**DIRECT TESTIMONY OF**  
**JAMES M. COYNE**  
**ON BEHALF OF**  
**GEORGIA POWER COMPANY**

**DOCKET NO. 44280**

# INTRODUCTION

1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.
2. My name is James M. Coyne, and I am employed by Concentric Energy Advisors, Inc. (“Concentric”) as a Senior Vice President. Concentric is a management consulting and economic advisory firm, focused on the North American energy and water industries. Based in Marlborough, Massachusetts and Washington, D.C., Concentric specializes in regulatory and litigation support, financial advisory services, energy market strategies, market assessments, energy commodity contracting and procurement, economic feasibility studies, and capital market analyses. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.
3. On whose behalf are you testifying?
4. I am submitting this testimony to the Georgia Public Service Commission (the “Commission”) on behalf of Georgia Power Company (“Georgia Power” or the “Company”), which is a wholly owned subsidiary of the Southern Company (“Southern Company”).
5. Please describe your experience in the energy and utility industries and your educational and professional qualifications.
6. I am among Concentric’s professionals who provide expert testimony before federal, state, and Canadian provincial agencies on matters pertaining to economics, finance, and public policy in the energy industry. I regularly advise regulatory agencies, utilities, generating companies, and private equity investors on business issues pertaining to the utility industry. This work includes calculating the cost of capital for the purpose of ratemaking and providing expert testimony and studies on matters pertaining to rate policy, valuation, capital costs, and performance-based regulation. I have authored numerous articles on the energy industry, lectured on utility regulation for regulatory commission staff, and provided testimony before the Federal Energy Regulatory Commission (“FERC”) as well as state and provincial jurisdictions in the U.S. and Canada. I hold a B.S. in Business Administration from Georgetown University and an M.S. in Resource Economics from the University of New Hampshire. My educational and professional background is summarized more fully in Exhibit JMC-1.
7. What is the purpose of your testimony?
8. The purpose of my direct testimony is to present evidence and provide a recommendation for the return on equity (“ROE”) for Georgia Power. My direct testimony also discusses the Company’s capital structure in comparison to the proxy group of companies supporting my analysis.
9. are you sponsoring any exhibits in this proceeding?
10. Yes. My analyses and recommendations are supported by the data presented in Exhibits JMC-2 through JMC-10, which have been prepared by me or under my direction. I sponsor the following exhibits:
    * JMC-2 – Comprehensive Summary of ROE Results
    * JMC-3 – Proxy Group Screening Analysis
    * JMC-4 – Constant Growth Discounted Cash Flow (“DCF”) Analysis
    * JMC-5.1 – Market Risk Premium
    * JMC-5.2 – Capital Asset Pricing Model (“CAPM”) Analysis
    * JMC-6 – Risk Premium Analysis
    * JMC-7 – Expected Earnings Analysis
    * JMC-8– Flotation Cost Adjustment
    * JMC-9 – Regulatory Risk Assessment
    * JMC-10 – Capital Structure Analysis

# SUMMARY OF TESTIMONY

1. What is your conclusion regarding the appropriate cost of equity AND CAPITAL STRUCTURE for GEORGIA POWER?
2. I have estimated Georgia Power’s ROE based on the results from four models: the Discounted Cash Flow (“DCF”) model, the Capital Asset Pricing Model (“CAPM”), the Bond Yield Plus Risk Premium model, and the Expected Earnings model. As shown in Exhibit JMC-2, these models produce an analytical range of estimates of the Company’s cost of equity, of 8.99 percent to 13.55 percent with a four-model average of 10.92 percent. Based on these analyses, and including an adjustment for flotation cost that I discuss later in my testimony, I recommend an ROE of 11.00 percent. As to the capital structure, Georgia Power’s requested capital structure of 56.0 percent equity and 44.0 percent long-term debt is reasonable relative to the range of capital structures for the operating companies held by the proxy group companies.
3. Please provide a brief overview of the analyses that you conducted to support your ROE recommendation.
4. As mentioned, my ROE recommendation is based on the range of results produced from four modeling methodologies. Analysts and academics understand that ROE models are tools to be used in the ROE estimation process, and that strict adherence to any single approach, or the specific results of any single approach, can lead to flawed conclusions. No model can exactly pinpoint the correct cost of equity, but each is designed to provide a unique estimate of the return required to attract equity investment. Therefore, my analysis considers the range of results produced by these four different models. The DCF analysis estimates the cost of equity based on market data on dividend yields and analysts’ projected earnings per share growth rates from reputable third-party sources. The CAPM analysis is based on both current and forecasted interest rates and a forward-looking market risk premium. The Risk Premium approach calculates the risk premium as the spread between authorized ROEs for vertically integrated electric utilities and Treasury bond yields. The Expected Earnings approach is based on projected returns on book equity that investors expect to receive over the next three to five years. My ROE recommendation is ultimately based on the range of results produced by these four methodologies. My recommendation also considers the general economic and capital market environment and the influence capital market conditions exert over the results of the DCF, CAPM and Risk Premium models.
5. How is the remainder of your Direct Testimony organized?
6. The remainder of my Direct Testimony is organized as follows:
   * + Section III provides background on the regulatory principles that guide the determination of ROE.
     + Section IV presents a review of current and prospective economic and capital market conditions and the implications on the cost of capital for utilities.
     + Section V describes the criteria and approach for the selection of a proxy group of comparable companies.
     + Section VI provides a description of the data and methodologies used to estimate the cost of equity, as well as the results of the various ROE estimation models and concludes with my recommendation and an assessment of its reasonableness under the *Hope* test.
     + Section VII reviews Georgia Power’s capital structure in the context of the proxy group.
     + Finally, Section VIII summarizes my results, conclusions, and recommendation.

# REGULATORY PRINCIPLES

1. Please describe the guiding principles used in establishing the cost of capital for a regulated utility.
2. The foundations of public utility regulation require that utilities receive a fair rate of return sufficient to attract needed capital to maintain important infrastructure for customers at reasonable rates. The basic tenets of this regulatory doctrine originate from several bellwether decisions by the United States Supreme Court, notably *Bluefield Waterworks and Improvement Company v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) (“*Bluefield*”), and *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1944) (“*Hope*”). In *Bluefield*, the Court stated:

A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties…

The return should be reasonably sufficient to assure investor confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties.

Later, in *Hope*, the Court established a standard for the ROE that remains the guiding principle for ratemaking in regulatory proceedings to this day:

[T]he return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

1. PLEASE EXPLAIN HOW THESE PRINCIPLES APPLY IN THE CONTEXT OF THE REGULATED RATE OF RETURN.
2. Regulated utilities rely primarily on common stock and long-term debt to finance permanent property, plant, and equipment. The allowed rate of return for a regulated utility is based on its weighted average cost of capital, where the costs of the individual sources of capital (i.e., debt and equity) are weighted by their respective book values. The ROE represents the cost of raising and retaining equity capital and is estimated by using one or more analytical techniques that use market data to quantify investor requirements for equity returns. However, the ROE cannot be derived through quantitative metrics and models alone. To properly estimate the ROE, the financial, regulatory, and economic context must also be considered.

The DCF, CAPM, Risk Premium, and Expected Earnings approaches, while fundamental to the ROE determination, are still only models. The results of these models cannot be mechanistically applied without also using informed judgment to consider economic and capital market conditions and the relative risk of Georgia Power compared to the proxy group companies.

Based on these widely recognized standards, the Commission’s order in this case should provide Georgia Power with the opportunity to earn a return on equity that is:

* Commensurate with returns on investments in enterprises having comparable risks;
* Adequate to attract capital on reasonable terms, thereby enabling the Company to provide safe, reliable service; and
* Sufficient to ensure the financial soundness of Georgia Power’s electric utility operations.

Importantly, a fair return must satisfy all three of these standards. The allowed ROE should enable the Company to finance capital expenditures on reasonable terms and provide it with the ability to raise capital under a full range of capital market circumstances.

1. What are your conclusions regarding regulatory principles?
2. The ratemaking process is premised on the principle that, in order for investors and companies to commit the capital needed to provide safe and reliable utility services, the utility must have the opportunity to recover invested capital and the market-required return on that capital. Because utility operations are capital intensive, regulatory decisions should enable the utility to attract capital on favorable terms. The financial community carefully monitors the current and expected financial condition of utility companies as well as the regulatory environment in which they operate. In that respect, the regulatory environment is one of the most important factors considered by both debt and equity investors in their assessments of risk. It is therefore essential that the ROE authorized in this proceeding take into consideration the current and expected capital market conditions that Georgia Power faces, as well as investors’ expectations and requirements regarding both risks and returns. A reasonable ROE is required both for continued capital investment by Georgia Power and to maintain confidence in Georgia’s regulatory environment among credit rating agencies and investors.

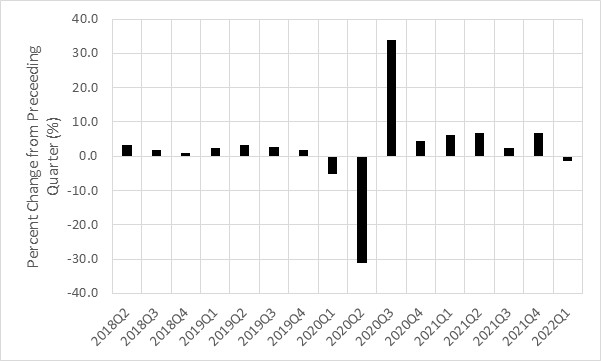
# ECONOMIC AND CAPITAL MARKET CONDITIONS

1. Why is it important to consider the effects of current and expected economic and financial market conditions when setting the appropriate ROE?
2. It is important to consider current and expected conditions in the general economy and financial markets because the authorized ROE for a public utility should allow the utility to attract investor capital at a reasonable cost under current and foreseeable economic and financial conditions as underscored by the *Hope* and *Bluefield* decisions discussed previously. The standard ROE estimation tools, such as the DCF, CAPM, Risk Premium, and Expected Earnings models, each reflect the state of the general economy and financial markets by incorporating specific economic and financial data. These inputs are, however, only samples of the various economic and market forces that determine a utility’s required return. Consideration must also be given to whether the assumptions relied on in the current or projected market data are appropriate. If investors do not expect current market conditions to continue in the future, it is possible that the ROE estimation models will not provide an accurate estimate of investors’ forward-looking required return. Therefore, an assessment of current and projected market conditions is integral to any ROE recommendation.
3. What are the key factors affecting the cost of equity for regulated utilities in the current and prospective capital markets?
4. The cost of equity for regulated utility companies is being affected by several key factors in the current and prospective capital markets including ongoing uncertainty and volatility in equity markets, as well as the economic recovery and inflation risk in 2022 and beyond. In this section, I discuss each of these factors and how it affects the models used to estimate the cost of equity for regulated utilities.

## Ongoing Uncertainty and Volatility in Capital Markets

1. Please describe the circumstances that have RECENTLY affected capital market conditions.
2. Capital market conditions have been significantly impacted by the economic impacts of the COVID-19 pandemic. While the economy and financial markets are emerging from these unique circumstances, it is important to recognize the current and forward-looking impacts that are reflected in the cost of equity for all businesses and utilities. Federal measures taken to contain the economic fallout from COVID-19 were extraordinary by any measure. As shown in Figure 1, real gross domestic product (“GDP”) has been on a roller-coaster cycle of unprecedented lows and highs over the past two years.[[1]](#footnote-2)

**Figure 1: U.S. Real GDP Growth – 2018Q2-2022Q1**[[2]](#footnote-3)

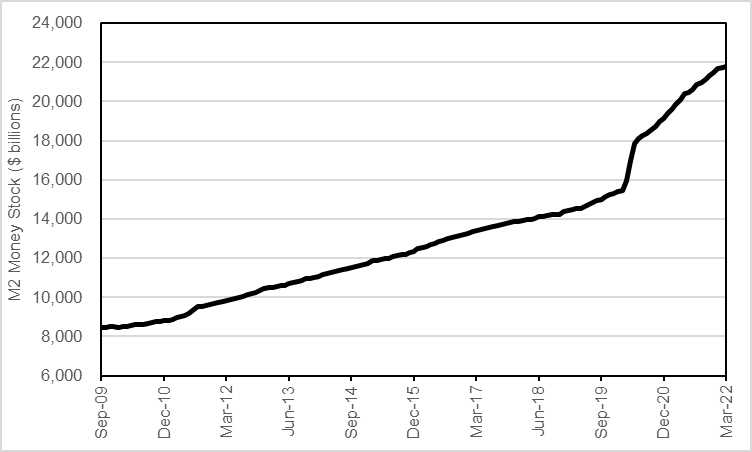


To spare consumers and businesses from the full economic consequences of the pandemic, the federal government took a series of unprecedented steps to stabilize financial markets. While utilities have traditionally been a “safe-haven” for investors, that has not been true during the COVID-19 pandemic. Capital market conditions changed dramatically in 2020 and 2021, resulting in greater risk for investors in both the broader equity market and utility stocks.

1. What steps did the Federal Reserve take to stabilize financial markets and support the economy in response to COVID-19?
2. In response to the economic effects of COVID-19, the Federal Reserve decreased the federal funds rate twice in March 2020, resulting in a target range of 0.00 percent to 0.25 percent (which remained in effect until March 2022), and announced plans to increase its holdings of both Treasury and mortgage-backed securities. From December 2020 through November 2021 the Federal Reserve purchased at least $80 billion per month of Treasury securities and at least $40 billion per month of mortgage-backed securities to support the flow of credit to households and businesses during the pandemic.[[3]](#footnote-4) In addition, on March 23, 2020, the Federal Reserve began expansive programs to support credit to large employers, including the Primary Market Corporate Credit Facility (“PMCCF”) to provide liquidity for new issuances of corporate bonds, and the Secondary Market Corporate Credit Facility (“SMCCF”) to provide liquidity for outstanding corporate debt issuances. Further, the Federal Reserve supported the flow of credit to consumers and businesses through the Term Asset-Backed Securities Loan Facility (“TALF”).[[4]](#footnote-5)

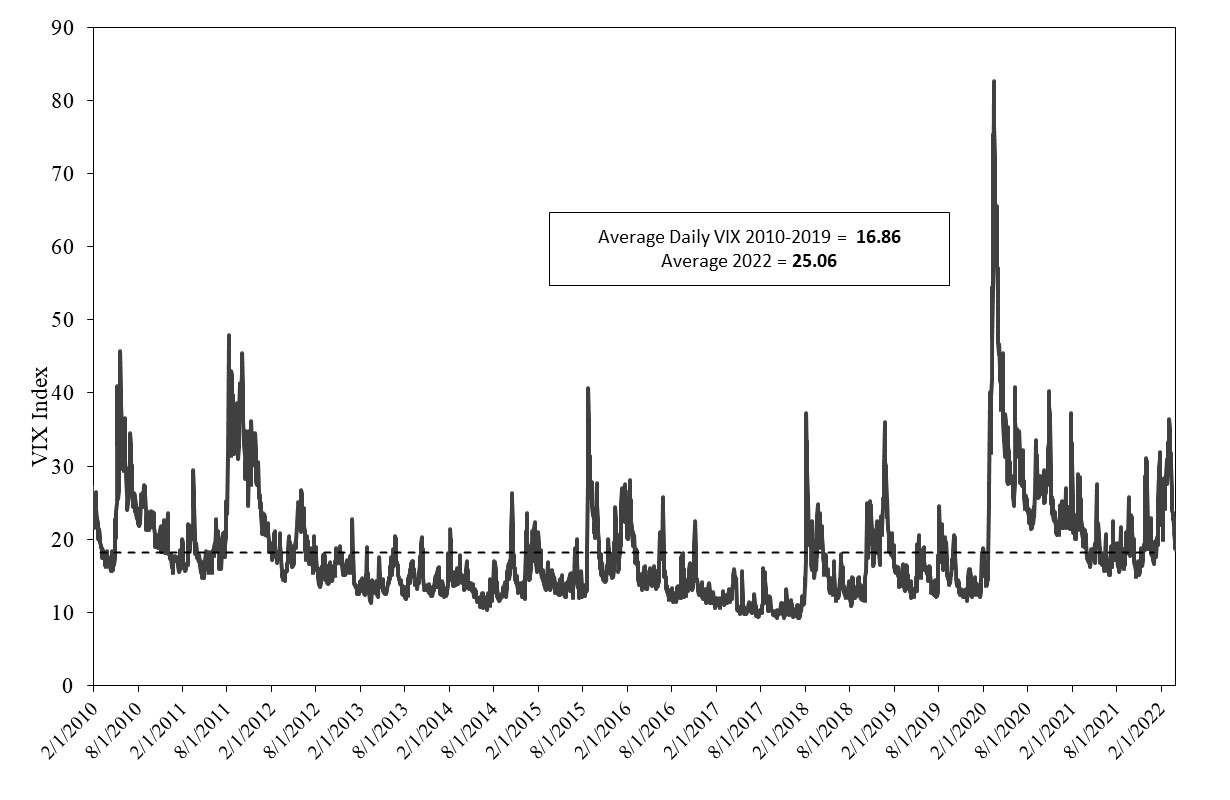
These “quantitative easing” programs allowed the Federal Reserve to purchase government bonds and corporate bonds from banks. The banks then received cash from the Federal Reserve, which resulted in an expansion of the money supply. This increase in the money supply kept short-term interest rates low and increased the ability of banks to lend to consumers and businesses. Investors in longer term bonds also responded, which affected the entire duration of the bond yield curve, from very near-term rates to 30-year yields. As shown in Figure 2, the programs enacted by the Federal Reserve resulted in an unprecedented expansion of the money supply as measured by M2.[[5]](#footnote-6)That expansion was far greater than the increase following the Federal Reserve’s response to the Great Recession of 2008/2009. This demonstrates the level of intervention that was necessary to provide some stability to capital markets amidst the extraordinary circumstances associated with COVID-19.

**Figure 2: M2 Money Stock – September 2009 – April 2022[[6]](#footnote-7)**



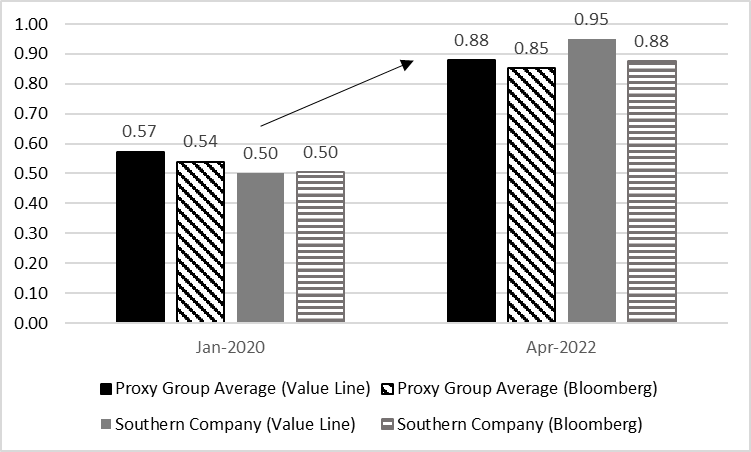
1. Please summarize the fiscal policy response from the U.S. Congress.
2. In addition to the Federal Reserve’s response, the U.S. Congress passed approximately $4.5 trillion in fiscal stimulus programs. On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act was signed into law, providing a large fiscal stimulus package aimed at mitigating the economic effects of the coronavirus. Further, in March 2021, the U.S. Congress approved additional fiscal stimulus of $1.9 trillion in response to the ongoing economic effects of COVID-19. The extraordinary measures taken by the Federal Reserve and U.S. Congress to support the economy and stabilize financial markets distorted bond markets (deliberately driving government and corporate yields lower) and equity markets (creating upward pressure on valuations and downward pressure on yields for dividend paying companies such as utilities). In March 2020, for the first time on record, the yield on a 10-year treasury bond dropped below 1.0 percent,[[7]](#footnote-8) and remained below 1.0 percent for the remainder of 2020.[[8]](#footnote-9) The 10-year treasury bond yield remained low throughout 2021, beginning the year below 1.0 percent, ending the year at 1.52 percent with an average of 1.45 percent.[[9]](#footnote-10) Before the onset of COVID-19, the 10-year Treasury yield had reached levels as low as 1.45 percent on only two occasions: July 24-26, 2012, and July 5-11, 2016. Moreover, these fiscal stimulus programs have increased inflationary pressures, as evidenced in the sharp run-up in inflation and corresponding upward spike in bond yields since late November 2021.
3. Are conditions expected to stabilize in the near-term?
4. The economy remains in a tenuous recovery phase of the business cycle. Recent global events associated with the Russian invasion of Ukraine have caused further uncertainty. As such, capital market conditions continue to be unstable as interest rates and inflation have increased. While expansive monetary and fiscal programs provided for some price stability, as shown in Figure 3, the Chicago Board Options Exchange (“CBOE”) Volatility Index (“VIX”) has remained above long-term historical levels, indicating stock investors remain anxious about the economy and company earnings. The VIX, a measure of expected price fluctuations in the S&P 500, reached 82.7 on March 16, 2020 in response to the pandemic. As a point of comparison, the VIX last traded above 80 in November 2008 during the financial crisis and Great Recession of 2008/09. The VIX has continued to reach levels above 35.0 in 2021 and 2022. The average level in 2022 has been 25.06 through April 30, 2022, compared to the average of 16.9 from 2010-2019.[[10]](#footnote-11) This indicates that equity market volatility levels have partially settled but continue to remain above the historical mean.

**Figure 3: CBOE VIX – January 1, 2010 – April 30, 2022[[11]](#footnote-12)**



1. Has the cost of equity for utility companies been affected by these circumstances?
2. Yes. The cost of equity for regulated utility companies has been affected by the market conditions during this period. In fact, utility company stocks have traded more in-line with the broader market since February 2020 when the COVID-19 pandemic became a concern in financial markets. This higher correlation is reflected in the Beta coefficients, which are the measure of risk in the CAPM, where 1.0 is the market average and higher Betas translate to greater risk and higher required equity returns. Beta coefficients increased substantially between January 2020 and April 2022 for the utility companies used in my cost of capital analysis. Figure 4 presents the average Value Line and Bloomberg Beta coefficients for my proxy group companies and Southern Company over this period. Higher Beta coefficients for utilities signal an increase in relative risk, and therefore a higher return to justify taking on those risks. These higher Beta coefficients reflect direct market evidence of an increase in cost of equity for utilities (as measured with the CAPM model). Investors have not viewed the utilities sector as a safe-haven during the capital market conditions associated with COVID-19, and even though bond yields have declined, the cost of equity has increased.

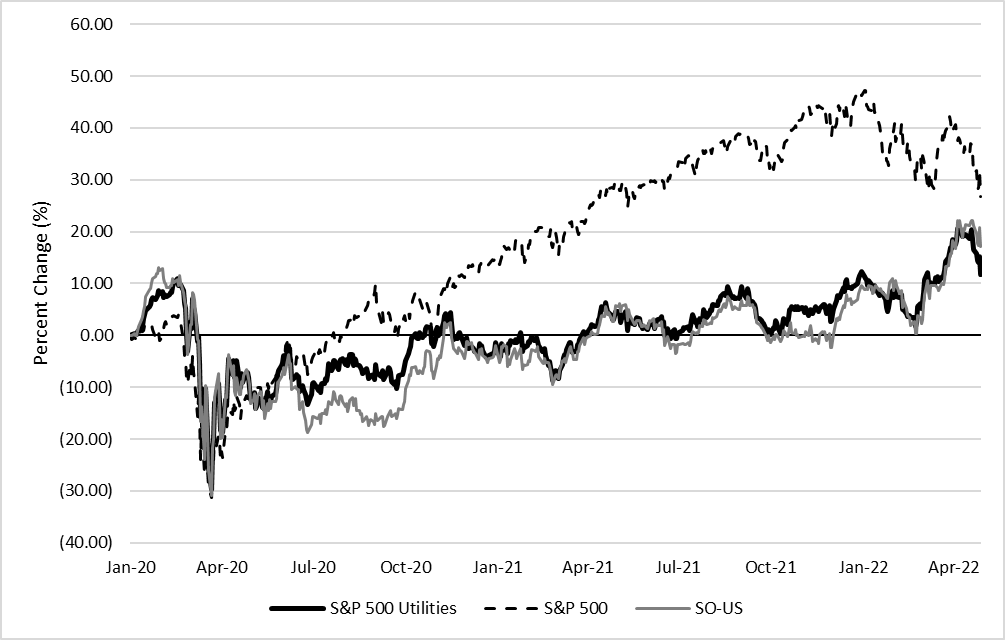
**Figure 4: Beta Coefficients for Proxy Group and Southern Company**



1. How have utilities performed relative to the broader equity market since the onset of COVID-19?
2. The past two years have reflected a challenging period for utility equities. While the overall market surpassed its pre-pandemic levels by mid-2020, the same was not true with the utility sector. The S&P Utilities sector was one of the worst performing market sectors in 2020, declining by 8.85 percent from the mid-February peak as compared to a 10.92 percent increase for the S&P 500. The only market sectors that underperformed utilities in 2020 were real estate (down 9.39 percent) and energy (down 25.67 percent). At end of 2020, seven of the other eight market sectors were above their mid-February 2020 levels, led by technology (up 27.89 percent), consumer discretionary (up 22.85 percent), and materials (up 21.78 percent).[[12]](#footnote-13) Figure 5 compares the daily performance of the S&P 500 stock market index and the S&P Utilities Index as of April 30, 2022. Performance is shown as the percentage gain from January 1, 2020. As Figure 5 shows, the S&P Utilities Index and Southern Company’s stock price have lagged the S&P 500 Index since January 2020.

**Figure 5: Relative Performance of Utilities and the S&P 500,**

**January 2020 – April 2022[[13]](#footnote-14)**



Although utilities initially performed well in early 2022, the sector’s performance should be viewed with caution. As Fidelity Investments recently noted “[i]n the past, powerful utilities rallies have signaled investors getting too defensive. The market typically has gained, and utilities have underperformed, in 12-month periods after top-decile monthly relative returns for the sector.”[[14]](#footnote-15) In other words, the recent stock price increase for utilities may not continue over the next year. Just as an increase in Beta signals an increase in the cost of equity in the CAPM model, weakening stock prices indicate an increase in the cost of equity in the DCF model, as signaled by the market data.

1. How has the current economic environment affected the credit ratings for utilities?
2. According to a recent report by S&P Global, credit ratings for North American utilities “weakened sharply in 2020.” According to S&P, “[t]he percentage of North American regulated utilities with a negative outlook or on CreditWatch with negative implications surged from 18% in 2019 to 36% in 2020.” The report also indicated “that the number of downgrades exceeded the number of upgrades by a wide margin in 2020 for the first time since 2010.” Regarding the causes of the weakening credit profiles, S&P stated: “The main causes of weakening credit quality reflected environment, social, and governance (ESG) risks, regulatory issues, and companies’ practice of strategically managing financial measures close to their downgrade threshold with little or no cushion,” and the COVID-19 pandemic “was not the culprit for weaker credit quality” the report states.[[15]](#footnote-16) That trend continued in 2021, as S&P noted that “credit quality weakened again in 2021 and represented the second consecutive year that downgrades outpaced upgrades” primarily due to weak financial measures and ESG-related risks.[[16]](#footnote-17) While the views of rating agencies represent an important consideration, they are not the only factor that equity investors consider. The important distinction is that credit rating agencies are primarily focused on the ability of a utility to pay its debts, while equity analysts and institutional investors are more concerned with profitability and value creation.
3. What are your conclusions regarding the effects of the current market environment on the cost of equity for Georgia Power?
4. Given the uncertainty and volatility that have characterized capital markets since February 2020, and the increase in relative risk of the utility industry (as measured by Beta) compared to the broader market, and the pressures cited by S&P on utility credit quality, it is reasonable that equity investors require a higher ROE today than in the pre-pandemic period to compensate for the additional risk associated with owning common stock. This is not to say that the pandemic is the cause; this period has also been characterized by an increased focus on changes in the business driven by the need to accelerate capital investment to lower carbon emissions and modernize the grid for new functionality.

## Economic Recovery and Inflation Risk

1. Are there indications THAT the Federal Reserve is normalizing monetary policy?

A. Yes. After its March 16, 2022 meeting, the Federal Open Market Committee (“FOMC”) acknowledged that the invasion of Ukraine by Russia is creating highly uncertain implications for the U.S. economy and announced its decision to raise the target range for the federal funds rate to 0.25 percent to 0.50 percent with an expectation of ongoing increases.[[17]](#footnote-18) The FOMC raised the federal funds target rate 50 basis points at its May meeting[[18]](#footnote-19) and 75 basis points at its June meeting.[[19]](#footnote-20) This is the largest single increase since 1994, and signals the Federal Reserve’s serious intent to fight inflation, recognizing  that higher interest rates will slow the economy.  The FOMC’s Summary of Economic Projections project a median federal funds rate of 3.4 percent by the end of 2022 and 3.8 percent by the end of 2023[[20]](#footnote-21).

While the Federal Reserve has increased interest rates, it has simultaneously pulled back on its bond purchasing actions. Taken together, these actions are a reminder that the Fed's job is to “take away the punch bowl just as the party gets going.”[[21]](#footnote-22) Beginning in January, the Federal Reserve began to reduce purchases of Treasury securities by $20 billion and mortgage-backed securities by $10 billion on a monthly basis.[[22]](#footnote-23) This change is double the initial plan previously outlined at the November 2, 2021 meeting.[[23]](#footnote-24) After the May 4 meeting, the FOMC issued its broader plans for reducing the size of the Federal Reserve’s balance sheet, by reducing its holdings of Treasury securities, agency debt, and mortgage back securities on June 1. The Federal Reserve intends to reduce Treasury securities at a pace capped at $30 billion per month for three months and increase the cap to $60 billion per month thereafter.[[24]](#footnote-25) Similarly, agency debt and mortgage-backed securities will be reduced at a pace capped at $17.5 billion per month for the first three months and increase to $35 billion per month thereafter.[[25]](#footnote-26)

1. Why has the Federal Reserve decided to normalize monetary policy?
2. The Federal Reserve has accelerated plans to normalize monetary policy in response to increasing inflation. While the Federal Reserve initially viewed inflation as transitory, it has been higher and more persistent than the target levels and is expected to continue in 2022. Specifically, Federal Reserve Chairman Jerome Powell stated:

[T]he inflation outlook had deteriorated significantly this year even before Russia's invasion of Ukraine.

\*\*\*

The rise in inflation has been much greater and more persistent than forecasters generally expected. For example, at the time of our June 2021 meeting, every Federal Open Market Committee (FOMC) participant and all but one of 35 submissions in the Survey of Professional Forecasters predicted that 2021 inflation would be below 4 percent. Inflation came in at 5.5 percent.

\*\*\*

For a time, moderate inflation forecasts looked plausible—the one-month headline and core inflation rates declined steadily from April through September. But inflation moved up sharply in the fall, and, just since our December meeting, the median FOMC projection for year-end 2022 jumped from 2.6 percent to 4.3 percent.[[26]](#footnote-27)

1. Please describe the significance of current inflationary pressure and expectations over the near-term.
2. Inflation is currently at its highest level in approximately 40 years and interest rates have recently increased from historic low levels observed at the onset of the pandemic. The year-over-year (“YOY”) change in the Consumer Price Index (“CPI”) published by the Bureau of Labor Statistics increased steadily in 2021 from 1.37 percent in January 2021 to 7.0 percent in December 2021. This trend has continued with the YOY change in CPI of 7.5 percent in January 2022, 7.9 percent in February 2022, 8.6 percent in March, and 8.2 percent in April. The 8.6 percent change in the CPI in March 2022 was the largest 12-month increase since December 1981. Goldman Sachs opined: “A very high inflation path in 2022 should make an easy case for steady rate hikes at all seven remaining FOMC meetings.”[[27]](#footnote-28) The FOMC participants in March projected an increase in the federal funds rate to a median range of 1.75 percent to 2.00 percent in 2022, and a range of 2.50 percent to 2.75 percent in 2023.[[28]](#footnote-29) Further, as noted earlier, the Federal Reserve decided to reduce the amount of Treasury and mortgage-backed securities on its balance sheet.[[29]](#footnote-30) This means that the historic low interest rate environment is deliberately designed to reverse in 2022.
3. What effect will inflation have on long-term interest rates?
4. Inflation and the Federal Reserve’s normalization of monetary policy will likely result in increases in long-term interest rates. Specifically, inflation reduces the purchasing power of the future interest payments an investor expects to receive over the duration of the bond. This risk increases the longer the duration of the bond. As a result, if investors expect increased levels of inflation, they will require higher yields to compensate for the increased risk of inflation which means interest rates will increase.

## Conclusions

1. What conclusions do you draw from your analysis of capital market conditions?
2. Investors are increasingly faced with inflationary pressures, and the Federal Reserve is unwinding its pandemic response measures. Long-term interest rates have increased substantially since the historic lows of 2020 and are expected to continue to increase. Importantly, this requires the use of both current and forecast bond yields in the CAPM and Risk Premium models.

As described earlier, declines in previously high utility valuations are expected as utilities underperform the broader market. If that is the case, the results of the DCF model would understate the forward-looking cost of equity because the dividend yield is calculated using historical average stock prices which do not fully reflect these expectations.

These circumstances collectively reinforce the importance of using forward-looking model inputs and multiple models, as I have with the CAPM, DCF, Risk Premium, and Expected Earnings approaches.

# PROXY GROUP SELECTION

1. Why is it necessary to select a proxy group to estimate the cost of equity for GEORGIA POWER?
2. Since the ROE is a market-based concept and Georgia Power is not publicly traded, it is necessary to establish a group of companies that is both publicly traded and comparable to Georgia Power. Even if Georgia Power were a publicly traded entity, it is possible that transitory events could bias the Company’s market value in one way or another in a given period. A significant benefit of using a proxy group is the ability to mitigate the effects of short-term events that may be associated with any one company. The proxy companies used in my ROE analyses possess a set of business and operating characteristics similar to Georgia Power’s vertically integrated electric utility operations, and thus provide a reasonable basis for estimating the Company’s ROE.
3. PLEASE PROVIDE A SUMMARY PROFILE OF GEORGIA POWER.
4. Georgia Power is a wholly owned subsidiary of Southern Company, providing electric generation, transmission, and distribution service to more than 2.6 million residential, commercial, and industrial customers in Georgia.[[30]](#footnote-31) It owns 14,541 MW of regulated generation assets, including nuclear, coal, oil, gas, hydroelectric, and solar generation facilities.[[31]](#footnote-32) The Company has long-term issuer ratings from S&P of BBB+ (Outlook: Stable), Moody’s Investors Service (“Moody’s”) of Baa1 (Outlook: Stable), and FitchRatings (“Fitch”) of BBB (Outlook: Stable).[[32]](#footnote-33)
5. Please describe the specific screening criteria you have utilized to select a proxy group.
6. I began with the 36 investor-owned domestic electric utilities covered by Value Line and then screened companies according to the following criteria:
7. Consistently pays quarterly cash dividends;
8. Maintains an investment grade long-term issuer rating (BBB- or higher) from S&P;
9. Is covered by more than one equity analyst;
10. Has positive earnings growth rates published by at least two of the following sources: Value Line, Thomson First Call (as reported by Yahoo! Finance), and Zack’s Investment Research (“Zacks”);
11. Owns regulated electric generation assets;
12. Regulated revenue and net operating income make up more than 60 percent of the consolidated company’s revenue and net operating income (based on a 3-year average from 2019-2021);
13. Regulated revenue and net operating income from regulated electric operations makes up more than 80 percent of the consolidated company’s regulated revenue and net operating income (based on a 3-year average from 2019-2021); and
14. Is not involved in a merger or other transformative transaction for an approximate six-month period prior to my analysis.
15. DID YOU INCLUDE SOUTHERN COMPANY IN YOUR ANALYSIS?
16. No, I did not. To avoid the circular logic that would otherwise occur, it is my practice to exclude the subject company, or its parent holding company, from the proxy group.
17. WHAT IS THE COMPOSITION OF YOUR RESULTING PROXY GROUP?
18. Based on the screening criteria discussed above, and financial information through fiscal year 2021, I arrived at a proxy group consisting of the 14 companies shown in Figure 6. The results of my screening process are shown in Exhibit JMC-3.

**Figure 6: Proxy Group**

|  |  |
| --- | --- |
| **Company** | **Ticker** |
| ALLETE, Inc. | ALE |
| Alliant Energy Corporation | LNT |
| Ameren Corporation | AEE |
| American Electric Power Company, Inc. | AEP |
| Duke Energy Corporation | DUK |
| Edison International | EIX |
| Entergy Corporation | ETR |
| Evergy, Inc. | EVRG |
| Hawaiian Electric Industries, Inc. | HE |
| IDACORP, Inc. | IDA |
| NextEra Energy | NEE |
| OGE Energy Corporation | OGE |
| Portland General Electric Company | POR |
| Xcel Energy Inc. | XEL |

1. DoES your screening criteria result in a group of companies that investors would view as comparable to GEORGIA POWER?
2. Yes. While no proxy group will be identical in risk as the Company, I believe this group of electric utilities is reasonably comparable to the financial and operational characteristics of Georgia Power. The proxy group screening criterion requiring an investment grade credit rating ensures that the proxy group companies, like Georgia Power, are in sound financial condition. Because credit ratings take into account business and financial risks, the ratings provide a broad measure of investment risk for investors. I have only included companies in the proxy group that own regulated generation assets because vertically integrated electric utilities have unique operating characteristics and business risks that cause investors to require a higher return on equity to compensate for those risks. These unique risks are not shared by pure Transmission and Distribution electric utilities. Additionally, I have screened on the percent of revenue and net operating income from regulated operations to differentiate between utilities that are protected by regulation and those with substantial unregulated operations or market-related risks. Also, I have screened on the percentage contribution of the electric utility segment to regulated consolidated financial results to select companies that, like Georgia Power, derive the majority of their revenue and operating income from regulated electric operations. These screens collectively reflect key risk factors that investors consider in making investments in electric utilities.
3. What is your conclusion with regard to the proxy group for GEORGIA POWER?
4. I conclude that my group of 14 vertically integrated electric utilities adequately reflects the broad set of risks that investors consider when investing in a U.S. regulated vertically integrated electric utility such as Georgia Power.

# DETERMINATION OF THE APPROPRIATE COST OF EQUITY

1. WHAT MODELS DID YOU USE IN YOUR ROE ANALYSES?
2. I have considered the results of several ROE estimation models, including the Constant Growth DCF model, the CAPM, the Bond Yield Plus Risk Premium approach, and an Expected Earnings analysis. When faced with the task of estimating the cost of equity, analysts are inclined to gather and evaluate as much relevant data (both quantitative and qualitative) as can be reasonably obtained.

## Constant Growth DCF Model

1. Please describe the DCF APPROACH.
2. The DCF approach is based on the theory that a stock’s current price represents the present value of all expected future cash flows. In its simplest form, the DCF model expresses the ROE as the sum of the expected dividend yield and long-term growth rate:

 [1]

Where “*k*” equals the required return, “*D*” is the current dividend, “*g*” is the expected growth rate, and “*P*” represents the subject company’s stock price.

Assuming a constant growth rate in dividends, the model may be rearranged to compute the ROE accordingly, as shown in Formula [2]:

*k* =  + *g* [2]

Stated in this manner, the cost of common equity is equal to the dividend yield plus the dividend growth rate.

1. What are the assumptions underlying the Constant Growth DCF model?
2. The Constant Growth DCF model is based on the following assumptions: (1) a constant average growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings multiple; and (4) a discount rate greater than the expected growth rate.
3. Please summarize your application of the Constant Growth DCF model.
4. I calculated DCF results for each of the proxy group companies using the following inputs:
   * Average stock prices for the historical period, over 30, 90, and 180 trading days through April 30, 2022;
   * Annualized dividend per share as of April 30, 2022; and
   * Company-specific earnings growth forecasts for the term *g*.

My application of the Constant Growth DCF model is provided in Exhibit JMC-4.

1. Why did you use averaging periods of 30, 90, and 180 trading days?
2. It is important to use an average of recent trading days to calculate the term *P* in the DCF model to ensure that the calculated ROE is not skewed by anomalous events that may affect stock prices on any given trading day. At the same time, it is important to reflect the conditions that have defined the financial markets over the recent past. In my view, consideration of those three averaging periods reasonably balances these interests.
3. Did you adjust the dividend yield to account for periodic growth in dividends?
4. Yes, I did. Utility companies tend to increase their quarterly dividends at different times throughout the year, so it is reasonable to assume that such increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for the purposes of calculating this component of the DCF model. This adjustment ensures that the expected dividend yield is representative of the coming 12-month period. Accordingly, the DCF estimates reflect one-half of the expected growth in the dividend yield.[[33]](#footnote-34)
5. What sources of growth have you used in your DCF analysis?
6. I have used the consensus analyst five-year growth estimates in earnings per share (“EPS”) from Thomson First Call and Zacks, as well as EPS growth rate estimates published by Value Line.
7. Why did you focus on ePS growth?
8. The Constant Growth DCF model assumes that dividends grow at a constant rate in perpetuity. Accordingly, in order to reduce the long-term growth rate to a single measure, one must assume a constant payout ratio, and that earnings per share, dividends per share, and book value per share all grow at the same constant rate. Over the long term, however, dividend growth can only be sustained by earnings growth. As noted by Brigham and Houston in their text, *Fundamentals of Financial Management*: “Growth in dividends occurs primarily as a result of growth in *earnings per share* (EPS).”[[34]](#footnote-35) It is therefore important to focus on measures of long-term earnings growth from credible sources as an appropriate measure of long-term growth in the DCF model.
9. Are other sources of dividend growth available to investors?
10. Yes, although that does not mean that investors incorporate such estimates into their investment decisions. Academic studies suggest that investors base their investment decisions on analysts’ expectations of growth in earnings.[[35]](#footnote-36) I am not aware of any similar findings regarding non-earnings-based growth estimates. In addition, the only forward-looking growth rates that are available on a consensus basis are analysts’ EPS growth rates. The fact that earnings growth projections are the only widely accepted estimates of growth provides further support that earnings growth is the most meaningful measure of growth among the investment community.
11. What are THE RESULTS OF your Constant Growth DCF analysis?
12. The results of my Constant Growth DCF analysis are provided in Exhibit JMC-4 and summarized in Figure 7.

**Figure 7: Constant Growth DCF Results**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Mean Low** | **Mean** | **Mean High** |
| 30-day average | 7.99% | 8.88% | 9.78% |
| 90-day average | 8.12% | 9.01% | 9.91% |
| 180-day average | 8.20% | 9.09% | 9.99% |

1. How did you calculate the Mean High, Mean Low, and Overall Mean DCF results?
2. I calculated the Mean High DCF result using the maximum growth rate (i.e., the maximum of the First Call, Value Line, and Zacks EPS growth rates) in combination with the expected dividend yield for each of the proxy group companies. I used a similar method to calculate the Mean Low DCF results, using the minimum growth rate for each company. The Mean results reflect the average growth rate from each source for each company in combination with the expected dividend yield.
3. What is your conclusion regarding the results of the DCF model?
4. My primary conclusion is that the results of the DCF model likely understate the cost of equity for electric utilities under current market conditions. The FERC considered what it termed “anomalous” market conditions as a basis for abandoning its practice of sole reliance on the DCF model to set ROEs for electric transmission companies which began in the 1980s. FERC reasoned:

The fact that utility stock prices appear to have performed in a manner inconsistent with the theory underlying the DCF methodology during the periods at issue in these four complaint proceedings is an example of what [New England Transmission Owners] have described as “model risk” — the risk that in some circumstances a model will produce results that do not reflect real world experience. It appears that, for whatever the reason, investors during this period have seen greater value in utility stocks than the DCF methodology would predict. This suggests that the ROE estimated by that methodology may be correspondingly inaccurate.[[36]](#footnote-37)

The average DCF result is 8.99 percent, and some estimates are as low as 5-7 percent, well below the results of the other models and any reasonable indication of the cost of equity. Consequently, in an investment environment dominated by volatility and uncertainty, it is necessary to also consider the results of Risk Premium models (such as the CAPM and Bond Yield Risk Premium analysis) and the Expected Earnings model, in order to assess the reasonableness of the DCF results and ultimately determine where to set the appropriate return from within the range of reasonable results. These models rely on data that avoid or mitigate the problems associated with the DCF method.

## CAPM Analysis

1. Please briefly describe the general form of the Capital Asset Pricing Model.
2. The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium (to compensate investors for the non-diversifiable or “systematic” risk of that security).[[37]](#footnote-38)

As shown in Equation [3], the CAPM is defined by four components, each of which must theoretically be a forward-looking estimate:

*Ke* = *rf* + β(*rm* – *rf*) [3]

where:

*Ke* = the required ROE for a given security;

*rf* = the risk-free rate of return;

*β = the Beta of an individual security; and*

*rm* = the required return for the market as a whole.

The term (*rm* – *rf*) represents the Market Risk Premium (“MRP”). According to the theory underlying the CAPM, since unsystematic risk can be diversified away, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by Beta, which is defined as:

β =  [4]

where:

*re* = the rate of return for the individual security or portfolio.

The variance of the market return, noted in Equation [4], is a measure of the uncertainty of the general market, and the covariance between the return on a specific security and the market reflects the extent to which the return on that security will respond to a given change in the market return. Thus, Beta represents the risk that the selected security will not be effective in diversifying systematic market risks.

1. Have economic and financial market conditions also affected the CAPM?
2. Yes. Given the extraordinarily low level of interest rates on Treasury bonds as compared to historical levels, using current or even near-term projections of government bond yields would distort market expectations for a reasonable risk-free rate. Using the 5-year forecast of bond yields helps alleviate these short-term market factors affecting the risk-free rate, or “*rf*” in the CAPM formula. As discussed in Section IV, interest rates have increased in recent months and are expected to continue to increase as the economy recovers from the effects of the COVID-19 pandemic. Further, due to the fiscal and monetary stimulus provided to the U.S. economy over the past two years, inflation risk remains elevated. It is also important to recognize that Georgia Power is financing long-lived assets, and the cost of capital should be forward looking to reflect that perspective.
3. What risk-free rate did you use in your CAPM analysis?
4. Since both the CAPM and Risk Premium models assume long-term investment horizons, I used the Blue Chip forecast of the yield on 30-year Treasury bonds for 2023-2027 of 3.40 percent as my estimate of the risk-free rate.[[38]](#footnote-39) That time period reflects a forward-looking view, which is the objective of the ROE analysis. However, I also considered CAPM results applying the 30-day average yield (as of April 30, 2022) on 30-year Treasury bonds of 2.72 percent. This is the approach recommended by Dr. Roger Morin in his text on regulatory finance:

There are two possibilities for proxying investors’ expectations of the risk-free rate expected to prevail in one year: actual and forecast interest rates. Each offers distinct advantages and limitations. At the conceptual level, given that ratemaking is a forward-looking process, interest rate forecasts are preferable. Moreover, the conceptual models used in the determination of the cost of equity, such as the CAPM, are prospective in nature and require expectational inputs.

\*\*\*

One reasonable option for the regulator is to accord equal weight to both current interest rate levels and the analysts’ consensus forecast. Each proxy for expected interest rates brings information to the judgement process from a different light.[[39]](#footnote-40)

1. Have regulators in other jurisdictions supported the use of a projected risk-free rate in the CAPM analysis?
2. Yes. In a 2017 decision, the Massachusetts Department of Public Utilities (or “MDPU”) noted that accommodative Federal monetary policy had pushed Treasury yields to near historical lows. As a result, the MDPU found it appropriate to use prospective interest rate expectations in the CAPM, stating:

Current federal monetary policy that is intended to stimulate the economy has pushed treasury yields to near historic lows. Consequently, the Department has found that a CAPM analysis based on current treasury yields may tend to underestimate the risk-free rate over the long term and, thereby, understate the required ROE. The CAPM is based on investor expectations and, therefore, it is appropriate to use a prospective measure for the risk-free rate component. The Department has found that Blue Chip Financial Forecasts is widely relied on by investors and provides a useful proxy for investor expectations for the risk-free rate.[[40]](#footnote-41)

1. What measures of Beta did you use in your CAPM analysis?
2. As shown in Exhibit JMC-5.2, I utilized two measures of Beta for the proxy group companies: (1) the reported Beta coefficients from Bloomberg (which are calculated using five years of weekly data against the S&P 500 Index); and (2) the reported Beta coefficients from Value Line (which are calculated using five years of weekly data against the New York Stock Exchange Composite Index). As previously discussed, Beta coefficients for utilities have increased substantially since January 2020, as utilities have traded more like the broader market. However, it is important to emphasize that Beta coefficients are calculated over a five-year period, so this recent increase is not a short-term market phenomenon. The recent movement in Betas captures a trend that began five years ago but has been accelerated by the recent market conditions. The substantial increase in Beta coefficients for the proxy group companies represents a significant departure from how investors have typically viewed utilities relative to the broader market and is not just COVID-19 related.
3. What Market Risk Premium did you use in your CAPM analysis?
4. Consistent with the approach adopted by FERC, I used the Constant Growth DCF model to estimate the total market return for the S&P 500 Index. I have used projected earnings growth rates and dividend yields from three sources: (1) S&P’s Earnings and Estimates report; (2) Bloomberg Professional; and (3) Value Line. Using the DCF model for a broad-based total market return mitigates the challenges specific to the utilities sector. As of April 30, 2022, the average total market return from these three sources is 15.29 percent, as shown in Figure 8 (also see Exhibit JMC-5.1).

**Figure 8: Total Expected Market Return**

|  |  |
| --- | --- |
| Source | Market Return |
| S&P Earnings & Estimates | 15.87% |
| Bloomberg Professional | 14.03% |
| Value Line | 15.63% |
| Average | 15.18% |

I then calculated the MRP by subtracting the risk-free rates from the total market return. My calculation as shown in Exhibit JMC-5.2 yielded a market derived ex-ante MRP of 11.78 percent using the projected risk-free rate of 3.40 percent. Using the current risk-free rate of 2.72 percent, the MRP is 12.46 percent.

1. What are the results of your CAPM analyses?
2. As shown in Figure 9 below and Exhibit JMC-5.2, applying the projected 30-year Treasury yield of 3.40 percent and 15.18 percent expected market return, the CAPM results are 13.75 percent (using Value Line Betas) and 13.44 percent (using Bloomberg Betas). Applying the 30-day average yield on 30-year Treasury bonds of 2.72 percent, the CAPM results are 13.66 percent (using Value Line Betas) and 13.34 percent (using Bloomberg Betas). The average of these results is 13.55 percent.

**Figure 9: Proxy Group Average CAPM Results**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Value Line Beta (0.88)** | **Bloomberg Beta (0.85)** | **Average** |
| Long-Term Projected Risk-Free Rate (3.40%) | 13.75% | 13.44% | **13.60%** |
| Current 30-Day Average Risk-Free Rate (2.72%) | 13.66% | 13.34% | **13.50%** |
| **Average** | **13.71%** | **13.39%** | **13.55%** |

1. What is your conclusion regarding the results of the capm model?
2. The results of the CAPM model are appreciably higher than the results from the other models, driven by market factors affecting all three of the model’s inputs: higher interest rates, higher betas, and higher expectations for overall market equity returns. While I do not discount these factors, these results further reinforce the benefit of balance found in multiple models.

## Risk Premium Analysis

1. Please describe the Risk Premium approach that you used.
2. In general terms, this approach recognizes that equity is riskier than debt because equity investors bear the residual risk associated with ownership. Equity investors, therefore, require a greater return (i.e., a premium) than would a bondholder. The Risk Premium approach estimates the cost of equity as the sum of the Equity Risk Premium and the yield on a particular class of bonds.

ROE = *RP* + *Y* [5]

Where:

*RP =* Risk Premium (difference between allowed ROE and the 30-Year Treasury Yield) and

*Y =* Applicable bond yield*.*

Since the equity risk premium is not directly observable, it is typically estimated using a variety of approaches, some of which incorporate *ex-ante*, or forward-looking, estimates of the cost of equity and others that consider historical, or *ex-post*, estimates. For my Risk Premium analysis, I have relied on authorized returns from a large sample of vertically integrated electric utility companies.

1. What did your Risk Premium analysis reveal?
2. To estimate the relationship between risk premia and interest rates, I conducted a regression analysis using the following equation:

*RP* = *a* + (*b x Y)* [6]

where:

*RP =* Risk Premium (difference between allowed ROEs and the 30-Year Treasury Yield);

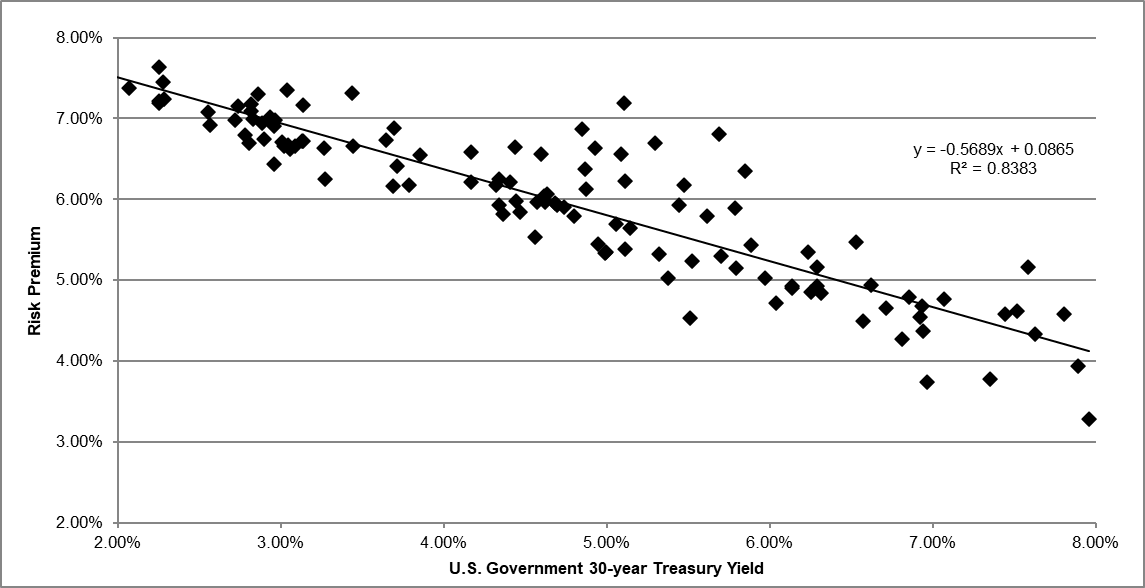
*a =* Intercept ter*m;*

*b =* Slope term; and

*Y =* 30-Year Treasury Yield.

Data regarding allowed ROEs were derived from vertically integrated electric utility company rate cases from January 1, 1992 through April 30, 2022, as reported by Regulatory Research Associates.

**Figure 10: Risk Premium Results**



As illustrated by Figure 10 (above), the risk premium varies with the level of bond yield, and generally increases as the bond yields decrease, and vice versa. In order to apply this relationship to current and expected bond yields, I consider three estimates of the 30-year Treasury yield, including the current 30-day average, a near-term Blue Chip consensus forecast for Q3 2022 – Q3 2023, and a Blue Chip consensus forecast for 2023–2027. I find the projected five-year result to be most applicable for the following reasons: (1) investors are expecting increases in government bond yields; (2) investors typically have a multi-year view of their required returns on equity; (3) Georgia Power’s large capital expenditure plan requires that the Company continue to be able to attract capital on reasonable terms and conditions; and (4) the projected five-year Treasury bond yield aligns with the term of the Company’s proposed Alternative Rate Plan. Based on the regression coefficients in Exhibit JMC-6, which allow for the estimation of the risk premium at varying bond yields, the results of my Risk Premium analysis are shown in Figure 11 below.

**Figure 11: Risk Premium Results Using 30-Year Treasury Yield**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **30-Day Average Yield on 30-Year Treasury Bond** | **Q3 2022–Q3 2023 Forecast for Yield on 30-Year Treasury Bond[[41]](#footnote-42)** | **2023-2027 Forecast for Yield 30-Year Treasury Bond[[42]](#footnote-43)** |
| Yield | 2.72% | 3.34% | 3.40% |
| Risk Premium | 7.11% | 6.75% | 6.72% |
| Resulting ROE | 9.83% | 10.09% | 10.12% |

1. What is your conclusion regarding the results of the risk premium model?
2. I believe the Risk Premium model provides an important perspective on the primary relationship between the risk-free rate and utility authorized ROEs over a variety of financial and economic cycles. This is particularly important today given the anticipated shift from a very low interest rate environment to one of higher rates, and this impact can be captured directly in the model.

## Expected Earning Analysis

1. Have you conducted any other analysis to estimate the cost of equity for georgia power?
2. Yes. I have also conducted an Expected Earnings analysis to estimate the cost of equity for Georgia Power based on the projected ROEs for the proxy group companies.
3. What is an Expected Earnings Analysis?
4. The Expected Earnings methodology is a comparable earnings analysis that calculates the earnings that an investor expects to receive on the book value of a stock. The Expected Earnings analysis is a forward-looking estimate of investors’ expected returns. The use of an Expected Earnings approach based on the proxy companies provides a range of the expected returns on a group of risk-comparable companies to the subject company. This range is useful in helping to determine the opportunity cost of investing in the subject company, which is relevant in determining a company’s ROE.

The Expected Earnings approach relying on expected returns for like-risk companies is a core strength of the model and consistent with the basic tenets of *Hope*: “the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.” Since the Expected Earnings model provides an accounting-based approach that relies on investment analysts’ projections of earnings on book equity, it affords the benefit of analyst insights, knowledge, and expertise in interpreting a given company’s earnings prospects in the context of current market conditions.

1. How is the Expected Earnings Approach calculated?
2. I relied on the projected ROE for the proxy companies as reported by Value Line for the period from 2025-2027. I then adjusted those projected ROEs to account for the fact that the ROEs reported by Value Line are calculated on the basis of common shares outstanding at the end of the period, as opposed to average shares outstanding over the entire period. As shown in Figure 12 below and Exhibit JMC-7, the Expected Earnings analysis results in a mean of 11.03 percent and a median of 11.08 percent.

**Figure 12: Expected Earnings Results**

|  |  |
| --- | --- |
|  | **ROE** |
| Proxy Group Average | 11.03% |
| Proxy Group Median | 11.08% |

1. What is your conclusion regarding the results of the expected earnings model?
2. The model captures investor expectations for ROEs for each company in the proxy group as estimated by impartial analysts. This is a valuable tool given the nature of the analysis here is designed to measure required returns for Georgia Power. It is reasonable to assume that investors would require returns from investment in Georgia Power similar to those they could earn in comparable investments, so these results are informative.

## Evaluating Model Results

1. Please explain how you considered the results of the DCF, CAPM, Risk Premium, and Expected Earnings analysis to arrive at your ROE recommendation.
2. I have placed equal weight on the results of the DCF, CAPM, Bond Yield Risk Premium, and Expected Earnings analyses. My ROE recommendation is ultimately based on the average produced by these four methodologies, providing equal weight to each reflecting the validity of each model. As shown in Figure 13 (and computed in JMC-2 as the “4-Model Average”), I derive an average base ROE estimate for the proxy group companies of 10.92 percent, excluding flotation costs.

**Figure 13: Base ROE Results**

|  |  |
| --- | --- |
|  | **ROE Estimate** |
| DCF | 8.99% |
| CAPM | 13.55% |
| Risk Premium | 10.12% |
| Expected Earnings | 11.03% |
| Range | 8.99% – 13.55% |
| Average ROE | 10.92% |

As noted above my estimate of the cost of equity excludes flotation costs.

## Flotation Cost Adjustment

1. What are flotation costs?
2. Flotation costs are the costs associated with the sale of new issues of common stock.
3. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other costs of issuance of common stock. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diminishing the utility’s ability to attract adequate capital on reasonable terms.
4. Why is it important to recognize flotation costs in the allowed ROE?
5. The allowed ROE is the only ratemaking mechanism through which it is appropriate to recover these necessary costs. Flotation costs are reflected on the utility’s balance sheet as “paid in capital” and are not expensed on the utility’s income statement. When a company issues common stock, flotation costs are incurred and netted against the proceeds from the issuance reducing the amount available for investment in rate base by the amount of the flotation costs. If Georgia Power is denied the opportunity to recover its prudently incurred flotation costs through its allowed ROE, actual returns will fall short, and equity share value will be diluted.
6. Do academic and financial experts recognize the need to consider flotation costs in a utility’s cost of equity?
7. Yes. Dr. Roger Morin, a recognized expert in regulatory economics and finance, notes:

The costs of issuing these securities are just as real as operating and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit recovery of these costs…. The simple fact of the matter is that common equity capital is not free….[Flotation costs] must be recovered through a rate of return adjustment.[[43]](#footnote-44)

According to Dr. Shannon Pratt, a published expert in cost of capital estimation:

Flotation costs occur when new issues of stock or debt are sold to the public. The firm usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the firm. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the firm’s required returns on these proceeds equate to a higher return to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the cash flow to discount, or by incorporating the cost into the cost of capital. Because flotation costs are not typically applied to operating cash flow, one must incorporate them into the cost of capital.[[44]](#footnote-45)

1. `how did you calculate it?
2. Based on the proxy group issuance costs shown in Exhibit JMC-8, I conclude that flotation costs for the proxy companies have equaled roughly 2.47 percent of gross equity raised. Adjusting the dividend yield component in the DCF model by 2.47 percent results in a flotation cost estimate of eight basis points. To properly reflect these issuance costs in my cost of capital estimates, it would be reasonable and appropriate to adjust the authorized ROE upward by approximately eight basis points for Georgia Power.

## Consideration of Specific Risk Factors

1. DOES YOUR RECOMMENDATION INCLUDE A DOWNWARD OR UPWARD ADJUSTMENT FOR GEORGIA POWER SPECIFIC RISK FACTORS?
2. No, it does not. All the proxy group vertically integrated electric utilities face a challenging environment requiring continuous access to capital in order to meet public expectations of safe, reliable, and reasonably economic utility service. Georgia Power is projecting a capital spending program through 2026 that will require the Company to maintain continuous access to capital markets on reasonable terms and conditions. For these reasons, it is important that the authorized ROE be set at a level that allows Georgia Power to continue to attract both debt and equity under favorable terms under a variety of economic and financial market conditions, including the inflationary conditions we are facing today and in the foreseeable future. My recommendation, however, makes no adjustment, explicit or implicit, for the specific capital expenditure requirements of Georgia Power. As noted above, I excluded Southern (and therefore Georgia Power) from the proxy group I used to avoid any question of circularity of my results.

Q. IS THERE ANY BASIS TO TREAT GEORGIA POWER LESS RISKY THAN ITS PEER UTILITIES?

A.No, there is not. I have undertaken a review of regulatory mechanisms designed to mitigate business risk, and they support treating the results from the proxy group I selected as representative of the business risk of a prudently managed vertically integrated regulated electric utility like Georgia Power. The results of my analysis are presented in Exhibit JMC-9. Specifically, I examined the following factors that affect the regulatory risk of Georgia Power and the proxy group companies: (1) test year convention; (2) rate base convention; (3) revenue decoupling; (4) capital cost recovery; and (5) Construction Work in Progress (“CWIP”) in rate base.

As shown in Exhibit JMC-9, 61 percent of the operating companies in the proxy group like Georgia Power provide service in jurisdictions that allow the use of a fully or partially forecasted test year. Further, 56 percent of the operating companies in the proxy group use average rate base like Georgia Power, while 44 percent are allowed to use year-end rate base. Georgia Power has limited revenue protection[[45]](#footnote-46) against fluctuations in customer demand, while approximately 64 percent of the operating companies held by the proxy group have either full or partial revenue decoupling mechanisms that protect against volumetric risk. Generally, Georgia Power’s capital investment costs must be recovered through rate cases, although the Nuclear Construction Cost Recovery mechanism (known as the NCCR) allows Georgia Power to recover financing costs associated with the construction of a nuclear generating plant between rate cases. Approximately 88 percent of the operating companies in the proxy group have a cost recovery mechanism for capital investment (e.g., generation capacity or infrastructure replacement). Finally, Georgia Power is allowed to include CWIP associated with nuclear plant construction, as do approximately 76 percent of the operating companies held by the proxy group.

As discussed above and as shown in Exhibit JMC-9, Georgia Power has similar regulatory risk to the proxy group companies in terms of test year and rate base convention. Georgia Power has comparable regulatory risk with respect to ability to include CWIP in rate base. However, Georgia Power does not have the same degree of protection against volumetric risk as do approximately 64 percent of the operating companies held by the proxy group which have revenue decoupling mechanisms that mitigate the effect on revenue of variations in demand. Nor does Georgia Power have a comprehensive capital cost recovery mechanism as do 88 percent of the operating companies within the proxy group. On balance, these mechanisms indicate that Georgia Power and the proxy group have comparable business risks and regulatory efforts to mitigate those risks.

# CAPITAL STRUCTURE

1. What is GEORGIA POWER’S proposed capital structure?
2. Georgia Power is proposing a financial capital structure targeting a mix of 56.0 percent common equity and 44.0 percent long-term debt.
3. How have you assessed the reasonableness of Georgia Power’s proposed capital structure with respect to the proxy group?
4. The proxy group has been selected to reflect comparable companies in terms of business and financial risks. Therefore, it is appropriate to compare the financial capital structures of the proxy group companies to the financial capital structure proposed by Georgia Power in order to assess whether the Company’s capital structure is reasonable and consistent with industry standards for companies with commensurate risk. I calculated the weighted average capital structures for each of the proxy group operating companies for the eight quarters ended Q4 2021. Exhibit JMC-10 shows that the Company’s proposed common equity ratio of 56.0 percent is within the range of actual common equity ratios of 46.57 percent to 61.48 percent for the operating companies held by the proxy group over this period.
5. What is your conclusion regarding the appropriateness of Georgia Power’s proposed capital structure in this proceeding?
6. Based on the analysis presented in Exhibit JMC-10, my conclusion is that Georgia Power’s proposed capital structure is reasonable. As the Commission recognizes,[[46]](#footnote-47) sufficient equity in the capital structure is an important factor for maintaining Georgia Power’s financial integrity and investment grade credit rating and it is an essential component of Georgia Power’s financial policies enabling access to capital on favorable terms in a variety of market circumstances.

# CONCLUSIONS

1. What is your conclusion regarding a fair ROE for Georgia Power?
2. Based on the quantitative analyses provided in my Direct Testimony, I have established a range of ROE results shown previously in Figure 13 (also see Exhibit JMC-2). The DCF, CAPM, Bond Yield Risk Premium, and the Expected Earnings analysis produce a range of estimates of the Company’s cost of equity of 8.99 percent to 13.55 percent, with a four-model average of 10.92 percent. Adding eight basis points to the 10.92 percent average for flotation costs, I recommend an ROE of 11.00 percent.
3. What is your recommendation with regard to the capital structure for Georgia Power in this proceeding?
4. I support Georgia Power’s actual capital structure of 56.0 percent common equity and 44.0 percent long-term debt as reasonable relative to the range of capital structures for the operating companies held by the proxy group companies.
5. Does this conclude your direct testimony?
6. Yes, it does.

1. Gross Domestic Product (Second Estimate), GDP by Industry, and Corporate Profits (Advanced Estimate), 1st Quarter 2022, U.S. Bureau of Economic Analysis (BEA). [↑](#footnote-ref-2)
2. Source: U.S. Bureau of Economic Analysis (BEA), <https://www.bea.gov/news/2022/gross-domestic-product-first-quarter-2022-advance-estimate>. [↑](#footnote-ref-3)
3. CNBC, Fed will aggressively dial back its bond buying, sees three rate hikes next year (December 15, 2021), available at <https://www.cnbc.com/2021/12/15/fed-will-aggressively-dial-back-its-monthly-bond-buying-sees-three-rate-hikes-next-year.html>. [↑](#footnote-ref-4)
4. Federal Reserve Board Press Release, “Federal Reserve announces extensive new measures to support the economy,” March 23, 2020. [↑](#footnote-ref-5)
5. M2 is defined by the Federal Reserve as follows: M2 includes a broader set of financial assets held principally by households. M2 consists of M1 plus (1) small-denomination time deposits (time deposits in amounts of less than $100,000) less IRA and Keogh balances at depository institutions; and (2) balances in retail money market funds (“MMFs”) less IRA and Keogh balances at MMFs. M1 consists of currency and cash and checkable deposits held at depository institutions, money market deposit accounts, and savings deposits. [↑](#footnote-ref-6)
6. Board of Governors of the Federal Reserve System (US), M2 Money Stock [M2], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/M2SL>, March 22, 2022. [↑](#footnote-ref-7)
7. FRED, Economic Data, available at <https://fred.stlouisfed.org/series/DGS10>. [↑](#footnote-ref-8)
8. U.S. Department of the Treasury, available at <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/TextView.aspx?data=yieldYear&year=2020>. [↑](#footnote-ref-9)
9. U.S. Department of the Treasury, available at <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/TextView.aspx?data=yieldYear&year=2021>. [↑](#footnote-ref-10)
10. Source: Bloomberg Professional. [↑](#footnote-ref-11)
11. Source: Bloomberg Professional. [↑](#footnote-ref-12)
12. Comparison from February 19, 2020, through December 31, 2020. [↑](#footnote-ref-13)
13. Source: S&P Capital IQ Pro. [↑](#footnote-ref-14)
14. Fidelity Investments, Quarterly investment research update, at 5 (May 4, 2022). <https://www.fidelity.com/viewpoints/investing-ideas/investment-research-update?ccsource=email_weekly_0505N&print=true> . [↑](#footnote-ref-15)
15. S&P Global Ratings, *Utility Sector’s credit ratings weakened sharply in 2020*, January 21, 2021. [↑](#footnote-ref-16)
16. S&P Global Ratings, *For the First Time Ever, The Median Investor-Owned Utility Ratings Falls to The ‘BBB’ Category*, January 20, 2022. [↑](#footnote-ref-17)
17. Federal Reserve, Press Release, (Mar. 16, 2022). [↑](#footnote-ref-18)
18. Federal Reserve, Press Release, (May 4, 2022). [↑](#footnote-ref-19)
19. Federal Reserve Presse Release (June 15, 2022). [↑](#footnote-ref-20)
20. Federal Reserve Board and FOMC Summary of Economic Projections, Figure 2, at 4 (June 15, 2022). [↑](#footnote-ref-21)
21. In monetary policy jargon “taking away the punch bowl” refers to a central bank action to reduce the stimulus that it has been giving the economy. William Martin, who chaired the Federal Reserve from 1951-1970, drew this metaphor in a widely quoted speech given in October, 1955. <https://conversableeconomist.blogspot.com/2013/06/the-punch-bowl-speech-william-mcchesney.html> [↑](#footnote-ref-22)
22. Federal Reserve, Press Release, (Dec. 15, 2021). [↑](#footnote-ref-23)
23. Federal Reserve, Press Release, (Nov. 3, 2021). [↑](#footnote-ref-24)
24. Federal Reserve, Plans for Reducing the Size of the Federal Reserve’s Balance Sheet (May 4, 2022). [↑](#footnote-ref-25)
25. *Ibid*. [↑](#footnote-ref-26)
26. Jerome H. Powell’s speech at the 38th Annual Economic Policy Conference, National Association for Business Economists (March 21, 2022). <https://www.federalreserve.gov/newsevents/speech/powell20220321a.htm>. [↑](#footnote-ref-27)
27. Curran, Edna. “Goldman Sachs Sees Fed Hiking More Times in 2023 Amid Inflation.” Bloomberg.com, Bloomberg, 28 Feb. 2022. [↑](#footnote-ref-28)
28. Federal Reserve, Summary of Economic Projections, (Mar. 16, 2021), Figure 2. [↑](#footnote-ref-29)
29. Federal Reserve, Press Release, May 4, 2022, <https://www.federalreserve.gov/monetarypolicy/files/monetary20220504a.pdf> . [↑](#footnote-ref-30)
30. The Southern Company, SEC Form 10-K, at I-6 (December 31, 2021). [↑](#footnote-ref-31)
31. The Southern Company, SEC Form 10-K, at I-31 (December 31, 2021). [↑](#footnote-ref-32)
32. S&P Capital IQ. [↑](#footnote-ref-33)
33. The expected dividend yield is calculated as d1 = d0 (1 + ½ g). [↑](#footnote-ref-34)
34. Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management (Concise Fourth Edition, Thomson South-Western), at 317 (emphasis added). [↑](#footnote-ref-35)
35. *See*, e.g., Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts Growth Forecasts*, Financial Management, Summer 1992, at 65; and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management, Spring 1988, at 81. Please note that while the original study was published in 1988, it was updated in 2004 under the direction of Dr. Vander Weide. The results of that updated study are consistent with Vander Weide and Carleton’s original conclusions. [↑](#footnote-ref-36)
36. 165 FERC ¶ 61,030, December 16, 2018, at Para. 46. [clarification added] [↑](#footnote-ref-37)
37. Systematic risks are fundamental market risks that reflect aggregate economic measures and therefore cannot be mitigated through diversification. Unsystematic risks reflect company-specific risks that can be mitigated and ultimately eliminated through investments in a portfolio of companies and/or market sectors. [↑](#footnote-ref-38)
38. Blue Chip Financial Forecasts, Volume 40, No. 12, December 1, 2021, at 14. [↑](#footnote-ref-39)
39. *New Regulatory Finance*, Roger A. Morin, PhD, Public Utilities Reports, 2006, pp. 172-173. [↑](#footnote-ref-40)
40. D.P.U. 17-05 *Petition of NSTAR Electric Company and Western Massachusetts Electric Company, each doing business as Eversource Energy, Pursuant to G.L. c. 164, § 94 and 220 CMR 5.00 et seq., for Approval of General Increases in Base Distribution Rates for Electric Service and a Performance Based Ratemaking Mechanism*, November 30, 2017, at 693. [↑](#footnote-ref-41)
41. Blue Chip Financial Forecasts, Vol. 41, No. 5, May 1, 2022, at 2. [↑](#footnote-ref-42)
42. Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 14. [↑](#footnote-ref-43)
43. Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006), at 321. [↑](#footnote-ref-44)
44. Shannon P. Pratt, Cost of Capital Estimation and Applications, Second Edition, at 220-221. [↑](#footnote-ref-45)
45. Georgia Power’s Alternative Rate Plan allows the Company to petition the Commission for an Interim Cost Recovery mechanism if its earnings are projected to fall below the low end of its approved ROE range. [↑](#footnote-ref-46)
46. Docket No. 42516, Long Order Adopting Settlement Agreement, at 6 (February 6, 2020). [↑](#footnote-ref-47)