



OKLAHOMA
Tax Commission

CAPITALIZATION RATE STUDY

23-Apr-2026

AD VALOREM

PUBLIC SERVICE SECTION

EXECUTIVE SUMMARY

Executive Summary

The income approach to value converts projected future income or cash flow into an estimate of present value. The accuracy of this approach is no greater than the validity of the assumptions used to estimate the key variables, particularly the capitalization rate variable. The mathematical techniques used in the approach convert those assumptions into an estimate of current market value.

This booklet contains a study of each of the eight state assessed industry groups in Oklahoma. Industry data was gathered by group as identified by Value Line Investment Survey published from the period of November 2025 through January 2026. Additional Value Line Industry segments including Oil/Gas Distribution and Pipeline MLPs were reviewed.

Generally accepted appraisal procedures were used to estimate the cost of capital for debt and equity. The long term debt cost is the cost for a particular risk class of debt on the lien date. The equity rate reflects the rate of return or compensation that will satisfy the risk that a prospective purchaser would assume by investing in the property.

Authority for Valuation

Oklahoma Tax Commission Ad Valorem is charged with the responsibility for the valuation of Railroad, Air Carrier, and Public Service Corporation property in accordance with Title 68, Oklahoma Statutes, Section 2808. The term "public service" includes electric companies, fluid or product pipeline companies, gas distribution and transmission companies, telecommunication companies, and water companies.

Nominal Growth Rate

For the typical income projection of the valuation of Railroad, Air Carrier, and Public Service Corporation property, a nominal growth rate of 4.43% will be applied.

Band of Investment, Capital Structure

A representative capital structure is developed for each industry using the market value of equity and the book value of long term debt. Using Value Line Investment Survey, the market value of equity can be calculated by multiplying the number of shares outstanding by the listed stock price, or by utilizing the given market capitalization number already calculated. The debt components are book amounts unless market amounts are readily available and predetermined to be significantly different. Preferred stock was excluded in the calculations for all industry types.

The rates of debt and equity capital are weighted by the respective amounts of such capital deemed mostly likely to be employed by a prospective buyer. The result is a representative or typical capital structure of an industry group of companies, not that of the present owner.

Cost of Debt

Cost of Debt was calculated as the twelve-month bond yield average from Mergent Bond Record for public utility and industrial bonds utilizing the bond rating perceived as typical for each industry.

Executive Summary

Cost of Capital

Equity rate calculations were derived upon review of Discounted Cash flow, Capital Asset Pricing Model (CAPM), and Earnings Price Ratio.

Discounted Cash Flow (Gordon Growth Model) allows for the calculation of two rates within its model utilizing the dividend yield, dividend growth rate estimates, and earnings growth rate estimates as listed in Value Line Investment Survey. Cost of capital is being calculated for dividends by adding the dividend yield and the dividend estimate. Similarly, the cost of capital for earnings is calculated by adding the dividend yield and the earnings estimate. No calculation is utilized where the resulting yield of growth estimated equity rate is below the chosen cost of debt for each respective industry.

Capital Asset Pricing Model (CAPM) in the application of the CAPM, the most sensitive component affecting the outcome is the estimate of the beta statistic. A choice of time frames and frequencies of measurement in the calculation of the beta can produce significantly different results. Another factor in the use of beta is the choice of whether to use an unadjusted beta of a beta adjusted to reflect the fact that betas revert to the mean over time. For this study the company levered betas as developed and presented in The Value Line Investment Survey for the selected industry groups are used.

Earnings Price Ratios (E/P Ratio) utilizing Value Line Investment Survey for the selected industry groups, the E/P Ratio was calculated with the projects earnings divided by the recent price.

Flotation Costs

Flotation costs are those costs associated with the issuance of new securities and include both the underwriting spread and the costs incurred by the issuing company from the offering. Financial theory suggests and evidence supports that firms do not typically issue new common equity as a matter of common practice. Therefore, in determining a capitalization rate, no adjustment will be made in the capitalization rate of the income stream for hypothetical flotation costs. Flotation costs actually incurred may be accounted for in the income stream.

Utilization of Other Studies and Data

Valuation staff has considered and where appropriate utilized data and capitalization studies submitted by assessed and interested parties in the development of the derived rates.

The capitalization rates published in this study are intended to be applied to the unitary operations of those companies subject to central valuation and assessment by the Oklahoma State Board of Equalization.

Airline - Cargo Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Airline - Cargo</i>	13.90%	6.02%	76.11%	23.89%	12.02%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Airline - Cargo Industry Notes

- Recognizing the different operational services as provided by this industry group, it was broken out into two segments, cargo and passenger service.
- From the passenger service segment, Ryanair Holdings plc was excluded due to being primarily involved in non-domestic operations and Joby Aviation, Inc., was excluded due to primary operations being air taxi not typically air travel. Air Transport Services Group was removed from Value Line.
- Staff considered capitalization studies submitted by:
 - No Submissions
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Airline - Cargo	13.90%	76.11%	23.89%	12.02%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Airline - Cargo

CapM Ex Post Equity Rate	12.71%
CapM Ex Ante Equity Rate	19.52%
DCF (Dividend) Equity Rate	10.15%
DCF (Earnings) Equity Rate	8.15%
Earnings Price Ratio	10.45%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Airline - Cargo	12.16%	18.49%	1.08	12.71%	19.52%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization	Dividend Yield	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Airline - Cargo								
	FedEx Corp.	B++	59,700,000,000	2.30%	10.00%	6.50%	12.30%	8.80%
	United Parcel Service, Inc.	A	79,700,000,000	7.00%	1.00%	0.50%	8.00%	7.50%
Median			69,700,000,000				10.15%	8.15%
Arithmetic Mean			69,700,000,000				10.15%	8.15%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Airline - Cargo						
	FedEx Corp.	B++	59,700,000,000	252.99	26.00	10.28%
	United Parcel Service, Inc.	A	79,700,000,000	94.09	10.00	10.63%
Median			69,700,000,000			10.45%
Arithmetic Mean			69,700,000,000			10.45%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization c	Long Term Debt d	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Airline - Cargo							
	FedEx Corp.	B++	59,700,000,000	20,291,000,000	0.34	74.63%	25.37%
	United Parcel Service, Inc.	A	79,700,000,000	23,850,000,000	0.30	76.97%	23.03%
Median			69,700,000,000	22,070,500,000	0.32	75.80%	24.20%
Arithmetic Mean			69,700,000,000	22,070,500,000	0.32	75.80%	24.20%
Weighted Average			71,134,720,230	22,325,808,465		76.11%	23.89%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Airline - Cargo, Selected Comparables		
	FedEx Corp.	1.15
	United Parcel Service, Inc.	1.00
Median		1.08
Arithmetic Mean		1.08

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Airline - Cargo, Value Line		
	FedEx Corp.	1.15
	United Parcel Service, Inc.	1.00
Median		1.08
Arithmetic Mean		1.08

Value Line Investment Survey, November 2025 through January 2026

Airline - Passenger Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Airline - Passenger</i>	17.10%	6.02%	65.72%	34.28%	13.30%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Airline - Passenger Industry Notes

- Recognizing the different operational services as provided by this industry group, it was broken out into two segments, cargo and passenger service.
- From the passenger service segment, Ryanair Holdings plc was excluded due to being primarily involved in non-domestic operations and Joby Aviation, Inc., was excluded due to primary operations being air taxi not typically air travel. Air Transport Services Group was removed from Value Line.
- Staff considered capitalization studies submitted by:
 - No Submissions
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Airline - Passenger	17.10%	65.72%	34.28%	13.30%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Airline - Passenger

CapM Ex Post Equity Rate	15.31%
CapM Ex Ante Equity Rate	24.35%
DCF (Dividend) Equity Rate	22.00%
DCF (Earnings) Equity Rate	17.98%
Earnings Price Ratio	21.77%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Airline - Passenger	12.16%	18.49%	1.43	15.31%	24.35%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization	Dividend Yield	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Airline - Passenger								
	Alaska Air Group, Inc.	B+	4,700,000,000			21.00%		21.00%
	Allegiant Travel Company	B+	1,100,000,000			24.50%		24.50%
	American Airlines Group	B	8,800,000,000			14.00%		14.00%
	Copa Holdings, S.A.	B+	5,200,000,000	5.10%	20.50%	7.00%	25.60%	12.10%
	Delta Air Lines, Inc.	B++	38,200,000,000	1.30%		9.50%		10.80%
	JetBlue Airways Corp	C++	1,500,000,000					
	SkyWest, Inc.	B+	4,000,000,000			25.50%		25.50%
	Southwest Airlines	B++	15,700,000,000	2.40%	16.00%	20.50%	18.40%	22.90%
	United Airlines Holdings, Inc.	B+	31,100,000,000			13.00%		13.00%
Median			5,200,000,000				22.00%	17.50%
Arithmetic Mean			12,255,555,556				22.00%	17.98%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Airline - Passenger						
	Alaska Air Group, Inc.	B+	4,700,000,000	41.07	14.25	34.70%
	Allegiant Travel Company	B+	1,100,000,000	61.93	16.00	25.84%
	American Airlines Group	B	8,800,000,000	13.34	3.70	27.74%
	Copa Holdings, S.A.	B+	5,200,000,000	125.68	18.00	14.32%
	Delta Air Lines, Inc.	B++	38,200,000,000	58.50	9.00	15.38%
	JetBlue Airways Corp	C++	1,500,000,000	4.18	1.50	35.89%
	SkyWest, Inc.	B+	4,000,000,000	100.55	13.15	13.08%
	Southwest Airlines	B++	15,700,000,000	30.43	3.75	12.32%
	United Airlines Holdings, Inc.	B+	31,100,000,000	96.11	16.00	16.65%
Median			5,200,000,000			16.65%
Arithmetic Mean			12,255,555,556			21.77%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization	Long Term Debt	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Airline - Passenger							
	Alaska Air Group, Inc.	B+	4,700,000,000	4,530,000,000	0.96	50.92%	49.08%
	Allegiant Travel Company	B+	1,100,000,000	1,778,900,000	1.62	38.21%	61.79%
	American Airlines Group	B	8,800,000,000	25,113,000,000	2.85	25.95%	74.05%
	Copa Holdings, S.A.	B+	5,200,000,000	1,497,600,000	0.29	77.64%	22.36%
	Delta Air Lines, Inc.	B++	38,200,000,000	12,773,000,000	0.33	74.94%	25.06%
	JetBlue Airways Corp	C++	1,500,000,000	7,772,000,000	5.18	16.18%	83.82%
	SkyWest, Inc.	B+	4,000,000,000	1,930,100,000	0.48	67.45%	32.55%
	Southwest Airlines	B++	15,700,000,000	4,079,000,000	0.26	79.38%	20.62%
	United Airlines Holdings, Inc.	B+	31,100,000,000	20,807,000,000	0.67	59.91%	40.09%
Median			5,200,000,000	4,530,000,000	0.67	59.91%	40.09%
Arithmetic Mean			12,255,555,556	8,920,066,667	1.41	54.51%	45.49%
Weighted Average			25,557,298,277	13,331,593,019		65.72%	34.28%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Airline - Passenger, Selected Comparables		
	Alaska Air Group, Inc.	1.35
	Allegiant Travel Company	1.50
	American Airlines Group	1.40
	Copa Holdings, S.A.	1.15
	Delta Air Lines, Inc.	1.45
	JetBlue Airways Corp	1.60
	SkyWest, Inc.	1.45
	Southwest Airlines	1.35
	United Airlines Holdings, Inc.	1.60
Median		1.45
Arithmetic Mean		1.43

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Airline - Passenger, Value Line		
	Alaska Air Group, Inc.	1.35
	Allegiant Travel Company	1.50
	American Airlines Group	1.40
	Copa Holdings, S.A.	1.15
	Delta Air Lines, Inc.	1.45
	JetBlue Airways Corp	1.60
	Joby Aviation, Inc.	1.75
	Ryanair Holdings	1.15
	SkyWest, Inc.	1.45
	Southwest Airlines	1.35
	United Airlines Holdings, Inc.	1.60
Median		1.45
Arithmetic Mean		1.43

Value Line Investment Survey, November 2025 through January 2026

Electric Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Electric</i>	11.00%	5.97%	59.95%	40.05%	8.99%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Electric Industry Notes

- From the Electric Industry segment, Fortis, Inc. was excluded due to Value Line information listed in Canadian dollars. Otter Tail Corporation was excluded due to the business model not being consistent with other comparable companies.
- Staff considered capitalization information submitted by:
 - No Submissions
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flows
 2. Capital Asset Pricing Model, Ex-Post and Ex-Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Electric	11.00%	59.95%	40.05%	8.99%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Electric

CapM Ex Post Equity Rate	10.41%
CapM Ex Ante Equity Rate	15.24%
DCF (Dividend) Equity Rate	8.71%
DCF (Earnings) Equity Rate	9.68%
Earnings Price Ratio	6.22%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Electric	12.16%	18.49%	0.76	10.41%	15.24%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Electric	Allele, Inc.	B++	3,900,000,000	4.40%	3.50%	6.00%	7.90%	10.40%
	Alliant Energy Corporation	A	17,600,000,000	3.00%	6.00%	6.00%	9.00%	9.00%
	Ameren Corporation	A	28,300,000,000	2.80%	6.50%	6.50%	9.30%	9.30%
	American Electric Power Company, Inc.	A	65,300,000,000	3.20%	5.50%	6.50%	8.70%	9.70%
	CenterPoint Energy, Inc.	B++	25,900,000,000	2.20%	5.50%	7.00%	7.70%	9.20%
	CMS Energy Corporation	B++	22,600,000,000	2.90%	7.50%	8.50%	10.40%	11.40%
	DTE Energy Company	B++	28,300,000,000	3.40%	3.00%	4.50%	6.40%	7.90%
	Entergy Corporation	A	42,600,000,000	2.50%	5.50%	3.00%	8.00%	
	Evergy, Inc.	B++	17,700,000,000	3.60%	7.00%	7.50%	10.60%	11.10%
	MGE Energy, Inc.	A	3,000,000,000	2.30%	7.00%	6.50%	9.30%	8.80%
	OGE Energy Corp.	B++	9,000,000,000	3.80%	3.00%	6.50%	6.80%	10.30%
	WEC Energy Group, Inc.	A	36,100,000,000	3.40%	7.00%	6.00%	10.40%	9.40%
Median			24,250,000,000				8.85%	9.40%
Arithmetic Mean			25,025,000,000				8.71%	9.68%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Electric						
	Allete, Inc.	B++	3,900,000,000	67.50	5.00	7.41%
	Alliant Energy Corporation	A	17,600,000,000	68.41	4.25	6.21%
	Ameren Corporation	A	28,300,000,000	104.79	6.50	6.20%
	American Electric Power Company, Inc.	A	65,300,000,000	122.04	7.30	5.98%
	CenterPoint Energy, Inc.	B++	25,900,000,000	39.72	2.30	5.79%
	CMS Energy Corporation	B++	22,600,000,000	74.30	5.00	6.73%
	DTE Energy Company	B++	28,300,000,000	136.07	9.25	6.80%
	Entergy Corporation	A	42,600,000,000	95.48	4.20	4.40%
	Evergy, Inc.	B++	17,700,000,000	77.02	5.00	6.49%
	MGE Energy, Inc.	A	3,000,000,000	81.88	4.75	5.80%
	OGE Energy Corp.	B++	9,000,000,000	44.75	3.00	6.70%
	WEC Energy Group, Inc.	A	36,100,000,000	111.02	6.80	6.13%
Median			24,250,000,000			6.21%
Arithmetic Mean			25,025,000,000			6.22%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization c	Long Term Debt d	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Electric							
	Allete, Inc.	B++	3,900,000,000	2,098,900,000	0.54	65.01%	34.99%
	Alliant Energy Corporation	A	17,600,000,000	10,655,000,000	0.61	62.29%	37.71%
	Ameren Corporation	A	28,300,000,000	19,172,000,000	0.68	59.61%	40.39%
	American Electric Power Company, Inc.	A	65,300,000,000	44,239,000,000	0.68	59.61%	40.39%
	CenterPoint Energy, Inc.	B++	25,900,000,000	19,400,000,000	0.75	57.17%	42.83%
	CMS Energy Corporation	B++	22,600,000,000	16,911,000,000	0.75	57.20%	42.80%
	DTE Energy Company	B++	28,300,000,000	22,424,000,000	0.79	55.79%	44.21%
	Entergy Corporation	A	42,600,000,000	27,058,000,000	0.64	61.16%	38.84%
	Evergy, Inc.	B++	17,700,000,000	12,446,000,000	0.70	58.71%	41.29%
	MGE Energy, Inc.	A	3,000,000,000	745,000,000	0.25	80.11%	19.89%
	OGE Energy Corp.	B++	9,000,000,000	5,368,200,000	0.60	62.64%	37.36%
	WEC Energy Group, Inc.	A	36,100,000,000	19,564,700,000	0.54	64.85%	35.15%
Median			24,250,000,000	18,041,500,000	0.66	60.39%	39.61%
Arithmetic Mean			25,025,000,000	16,673,483,333	0.63	62.01%	37.99%
Weighted Average			36,275,957,376	24,229,554,712		59.95%	40.05%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>	
Electric, Selected Comparables			
	Allete, Inc.	0.75	
	Alliant Energy Corporation	0.80	
	Ameren Corporation	0.80	
	American Electric Power Company, Inc.	0.70	
	CenterPoint Energy, Inc.	0.80	
	CMS Energy Corporation	0.70	
	DTE Energy Company	0.80	
	Entergy Corporation	0.75	
	Evergy, Inc.	0.75	
	MGE Energy, Inc.	0.80	
	OGE Energy Corp.	0.85	
	WEC Energy Group, Inc.	0.65	
		<hr/>	
Median		0.78	
Arithmetic Mean		<table border="1"><tr><td>0.76</td></tr></table>	0.76
0.76			

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Electric, Value Line		
	Allete, Inc.	0.75
	Alliant Energy Corporation	0.80
	Ameren Corporation	0.80
	American Electric Power Company, Inc.	0.70
	CenterPoint Energy, Inc.	0.80
	CMS Energy Corporation	0.70
	DTE Energy Company	0.80
	Entergy Corporation	0.75
	Evergy, Inc.	0.75
	Fortis Inc.	0.50
	MGE Energy, Inc.	0.80
	OGE Energy Corp.	0.85
	Otter Tail Corporation	0.90
	WEC Energy Group, Inc.	0.65
Median		0.78
Arithmetic Mean		0.75

Value Line Investment Survey, November 2025 through January 2026

Fluid Pipeline Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Fluid Pipeline</i>	14.85%	6.02%	88.13%	11.87%	13.80%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Fluid Pipeline Industry Notes

- From the Fluid Pipeline (Petroleum Integrated) Industry segment, Petroleo Brasileiro S.A. and Equinor ASA were excluded; although publicly traded, the government is the majority holder of their common stock. Cenovus Energy Inc. and Suncor Energy, Inc. were excluded due to Value Line information listed in Canadian dollars. World Kinect Corp. was excluded due to the business model not being comparable to other companies.
- Staff considered capitalization studies submitted by:
 - Liquids Pipeline Industry Capitalization Rate Study submitted by Nielsen Management Services, LLC.
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flows
 2. Capital Asset Pricing Model, Ex-Post and Ex-Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Fluid Pipeline	14.85%	88.13%	11.87%	13.80%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Fluid Pipeline

CapM Ex Post Equity Rate	12.92%
CapM Ex Ante Equity Rate	19.91%
DCF (Dividend) Equity Rate	11.08%
DCF (Earnings) Equity Rate	12.02%
Earnings Price Ratio	11.03%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Fluid Pipeline	12.16%	18.49%	1.10	12.92%	19.91%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization	Dividend Yield	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Fluid Pipeline								
	BP p.l.c.	A	96,000,000,000	5.20%	5.00%	27.00%	10.20%	32.20%
	Chevron Corp.	A++	313,000,000,000	4.60%	6.50%	1.50%	11.10%	6.10%
	CVR Energy, Inc.	B	3,700,000,000		4.00%	-1.50%		
	Delek US Holdings, Inc.	B	2,500,000,000	2.50%	6.00%		8.50%	
	Exxon Mobil Corp.	A++	499,000,000,000	3.30%	3.50%	-3.00%	6.80%	
	HF Sinclair Corporation	B++	10,200,000,000	3.90%	10.50%		14.40%	
	Imperial Oil Ltd.	A+	47,500,000,000	2.20%	12.00%	6.00%	14.20%	8.20%
	Marathon Petroleum	B++	59,000,000,000	2.00%	6.00%	-8.00%	8.00%	
	Occidental Petroleum	B++	41,200,000,000	2.30%	17.50%	2.50%	19.80%	
	Par Pacific Holdings, Inc.	B	2,200,000,000			2.50%		
	PBF Energy, Inc.	C++	4,600,000,000	2.80%	12.50%	-12.50%	15.30%	
	Phillips 66	A	55,800,000,000	3.60%	5.00%		8.60%	
	Shell plc	A+	222,000,000,000	3.70%	4.00%	2.50%	7.70%	6.20%
	TotalEnergies SE	A+	139,000,000,000	6.40%	5.00%	1.00%	11.40%	7.40%
	Valero Energy Corp.	B++	54,700,000,000	2.60%	5.50%	-4.50%	8.10%	
Median			54,700,000,000				10.20%	7.40%
Arithmetic Mean			103,360,000,000				11.08%	12.02%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Fluid Pipeline						
	BP p.l.c.	A	96,000,000,000	37.12	6.20	16.70%
	Chevron Corp.	A++	313,000,000,000	155.65	15.00	9.64%
	CVR Energy, Inc.	B	3,700,000,000	36.90	3.80	10.30%
	Delek US Holdings, Inc.	B	2,500,000,000	41.50	2.75	6.63%
	Exxon Mobil Corp.	A++	499,000,000,000	118.22	8.35	7.06%
	HF Sinclair Corporation	B++	10,200,000,000	55.34	7.25	13.10%
	Imperial Oil Ltd.	A+	47,500,000,000	95.52	10.00	10.47%
	Marathon Petroleum	B++	59,000,000,000	196.36	12.50	6.37%
	Occidental Petroleum	B++	41,200,000,000	41.80	6.00	14.35%
	Par Pacific Holdings, Inc.	B	2,200,000,000	43.32	6.70	15.47%
	PBF Energy, Inc.	C++	4,600,000,000	39.82	5.25	13.18%
	Phillips 66	A	55,800,000,000	138.65	12.90	9.30%
	Shell plc	A+	222,000,000,000	76.56	8.50	11.10%
	TotalEnergies SE	A+	139,000,000,000	62.93	8.15	12.95%
	Valero Energy Corp.	B++	54,700,000,000	179.18	15.75	8.79%
Median			54,700,000,000			10.47%
Arithmetic Mean			103,360,000,000			11.03%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization c	Long Term Debt d	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Fluid Pipeline							
	BP p.l.c.	A	96,000,000,000	54,100,000,000	0.56	63.96%	36.04%
	Chevron Corp.	A++	313,000,000,000	37,953,000,000	0.12	89.19%	10.81%
	CVR Energy, Inc.	B	3,700,000,000	1,827,000,000	0.49	66.94%	33.06%
	Delek US Holdings, Inc.	B	2,500,000,000	3,168,000,000	1.27	44.11%	55.89%
	Exxon Mobil Corp.	A++	499,000,000,000	32,824,000,000	0.07	93.83%	6.17%
	HF Sinclair Corporation	B++	10,200,000,000	2,768,000,000	0.27	78.66%	21.34%
	Imperial Oil Ltd.	A+	47,500,000,000	2,864,000,000	0.06	94.31%	5.69%
	Marathon Petroleum	B++	59,000,000,000	31,232,000,000	0.53	65.39%	34.61%
	Occidental Petroleum	B++	41,200,000,000	20,846,000,000	0.51	66.40%	33.60%
	Par Pacific Holdings, Inc.	B	2,200,000,000	962,100,000	0.44	69.57%	30.43%
	PBF Energy, Inc.	C++	4,600,000,000	2,394,000,000	0.52	65.77%	34.23%
	Phillips 66	A	55,800,000,000	19,168,000,000	0.34	74.43%	25.57%
	Shell plc	A+	222,000,000,000	64,000,000,000	0.29	77.62%	22.38%
	TotalEnergies SE	A+	139,000,000,000	49,600,000,000	0.36	73.70%	26.30%
	Valero Energy Corp.	B++	54,700,000,000	9,687,000,000	0.18	84.96%	15.04%
Median			54,700,000,000	19,168,000,000	0.36	73.70%	26.30%
Arithmetic Mean			103,360,000,000	22,226,206,667	0.40	73.92%	26.08%
Weighted Average			282,818,240,454	38,085,361,210		88.13%	11.87%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Fluid Pipeline, Selected Comparables		
	BP p.l.c.	1.00
	Chevron Corp.	0.95
	CVR Energy, Inc.	1.25
	Delek US Holdings, Inc.	1.35
	Exxon Mobil Corp.	0.90
	HF Sinclair Corporation	1.10
	Imperial Oil Ltd.	1.10
	Marathon Petroleum	1.15
	Occidental Petroleum	1.15
	Par Pacific Holdings, Inc.	1.10
	PBF Energy, Inc.	1.25
	Phillips 66	1.20
	Shell plc	1.00
	TotalEnergies SE	0.90
	Valero Energy Corp.	1.15
Median		1.10
Arithmetic Mean		1.10

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Fluid Pipeline, Value Line		
	BP p.l.c.	1.00
	Genovus Energy Inc.	1.05
	Chevron Corp.	0.95
	CVR Energy, Inc.	1.25
	Delek US Holdings, Inc.	1.35
	Equinor ASA	0.85
	Exxon Mobil Corp.	0.90
	HF Sinclair Corporation	1.10
	Imperial Oil Ltd.	1.10
	Marathon Petroleum	1.15
	Occidental Petroleum	1.15
	Par Pacific Holdings, Inc.	1.10
	PBF Energy, Inc.	1.25
	Petroleo Brasileiro S.A (Petrobas)	1.00
	Phillips 66	1.20
	Shell plc	1.00
	Suncor Energy Inc.	0.95
	TotalEnergies SE	0.90
	Valero Energy Corp.	1.15
	World Kinect Corp.	1.25
Median		1.10
Arithmetic Mean		1.08

Value Line Investment Survey, November 2025 through January 2026

Gas Distribution Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Gas Distribution</i>	11.30%	5.97%	68.44%	31.56%	9.62%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Gas Distribution Industry Notes

- From the Natural Gas Utility Industry segment, UGI Corp. was excluded as they primarily market propane gas.
- Staff considered capitalization studies submitted by:
 - Natural Gas Pipeline Industry Capitalization Rate Study submitted by Nielsen Management Services, LLC.
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Gas Distribution	11.30%	68.44%	31.56%	9.62%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Gas Distribution

CapM Ex Post Equity Rate	10.36%
CapM Ex Ante Equity Rate	15.15%
DCF (Dividend) Equity Rate	8.75%
DCF (Earnings) Equity Rate	9.84%
Earnings Price Ratio	6.50%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Gas Distribution	12.16%	18.49%	0.76	10.36%	15.15%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Gas Distribution								
	Atmos Energy Corporation	A	28,500,000,000	2.30%	8.50%	8.50%	10.80%	10.80%
	Chesapeake Utilities Corporation	B++	3,200,000,000	2.10%	7.00%	8.00%	9.10%	10.10%
	New Jersey Resources Corp	A	4,600,000,000	4.20%	5.50%	6.50%	9.70%	10.70%
	NiSource, Inc.	B++	20,900,000,000	2.70%	6.50%	8.00%	9.20%	10.70%
	Northwest Natural Holding Co.	A	2,000,000,000	4.20%	0.50%	6.50%		10.70%
	ONE Gas, Inc.	A	4,900,000,000	3.30%	2.00%	4.50%		7.80%
	Southwest Gas Holdings, Inc.	B++	5,700,000,000	3.10%	3.00%	0.00%	6.10%	
	Spire, Inc.	B++	5,300,000,000	3.60%	4.00%	4.50%	7.60%	8.10%
Median			5,100,000,000				9.15%	10.70%
Arithmetic Mean			9,387,500,000				8.75%	9.84%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Gas Distribution						
	Atmos Energy Corporation	A	28,500,000,000	177.76	10.00	5.63%
	Chesapeake Utilities Corporation	B++	3,200,000,000	133.50	8.00	5.99%
	New Jersey Resources Corp	A	4,600,000,000	45.66	3.90	8.54%
	NiSource, Inc.	B++	20,900,000,000	43.72	2.55	5.83%
	Northwest Natural Holding Co.	A	2,000,000,000	47.00	3.25	6.91%
	ONE Gas, Inc.	A	4,900,000,000	81.47	5.25	6.44%
	Southwest Gas Holdings, Inc.	B++	5,700,000,000	79.22	5.40	6.82%
	Spire, Inc.	B++	5,300,000,000	89.58	5.25	5.86%
Median			5,100,000,000			6.22%
Arithmetic Mean			9,387,500,000			6.50%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization c	Long Term Debt d	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Gas Distribution							
	Atmos Energy Corporation	A	28,500,000,000	8,980,600,000	0.32	76.04%	23.96%
	Chesapeake Utilities Corporation	B++	3,200,000,000	1,437,900,000	0.45	69.00%	31.00%
	New Jersey Resources Corp	A	4,600,000,000	3,020,600,000	0.66	60.36%	39.64%
	NiSource, Inc.	B++	20,900,000,000	14,472,000,000	0.69	59.09%	40.91%
	Northwest Natural Holding Co.	A	2,000,000,000	2,128,000,000	1.06	48.45%	51.55%
	ONE Gas, Inc.	A	4,900,000,000	2,355,600,000	0.48	67.53%	32.47%
	Southwest Gas Holdings, Inc.	B++	5,700,000,000	3,507,100,000	0.62	61.91%	38.09%
	Spire, Inc.	B++	5,300,000,000	3,498,400,000	0.66	60.24%	39.76%
Median			5,100,000,000	3,259,500,000	0.64	61.14%	38.86%
Arithmetic Mean			9,387,500,000	4,925,025,000	0.62	62.83%	37.17%
Weighted Average			18,229,693,742	8,405,304,527		68.44%	31.56%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Gas Distribution, Selected Comparables		
	Atmos Energy Corporation	0.75
	Chesapeake Utilities Corporation	0.70
	New Jersey Resources Corp	0.75
	NiSource, Inc.	0.85
	Northwest Natural Holding Co.	0.75
	ONE Gas, Inc.	0.75
	Southwest Gas Holdings, Inc.	0.75
	Spire, Inc.	0.75
Median		0.75
Arithmetic Mean		0.76

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Gas Distribution, Value Line		
	Atmos Energy Corporation	0.75
	Chesapeake Utilities Corporation	0.70
	New Jersey Resources Corp	0.75
	NiSource, Inc.	0.85
	Northwest Natural Holding Co.	0.75
	ONE Gas, Inc.	0.75
	Southwest Gas Holdings, Inc.	0.75
	Spire, Inc.	0.75
	UGI Corp	1.00
Median		0.75
Arithmetic Mean		0.78

Value Line Investment Survey, November 2025 through January 2026

Gas Transmission Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Gas Transmission</i>	14.90%	6.02%	69.47%	30.53%	12.19%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Gas Transmission Industry Notes

- From the Natural Gas Diversified Industry segment, MDU Resources Group, Inc. and National Fuel Gas Company were included as they presented to be primarily engaged in the transportation of natural gas.
- From the Oil/Gas Distribution Industry segment, DT Midstream, Inc., EnLink Midstream, LLC, Kinder Morgan, Inc., ONEOK, Inc., Targa Resources, TC Energy Corp., and The Williams Companies, Inc. were included as they presented to be primarily engaged in the transportation of natural gas.
- Staff considered capitalization studies submitted by:
 - No Submissions
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Gas Transmission	14.90%	69.47%	30.53%	12.19%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Gas Transmission

CapM Ex Post Equity Rate	12.37%
CapM Ex Ante Equity Rate	18.88%
DCF (Dividend) Equity Rate	10.37%
DCF (Earnings) Equity Rate	14.01%
Earnings Price Ratio	7.83%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Gas Transmission	12.16%	18.49%	1.03	12.37%	18.88%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Gas Transmission								
	DT Midstream, Inc.	B++	11,700,000,000	2.90%	4.50%	4.00%	7.40%	6.90%
	Kinder Morgan, Inc.	B++	60,200,000,000	4.30%	5.50%	8.50%	9.80%	12.80%
	MDU Resources Group, Inc.	B++	4,300,000,000	2.70%				
	National Fuel Gas Company	B++	7,200,000,000	2.70%	4.50%	9.50%	7.20%	12.20%
	ONEOK, Inc.	B++	42,800,000,000	6.30%	4.00%	10.50%	10.30%	16.80%
	Targa Resources	B+	36,400,000,000	2.70%	21.50%	20.50%	24.20%	23.20%
	TC Energy Corp.	B++	56,000,000,000	4.90%	2.00%	8.50%	6.90%	13.40%
	Williams Companies, Inc.	B++	74,000,000,000	3.30%	3.50%	9.50%	6.80%	12.80%
Median			39,600,000,000				7.40%	12.80%
Arithmetic Mean			36,575,000,000				10.37%	14.01%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Gas Transmission						
	DT Midstream, Inc.	B++	11,700,000,000	114.82	4.85	4.22%
	Kinder Morgan, Inc.	B++	60,200,000,000	27.06	1.80	6.65%
	MDU Resources Group, Inc.	B++	4,300,000,000	21.10	1.30	6.16%
	National Fuel Gas Company	B++	7,200,000,000	79.42	9.30	11.71%
	ONEOK, Inc.	B++	42,800,000,000	67.90	8.00	11.78%
	Targa Resources	B+	36,400,000,000	169.48	13.50	7.97%
	TC Energy Corp.	B++	56,000,000,000	53.35	4.75	8.90%
	Williams Companies, Inc.	B++	74,000,000,000	60.60	3.20	5.28%
Median			39,600,000,000			7.31%
Arithmetic Mean			36,575,000,000			7.83%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization	Long Term Debt	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Gas Transmission							
	DT Midstream, Inc.	B++	11,700,000,000	3,322,000,000	0.28	77.89%	22.11%
	Kinder Morgan, Inc.	B++	60,200,000,000	31,500,000,000	0.52	65.65%	34.35%
	MDU Resources Group, Inc.	B++	4,300,000,000	2,188,500,000	0.51	66.27%	33.73%
	National Fuel Gas Company	B++	7,200,000,000	2,382,900,000	0.33	75.13%	24.87%
	ONEOK, Inc.	B++	42,800,000,000	3,198,600,000	0.07	93.05%	6.95%
	Targa Resources	B+	36,400,000,000	16,742,000,000	0.46	68.50%	31.50%
	TC Energy Corp.	B++	56,000,000,000	40,281,200,000	0.72	58.16%	41.84%
	Williams Companies, Inc.	B++	74,000,000,000	25,589,000,000	0.35	74.31%	25.69%
Median			39,600,000,000	10,032,000,000	0.40	71.40%	28.60%
Arithmetic Mean			36,575,000,000	15,650,525,000	0.41	72.37%	27.63%
Weighted Average			53,315,311,005	23,436,011,312		69.47%	30.53%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Gas Transmission, Selected Comparables		
	DT Midstream, Inc.	0.95
	Kinder Morgan, Inc.	1.00
	MDU Resources Group, Inc.	
	National Fuel Gas Company	0.85
	ONEOK, Inc.	1.30
	Targa Resources	1.25
	TC Energy Corp.	0.90
	Williams Companies, Inc.	0.95
Median		0.95
Arithmetic Mean		1.03

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Gas Transmission, Value Line		
	Antero Midstream Corporation	1.05
	Antero Resources Corporation	1.30
	Cheniere Energy, Inc.	1.00
	CNX Resources Corp.	0.95
	Coterra Energy Inc.	1.00
	Devon Energy Corp.	1.40
	DT Midstream, Inc.	0.95
	Enbridge Inc.	0.70
	EOG Resources, Inc.	1.15
	EQT Corporation	
	Expand Energy Corp.	1.20
	Kinder Morgan, Inc.	1.00
	Kinetik Holdings Inc.	1.10
	MDU Resources Group, Inc.	
	National Fuel Gas Company	0.85
	New Fortress Energy, Inc.	1.70
	ONEOK, Inc.	1.30
	Ovintiv Inc.	1.45
	Pembina Pipeline Corp.	0.80
	Targa Resources	1.25
	TC Energy Corp.	0.90
	Venture Global, Inc.	
	Williams Companies, Inc.	0.95
Median		1.03
Arithmetic Mean		1.10

Railroad Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Railroad</i>	13.45%	6.02%	80.34%	19.66%	11.99%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Railroad Industry Notes

- For the Railroad Industry segment, Wabtec was excluded as it provides equipment and services to the rail industry. Trinity Industries, Inc. was excluded as they design and manufacture railcars and component parts. GATX Corp. was excluded as they specialize in tank, freight car, and locomotive leasing. The Greenbrier Companies, Inc. was excluded as they design, manufacture, repair, and market railroad freight cars and related equipment.
- Staff considered capitalization studies submitted by:
 - BNSF 2025-Year in Review
 - National Association of Railroad Property Tax Representatives Year End 2025 Report
 - Union Pacific Railroad Company Cost of Capital Study 2026 Assessment Year
- Staff relied upon the results of the following models and appraisal judgement in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Railroad	13.45%	80.34%	19.66%	11.99%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Railroad

CapM Ex Post Equity Rate	11.94%
CapM Ex Ante Equity Rate	18.08%
DCF (Dividend) Equity Rate	9.94%
DCF (Earnings) Equity Rate	10.74%
Earnings Price Ratio	7.41%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Railroad	12.16%	18.49%	0.97	11.94%	18.08%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization	Dividend Yield	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Railroad								
	Canadian National Railway	A+	59,100,000,000	2.80%	9.00%	8.00%	11.80%	10.80%
	Canadian Pacific Kansas City, LTD	A	63,700,000,000	1.00%	9.00%	10.00%	10.00%	11.00%
	CSX Corporation	A	66,700,000,000	1.50%	12.50%	8.50%	14.00%	10.00%
	Norfolk Southern Corp.	A	63,300,000,000	1.90%	4.50%	11.00%	6.40%	12.90%
	Union Pacific Corporation	A+	129,800,000,000	2.50%	5.00%	6.50%	7.50%	9.00%
Median			63,700,000,000				10.00%	10.80%
Arithmetic Mean			76,520,000,000				9.94%	10.74%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Railroad						
	Canadian National Railway	A+	59,100,000,000	95.62	8.25	8.63%
	Canadian Pacific Kansas City, LTD	A	63,700,000,000	70.70	4.75	6.72%
	CSX Corporation	A	66,700,000,000	35.83	2.75	7.68%
	Norfolk Southern Corp.	A	63,300,000,000	282.17	19.00	6.73%
	Union Pacific Corporation	A+	129,800,000,000	218.82	16.00	7.31%
Median			63,700,000,000			7.31%
Arithmetic Mean			76,520,000,000			7.41%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization	Long Term Debt	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Railroad							
	Canadian National Railway	A+	59,100,000,000	14,100,000,000	0.24	80.74%	19.26%
	Canadian Pacific Kansas City, LTD	A	63,700,000,000	15,500,000,000	0.24	80.43%	19.57%
	CSX Corporation	A	66,700,000,000	18,600,000,000	0.28	78.19%	21.81%
	Norfolk Southern Corp.	A	63,300,000,000	16,500,000,000	0.26	79.32%	20.68%
	Union Pacific Corporation	A+	129,800,000,000	30,300,000,000	0.23	81.07%	18.93%
Median			63,700,000,000	16,500,000,000	0.24	80.43%	19.57%
Arithmetic Mean			76,520,000,000	19,000,000,000	0.25	79.95%	20.05%
Weighted Average			85,871,197,073	21,010,637,742		80.34%	19.66%

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Railroad, Selected Comparables		
	Canadian National Railway	0.95
	Canadian Pacific Kansas City, LTD	0.95
	CSX Corporation	1.00
	Norfolk Southern Corp.	1.00
	Union Pacific Corporation	0.95
Median		0.95
Arithmetic Mean		0.97

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Railroad, Value Line		
	Canadian National Railway	0.95
	Canadian Pacific Kansas City, LTD	0.95
	CSX Corporation	1.00
	GATX Corp.	1.10
	Norfolk Southern Corp.	1.00
	The Greenbrier Companies, Inc.	1.25
	Trinity Industries, Inc.	1.30
	Union Pacific Corporation	0.95
	Wabtec	1.20
Median		1.00
Arithmetic Mean		1.08

Value Line Investment Survey, November 2025 through January 2026

Telecommunication Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Telecommunication</i>	13.75%	6.02%	64.42%	35.58%	11.00%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Telecommunication Industry Notes

- From the Telecommunication Services segment, America Movil, S.A.B. de CV, TELUS Corporation, Liberty Latin America Ltd., Millicom International Cellular S.A., IHS Holding Ltd., Deutsche Telekom AG, BCE Inc., Rogers Communications, Telefonica, S.A., and Vodafone Group PLC, were all excluded as being primarily involved in non-domestic operations. Gogo Inc. was excluded as being a global provider of broadband connectivity for the aviation market. Five 9, Inc., Nice Ltd., Ring Central, Inc., Twilio Incorporated, Zoom Communications, Inc., and Verint Systems Inc were excluded as the companies are principally engaged in chat meetings, tandem services, or cloud-based technologies and/or cloud software platforms to prospective clients and customers. Array Digital Infrastructure was excluded due to merger and acquisition activities.
- Staff considered capitalization studies/summaries submitted by:
 - T-Mobile: A Telecom Business Industry Update with a Cost of Capital Summary
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Telecommunication	13.75%	64.42%	35.58%	11.00%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Telecommunication

CapM Ex Post Equity Rate	12.70%
CapM Ex Ante Equity Rate	19.49%
DCF (Dividend) Equity Rate	17.55%
DCF (Earnings) Equity Rate	13.43%
Earnings Price Ratio	6.19%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Telecommunication	12.16%	18.49%	1.07	12.70%	19.49%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization	Dividend Yield	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Telecommunication								
	AST SpaceMobile Inc.	B	15,300,000,000					
	AT&T Inc.	B++	182,000,000,000	4.80%	0.50%	6.50%		11.30%
	Cogent Communications Holdings, Inc.	B	850,000,000	0.50%	-31.00%			
	EchoStar Corporation	C+	20,400,000,000					
	Frontier Communications Parent, Inc.	B	9,500,000,000					
	Globalstar, Inc.	B	7,600,000,000					
	IDT Corporation	B+	1,200,000,000	0.50%		15.00%		15.50%
	Iridium Communications Inc	B+	1,700,000,000	3.70%	13.50%		17.20%	
	Lumen Technologies, Inc.	C+	7,900,000,000					
	Shenandoah Telecommunications Company	B+	600,000,000	1.10%	9.00%		10.10%	
	Telephone & Data Systems, Inc.	B+	4,400,000,000	0.40%	2.50%	0.50%		
	T-Mobile US, Inc.	A	231,900,000,000	2.00%	31.50%	17.50%	33.50%	19.50%
	Verizon Communications	A	170,000,000,000	6.90%	2.50%	0.50%	9.40%	7.40%
Median			7,900,000,000				13.65%	13.40%
Arithmetic Mean			50,257,692,308				17.55%	13.43%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Telecommunication						
	AST SpaceMobile Inc.	B	15,300,000,000	55.00	3.00	5.45%
	AT&T Inc.	B++	182,000,000,000	25.62	3.00	11.71%
	Cogent Communications Holdings, Inc.	B	850,000,000	17.16	-0.50	-2.91%
	EchoStar Corporation	C+	20,400,000,000	70.92	1.50	2.12%
	Frontier Communications Parent, Inc.	B	9,500,000,000	37.80	1.70	4.50%
	Globalstar, Inc.	B	7,600,000,000	59.89	0.15	0.25%
	IDT Corporation	B+	1,200,000,000	49.16	3.75	7.63%
	Iridium Communications Inc	B+	1,700,000,000	16.32	2.75	16.85%
	Lumen Technologies, Inc.	C+	7,900,000,000	7.71	0.40	5.19%
	Shenandoah Telecommunications Company	B+	600,000,000	10.77	0.40	3.71%
	Telephone & Data Systems, Inc.	B+	4,400,000,000	37.99	1.10	2.90%
	T-Mobile US, Inc.	A	231,900,000,000	207.34	20.15	9.72%
	Verizon Communications	A	170,000,000,000	40.21	5.35	13.31%
Median			7,900,000,000			5.19%
Arithmetic Mean			50,257,692,308			6.19%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization c	Long Term Debt d	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Telecommunication							
	AST SpaceMobile Inc.	B	15,300,000,000	697,600,000	0.05	95.64%	4.36%
	AT&T Inc.	B++	182,000,000,000	128,090,000,000	0.70	58.69%	41.31%
	Cogent Communications Holdings, Inc.	B	850,000,000	2,289,700,000	2.69	27.07%	72.93%
	EchoStar Corporation	C+	20,400,000,000	21,800,000,000	1.07	48.34%	51.66%
	Frontier Communications Parent, Inc.	B	9,500,000,000	12,008,000,000	1.26	44.17%	55.83%
	Globalstar, Inc.	B	7,600,000,000	485,100,000	0.06	94.00%	6.00%
	IDT Corporation	B+	1,200,000,000	0		100.00%	0.00%
	Iridium Communications Inc	B+	1,700,000,000	1,809,800,000	1.06	48.44%	51.56%
	Lumen Technologies, Inc.	C+	7,900,000,000	17,578,000,000	2.23	31.01%	68.99%
	Shenandoah Telecommunications Company	B+	600,000,000	524,000,000	0.87	53.38%	46.62%
	Telephone & Data Systems, Inc.	B+	4,400,000,000	825,300,000	0.19	84.21%	15.79%
	T-Mobile US, Inc.	A	231,900,000,000	81,431,000,000	0.35	74.01%	25.99%
	Verizon Communications	A	170,000,000,000	126,629,000,000	0.74	57.31%	42.69%
Median			7,900,000,000	2,289,700,000	0.81	57.31%	42.69%
Arithmetic Mean			50,257,692,308	30,320,576,923	0.94	62.79%	37.21%
Weighted Average			178,598,075,304	98,636,488,505		64.42%	35.58%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Telecommunication, Selected Comparables		
	AST SpaceMobile Inc.	1.65
	AT&T Inc.	0.70
	Cogent Communications Holdings, Inc.	0.95
	EchoStar Corporation	1.20
	Frontier Communications Parent, Inc.	1.10
	Globalstar, Inc.	1.55
	IDT Corporation	1.10
	Iridium Communications Inc	1.05
	Lumen Technologies, Inc.	1.45
	Shenandoah Telecommunications Company	0.85
	Telephone & Data Systems, Inc.	1.00
	T-Mobile US, Inc.	0.70
	Verizon Communications	0.65
Median		1.05
Arithmetic Mean		1.07

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Telecommunication, Value Line		
	American Movil, S.A.B de C.V.	0.75
	Array Digital Infrastructure	0.75
	AST SpaceMobile Inc.	1.65
	AT&T Inc.	0.70
	BCE Inc	0.65
	Cogent Communications Holdings, Inc.	0.95
	Deutsche Telekom AG	0.80
	EchoStar Corporation	1.20
	Five9, Inc.	1.60
	Frontier Communications Parent, Inc.	1.10
	Globalstar, Inc.	1.55
	Gogo Inc.	1.40
	IDT Corporation	1.10
	IHS Holding Ltd.	1.55
	Iridium Communications Inc	1.05
	Liberty Latin America Ltd.	1.20
	Lumen Technologies, Inc.	1.45
	Millicom International Cellular SA	1.00
	NICE Ltd.	1.15
	RingCentral, Inc.	1.60
	Rogers Communications	0.65
	Shenandoah Telecommunications Company	0.85
	Telefonica S.A.	0.80
	Telephone & Data Systems, Inc.	1.00
	TELUS Corporation	0.55
	T-Mobile US, Inc.	0.70
	Twilio Incorporated	1.55
	Verint Systems Inc	1.10
	Verizon Communications	0.65
	Vodafone Group Plc	0.90

Zoom Communications, Inc.

1.25

Median

1.05

Arithmetic Mean

1.07

Value Line Investment Survey, November 2025 through January 2026

Water Industry

Industry Capitalization Rate Summary

Industry	Equity Rate	Debt Rate	Market Capitalization	Long-Term Debt	Capitalization Rate
<i>Water</i>	11.10%	5.97%	65.15%	34.85%	9.31%

Mergents 2025 Twelve Month Bond Yield Averages

2026 Capitalization Rate Study

Water Industry Notes

- Recognizing the water industry segment from Value Line.
- Staff considered capitalization studies submitted by:
 - No Submissions
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

Industry	Equity Rate	Market Capitalization	Long Term Debt	Capitalization Rate
Water	11.10%	65.15%	34.85%	9.31%

Mergents 2025 Twelve Month Bond Yield Averages

Industry Equity Rate Summary

Water

CapM Ex Post Equity Rate	10.56%
CapM Ex Ante Equity Rate	15.52%
DCF (Dividend) Equity Rate	9.18%
DCF (Earnings) Equity Rate	9.77%
Earnings Price Ratio	6.58%

CapM Equity Rates

Industry	Ex Post Risk Premium b*	Ex Ante Risk Premium c*	Value Line Beta d	Ex Post CapM Equity Rate (((b-4.79%)*d)+4.79%)	Ex Ante CapM Equity Rate (((c-4.79%)*d)+4.79%)
Water	12.16%	18.49%	0.78	10.56%	15.52%

b* Risk Free Rate (4.79%) plus Risk Premium Rate (7.37%)

c* Risk Free Rate (4.79%) plus Risk Premium Rate (13.70%)

Value Line Investment Survey, November 2025 through January 2026, Kroll Cost of Capital Navigator

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization	Dividend Yield	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Water								
	American States Water Co.	A	2,900,000,000	2.80%	8.00%	7.00%	10.80%	9.80%
	American Water Works Company, Inc.	B++	25,700,000,000	2.70%	8.50%	4.50%	11.20%	7.20%
	California Water Service Group	B++	2,600,000,000	2.80%	5.50%	9.50%	8.30%	12.30%
	Essentail Utilities, Inc.	A	10,900,000,000	3.60%	6.50%	6.00%	10.10%	9.60%
	H2O America	B+	1,800,000,000	3.40%	4.00%	6.00%	7.40%	9.40%
	MiddleSex Water Company	A	950,000,000	2.80%	4.50%	7.50%	7.30%	10.30%
Median			2,750,000,000				9.20%	9.70%
Arithmetic Mean			7,475,000,000				9.18%	9.77%

Value Line Investment Survey, November 2025 through January 2026

E/P Ratio

Industry	Company	Value Line Strength	Market Capitalization c	Recent Price d	Projected Earnings e	E/P Ratio (e/d)
Water						
	American States Water Co.	A	2,900,000,000	73.68	4.35	5.90%
	American Water Works Company, Inc.	B++	25,700,000,000	131.67	7.50	5.70%
	California Water Service Group	B++	2,600,000,000	43.28	2.85	6.59%
	Essentail Utilities, Inc.	A	10,900,000,000	38.57	2.75	7.13%
	H2O America	B+	1,800,000,000	49.80	3.75	7.53%
	MiddleSex Water Company	A	950,000,000	52.14	3.45	6.62%
Median			2,750,000,000			6.60%
Arithmetic Mean			7,475,000,000			6.58%

Value Line Investment Survey, November 2025 through January 2026

Capital Structure

Industry	Company	Value Line Strength	Market Capitalization c	Long Term Debt d	Debt/Equity Ratio (d/c)	Percentage Equity (c/(c+d))	Percentage Debt (d/(c+d))
Water							
	American States Water Co.	A	2,900,000,000	790,300,000	0.27	78.58%	21.42%
	American Water Works Company, Inc.	B++	25,700,000,000	13,002,000,000	0.51	66.40%	33.60%
	California Water Service Group	B++	2,600,000,000	1,104,000,000	0.42	70.19%	29.81%
	Essentail Utilities, Inc.	A	10,900,000,000	7,742,200,000	0.71	58.47%	41.53%
	H2O America	B+	1,800,000,000	1,757,000,000	0.98	50.60%	49.40%
	MiddleSex Water Company	A	950,000,000	350,200,000	0.37	73.07%	26.93%
Median			2,750,000,000	1,430,500,000	0.47	68.30%	31.70%
Arithmetic Mean			7,475,000,000	4,124,283,333	0.54	66.22%	33.78%
Weighted Average			17,806,298,774	9,525,059,978		65.15%	34.85%

Value Line Investment Survey, November 2025 through January 2026

Beta

<u>Industry</u>	<u>Company</u>	<u>Value Line Levered Beta</u>
Water, Selected Comparables		
	American States Water Co.	0.75
	American Water Works Company, Inc.	0.80
	California Water Service Group	0.80
	Essentail Utilities, Inc.	0.80
	H2O America	0.75
	MiddleSex Water Company	0.80
Median		0.80
Arithmetic Mean		0.78

Value Line Investment Survey, November 2025 through January 2026

Beta

Industry	Company	Value Line Levered Beta
Water, Value Line		
	American States Water Co.	0.75
	American Water Works Company, Inc.	0.80
	California Water Service Group	0.80
	Essentail Utilities, Inc.	0.80
	H2O America	0.75
	MiddleSex Water Company	0.80
Median		0.80
Arithmetic Mean		0.78

Value Line Investment Survey, November 2025 through January 2026

Mergents 2025 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.89%	5.71%	5.74%	5.87%	6.05%	5.46%	5.57%	5.72%	6.09%
February	5.74%	5.57%	5.60%	5.73%	5.90%	5.32%	5.44%	5.58%	5.94%
March	5.75%	5.56%	5.61%	5.72%	5.91%	5.29%	5.42%	5.57%	5.95%
April	5.93%	5.76%	5.78%	5.91%	6.11%	5.45%	5.57%	5.78%	6.25%
May	6.06%	5.86%	5.90%	6.05%	6.23%	5.54%	5.65%	5.88%	6.33%
June	5.95%	5.74%	5.78%	5.93%	6.12%	5.46%	5.55%	5.78%	6.17%
July	5.90%	5.72%	5.74%	5.88%	6.08%	5.45%	5.55%	5.75%	6.11%
August	5.79%	5.62%	5.63%	5.77%	5.98%	5.35%	5.48%	5.65%	6.01%
September	5.63%	5.47%	5.48%	5.61%	5.81%	5.21%	5.30%	5.49%	5.85%
October	5.53%	5.37%	5.37%	5.51%	5.71%	5.13%	5.21%	5.40%	5.75%
November	5.65%	5.50%	5.49%	5.62%	5.83%	5.26%	5.34%	5.53%	5.88%
December	5.71%	5.55%	5.57%	5.68%	5.88%	5.31%	5.41%	5.58%	5.91%
	5.79%	5.62%	5.64%	5.77%	5.97%	5.35%	5.46%	5.64%	6.02%