by rate base
17 investments.³ What is also clear in my FEA Exhibit 1.08 and replicated on her
18 Figure 28, is that electric and energy use do generally track real GDP. When

¹DEU Exhibit 2.0R at 113.

²*Id.* at 113-114.

³FEA Exhibit 1.0 at 36.

1 there is a negative growth in real GDP, there was corresponding negative
2 growth in electric and energy use. During expansions of real GDP, there has
3 been some tracking, albeit at a lower level, in electric and energy use.

4 Further, she observes that the utility sector component of GDP has had
5 growth at a faster rate (6.54%) relative to the overall GDP growth rate (6.30%)
6 since 1947.⁴ She notes that the projected EPS growth rates used by her and
7 the “Opposing Witnesses” are below the long-term historical compound annual
8 GDP growth rate for the utility sector, making the short-term growth rates not
9 excessive.⁵ This logic is flawed and counter to Ms. Nelson’s own testimony.
10 Investors and analysts clearly project GDP growth to be significantly less in the
11 future than what was realized in the past. Her perspective of comparing
12 projected utility earnings growth rates to historical GDP growth is an
13 apples-to-oranges comparison and should be ignored.

14 Finally, in addition to the cited texts from *Brigham and Houston* as well as
15 *Ibbotson* provided in my Direct Testimony, several others agree that GDP is a
16 limiting factor in a company’s long-run growth potential. It is an economic
17 impossibility for any company to grow at a higher rate than the economy into
18 perpetuity, the period of time in which the constant growth DCF model assumes
19 constancy. If a company were to grow at a higher rate than the economy in
20 perpetuity, that particular company would eventually be larger than the economy
21 as a whole. To suggest any company, regulated or otherwise, can grow at a

⁴DEU Exhibit 2.0R at 113-114.

⁵*Id.* at 113:1888-1892.

1 rate higher than the economy into perpetuity fails the very underpinnings of tests
2 of economic logic. As a matter of principle, no company's earnings or dividends
3 can grow faster than the economy in which it sells goods and services into
4 perpetuity. In the long-run, earnings growth will be limited by several factors,
5 including, but not limited to, competition and market saturation. For example:

6 As the texts of the CFA Institute have stated:

7 For earnings growth to exceed GDP growth, the ratio of corporate
8 profits to GDP must trend upward over time. It should be clear
9 that the share of profits in GDP cannot rise forever. At some point,
10 stagnant labor income would make workers unwilling to work and
11 would also undermine demand, making further profit growth
12 unsustainable. Thus, in the long run, real earnings growth cannot
13 exceed the growth rate of potential GDP.⁶

14 Also, Dr. Morin states the following in his book, *New Regulatory Finance*:

15 It is useful to remember that eventually all company growth rates,
16 especially utility services growth rates, converge to a level
17 consistent with the growth rate of the aggregate economy.⁷

18 Further, Dr. Morin continues to state:

19 "[...] it is quite possible that a company's dividends can grow faster
20 than the general economy for five years, but it is quite implausible
21 for such growth to continue into perpetuity."⁸

22 For the reasons explained above, Ms. Nelson's assertions fail the tests
23 of economic logic, are unsupported by academic and practitioner texts, and
24 should be rejected in their entirety.

⁶CFA Program Curriculum, 2014, Level II, Volume 1, "Economic Growth and the Investment Decision," at 608-609.

⁷Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 308.

⁸*Id.* at 309.

1 B. Sustainable Growth DCF

2 **Q PLEASE SUMMARIZE THE CRITICISMS MS. NELSON HAS WITH YOUR**
3 **SUSTAINABLE GROWTH DCF ANALYSIS.**

4 A She asserts that the premise behind the sustainable growth model does not
5 hold and that one of the sources cited in my testimony (Myron Gordon) indicates
6 that that sustainable growth rates are less reliable in predicting future stock
7 returns relative to analysts' projected earnings growth rates.⁹ As such, Ms.
8 Nelson asserts that these results should be rejected.¹⁰

9 **Q PLEASE RESPOND.**

10 A As an initial matter, no one model is perfect, and at times can be more or less
11 accurate than other models depending on various factors such as economic
12 conditions. As Ms. Nelson observes, to which I agree, "using multiple methods
13 provides a more comprehensive, and therefore, more reliable perspective on
14 investors' return requirements."¹¹ For this reason alone, it is important to
15 perform a thorough analysis, and apply informed, reasoned judgement in the
16 interpretation of the results.

17 In addition, using the retention growth methodology is a recognized
18 reasonable method for estimating sustainable dividend growth and should not
19 be ignored.

⁹DEU Exhibit 2.0R at 114.

¹⁰*Id.*

¹¹DEU Exhibit 2.0 at 18:335-337.

1 As noted by the CFA curriculum text:

2 We define the sustainable growth rate as the rate of dividend (and
3 earnings) growth that can be sustained for a given level of return
4 on equity, assuming that the capital structure is constant through
5 time and that additional common stock is not issued. The reason
6 for studying this concept is that it can help in estimating the stable
7 growth rate in a Gordon growth model valuation, or the mature
8 growth rate in a multistage DDM in which the Gordon growth
9 formula is used to find the terminal value of the stock.

10 The expression to calculate the sustainable growth rate is
11 $g = b \times \text{ROE}$ ¹²

12 Notably, the same CFA text observes that in light of the Arnott and
13 Asness (2003) study, cited by Ms. Nelson,¹³ “caution is appropriate in assuming
14 that dividends displace earnings.”¹⁴ However, that same text concludes that
15 “[n]evertheless, the equation can be useful as a simple expression for
16 approximating the average rate at which dividends can grow over a long
17 horizon.”¹⁵ Notably, the *Brigham and Houston* text does not necessarily agree
18 that the study cited by Ms. Nelson is a blanket and covers all companies, as it
19 states, “Companies that retain a high percentage of their earnings rather than
20 paying them out as dividends generate more retained earnings and thus need
21 less external capital.”¹⁶

¹²CFA Program Curriculum, 2014, Level II, Volume 4, “Dividend Discount Valuation,” at 264.

¹³ DEU Exhibit 2.0R at 88.

¹⁴CFA Program Curriculum, 2014, Level II, Volume 4, “Dividend Discount Valuation,” at 265-266.

¹⁵*Id.* at 266.

¹⁶*Fundamentals of Financial Management*, Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 558.

1 Ms. Nelson's outright rejection of the sustainable growth DCF model
2 should be ignored.

3 C. Risk Premium

4 **Q PLEASE SUMMARIZE THE CRITICISMS MS. NELSON HAS WITH YOUR**
5 **RISK PREMIUM ANALYSIS.**

6 A Ms. Nelson expresses two concerns with my risk premium analysis. First, she
7 asserts that my method understates the required equity risk premium because
8 it fails to adequately reflect the inverse relationship between the risk premium
9 and bond yields.¹⁷ She asserts that because my projected Treasury yield of
10 3.8% reflects approximately the 30th percentile of my observations, I should
11 have used the 70th percentile of my risk premium range, rather than the 50th
12 percentile to 70th percentile.¹⁸ In other words, she asserts that a risk premium
13 over Treasury bond yields of 6.44% is more accurate. Therefore she asserts
14 that a more accurate estimate of the cost of equity using the risk premium
15 method over Treasury yields is 10.24% (3.80% + 6.44%).¹⁹ She makes a similar
16 assertion as it relates to my risk premium over utility bond yields.

17 Second, she takes issue with my reliance on recent utility bond yields,
18 rather than projected, even though I rely on projected Treasury bond yields in
19 the other version of my risk premium analysis.²⁰ In an attempt to correct for the

¹⁷DEU Exhibit 2.0R at 118.

¹⁸*Id.* at 118-120.

¹⁹*Id.* at 121.

²⁰*Id.* at 118.

1 alleged shortcoming, Ms. Nelson formulates her own projections of utility bond
2 yields assuming projected corporate bond yields and historical yield spreads.²¹

3 **Q PLEASE RESPOND TO MS. NELSON’S ASSERTION THAT A 6.44%**
4 **EQUITY RISK PREMIUM OVER TREASURY YIELDS IS MORE ACCURATE.**

5 A For an initial observation, we can quickly see in my FEA Exhibit 1.11, under
6 column 2, there are two years where the average Treasury yield was near
7 3.80%: (2011 – 3.91% and 2013 – 3.45%). In 2011 when the Treasury yield
8 average was 3.91%, the average equity risk premium was 6.01%. In 2013 when
9 the Treasury yield averaged 3.45%, the average equity risk premium was
10 6.23%. As pointed out by Ms. Nelson, the projected Treasury yield in my
11 analysis was 3.80%, which falls between the 2011 and 2013 observations. Yet,
12 she asserts that an equity risk premium of 6.44% is more accurate than my
13 method, even though 6.44% is between 19 and 43 basis points higher than the
14 observed equity risk premiums observed in 2011 and 2013. Her attempt to more
15 “accurately” capture an inverse relationship is not accurate at all by the empirical
16 observations presented in my FEA Exhibit 1.11. Similar observations can be
17 made for the equity risk premium analysis over utility bond yields presented in
18 my FEA Exhibit 1.12. Her adjustments should be ignored.

²¹*Id.* at 121.

1 **Q PLEASE RESPOND TO MS. NELSON’S ASSERTION THAT YOU SHOULD**
2 **HAVE RELIED ON PROJECTED UTILITY BOND YIELDS IN YOUR**
3 **ANALYSIS.**

4 A Ms. Nelson attempts to *correct* my Risk Premium analysis by adding her own
5 projected utility bond yields that she calculates.²² I say they are her own
6 projected utility bond yields because I am not aware of a data provider that
7 projected A and Baa-rated utility bond yields. As such, she introduces an
8 unsupported assumption that her method of projected utility bond yields is
9 reasonably relied on by the market. She has failed to demonstrate that yield
10 spreads are constant, particularly in what she has described as a volatile
11 market. For these reasons, her projected yields should be rejected.

12 D. CAPM

13 **Q PLEASE SUMMARIZE THE CRITICISMS MS. NELSON HAS WITH YOUR**
14 **CAPM ANALYSIS.**

15 A Ms. Nelson’s primary concerns with my CAPM analysis are my market risk
16 premium estimates, and my use of Vasicek-adjusted betas from S&P Global
17 Market Intelligence (“MI”).²³ Specifically, Ms. Nelson disagrees with my
18 reference to the normalized risk premium put forward by Kroll as well as my
19 estimates using the FERC’s DCF methodology to calculate the expected market
20 return.

²²*Id.* at 120-121.

²³*Id.* at 123.

1 **Q PLEASE RESPOND TO MS. NELSON'S CONCERNS WITH THE**
2 **NORMALIZED MARKET RISK PREMIUM PUBLISHED BY KROLL.**

3 A Kroll (and its predecessor Duff & Phelps) is one of the most oft-cited sources in
4 rate of return testimony for market and economic-related data, including Ms.
5 Nelson's testimony.²⁴ There is no reason to simply disregard the data because
6 the expected market return of 9.0% is lower than my recommendation for DEU.

7 **Q PLEASE RESPOND TO HER CONCERNS WITH YOUR DCF-DERIVED**
8 **ESTIMATES OF THE EXPECTED MARKET RETURN TO CALCULATE A**
9 **MARKET RISK PREMIUM.**

10 A As I have explained in detail in my Direct Testimony as well as here in this
11 testimony, it is not reasonable, let alone plausible, to expect a company within
12 the index to grow at a rate faster than the economy in perpetuity, a key
13 assumption with the constant growth model. This becomes even more
14 important during anomalous market conditions and when certain individual
15 company growth rates are more than 10x that of projected GDP growth.

16 Measuring the expected return on the market as Ms. Nelson has done
17 produces a biased, or skewed upward, result that is based on short-term growth
18 rate estimates for the individual companies that make up the broad market
19 index. As I explained in my Direct Testimony, to estimate her DCF market risk
20 premium, Ms. Nelson calculated a DCF for the individual companies of the S&P

²⁴DEU Exhibit 2.0 at 30.

1 500, including non-dividend paying companies.²⁵ Her DCF on the market
2 companies relied on growth rates for the underlying individual companies as
3 high as 153.32%.²⁶ Growth rates of this nature are aberrant and cannot be
4 expected to be sustained over any reasonable period of time. Because of
5 underlying individual results such as this, applying multiple methods to calculate
6 the expected market return as I have in this case results in a more reasonable
7 and balanced approach.

8 Further, Ms. Nelson ignores academic and practitioner texts in doing so.
9 Specifically, the CFA Institute notes as follows with regard to earnings growth
10 rates of the composite indices (*i.e.*, S&P 500):

11 Earnings growth for the overall national economy can differ
12 from the growth of earnings per share in a country's equity
13 market composites. This is due to the presence of new
14 businesses that are not yet included in the equity indices and
15 are typically growing at a faster rate than the mature
16 companies that make up the composites. **Thus, the earnings**
17 **growth rate of companies making up the composites**
18 **should be lower than the earnings growth rate for the**
19 **overall economy.**²⁷ (emphasis added)

20 Ms. Nelson's concerns here are misplaced.

²⁵FEA Exhibit 1.0 at 67-68.

²⁶DEU Exhibit 2.04.

²⁷CFA Program Curriculum, 2014 Level II Vol.1, "Ethical and Professional Standards, Quantitative Methods, and Economics," Paul Kutasovic, Reading 15 – Economic Growth and the Investment Decision, p. 609, footnote 5.

1 **Q MS. NELSON ASSERTS THAT YOUR BETA ESTIMATES FROM S&P'S**
2 **BETA GENERATOR MODEL ARE UNDERSTATED DUE TO STOCK PRICE**
3 **DIFFERENCES ON MAJOR HOLIDAYS. DO YOU AGREE?**

4 A Yes. As Ms. Nelson explains in a footnote,²⁸ the version of S&P's Beta
5 Generator model I relied on was possibly based on an outdated version. After
6 speaking with S&P, this was the case and I have since received the updated
7 version of the model. After doing so, I can confirm that the beta estimates Ms.
8 Nelson reports in her Figure 33 of her DEU Exhibit 2.0R are true and accurate.
9 I have provided an updated CAPM analysis reflecting these corrected Beta
10 estimates in my FEA Exhibit 3.01.

11 **Q NOTWITHSTANDING THE ERROR POINTED OUT BY MS. NELSON, SHE**
12 **TAKES ISSUE WITH YOUR USE OF MI BETAS IN GENERAL. PLEASE**
13 **BRIEFLY DISCUSS THE DIFFERENCES BETWEEN VALUE LINE BETAS**
14 **AND THE BETAS FROM MI.**

15 A MI betas are calculated using its beta generator model and are adjusted using
16 the Vasicek method and calculated using the S&P 500 as the proxy for the
17 investable market. This is in stark contrast with the *Value Line* beta estimates
18 that are adjusted using a constant weighting factors of 67%/35% to the raw
19 beta/market beta and use the New York Stock Exchange as the proxy for the
20 investable market. Because I rely on the S&P 500 to estimate the expected

²⁸DEU Exhibit 2.0R at 132, footnote 192.

1 return on the investable market, it is logical to rely on beta estimates that are
2 calculated using the S&P 500 as the benchmark for the market. Further, as
3 S&P explains:

4 The Vasicek Method is a superior alternative to the Bloomberg
5 Beta adjustment. The Bloomberg adjustment is not appropriate
6 for a vast number of situations, as it assigns constant weighting
7 regardless of the standard error in the raw beta estimation
8 (Bloomberg Beta = $1/3 \times \text{market beta} + 2/3 \times \text{Raw Beta}$). Given the
9 statistical fact that a larger sample size yields a smaller error, the
10 Vasicek method more appropriately adjusts the raw beta via
11 weights determined by the variance of the individual security
12 versus the variance of a larger sample of comparable companies.
13 The weights are designed to bring the raw beta closer to
14 whichever beta estimation has the smallest error. This is a
15 feature the Bloomberg beta cannot replicate.²⁹

16 **Q DO YOU BELIEVE MI IS A RELIABLE SOURCE OF DATA THAT IS USED**
17 **BY INVESTORS?**

18 A Absolutely. MI is one of the most cited sources of financial data and other
19 relevant utility industry information by rate of return witnesses in cost of capital
20 testimony throughout the country. Further, MI is a division of S&P, one of the
21 most recognized names in finance. Investors rely on data from MI, particularly
22 in the utility sector, to inform their investment making decisions.

²⁹S&P Market Intelligence, Beta Generator Model. Notable, while S&P makes reference to the Bloomberg method of applying 2/3 and 1/3 weights to the raw beta and market beta, respectively, the comparison also applies to *Value Line*'s methodology of applying 67% and 35% weights. Both methods are forms of the Blume adjustment. While the weights are slightly different between the Bloomberg and *Value Line* methods, they are similar and apply a constant weight without any regard to accuracy. As such, the criticisms of the betas offered by S&P apply to both Bloomberg betas and *Value Line* betas.

1 Q IS THERE FINANCIAL LITERATURE DISCUSSING THE VASICEK METHOD
2 OF ADJUSTING BETA IN COMPARISON TO THE BLUME METHOD
3 EMPLOYED BY VALUE LINE?

4 A Yes. In an article titled “An Examination of Blume and Vasicek Betas” published
5 in the journal *The Financial Review*, Martin Lally discusses the merits of both
6 methods of adjusting beta. An observation made by Lally as it relates to the
7 utility industry is as follows:

8 A dramatic example of this is in U.S. electric utilities. A typical
9 such firm has an estimated beta (unadjusted) of around 0.4
10 (Value Line, 1993). By virtue of being typical, the Vasicek
11 estimate, with prior corresponding to this industry, will also be 0.4.
12 By contrast, Blume adjusts the 0.4 to 0.6 [i.e. $0.33 + 0.67(0.4)$].
13 The result is a dramatic overestimate by Blume, because a
14 singularly relevant fact is ignored, i.e., membership of an industry
15 whose average estimated, and therefore presumably also true,
16 beta is well below one. Given that these firms have output prices
17 that are set so as to recover costs, including the cost of equity,
18 and they have substantial equity investment, then the
19 implications of using Blume betas (i.e., not partitioning into
20 industries) for measuring costs of equity are particularly severe.³⁰

21 Ms. Nelson’s assertion that Vasicek-adjusted betas should not be used
22 to estimate the cost of equity for DEU should be disregarded.

³⁰The Financial Review, Vol. 33 (1998) at 183-198, “An Examination of Blume and Vasicek Betas,” Martin Lally. (emphasis added).

1 **Q DO THE UPDATED CAPM RESULTS REFLECTING THE CORRECTED**
2 **BETA ESTIMATES FROM S&P'S BETA GENERATOR MODEL CAUSE YOU**
3 **TO CHANGE YOUR CAPM RECOMMENDATION OR YOUR OVERALL**
4 **RECOMMENDATION IN THIS PROCEEDING?**

5 **A No.** My corrected CAPM results are largely consistent with, yet still below, my
6 CAPM recommendation of 9.40%. For example, the average of all my CAPM
7 results after the correction is 9.30%. As such, I maintain my CAPM
8 recommendation of 9.40%, which is also within my recommended range.

9 **Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

10 **A Yes, it does.**

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Dominion Energy Utah

CAPM Return

<u>Line</u>	<u>Description</u>	Duff & Phelps	Risk Premium ³	Average
		Normalized ²	Derived	FERC
		<u>MRP</u>	<u>MRP</u>	<u>S&P 500 DCF⁴</u>
		(1)	(2)	(3)
Current Beta				
1	Risk-Free Rate ^{1,2}	3.50%	3.80%	3.80%
2	Market Risk Premium	5.50%	8.10%	8.60%
3	Beta ⁵	0.83	0.83	0.83
4	CAPM	8.08%	10.55%	10.97%
Historical Beta				
5	Risk-Free Rate ^{1,2}	3.50%	3.80%	3.80%
6	Market Risk Premium	5.50%	8.10%	8.60%
7	Beta ⁵	0.74	0.74	0.74
8	CAPM	7.56%	9.78%	10.15%
Current S&P Global Market Intelligence Beta				
9	Risk-Free Rate ^{1,2}	3.50%	3.80%	3.80%
10	Market Risk Premium	5.50%	8.10%	8.60%
11	Beta ⁵	0.70	0.70	0.70
12	CAPM	7.34%	9.45%	9.80%

Sources:

- ¹ *Kroll Increases U.S. Normalized Risk-Free Rate from 3.0% to 3.5%, but Spot 20-Year U.S. Treasury Yield Preferred When Higher.* June 16, 2022.
 The Current 13-Wk Average 20-Yr Treasury Yield is 3.32%, Kroll Risk-Free Rate used in study.
- ² *Blue Chip Financial Forecasts*, July 1, 2022 at 2.
- ³ *Kroll 2022 SBBI Yearbook*, page 207.
- ⁴ FEA Exhibit 1.16, page 2.
- ⁵ FEA Exhibit 1.15, page 1.

Dominion Energy Utah

Development of the Market Risk Premium

<u>Line</u>	<u>Description</u>	<u>MRP</u>
<u>Risk Premium Based Method:</u>		
1	Lg. Co. Stock Real Market Return	9.20% ¹
2	Projected Consumer Price Index	<u>2.50%</u> ²
3	Expected Market Return	11.93%
4	Risk-Free Rate	<u>3.80%</u> ²
5	Market Risk Premium	8.10%
<u>FERC S&P 500 (Dividend Companies) 1-Step DCF Based Method:</u>		
6	S&P 500 Growth	10.40% ³
7	Index Dividend Yield	1.80% ³
8	Adjusted Yield	<u>1.89%</u>
9	Expected Market Return	12.29%
10	Risk-Free Rate	<u>3.80%</u> ²
11	Market Risk Premium	8.50%
<u>FERC S&P 500 (All Companies) 1-Step DCF Based Method:</u>		
12	Short-Term S&P 500 Growth	11.00% ⁴
13	Index Dividend Yield	1.40% ⁴
14	Adjusted Yield	<u>1.48%</u>
15	Expected Market Return	12.48%
16	Risk-Free Rate	<u>3.80%</u> ²
17	Market Risk Premium	8.70%
18	Average DCF Based MRP	8.60%

Sources & Note:

¹ *Kroll 2022 S&P Yearbook*, page 146.

² *Blue Chip Financial Forecast*, July 1, 2022.

³ S&P 500 1-Step DCF through June, 2022 for Dividend Paying Companies.

⁴ S&P 500 1-Step DCF through June, 2022 for all Companies.