BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Application of	**)**	
Moundridge Telephone Company for	**)**	**Docket No.**
Kansas Universal Service Fund Support	**)**	**25-MRGT-222-KSF**

DIRECT TESTIMONY

PREPARED BY

Adam H. Gatewood

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

March 27, 2025

Contents

Q. Please state your name and business address.

A. Adam H. Gatewood, 1500 Arrowhead Road, Topeka, Kansas 66604.

Q. Who is your employer, and what is your title?

A. I am a Senior Managing Financial Analyst for the Kansas Corporation Commission (Commission).

Q. What is your educational and professional background?

A. I graduated from Washburn University with a B.A. in Economics in 1987 and a Master of Business Administration in 1996. I have filed testimony on cost of capital, capital structure, and related issues before the Commission in more than 160 proceedings. I have also filed cost of capital testimony before the Federal Energy Regulatory Commission in natural gas pipeline and electric transmission revenue requirement complaint dockets.

Q. What is the purpose of your testimony?

A. My testimony contains Staff's proposed rate of return (ROR) for Moundridge Telephone Company, Inc. (Moundridge or Applicant). The ROR is an input to Staff's revenue requirement study that determines Moundridge's Kansas Universal Service Fund (KUSF) annual support.

Executive Summary

Q. Please summarize your recommendation.

A. I recommend the Commission adopt an allowed ROR of 7.21% to set the Applicant's KUSF revenue requirement, incorporating a 9.75% return on equity (ROE), a 60% equity ratio, and a 3.41% cost of debt. Staff's recommendation results from a comprehensive analysis that adjusts the Applicant's proposed cost of equity and debt and the weighting of both sources of capital.

Staff Cost of Capital Recommendation
Moundridge Telephone Co
25-MRGT-222-KSF

	Weight	Cost	Weighted Avg Cost
Equity	60.00%	9.75%	5.85%
Debt	40.00%	3.41%	1.36%
		Rate of Return	7.21%

Q. How did you conclude that a 9.75% ROE is a just and reasonable return for rural local exchange carriers (RLEC)?

A. I performed an economic analysis to verify that a 9.75% ROE is just and reasonable compensation for the RLECs' equity investors in line with the legal principles espoused in several landmark cases specific to this issue. My methodology is the same analysis investors perform to evaluate returns available in the capital markets. It is consistent with Staff's analyses of rate cases of gas and electric utilities and previous KUSF dockets.

Investors' expectations for the economy and capital markets have not significantly changed over the past two months since Staff's last KUSF testimony. Therefore, Staff's ROR testimony in this docket draws similar conclusions to those filed in February of 2025 in Dockets 25-CNHT-185-KSF, save for the data herein is unique to Moundridge. Staff is mindful that consumers ultimately bear the costs of KUSF investigations and Staff strives to keep those costs as low as possible while also completing a thorough review of capital markets and application-specific analysis to determine a reasonable ROR.

As has been Staff's goal for KUSF dockets over the past decade, Staff seeks to strike a balance accurately reflecting the prevailing cost of equity capital and applying a return uniformly across Kansas RLECs. Staff is willing to recommend a uniform number across the KUSF dockets if appropriate and supported by thorough analysis. Based on the market data of recent months, Staff finds a 9.75% ROE continues to be reasonable and provides Applicant's owners with a return significantly above that available in fixed-income investments and the broad equity market. Staff demonstrates in each KUSF docket that its ROE recommendation provides the RLEC a just and reasonable return while being fair to all Kansans contributing to the KUSF.

Q. Please summarize the Applicant's rate of return request.

A. The Applicant requests the Commission grant an ROR equal to the 9.75% ROR authorized by the Federal Communications Commission (FCC) to calculate federal high-cost support;[1] Section 7 of the Application requests an ROE of 10.79% with no analysis or details of how that cost was derived.[2]

Rate of Return Requested By
Moundridge Telephone Co
25-MRGT-222-KSF

		Balance	Weight	Cost	Weighted Avg Cost
Equity	$	10,935,679	85.89%	10.79%	9.268%
Debt	$	1,796,316	14.11%	3.41%	0.481%
	$	12,731,995			9.75%

Moundridge Telephone Co. Requested RoR **9.75%**

Source: Section 7; Schedule 1 of Application
Requested ROR based on FCC authorized ROR effective July 1, 2021

Since beginning KUSF audits, Staff has maintained the FCC's generic ROR does not meet the cost-based standard set by Kansas law that the Commission applies when setting revenue requirements for KUSF support. Because the FCC's ROR does not differentiate between the costs of debt and equity capital that a specific RLEC employs, it does not recognize the cost savings that can result from utilizing debt capital. Nor does the FCC's ROR reflect changes in the capital markets as the FCC issued the Order in July 2016. Further, a review of the FCC's Order indicates that the 10.75% ROR set by the FCC for 2017, dropping to 10.00% in 2020 and 9.75% in 2021, incorporates an ROE greater than

[1] Connect America Fund, WC Docket No. 10-90, Rate of Return Order, March 23, 2016.
[2] Direct Testimony of Nick Huckaby and Application at Section 7; 25-MRGT-222-KSF.

the cost of equity set by this Commission in the early 2000s. By some measures, using data from Kansas RLECs, the FCC's generic allowed ROR would result in an ROE over 14.00% because it does not recognize an RLEC's actual cost of debt.[3] Based on the cost of capital studies I have prepared from 2016 to present, even with the uptick in capital costs that began in 2022 and continued through 2024, the FCC's annual reduction does not reflect the current cost of capital.

Phase in of Authorized RoR Reduction From 11.25% to 9.75%

Effective Date of Rate of Return	Authorized Rate of Return	
2016	11.00%	*Authorized rate of return is set at
2017	10.75%	9.75% and phased in over time
2018	10.50%	
2019	10.25%	*9.75% WACC embodies a 5.87% cost of debt
2020	10.00%	14.37% ROE with a 54.34% debt ratio
2021	9.75%	

FCC Report and Order and Order on Reconsideration, and Further Notice of Proposed Rulemaking; March 30, 2016
FCC 16-33; para 319-326

The Applicant's requested rate of return has no link to returns available in the capital markets or the Applicant's embedded cost of debt. Therefore, it fails to conform to the

[3] Report and Order, Order and Order on Reconsideration, and Further Notice of Proposed Rulemaking In the Matter of Connect America Fund ETC Annual Reports and Certifications Developing a Unified Intercarrier Compensation Regime (WC Docket No. 10-90; WC Docket No. 14-58; and CC Docket No. 01-92) Released March 30, 2016. See paragraph 322.

> 322. We note that the WACC is supposed to compensate equity holders and debtholders who provide the funds used to finance the firm's assets. Given a rate of return set equal to 9.75 percent, an average capital structure based on our estimates of 54.34 percent debt, and a cost of debt based on our estimates of 5.87 percent, the implied cost of equity is 14.37percent. We find that not only is the WACC of 9.75 percent high enough adequately to compensate the firm's debtholders, but the implied rate of return on equity also provides equity holders with the opportunity to earn a reasonable rate of return on their investment. As support for our finding that a 9.75 percent rate of return is reasonable, we examine some benchmarks.

Commission's established practice and the basic principles set forth in the decisions rendered by the U.S. Supreme Court, commonly referred to as the "Hope and Bluefield" decisions; both of which are cornerstones for establishing a fair return.[4] For these reasons, the Commission should reject the FCC ROR, as it has in all past KUSF Dockets.

Q. Does Staff have any additional concerns surrounding this issue?

A. The Kansas Legislature established a cap on aggregate annual KUSF support to RLECs. Applying the FCC ROR to KUSF support calculations could cause a substantial shift in support dollars among the Kansas RLECs, transferring support dollars to those RLECs with the greatest leverage in their capital structures and away from RLECs with balanced, conservative capital structures. Staff believes such an outcome is unfair for the stakeholders to the KUSF support system. Staff urges the Commission not to waver from its established practice of rejecting the FCC ROR and instead closley examining the RLECs' actual capital costs.

Q. How do KUSF Dockets in which the Commission sets the KUSF support level for an

[4] *See Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia*, 262 U.S. 679, 692-3 (1923) (Bluefield); *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591, 603 (1944) (Hope): "The rate-making process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests. Thus, we stated in the Natural Gas Pipeline Co. case that 'regulation does not insure that the business shall produce net revenues.' But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view, it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard, the 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. The conditions under which more or less might be allowed are not important here. Nor is it important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at. For we are of the view that the end result in this case cannot be condemned under the Act as unjust and unreasonable from the investor or company viewpoint."

RLEC differ from a typical rate case involving gas and electric utilities?

A. A typical rate case determines a utility's revenue requirement, which is then recovered from its customers. However, in setting an RLEC's KUSF support, the Commission is not establishing rates paid solely by the RLEC's customers. Instead, KUSF support is funded by all Kansans who contribute to the KUSF, effectively subsidizing RLEC ratepayers to offset the full cost of their telephony services. Thus, all Kansans, directly or indirectly, share in covering RLECs' revenue requirements. When setting revenue requirements for any rate-regulated industry, a regulatory agency must balance the interests of the regulated entity and its consumers. Here, "consumer interests" extend to all who contribute to the KUSF.

Q. When establishing a reasonable rate of return for RLECs in KUSF Dockets, are there unique issues that the Commission should be aware of that are not present in gas and electric rate cases?

A. Yes, in KUSF Dockets, we estimate the capital costs of providing a very narrow set of telecommunications services.[5] The primary challenge issue is the lack of publicly traded companies whose core business is providing rural land-line telephony. Among the few companies that provide landline services to rural areas, landline operations represent only a small fraction of their total revenue and earnings. Consequently, investors assess these

[5] In Kansas, Universal Service is defined by K.S.A. 66-1,187(p): "Universal service" means telecommunications services and facilities which include: single party, two-way voice grade calling; stored program controlled switching with vertical service capability; E911 capability; tone dialing; access to operator services; access to directory assistance; and equal access to long distance services."

companies based on the risks and growth potential of other telecommunications services—such as cellular, internet, and cable—rather than the specific risks of RLEC services.

Despite these limitations, it is possible to estimate the cost of equity for RLEC providers, though stakeholders must accept a less precise estimate due to the absence of a robust proxy group. This data constraint is an inherent challenge that all parties must acknowledge. Nevertheless, Staff can demonstrate that its recommended rate of return satisfies the legal standard for a just and reasonable return to the Applicant.

Q. How did you overcome those challenges?

A. Staff relies on data that reflects long-run, forward-looking returns in capital markets measured by the capital asset pricing model (CAPM) and similar risk premium models. Seasoned financial industry experts and institutional investors universally rely on these and similar models to evaluate investment opportunities.

Staff is not using the discounted cash flow (DCF) model, which is typically applied in gas and electric rate cases and previous KUSF dockets. A DCF analysis requires specific data, which is currently unavailable due to the limited number of publicly traded telecommunications companies providing landline services. Many of these companies exhibit volatile or negative earnings growth projections, both of which conflict with the fundamental assumptions of the DCF model. Removing the DCF model does not represent a significant change in Staff's cost of capital study, as Staff has consistently placed little weight on it for these same reasons over the past several years.

Risk-Premium Provided by a 9.75% ROE

Q. How does your recommendation in this Docket compare to those in past KUSF Dockets?

A. A key comparison is the risk premium that the allowed ROE provides RLEC investors over bond yields observed in capital markets and the returns set for other regulated utilities. The table includes KUSF dockets since 2006, showing that Staff's recommendations have ranged from 10.50%, gradually decreasing to 9.60% as interest rates declined. As the post-Global Financial Crisis (GFC) economy stabilized—characterized by slower economic growth and lower capital costs—Staff recommended an ROE between 9.60% and 9.75%.

Staff Positions in Recent KUSF Dockets
25-MRGT-222-KSF

Docket	Testimony Date	Company	Equity Ratio	Staff ROE	Baa/BBB Yields*	Resulting Rp**
06-H&BT-1007-AUD	10/10/2006	H&B Communications, Inc.	60.00%	12.00%	6.47%	5.53%
06-RNBT-1322-AUD	2/9/2007	Rainbow Telephone Association, Inc.	60.00%	12.15%	6.33%	5.82%
07-MDTT-195-AUD	3/2/2007	Madison Telephone, LLC	6.46%	12.30%	6.16%	6.14%
07-PLTT-1289-AUD	10/26/2007	Peoples Telephone, LLC	60.00%	12.00%	6.39%	5.61%
08-MRGT-221-KSF	12/19/2007	Moundridge Telephone Co.	60.00%	12.00%	6.60%	5.40%
09-MTLT-091-KSF	11/26/2008	Mutual Telephone Co.	60.00%	14.00%	9.05%	4.95%
09-BLVT-913-KSF	9/30/2009	Blue Valley Telecommunications, Inc.	46.60%	12.50%	6.17%	6.33%
10-HVDT-288-KSF	6/24/2010	Haviland Telephone Co, Inc.	30.00%	11.00%	6.22%	4.78%
11-PRNT-315-KSF	5/25/2011	Pioneer Telephone Association, Inc.	54.40%	10.00%	5.77%	4.23%
11-RNBT-608-KSF	7/26/2011	Rainbow Telecommunications Assoc.	55.00%	10.00%	5.75%	4.25%
11-CNHT-659-KSF	9/2/2011	Cunningham Telephone Co., Inc.	37.40%	10.25%	5.20%	5.05%
12-S&TT-234-KSF	8/15/2012	S&T Telephone Assoc., Inc.	57.40%	10.50%	5.07%	5.43%
12-GRHT-633-KSF	10/18/2012	Gorham Telephone Company	29.69%	10.50%	4.58%	5.92%
12-LHPT-875-AUD	12/19/2012	LaHarpe Telephone Company	90.00%	10.00%	4.71%	5.29%
13-CRKT-268-KSF	3/13/2013	Craw-Kan Telephone Cooperative, Inc.	60.00%	10.00%	4.89%	5.11%
13-ZENT-065-AUD	5/17/2013	Zenda Telephone Company, Inc.	Confidential	10.00%	4.76%	5.24%
13-JBNT-437-KSF	5/23/2013	J.B.N. Telephone Company, Inc.	46.50%	9.75%	4.79%	4.96%
13-PLTT-678-KSF	9/24/2013	Peoples Telecommunications, LLC	55.83%	9.75%	5.35%	4.40%
14-WTCT-142-KSF	2/5/2014	Wamego Telecommunications Co.	61.43%	9.60%	5.12%	4.48%
14-S&TT-525-KSF	9/25/2014	S&T Telephone Cooperative, Inc.	54.86%	9.75%	4.79%	4.96%
15-MRGT-097-KSF	1/20/2015	Moundridge Telephone Co.	Confidential	9.75%	4.43%	5.32%
15-TWVT-213-AUD	9/4/2015	Twin Valley Telephone Co.	47.81%	9.75%	5.28%	4.47%
17-RNBT-555-KSF	10/26/2017	Rainbow Telecomm Assoc. Coop	60.00%	9.75%	4.37%	5.38%
19-GNBT-505-KSF	10/11/2019	Golden Belt Telephone Assoc. Cooperative	60.00%	9.60%	3.98%	5.62%
20-UTAT-032-KSF	12/13/2019	United Telephone Association	60.00%	9.60%	3.84%	5.76%
20-BLVT-218-KSF	3/20/2020	Blue Valley Telecommunications, Inc.	60.00%	9.60%	5.15%	4.45%
22-CRKT-087-KSF	12/15/2021	Craw-Kan Telephone Cooperative, Inc.	60.00%	9.60%	3.30%	6.30%
22-COST-546-KSF	10/6/2022	Columbus Communications Services, LLC	60.00%	9.60%	5.99%	3.61%
24-SNKT-131-KSF	12/14/2023	South Central Telephone Association, Inc.	60.00%	9.75%	5.49%	4.26%
24-TTHT-343-KSF	2/22/2024	Totah Communications, Inc.	55.87%	9.75%	5.82%	3.93%
25-MTLT-161-KSF	1/24/2025	Mutual Telephone Co. Assoc.	60.00%	9.75%	6.06%	3.69%
25-CNHT-185-KSF	2/13/2025	Cunningham Telephone Co., Inc.	60.00%	9.75%	6.07%	3.68%
				Average Risk Premium of Recent KUSF Dockets		**5.01%**
					Median	**5.18%**

*Moody's Seasoned Baa Corporate Bond Yield [DBAA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org
**Risk premium of Staff's ROE Recommendation over the Baa/BBB Corporate Bond Yield

The right column shows the resulting risk premium provided by the ROE recommended by Staff in each docket, calculated as the recommended ROE minus the average yield on Baa/BBB corporate bonds. From 2010 to the present, following the Global Financial Crisis (GFC), the risk premium has averaged 490 basis points.

The decline in bond yields during 2019, 2020, and 2021, combined with a 9.60% ROE, resulted in a progressively higher risk premium for RLECs, nearly justifying a lower ROE than the 9.60% recommended by Staff. However, with rising interest rates in 2022, the risk

premium narrowed, providing the Applicant with an estimated 400 basis points.

For comparison, the following table contains the risk premium derived in gas and electric utility cases. The broad trends observed in electric and natural gas rate cases are the same as those observed in the KUSF dockets.

Risk Premium of Recent Electric and Gas Dockets

Docket	Testimony Date	Company	Equity Ratio	Staff Recmmd	*BBB/Baa Corporate Bond Yld.	Resulting Rp
15-KCPE-116-RTS	5/11/2015	Kansas City Power & Light	50.48%	9.25%	4.94%	4.31%
15-WSEE-115-RTS	7/9/2015	Westar Energy	53.12%	9.25%	5.20%	4.05%
16-KGSG-491-RTS	9/7/2016	Kansas Gas Service	55.00%	8.75%	4.19%	4.56%
16-ATMG-079-RTS	12/21/2016	Atmos Energy	56.12%	9.10%	4.81%	4.29%
18-KCPE-095-MER	1/29/2018	Kansas City Power & Light	*	9.30%	4.29%	5.01%
18-WSEE-328-RTS	6/11/2018	Westar Energy	51.24%	9.30%	4.85%	4.45%
18-KCPE-480-RTS	9/12/2018	Kansas City Power & Light	49.09%	9.30%	4.86%	4.44%
18-KGSG-560-RTS	10/29/2018	Kansas Gas Service	55.00%	9.15%	5.10%	4.05%
19-EPDE-223-RTS	5/13/2019	Empire District Electric Co	51.65%	9.30%	4.65%	4.65%
19-ATMG-525-RTS	10/31/2019	Atmos Energy	56.32%	9.10%	3.87%	5.23%
21-BHCG-418-RTS	9/10/2021	Black Hills Energy	42.96%	9.20%	3.23%	5.97%
23-ATMG-359-RTS	1/17/2023	Atmos Energy	59.16%	9.40%	5.44%	3.96%
23-EKCE-775-RTS	8/29/2023	Evergy, Inc.	48.50%	9.30%	5.96%	3.34%
24-KGSG-610-RTS	7/1/2024	Kansas Gas Service	60.21%	9.60%	6.03%	3.57%
		Average Risk Premium from Recent Gas & Electric Dockets				**4.42%**
					Median	**4.38%**

*Moody's Seasoned Baa Corporate Bond Yield [DBAA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org

Providing investors with a risk premium over lower-risk debt investments, as Staff has done, aligns with the principles established by the Supreme Court in the *Hope* and *Bluefield* decisions. These income-producing securities serve as alternatives to utility stock investments because, like utility stocks, bonds offer stable valuations and higher current income relative to the broader equity market.

Risk premiums fluctuate over time based on economic and capital market conditions, meaning no fixed benchmark or formula determines a reasonable return on equity at a given interest rate. Instead, risk premium calculations contextualize the allowed return relative to

prevailing, market-determined interest rates. The Court's rulings affirm that a fair and reasonable return for utility equity investors must provide an opportunity to earn a premium over lower-risk investments, such as the bonds referenced in the previous tables. The following table demonstrates Staff's proposed 9.75% ROE meets this standard, providing a risk premium ranging from 397 to 546 basis points over less risky fixed-income investments.

KCC Staff's Risk Premium Over Fixed Income Yields
Based on a 9.75% Return on Equity
25-MRGT-222-KSF

Monthly Averages	10-Year T-Bond	30-Year T-Bond	Baa Corporate Bond Yield
September, 2024	3.72%	4.04%	5.42%
October, 2024	4.10%	4.38%	5.63%
November, 2024	4.36%	4.54%	5.78%
December, 2024	4.39%	4.58%	5.80%
January, 2025	4.63%	4.85%	6.08%
February, 2025	4.53%	4.73%	5.96%
Average	**4.29%**	**4.52%**	**5.78%**

Staff's Risk Premium Over the Average 10-Year Treasury Bond Yield	
Staff Recommended Allowed ROE	9.75%
Six Month Average 10-Year Treasury Bond Yield	4.29%
Premium Over Average 10-Year Treasury Bond Yield	**5.46%**

Staff's Risk Premium Over the Average 30-Year Treasury Bond Yield	
Staff Recommended Allowed ROE	9.75%
Six Month Average 30-Year Treasury Bond Yield	4.52%
Premium Over Average 30-Year Treasury Bond Yield	**5.23%**

Staff's Risk Premium Over the Average BBB/Baa Corporate Bond Yield	
Staff Recommended Allowed ROE	9.75%
Six-Month Average BBB/Baa Corporate Bond Yield	5.78%
Premium Over Average BBB/Baa Utility Bond Yield	**3.97%**

Sources:
1) Yield on U.S. 10-Year Treasury Bond reported at https://fred.stlouisfed.org/
2) Yield on U.S. 30-Year Treasury Bond reported at https://fred.stlouisfed.org/
3) Yield on Baa Corporate Bonds reported at https://fred.stlouisfed.org/

Q. For comparison, could you please summarize ROE decisions across the country?

A. There is ample information on the allowed returns granted to gas distribution and electric utilities; however, returns granted to local exchange carriers are not widely reported, as most telephony services are considered competitive or operate under price cap regulation. This

comparison to other rate-of-return regulated industries is useful because it demonstrates that allowed returns in these industries have generally aligned with broader measures of capital costs. As a result, regulatory commissions have had numerous opportunities to evaluate evidence on investors' required returns.

Median Allowed Return on Equity

Date	Natural Gas	Electric
2000	11.16	11.50
2001	11.00	11.00
2002	11.00	11.28
2003	11.00	10.75
2004	10.50	10.70
2005	10.40	10.35
2006	10.50	10.23
2007	10.20	10.20
2008	10.45	10.30
2009	10.26	10.50
2010	10.10	10.30
2011	10.03	10.17
2012	10.00	10.08
2013	9.72	9.95
2014	9.78	9.78
2015	9.68	9.65
2016	9.50	9.75
2017	9.60	9.60
2018	9.60	9.58
2019	9.70	9.65
2020	9.44	9.45
2021	9.60	9.38
2022	9.60	9.50
2023	9.60	9.50
2024	9.70	9.70

Source: S&P Market Intelligence; RRA

This table highlights that public service commissions nationwide recognize the decline in capital costs over the past two decades for rate-of-return regulated companies. This Commission's decisions have followed the same trend.

Macro-Economic Environment & Investor Expectations

Q. Is it necessary for the Commission to create a forecast of the broad economy to determine a reasonable return?

A. No. Determining a fair and reasonable allowed return does not require an independent forecast of the economy's future or adopting a specific perspective on its direction. The focus in setting a fair and reasonable allowed return is on the investors' required return, which reflects investors' expectations for the economy—not the Commissioners' perspectives.

Investors' expectations are captured within the Commission's cost of capital decision, provided it is based on market-derived data such as current stock prices, interest rates, and other relevant market information that reflects investors' outlook for the economy. Staff's recommendation is based on such current market-derived data. It is unnecessary, and likely counterproductive, for regulators and cost of capital witnesses to second-guess the capital markets. It is a well-accepted premise that capital markets are efficient, meaning investors incorporate all available information into their decisions to buy and sell debt and equity securities. Furthermore, rational, profit-maximizing investors are forward-looking, incorporating their economic forecasts into their decisions to best maximize returns.

Q. Do you believe the Commission benefits from some discussion of economic forecast when setting allowed returns?

A. Yes, particularly with the global events of the past five years, beginning with the Covid-19 pandemic, the Russo-Ukrainian War, and changes in international trade patterns.

The economic issues facing governments and their central banks are directly tied to the fallout from these global events, which disrupted long-established global supply chains and trade patterns. These disruptions have led to reduced economic growth and triggered inflation rates that have reached levels not seen in 40 years.

Equity and fixed-income investors watch the actions of the Federal Reserve Open Market Committee (FOMC) of the U.S. Federal Reserve Board (Fed) very closely, likely more so than any other published reports on the U.S. economy. As of the recent meetings in November and December of 2024, as well as the latest meeting in January of 2025, the Federal Reserve members' economic perspective reflects cautious optimism amid ongoing inflationary pressures and a slowing, but resilient economy, as summarized in their views on inflation, growth, and unemployment.

- **Inflation**: The Fed remains focused on bringing inflation down to its 2% target.[6] While inflation has moderated from the heights of 2022, it continues to be above target, particularly in core areas like services and shelter. Some members noted that the process could take longer than previously expected.[7] The FOMC recognizes the need for careful monitoring of price pressures, particularly as demand in the economy remains strong. While some members noted that the disinflationary process may have temporarily stalled, at all three meetings—November and December of 2024, as well as January of 2025—they emphasized the risk that it could take longer than previously anticipated to return to target inflation levels.[8]
- **Economic Growth**: U.S. economic growth has slowed but remains positive and solid, with a noticeable slowdown in the labor market, particularly in sectors like housing and manufacturing. However, consumer spending has been relatively stable, supported by a strong labor market and wages growing at a moderate pace.

[6] Minutes of the Federal Open Market Committee, November 6, 2024; p.12
[7] Minutes of the Federal Open Market Committee, November 6, 2024; p. 8.
[8] Minutes of the Federal Open Market Committee of its December 17-18, 2024, Meeting; Released January 8, 2025.

- **Labor Market**: At all three meetings, participants noted the job market is solid though showing signs of cooling, with job growth slowing and the unemployment rate remaining low. The Fed is watching for signs of a more sustainable labor market balance, as it is concerned about potential wage-price spirals that could sustain inflation.
- **Monetary Policy Decision:** In its November and December meetings the decision to reduce the federal funds rate was finely balanced. Some participants favored maintaining the previous target range, citing concerns about stalled progress in lowering inflation. At its December meeting the Committee voted 11–1 in favor of the rate cut.[9]
- **Future Policy Considerations:** Given the uncertainty surrounding potential changes in trade and immigration policies under the incoming administration, the Committee emphasized a careful approach to future rate adjustments. In the November and December meetings most participants indicated that the Committee was at or near the point at which it would be appropriate to slow the pace of policy easing.[10]
- **Long-run Targets:** In all three meetings the FOMC members' long-run targets are for a return of pre-pandemic inflation levels at 2.00% annually, real GDP at an annual growth of 1.80%, and unemployment at 4.20%.
- **Federal Funds Rate:** In its December meeting, acting on the totality of the data, the FOMC reduced the federal funds rate by 25 basis points, bringing it to a target range of 4.25% - 4.50%; the third rate cut since September 2024. In its January 2025 meeting, FOMC members voted unanimously to maintain that target federal funds rate. Further, many participants emphasized the need for continued disinflation toward the 2% target before making additional rate cuts.[11]

FOMC members acknowledge several risks that could disrupt markets, including global economic conditions, the possibility of a more pronounced slowdown in consumer spending, and geopolitical uncertainties that could disrupt markets. There is also concern about long-term inflation expectations becoming unanchored if price pressures do not ease.[12] The FOMC's perspective is one of caution—acknowledging that progress has been

[9] Minutes of the Federal Open Market Committee of its December 17-18, 2024, Meeting; Released January 8, 2025.
[10] Minutes of the Federal Open Market Committee of its December 17-18, 2024, Meeting; Released January 8, 2025.
[11] Minutes of the Federal Open Market Committee of its December 17-18, 2024, Meeting; Released January 8, 2025.
[12] Minutes of the Federal Open Market Committee, November 6, 2024; p.12

made in controlling inflation while recognizing further work is needed to ensure inflation moves sustainably toward the 2% target without triggering a severe economic downturn. FOMC members expressed cautious optimism about the economy while maintaining a measured approach to monetary easing, actions that reflect its dual mandate to achieve maximum employment and stable prices. In all three meetings, nearly all FOMC members judged the risks to attaining their dual-mandate objective to be roughly in balance. Granted, there are other views on the economy and forecasts published, though most are in line with the expectations published by FOMC members. Even those who disagree with observations and expectations published in the FOMC's notes acknowledge that they carry substantial weight with investors.

Corporate Structure

Q. Please describe Applicant, Moundridge Telephone Company.

A. The Applicant is a subsidiary of Rural Telephone Service Company, Inc., is organized as a cooperative and owns the Applicant, Nex-Tech, LLC, and Nex-Tech Communications, LLC. Rural Telephone Service Company acquired the Applicant and its subsidiaries in Docket No. 22-MRGT-483-ACQ. The Applicant serves exchanges in parts of McPherson, Harvey, and Marion Counties in Kansas.

Standards for a Just & Reasonable Rate of Return

Q. What standards should public utility commissions consider when authorizing a rate of return?

A. The standards for setting a just and reasonable rate of return require that, to be reasonable, the allowed return must reflect the risks associated with an equity investment in the utility. For the allowed return to be in that reasonable range, it must compensate for risks while capturing a fair proportion of benefits for consumers. The allowed ROE is best described as the forward-looking discount rate necessary to induce equity investors to commit capital to the enterprise. Standards for gauging the fairness and reasonableness of an allowed ROE have been established through court decisions resulting from appeals of regulatory agency rulings. Financial analysts and policymakers rely on these court decisions to estimate the appropriate allowed return. However, the opinions do not prescribe a specific method for calculating or modeling a reasonable cost of capital. Instead, they pose critical questions for policymakers and analysts to consider when determining a reasonable return for a regulated utility.

Several key court cases, viewed collectively, are considered foundational in measuring the adequacy of a utility's allowed return. The earliest of these decisions were from an era when the "rate of return" was not the only issue at stake; it was also about how to measure the investment in the utility enterprise, commonly referred to as the rate base. This is less of a concern today, as regulators, utility management, and investors typically accept historic depreciated value as the measure of investment for estimating a utility's rate base, as opposed to using reproduction cost or market value.

The Court's decision in *Bluefield* addressed both rate base and ROR.[13]

[13] *See Bluefield,* 262 U.S. 579, 692-93.

As a result of the various court decisions, returns granted to regulated public utilities should: 1) be commensurate with returns on investments of similar risk; 2) be sufficient to assure the financial integrity of the utility under efficient economic management; and 3) change over time with changes in the money market and business conditions.[14] In conjunction with these decisions, the United States Supreme Court has afforded regulatory agencies significant latitude in establishing an appropriate ROR and ROE for a utility. The Kansas Supreme Court has recognized and follows this body of law[15] and this Commission has noted similar findings in Orders issued in previous dockets.[16]

Q. How do financial analysts apply the standards established by the Court?

A. For an allowed ROE to meet the legal standards, the return should be as specific as possible to the utility in question. Financial analysts achieve this by analyzing the utility in question when it is possible to do so and a proxy group of similarly situated utilities.

Treatises on rate of return for public utilities, such as *The Cost of Capital – A Practitioner's Guide*, affirm that the *Bluefield* decision establishes four key standards for a fair return:

1. **Comparable Earnings** – A utility is entitled to a return similar to that earned by other enterprises with comparable risks, but not as high as that of highly profitable or speculative ventures.
2. **Financial Integrity** – A utility's return must be sufficient to ensure its financial soundness.

[14] *See id.; Hope,* 320 U.S. 591, 603; *Smyth v. Ames*, 169 U.S. 466 (1898); *Wilcox v. Consolidated Gas Co*., 212 U.S. 19, 48-49 (1909).
[15] *Kansas Gas & Elec. Co. v. State Corp. Comm'n*, 239 Kan. 483, 491, 720 P. 2d 1063, 1072 (1986).
[16] Order: 1) Addressing Prudence; 2) Approving Application, in Part; and 3) Ruling on Pending Requests, pp. 37-38, Docket No. 10-KCPE-415-RTS (Nov. 22, 2010).

3. **Capital Attraction** – The return must be adequate to support the utility's credit and attract necessary capital.
4. **Changing Level of Returns** – A fair return may adjust over time in response to economic conditions and capital market fluctuations.[17]

As a financial analyst formulating rate of return analyses for the Commission Staff, I believe *Bluefield* requires a rate that allows a utility an opportunity to earn a return consistent with the utility's risk profile and consistent with observations in the capital markets. The Court's decision in *Hope,*[18] like that in *Bluefield,* dealt with both the valuation of the rate base and the rate of return on that rate base. Concerning the rate of return, *Hope* affirmed the four standards set out in *Bluefield.*

Capital Structure

Q. Please describe Applicant's capital structure presented in Section 7 of its Application.

A. Applicant reports a capital structure with 85.89% equity and 14.11% long-term debt.[19]

[17] The Cost of Capital – A Practitioner's Guide by David C. Parcell, Prepared for the Society of Utility and Regulatory Financial Analysts, 1997, pp. 3-13 to 3-14.

[18] *Hope*, 320 U.S. 591, 603: "The rate-making process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests. Thus, we stated in the Natural Gas Pipeline Co. case that 'regulation does not insure that the business shall produce net revenues.' But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view, it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard, the 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. The conditions under which more or less might be allowed are not important here. Nor is it important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at. For we are of the view that the end result in this case cannot be condemned under the Act as unjust and unreasonable from the investor or company viewpoint."

[19] Application, Section 7; Docket 25-MRGT-222-KSF.

Q. Did you use an 85% equity ratio to calculate the ROR?

A. No. Instead, I recommend that the Commission rely on a hypothetical capital structure that contains 40% debt capital and 60% equity capital to calculate the ROR.

Q. Why are you recommending something other than the Applicant's actual capital structure?

A. Staff's proposed capital structure balances the interests of the RLEC, Kansas telecommunications consumers, and the Applicant, who like most Kansas RLECs has access to relatively low-cost debt capital, as is apparent in Section 7 of its Application. The KUSF subsidy should recognize that RLECs can employ a lower-cost capital structure as opposed to one that is nearly all equity. Establishing a subsidy payment out of the KUSF must balance the interests of the RLECs that receive the subsidy and Kansas telephony consumers who fund the subsidy. This requires estimating the revenue requirement using reasonable and cost-effective inputs.

Q. Did the Applicant provide evidence that its capital structure is cost-effective?

A. No.

Q. Is Staff recommending that the Applicant's management alter its equity ratio?

A. My recommendation applies solely to the capital structure used in calculating the KUSF subsidy. Staff is not requesting that Moundridge or its parent company alter its equity ratio. Capitalization decisions remain the responsibility of RLEC management. However,

determining the annual KUSF support subsidy involves public policy considerations that impact those who contribute to the KUSF support mechanism.

Q. How did you conclude that a hypothetical capital structure with 60% equity is reasonable?

A. Through decades of conducting KUSF audits, I have observed that a 60% equity ratio represents the high end of the range for publicly traded telecommunications companies. These companies serve as the proxy group for Staff's analysis, meaning their capital structures have been tested in the market by successful industry participants. Additionally, Kansas RLECs have access to debt capital at reasonable interest rates. Given these factors, I conclude that a balanced capital structure for Kansas RLECs should incorporate a significant portion of debt. Staff believes a 60% equity ratio provides RLECs with a reasonable return and cost structure for the KUSF subsidy.

Cost of Debt

Q. What cost of debt do you use in Applicant's ROR?

A. I recommend using 3.41% for the Applicant's cost of debt, which reflects its embedded cost of debt in Section 7 of its Application, and which. I believe is a reasonable estimate of an embedded cost of debt. The proposed cost of debt is not intended to reflect only the current, prevailing cost of debt in the market but also an embedded cost that an RLEC would have incurred during the past decade that would make up its embedded cost.

Summary of Cost of Equity Models

Q. Please provide an overview of the methods you relied on to arrive at 9.75% ROE.

A. To estimate Applicant's cost of equity, I used the same financial models I do for regulated natural gas distribution and electric utilities. I performed a CAPM analysis whiling reviewing the options for applying DCF models to a group of telecommunications companies.

Q. Which models are the most informative in estimating an RLEC's cost of equity capital?

A. The CAPM is the most informative for estimating an allowed return for the Applicant and similar RLECs. At present, applying a DCF analysis to the publicly traded companies that could serve as the proxy group for Kansas RLECs is not feasible, as it would not yield meaningful or reliable results.

Q. Why would the DCF model produce unmeaningful and unreliable results?

A. The DCF model requires a positive growth rate in earnings and dividends at a singular, constant rate or occurring in several distinct, predictable phases. Over the past four years, all potential proxy group members have failed this requirement, exhibiting growth forecasts that are either negative or far too high to expect them to continue beyond the analysts' three-to-five-year horizon. Further, the DCF model is simply an equation; when faced with negative or volatile growth forecasts, it becomes ineffective and fails to generate meaningful results. In contrast, the CAPM is particularly useful in this scenario, as it

assesses investors' required returns based on current capital market conditions without relying on analysts' projected earnings growth rates.

Discussion of Staff's Cost of Equity Analysis

Q. Please describe the CAPM.

A. The CAPM is a cornerstone financial model which offers a tested explanation of the positive relationship between risk and equity returns required by investors.[20] Notably, every merger and acquisition analysis performed by an investment banker involving a Kansas utility has incorporated a CAPM analysis as a critical component of the valuation process. The CAPM appeals to regulators because it meets the legal standards discussed above and includes current data from the financial markets and the unique risks of the utility in question. The CAPM is defined as follows:

Ke = Rf + Beta (Rm - Rf) or
Ke = Rf + Beta (Rp)

Where:

Ke =	required return on equity
Rf =	return on a risk-free security
Rm =	an expected return from the equity market as a whole
Rp =	risk premium available to investors through purchasing common stocks instead of risk-free securities, often calculated as Rm - Rf
Beta =	volatility of the security's or portfolio's return relative to the volatility of the market's return with the market beta equal to 1.0

[20] The theoretical support for the CAPM is the work done by Harry Markowitz ("Portfolio Selection," *Journal of Finance*, March, 1952). W.F. Sharpe added the concept of a risk-free rate of return to the Markowitz model ("A Simplified Model of Portfolio Analysis," *Management Science*, January, 1963).

Rf

The Rf estimate is the interest rate investors believe represents a riskless return readily available in the financial markets. Although it is a simple concept, the answer is not universally agreed upon. It is widely accepted that a debt instrument issued by the U.S. Government is risk-free as there is no default risk, and the return is known if the investor plans to hold it until maturity. From this base risk-free-return that is universally available to investors, investors add a premium to justify taking on additional risks of an investment in equity securities, namely accepting the volatility of stock prices as opposed to stable, periodic interest payments from U.S. Treasury Bonds.

Beta

The beta coefficient measures the volatility of the return earned by the utility's stock relative to the volatility of the returns earned by the broader equity market. This measure provides a look at the risk and volatility of a stock relative to other investments. A stock with a beta of 1 is equally volatile as the market. A stock with a beta of 0.5 is half as volatile as the market. Most regulated utilities and telecommunications services companies exhibit beta coefficients that are less than the broad market indexes and, therefore, less risky.

Rm

Rm is the expected return on the stock market as measured by a broad market index such as the S&P 500. It represents the total return of the index's price change plus dividends earned for the year. In most instances, the CAPM relies on investors' expected or forecasted

return on the market for this variable; historical data is also used to estimate the market return. I will discuss the application of both sources of data.

Rp

The risk premium is the difference between investors' expected return from the stock market and their expected return from the risk-free investment over the same time. The risk premium is written as Rm-Rf. The market return and the risk-free return should be taken from the same period to measure the additional return investors require to take on the risk of common stocks over the risk-free investment over that forecasted or historical period. The risk premium itself is an essential topic in financial research as it signals the additional return investors demand when taking the added risks of investing in equity capital instead of a U.S. Treasury Bond.

Q. Does the CAPM meet the *Hope-Bluefield* legal standards discussed earlier in your testimony?

A. Yes, a cost of equity estimate derived from the CAPM meets those legal standards if the model incorporates information from the capital markets that investors rely on to evaluate the potential returns of investment. This market-based information ensures the cost of equity estimates evaluate investors' required rate of return or discount rate that reflects the current economic environment for a given level of risk. The CAPM analysis includes the expected returns in the broad equity market and the return available on risk-free investment vehicles.

Q. Please discuss your CAPM analysis.

A. I employed two approaches to the CAPM analysis that are commonly used in both cost of capital studies for utility regulation and asset valuation. The approaches offer distinct perspectives of the securities market, and analysts use both methods to inform investment decisions. One approach incorporates forecasted returns on the broad equity market indexes and government fixed-income securities published by institutional investment services. The second offers a perspective of capital costs using purely historical measures of returns from the stock and bond markets over the past 96 years. The two approaches highlight the difference in returns earned in the past relative to the returns institutional investors expect going forward. There is support for using forecasted returns over historical data as the forecasted returns embody the institutional investors' forecasts for growth in the broad economy's most frequently measured government GDP accounts which is widely believed to be much lower than that experienced in the past.

Q. How did you determine a beta coefficient representative of the KUSF services?

A. I relied on beta coefficients reported for the telecommunications services industry and electric and gas utilities since they operate in the rate-of-return regulated industries. The first observation is that reported for telecommunications services which have a beta coefficient of 0.78; granted, most companies in that group have little, if any, rate-regulated services.[21] In many respects, the KUSF services resemble traditional, rate-of-return

[21] Beta coefficients for the telecommunications services industry of 0.78 and utility services (not water) of 0.58 reported at January 2024; https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html

regulated utility services more so than those of competitive telecommunications services that make up most of the telecommunications industry's earnings. As such, I believe it is reasonable to include the average beta coefficient of those other regulated industries. I completed cost of capital analyses for electric and natural gas distribution utilities during the past two years. My analysis in those dockets includes selecting proxy groups representative of that industry. All the proxy group members derive a vast majority of their earnings from their rate of return regulated services. The natural gas and electric utilities in those proxy groups used in my analyses exhibited beta coefficients averaging 0.87 and a range of 0.75 to 1.05.[22] In my analyses, one company had a beta coefficient of 1.05, while most of the proxy companies' beta coefficients fall in the range of 0.80 to 0.90. There is no beta coefficient derived from securities specific to the RLEC services, so my CAPM analyses incorporate the range of beta coefficients discussed above derived from rate of return regulated utilities.

Q. Please describe your CAPM analyses which use forecasted returns.

A. For the forecasted CAPM analyses, I obtained forecasts of long-run returns for common equity and U.S. Treasury Bonds from three sources: J.P. Morgan Asset Management (JPMAM), BlackRock Investments (BlackRock), and Kroll Corporation (Kroll). BlackRock and JPMAM have over $11 trillion of assets under management with individual and institutional clients worldwide. Other asset managers like Vanguard Group, which has over $9 trillion in assets under management, have similar expectations for long-term returns.

[22] Direct Testimony of Adam H. Gatewood in dockets 23-EKCE-775-RTS filed August 29, 2023; and 24-KGSG-610-RTS filed July 1, 2024.

Given the amount of money these firms manage, it is reasonable to assume that their published forecasts are not only the expectations of sophisticated money managers but also influence investors' expectations beyond their client base. JPMAM and BlackRock each annually publish their views of long-run (more than 15 years) returns available of numerous asset classes. Their respective forecasts are similar, though not identical, but taken together they provide a range for long-run returns on asset classes by the largest asset management companies. As a third input of projected returns, I looked to Kroll, a global advisory and asset valuation service provider to the financial industry and corporations. The table below summarizes the cost of equity estimates derived from the CAPM application using data from these three sources.

Summary of Staff's Cost of Equity Estimates
Capital Asset Pricing Models
25-MRGT-222-KSF

	Low	High	Midpoint
Based on Historical Return Data, gathered from 1928 to 2024, Reported by Damodaran Online			
Geometric Returns	8.83%	10.46%	9.65%
Arithmetic Returns	10.00%	12.10%	11.05%
Based on Forecasted Return Data, gathered from J.P. Morgan Asset Management Long-Term Capital Market Assumptions (2025 edition)	6.20%	7.12%	6.66%
Based on Forecasted Return Data, gathered from BlackRock Investments Projected Long-run Returns Market Assumptions - Geometric Returns (2025 edition)	6.50%	7.57%	7.03%
Based on Forecasted Return Data, gathered from Kroll Projected Market Risk Premium & Risk Free Return	8.54%	10.04%	9.29%

Q. How is JPMAM data applied to the CAPM analysis?

A. For this CAPM analysis, we are interested in their forecasted returns on common stock in the U.S. and U.S. Treasury Bonds published by JPMAM to establish the expected return for the market. JPMAM publishes 10 to 15-year forecasts of expected returns on investment asset classes in its annual publication, the Long-Term Capital Market Return Assumptions (LTCMRA).[23] In its 2025 edition, JPMAM forecasts an annual return on common stocks of 6.87% during the next decade. Following the calculations and inputs through the CAPM equation in line 2 of the following table, the forecasted return on a risk-free investment, 10-year U.S. Treasury Bonds, is subtracted from the expected return on common stocks, resulting in a risk premium of 3.07%. This risk premium is the additional return necessary to induce investors to take on the added risk associated with common stocks over the risk-free investment in a U.S. Treasury Bond. The beta coefficient is applied to the risk premium to ascertain how much of a risk premium is necessary for investors to take on the risks of investing in utility stocks instead of the risk-free U.S. Treasury Bond.

[23] J.P. Morgan Asset Management, Long-term Capital Market Return Assumptions, 2025 Edition, J.P. Morgan Asset Management (published October of 2024) www.jpmorganinstitutional.com/pages/jpmorgan/am/ia/research_and_publications/long-term_capital_market

Capital Asset Pricing Model -- Forecasted Risk Premium
Using Forecasted Market Returns & Treasury Bond Yields
25-MRGT-222-KSF

			Low Beta	High Beta
1)	Forecasted Returns on Common Stocks		6.87%	6.87%
2)	Forecasted Total Return on 10-Year T-Bonds	-	3.80%	3.80%
3)	Equity Risk Premium		3.07%	3.07%
4)	Beta Coefficient	X	0.75	1.05
5)	Beta Adjusted Risk Premium		2.30%	3.22%
6)	Forecasted Yield on 10-Year T-Bonds	+	3.90%	3.90%
7)	For Cost of Equity		6.20%	7.12%

1) Forecasted 10 to 15-year annual geometric return on stocks J.P. Morgan Asset Management, 2025 Edition.
2) Forecasted 10 to 15-year annual geometric return on intermediate term U.S. Government bonds by J.P. Morgan Asset Management 2025 Edition.
3) Resulting risk premium (1-2).
4) Range of beta coefficient range of regulated gas and electric utilities as well as telecom services companies
5) Row 3 x Row 4 = asset specific risk premium.
6) Forecasted yield on 10-Year U.S. Treasury bonds forecasted by J.P. Morgan Asset Management, 2025 Edition (page 10).
7) Forecasted cost of equity capital row 5 + row 6.

Sources:
J.P. Morgan Asset Management, Long-term Capital Market Return Assumptions, 2025 Edition, J.P. Morgan Asset Management

The expected risk-free yield of 3.90% forecasted by JPMAM is added to the beta-specific risk premium to arrive at the cost of equity for the given beta coefficients.

As you can see in the following table, a CAPM analysis that incorporates BlackRock's long-term return projections are slightly lower than those published by JPMAM. The application of the CAPM using the BlackRock data is the same as that discussed above.

Capital Asset Pricing Model -- Forecasted Risk Premium
Forecasted Market Returns & Treasury Bond Yields
by BlackRock Investments
25-MRGT-222-KSF

		Low Beta	High Beta
1) Forecasted Returns on Common Stocks		7.00%	7.00%
2) Forecasted Total Return on 10+ Year U.S. T-Bonds	-	3.42%	3.42%
3) Equity Risk Premium		3.58%	3.58%
4) Beta Coefficients of Proxy Group	x	0.75	1.05
5) Beta Adjusted Risk Premium		2.69%	3.76%
6) Forecasted Yield on 10-Year T-Bonds	+	3.81%	3.81%
7) Cost of Equity		6.50%	7.57%

1) Forecasted 20-year annual geometeric returns on U.S. common stocks; January 2025
2) Forecasted 20-year annual geometeric return on intermediate term Treasury bonds
3) Resulting risk premium (1-2)
4) Beta coefficient range observed in Telecommunications Services companies
5) Proxy Group risks premium
6) Survey of Prof. Forecasters; Median, Table 1; November 2024, Q4
7) Forecasted cost of equity capital row 5 + row 6.

Sources:
https://www.blackrockblog.com/blackrock-capital-markets-assumptions/
https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/

Q. What is the third data source used in the forward-looking CAPM analyses?

A. I relied on data published by Kroll, a global financial services company. Specific to the cost of capital estimation, Kroll provides forward-looking estimates of an equity risk premium (ERP) and a risk-free return. As in the previous CAPM equations, the ERP plus the risk-free return equates to the expected return on common stocks. Kroll develops its forecast risk-free rate as a normalized risk-free return that investors can expect across the current economic cycle. The beta coefficient of the particular asset (in this case, the proxy group) is applied to the ERP, and the product is added to the forecasted risk-free rate of return. As capital markets change, Kroll adjusts its ERP and risk-free return estimates.

Capital Asset Pricing Model -- Kroll Forecasted Risk Premium
Using Forecasted Market Returns & Treasury Bond Yields
25-MRGT-222-KSF

			Low Beta	High Beta
1)	Kroll U.S. ERP		5.00%	5.00%
2)	Beta Coefficient	x	0.75	1.05
3)	Proxy Group Risk Premium		3.75%	5.25%
4)	Kroll U.S. Risk-Free Rate of Return*	+	4.79%	4.79%
5)	Proxy Group Cost of Equity		8.54%	10.04%

1) Kroll U.S. Equity Risk Premium as of June 5, 2024
2) Beta coefficient range observed in Telecommunications Services companies
3) Resulting risk premium for proxy group (1-2).
4) Kroll U.S. Risk-Free Rate of Return 20 Year Treasury Bond February 13, 2025
5) Forecasted Cost of Equity Range for Proxy Group

Kroll recommends a risk-free rate of the higher of 3.50% OR spot market yield on 20-Year U.S. Treasury Bond. At February 13, 2025, the spot yield was 4.79% (Federal Reserve H.15)

Sources:
https://www.kroll.com/-/media/kroll-images/pdfs/kroll-increases-us-risk-free-rate.pdf
https://www.federalreserve.gov/releases/h15/

Q. Does the CAPM utilizing historical data corroborate the findings of your forecasted CAPM analyses?

A. Yes, to a degree. JPMAM's and BlackRock's views of lower returns in the future relative to the historical returns are universally accepted across the investment banking and asset management industry. Their expectations for relatively low returns directly reflect the current high valuation of the equities market indexes; there is little room for equity indexes to advance from their current price levels. The cost of equity or expected returns calculated using purely historical data are greater than scenarios using forecasted returns because economists and the capital management industry forecast lower economic growth in the future than what was witnessed in the past nine decades. There is a clear connection between broad measures of economic growth and potential returns on common stocks,

particularly over multi-year horizons. Even though historical growth rates are unlikely to repeat, surveys of financial professionals reveal a significant percentage of them utilizing historical returns. For the historical CAPM, I relied on data on returns earned from 1928 through 2024, consistent with the period used by these financial professionals.[24] Some well-regarded financial publications focus solely on this era of recorded data and how to apply it in cost of capital studies. Thus, measurements from this period influence expectations despite warnings surrounding historic economic growth rates and market returns. Still, it has significant limitations, and policymakers should be aware of them in their final decision.

If we rely on purely historical data, we assume that specific trends, particularly economic growth observed in the past 96 years will continue. It is well established that the U.S. economy is projected to grow slower than that experienced in the past. The projected long-run growth rate for nominal Gross Domestic Product (nGDP) is 4.09% compared to the historical growth rate of 6.12% over the past 94 years.[25] Beyond the change in economic growth, there is some issue with measuring those historical returns. Evidence shows that these frequently quoted historical returns do not present a complete picture in part due to

[24] https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html

[25]

Historic Nominal GDP (Billion $'s)		
1929	$	104.60
2023	$	27,720.70
Annual Growth Rate		**6.12%**

Source: Bureau of Economic Analysis
Table 1.1.5. Gross Domestic Product
www.bea.gov

the beginning period often used in the calculation.[26] The simple step of beginning the measurement period in the 1920's raises questions about whether the period represents all modern-era securities trading. Regardless of whether the 1920s is an appropriate starting point for measuring historical returns, historical returns are widely reported and frequently referred to in discussions of capital markets and potential returns for the future.

Q. Please describe the two model runs you performed with the historical data.

A. I prepared the historical perspective in two unique views of historical average returns: arithmetic and geometric. The model calculations are identical to those presented earlier, merely a different source for the data. The arithmetic average returns are the mean or average of the returns occurring *each year*; it is what is expected in any given year and what people refer to as an average. The geometric average is the compound return earned *across a period*, in this instance, 1928 through 2024. These two return measures differ because of the volatility in annual returns; the greater the volatility in annual returns, the greater the difference between arithmetic and geometric averages for those observations. In applying the CAPM, neither measure of returns reigns supreme as countless academic papers argue each side of the issue. Both methods offer an accurate perspective of historic returns; the arithmetic average is representative of a year, and the geometric average is the average change over a time span. Since investors are rarely concerned with the potential return over the period of just one year, the geometric averages are more important to investors. Both

[26] McQuarrie, Edward F, "The Myth of 1926: How Much Do We Know Long-Term Returns on U.S. Stocks?" The Journal of Investing; Winter 2009, p. 96.

averages are widely reported or easily calculated from publicly published data.

Capital Asset Pricing Model -- Historic Risk Premium
Based on Historic Arithmetic Risk Premiums
from 1928 to 2024
25-MRGT-222-KSF

		Low Beta	High Beta
1) Total Returns on Common Stocks		11.79%	11.79%
2) Total Return on Government Bonds	-	4.79%	4.79%
3) Resulting Risk Premium		7.00%	7.00%
4) Beta Coefficient	x	0.75	1.05
5) Risk Premium		5.25%	7.35%
6) Historic Yield on Government Bonds	+	4.75%	4.75%
7) Forecasted Cost of Equity Based on Historic Returns		10.00%	12.10%

1) Historic returns on common stocks 1928-2024
2) Historic returns on intermediate-term government bonds 1928-2024
3) Resulting risk premium (1-2)
4) Beta coefficient range observed in Telecommunications Services companies
5) Row 3 x Row 4 = Asset Specific Risk Premium
6) Historic year-end yield on intermediate-term government bonds 1928-2024
7) Forecasted cost of equity capital, row 5 + row 6

Sources: Damodaran Online
http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html

Capital Asset Pricing Model -- Historic Risk Premium
Based on Historic Geometric Risk Premiums
from 1928 to 2024
25-MRGT-222-KSF

		Low Beta	High Beta
1) Total Returns on Common Stocks		9.94%	9.94%
2) Total Return on Government Bonds	-	4.50%	4.50%
3) Resulting Risk Premium		5.44%	5.44%
4) Beta Coefficient	x	0.75	1.05
5) Risk Premium		4.08%	5.71%
6) Historic Yield on Government Bonds	+	4.75%	4.75%
7) Forecasted Cost of Equity Based on Historic Returns		8.83%	10.46%

1) Historic returns on common stocks 1928-2024
2) Historic returns on intermediate-term government bonds 1928-2024
3) Resulting risk premium (1-2)
4) Beta coefficient range observed in Telecommunications Services companies
5) Row 3 x Row 4 = Asset Specific Risk Premium
6) Historic year-end yield on intermediate-term government bonds 1928-2024
7) Forecasted cost of equity capital, row 5 + row 6

Sources: Damodaran Online
http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html

Q. Does that conclude your testimony?

A. Yes, thank you.

STATE OF KANSAS)
) ss.
COUNTY OF SHAWNEE)

VERIFICATION

Adam Gatewood, being duly sworn upon his oath deposes and states that he is a Senior Managing Financial Analyst for the Utilities Division of the Kansas Corporation Commission of the State of Kansas, that he has read and is familiar with the foregoing *Direct Testimony*, and attests that the statements contained therein are true and correct to the best of his knowledge, information and belief.

Adam Gatewood
Senior Managing Financial Analyst
State Corporation Commission of the
State of Kansas

Subscribed and sworn to before me this 25 day of March, 2025.

Notary Public

My Appointment Expires: 4/28/25

NOTARY PUBLIC - State of Kansas
ANN M. MURPHY
My Appt. Expires 4/28/25

CERTIFICATE OF SERVICE

25-MRGT-222-KSF

I, the undersigned, certify that a true and correct copy of the above and foregoing Direct Testimony was served via electronic service this 27th day of March, 2025, to the following:

ANTHONY K. VEACH
ANTHONY VEACH LAW
1575 BIRDIE WAY, A107
LAWRENCE, KS 66047
anthonyveach@anthonyveachlaw.com

AARON BAILEY, ASSISTANT GENERAL COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
aaron.bailey@ks.gov

PATRICK HURLEY, CHIEF LITIGATION COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
patrick.hurley@ks.gov

RHONDA GODDARD, CFO - ASSESSMENTS (MOUNDRIDGE)
MOUNDRIDGE TELEPHONE COMPANY
145 N MAIN
LENORA, KS 67645
rgoddard@nex-tech.com

PHOENIX Z. ANSHUTZ, ATTORNEY
PENNER LOWE LAW GROUP, LLC
245 N WACO STREET, STE 125
WICHITA, KS 67202
panshutz@pennerlowe.com

NICOLE STEPHENS, KUSF ADMINISTRATOR MANAGER
VANTAGE POINT SOLUTIONS
2930 MONTVALE DRIVE SUITE B
SPRINGFIELD, IL 62704
nicole.stephens@vantagepnt.com

Ann Murphy

Ann Murphy