

**Starting Soon**

# 2022 State Assessed Property Spring Forum

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March 14, 2022



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This presentation is based on the facts and circumstances being discussed, and on the laws in effect when it is presented. It does not supersede or alter any provisions of Minnesota laws, administrative rules, court cases, or revenue notices.

If you have any questions, contact us at [sa.property@state.mn.us](mailto:sa.property@state.mn.us) or consult a tax professional.

- Department updates
- Draft capitalization study overview
- Questions
- Public comments

# Department Updates

- Property Tax Division
- Remote Work
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# Minnesota Department of Revenue

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**Capitalization Rate Study**

The Minnesota Department of Revenue assesses utility, pipeline, and railroad operating property.

Last Updated: April 24, 2020

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**Capitalization Rate Study**

The Minnesota Department of Revenue assesses utility, pipeline, and railroad operating property.

Last Updated: April 24, 2020



# Capitalization Rate Study

MENU

The Minnesota Department of Revenue develops a Capitalization Rate Study yearly. We use the capitalization rates published in the study to help determine the unitary value of state assessed property as of January 2 each year. State assessed property includes utility, pipeline, and railroad operating property.

How does the department complete the study? [\[+\]](#)

How can I view the study? [\[-\]](#)

[2022 Draft Capitalization Rate Study](#)

## Questions?

If you have questions, email us at [sa.property@state.mn.us](mailto:sa.property@state.mn.us).

### Contact Info

#### EMAIL

Contact form

#### PHONE

651-556-3097  
651-556-5128 (fax)

#### HOURS [\[+\]](#)

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### Last Updated

April 24, 2020



# Capitalization Rate Study and Methodologies

# Introduction

	<b>Capital Structure</b>	<b>×</b>	<b>Market Rate</b>	<b>=</b>	<b>Weighted Rate</b>
<b>Debt</b>	50%	×	6%	=	3%
<b>Equity</b>	50%	×	10%	=	5%
<b>Combined Rate</b>				=	<b>8%</b>

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# Changes from Last Year's Study

- No longer using ERP estimates from Kroll (formerly known as Duff & Phelps) Cost of Capital Navigator
- Using Indexed Rate of Debt from Mergent Bond Record for Draft Study

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$$\text{Value} = \frac{\text{Net Operating Income or Net Railway Operating Income}}{\text{Yield Rate}}$$

# Yield Rate - Guideline Company Selection

## Guideline Company Selection

### Considerations:

- Value Line industries
- Standard industrial classification codes
- Location
- Business segments
- Recent or current mergers and acquisitions
- Recent initial public offering

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# Yield Rate - Market Rate of Equity

## Market Rate of Equity

Capital Asset Pricing Model:

Rate of Equity = (Equity Risk Premium x Beta) + Risk-Free Rate

# Yield Rate - Equity Risk Premium Estimates

## Equity Risk Premium Estimates:

- Three-stage ex ante
- Dr. Damodaran
- Duke CFO Global Business Outlook Survey
- Fernandez, Banuls, and Acin
- BVR Arithmetic
- BVR Geometric

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# Yield Rate - CAPM Data Inputs

<b>CAPM Data Inputs</b>	<b>2022 AY</b>	<b>2021 AY</b>
Risk-Free Rate	2.01%	1.66%
BVR - Historical, Arithmetic	6.21%	5.90%



# Yield Rate - Market Rate of Equity

## Market Rate of Equity

Dividend Growth Model:

Rate of Equity = Dividend Yield + Growth Estimate

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# Yield Rate - Market Rate of Equity

## Market Rate of Equity

Two-Stage Dividend Growth Model:

Rate of Equity =

(Dividend Yield x (1 + 0.5 x Avg Growth Rate))

+ 0.67 x Short-term Growth Rate

+ 0.33 x Long-term Growth Rate

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# Yield Rate - Market Rate of Debt

## **Market Rate of Debt**

### Corporate Bond Yield Averages

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# Yield Rate - Market Rate of Preferred Stock

## Market Rate of Preferred Stock

## Equity Component

$$\text{Indicated Equity Component} = \frac{1}{\text{Price to Earnings Ratio}}$$

- Flotation costs
- Company-specific risk
- Illiquidity

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- Short-term growth
- Long-term growth
- Inflation

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# Comments Welcome

Email comments to [sa.property@state.mn.us](mailto:sa.property@state.mn.us) by March 31.



- Equity Risk Premium Estimates
- Market rate of debt

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- Appendix A – Electric
- Appendix B – Gas Distribution
- Appendix C – Gas Transmission Pipeline
- Appendix D – Fluid Transportation Pipeline
- Appendix E – Railroads
- Appendix F – Ex Ante Calculations
- Appendix G – Guideline Company Selection

# Continuing Education for Minnesota Assessors

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1. Name
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# Data

<b>Electric</b>	<b>2022 AY</b>	<b>2021 AY</b>
Yield rate	6.37%	6.34%
Debt in capital structure	39%	35%
Equity in capital structure	61%	65%
Cost of equity	8.30%	8.05%
Cost of debt	3.36%	3.17%
Beta	0.90	0.86
Single-stage DGM – Earnings Growth	9.05%	8.50%
Two-stage DGM	8.38%	8.01%
Dividend yield	3.20%	3.45%
Short-term earnings growth est.	5.77%	5.67%

# Gas Distribution

<b>Gas Distribution</b>	<b>2022 AY</b>	<b>2021 AY</b>
Yield rate	6.46%	6.63%
Debt in capital structure	43%	38%
Equity in capital structure	57%	62%
Cost of equity	8.80%	8.60%
Cost of debt	3.36%	3.42%
Beta	0.87	0.87
Single-stage DGM – Earnings Growth	10.14%	9.90%
Two-stage dividend growth model	9.13%	8.86%
Dividend yield	3.50%	3.30%
Short-term earnings growth est.	5.60%	5.90%

# Gas Transmission Pipeline

<b>Gas Transmission</b>	<b>2022 AY</b>	<b>2021 AY</b>
Yield rate	9.38%	9.82%
Debt in capital structure	37%	49%
Equity in capital structure	63%	51%
Cost of equity	12.90%	15.40%
Cost of debt	3.37%	4.03%
Beta	1.16	1.30
Single-stage DGM – Earnings Growth	16.40%	20.86%
Two-stage dividend growth model	14.40%	18.68%
Dividend yield	6.10%	8.20%
Short-term earnings growth est.	6.20%	6.50%

# Fluid Transportation Pipeline

<b>Fluid Transportation</b>	<b>2022 AY</b>	<b>2021 AY</b>
Yield rate	9.58%	10.13%
Debt in capital structure	40%	50%
Equity in capital structure	60%	50%
Cost of equity	13.10%	15.40%
Cost of debt	4.31%	4.86%
Beta	1.13	1.18
Single-stage DGM – Earnings Growth	14.65%	21.50%
Two-stage dividend growth model	17.01%	19.94%
Dividend yield	8.70%	13.20%
Short-term earnings growth est.	7.92%	6.62%



# Railroad

<b>Railroad</b>	<b>2022 AY</b>	<b>2021 AY</b>
Yield rate	8.81%	9.08%
Debt in capital structure	14%	15%
Equity in capital structure	86%	85%
Cost of equity	9.70%	10.20%
Cost of debt	3.37%	2.70%
Beta	1.05	1.10
Single-stage DGM – Earnings Growth	11.55%	11.75%
Two-stage dividend growth model	9.52%	9.65%
Dividend yield	1.40%	1.40%
Short-term earnings growth est.	9.50%	8.19%



Questions?

*[sa.property@state.mn.us](mailto:sa.property@state.mn.us)*

# Public Comments

# Thank You!

**State Assessed Property Section**

*sa.property@state.mn.us*

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