



**MONTANA**  
DEPARTMENT OF  
**REVENUE**

**2026 Capitalization Rate Study  
Telecommunications - Medium & Small**

*Final*

*Completed: April 22, 2026*

**MONTANA DEPARTMENT OF REVENUE**

**Yield Capitalization Rate Conclusion  
Industry: Telecommunications - Medium & Small  
2026 Assessment Year**

**Capital Structure <sup>[1]</sup>**

Equity	<b>34.00%</b>
Debt	<b>66.00%</b>

**Equity Cost of Capital**

		<b>Weighting</b>
Capital Asset Pricing Model - Ex Post <sup>[2]</sup>	13.27%	48%
Capital Asset Pricing Model - Ex Ante <sup>[2]</sup>	10.33%	12%
3 Stage Dividend Discount Model - Dividends <sup>[3]</sup>	7.18%	20%
3 Stage Dividend Discount Model - Earnings <sup>[3]</sup>	7.34%	<u>20%</u>
Weighted Average	<u>10.51%</u>	100%
Selected Cost of Equity	<b><u>10.51%</u></b>	

**Debt Cost of Capital <sup>[4]</sup>**

		<b>Weighting</b>
A - Avg. YTM of A Rated Corporate Bonds <sup>[4]</sup>	5.71%	0%
Baa - Avg. YTM of Baa Rated Corporate Bonds <sup>[4]</sup>	5.98%	0%
Ba - Avg. YTM of Ba Rated Corporate Bonds <sup>[5]</sup>	7.39%	29%
B - Avg. YTM of B Rated Corporate Bonds <sup>[5]</sup>	8.47%	71%
Caa - Avg. YTM of Caa Rated Corporate Bonds <sup>[6]</sup>	12.41%	<u>0%</u>
Weighted Average	<u>8.16%</u>	100%
Selected Cost of Debt	<b><u>8.16%</u></b>	

**Weighted Average Cost of Capital (WACC)**

Source of Capital	Capital Structure	Cost of Capital	Marginal Tax Rate	After-tax Unweighted	Pre-tax Debt Weighted	After-tax Weighted
Equity	34.00%	10.51%		10.51%	3.57%	3.57%
Debt	66.00%	8.16%	24.00%	6.20%	5.38%	4.09%
<b>WACC</b>	<b>100.00%</b>				<b>8.96%</b>	<b>7.67%</b>
<b>WACC (Rounded)</b>						<b>7.67%</b>

Notes

- [1] From worksheet: Capital Structure
- [2] From worksheet: Capital Asset Pricing Model Summary
- [3] From worksheet: Yield Equity Summary
- [4] January 2026 Mergent Bond Record, Bloomberg, and Capital IQ
- [5] MDOR High Yield Debt Study, Bloomberg, and Capital IQ
- [6] MDOR High Yield Debt Study, Capital IQ

**MONTANA DEPARTMENT OF REVENUE**

**Direct Capitalization Rate Conclusion  
Industry: Telecommunications - Medium & Small  
2026 Assessment Year**

**Capital Structure <sup>[1]</sup>**

Equity	<b>34.00%</b>
Debt	<b>66.00%</b>

**Equity Capitalization Rate <sup>[2]</sup>**

NOI After-tax	<b>9.63%</b>
GCF	<b>15.28%</b>

**Debt Capitalization Rate <sup>[3]</sup>**

Calculated Current Yield	<b>6.33%</b>
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**NOI After-tax Direct Capitalization Rate**

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	After-tax Unweighted	Pre-tax Debt Weighted	After-tax Weighted
Equity	34.00%	9.63%		9.63%	3.27%	3.27%
Debt	66.00%	6.33%	24.00%	4.81%	4.18%	3.18%
<b>Total</b>	<b>100.00%</b>				<b>7.45%</b>	<b>6.45%</b>
<b>Total (Rounded)</b>						<b>6.45%</b>

**GCF Direct Capitalization Rate**

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	After-tax Unweighted	Pre-tax Debt Weighted	After-tax Weighted
Equity	34.00%	15.28%		15.28%	5.20%	5.20%
Debt	66.00%	6.33%	24.00%	4.81%	4.18%	3.18%
<b>Total</b>	<b>100.00%</b>				<b>9.38%</b>	<b>8.37%</b>
<b>Total (Rounded)</b>						<b>8.37%</b>

Notes:

[1] From worksheet: Capital Structure

[2] From worksheet: Direct Equity Summary

[3] From worksheet: Calculated Current Yield

**MONTANA DEPARTMENT OF REVENUE**

**Selection of Guideline Companies  
Industry: Telecommunications - Medium & Small  
2026 Assessment Year**

**Screening Requirements:**

The universe of companies is all companies listed in Value Line under the Cable TV and Telecom Services industries with a market capitalization under \$30B.

Companies were then selected using the following screening criteria:

1. Headquartered and primarily operated in the United States.
2. Actively traded on an American exchange. All OTC and TO companies excluded.
3. Primarily provides two-way transmission of voice, image, data, or other information over wire, cable, fiber optics, microwave, or similar facilities.
4. Not engaged in material M&A activity.
5. Under \$30 Billion in market capitalization.

<b>Ticker Symbol</b>	<b>Headquartered /Incorporated in the U.S.</b>	<b>Actively traded on American exchange</b>	<b>Under \$30 Billion in Market Capitalization</b>	<b>Primarily operates a two-way comm network</b>	<b>Consider as Potential Guideline Company</b>	<b>Not Engaged in Material M&amp;A Activity</b>	<b>Use as Guideline Company</b>	<b>Note</b>
AD				No				
AMX			No					
ASTS				No				
ATNI				No				
BAND				No				
BCE	No							
CABO	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
CCA.TO	No							
CCOI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
CHTR			No					
CMCSA			No					
CXDO				No				
DTEGY			No					
FIVN				No				
FNGR				No				
FYBR						No		[1]
GOGO	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
GSAT				No				
HIS	No							
IDT				No				
IRDM				No				
KLTR				No				

## MONTANA DEPARTMENT OF REVENUE

### Selection of Guideline Companies Industry: Telecommunications - Medium & Small 2026 Assessment Year

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Ticker Symbol	Headquartered /Incorporated in the U.S.	Actively traded on American exchange	Under \$30 Billion in Market Capitalization	Primarily operates a two-way comm network	Consider as Potential Guideline Company	Not Engaged in Material M&A Activity	Use as Guideline Company	Note
LBTYA	No							
LILA	No							
LUMN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
NICE				No				
NN				No				
NUVR		No						
OOMA				No				
OPTU	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
RCIB.TO	No							
RING				No				
SATS			No					
SHEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
T			No					
T.TO	No							
TCX	No							
TDS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TEF	No							
TIGO	No							
TMUS			No					
TWLO				No				
VOD			No					
VSAT				No				
VZ			No					
WEAV				No				
ZM				No				

[1] Set to be acquired by VZ

**MONTANA DEPARTMENT OF REVENUE**

Support for Capital Structure  
Telecommunications - Medium & Small  
2026 Assessment Year

(\$ and Shares Outstanding In Millions, Except Per Share Amounts)

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ticker	Company	Industry Group	Financial Strength	Shares Outstanding	End of Year Closing Stock Price	MV Common Stock	MV Preferred Stock	MV Long Term Debt	PV of Operating Leases	Total Common, Preferred, LT Debt, & Op Leases	% Common	% Preferred	% Debt & Op Leases
		Value Line	Value Line	10-K	Yahoo	ExF	10-K	10-K	10-K	G+H+I+J	G/K	H/K	(I+J)/K
							Note [1]	[Note 2]					
CABO	Cable One	CABLETV	C++	6	112.85	636	0	2,925	6	3,568	18%	0%	82%
CCOI	Cogent Comms. Hldgs	TELESERV	B	50	21.56	1,079	0	2,267	324	3,671	29%	0%	71%
GOGO	Gogo Inc.	TELESERV	C++	135	4.66	627	0	781	70	1,477	42%	0%	58%
LUMN	Lumen Technologies	TELESERV	C+	1,024	7.77	7,959	0	17,321	1,379	26,659	30%	0%	70%
OPTU	Optimum Comms. Inc.	CABLETV	C+	470	1.65	776	0	19,484	290	20,551	4%	0%	96%
SHEN	Shenandoah Telecom.	TELESERV	B+	55	11.56	635	0	572	13	1,220	52%	0%	48%
TDS	Telephone & Data	TELESERV	B+	114	41.00	4,665	1,074	751	576	7,066	66%	15%	19%
<b>All Companies</b>						16,377	1,074	44,102	2,659	64,212	<b>26%</b>	<b>2%</b>	<b>73%</b>
<b>Average</b>											<b>34%</b>	<b>2%</b>	<b>63%</b>
<b>Median</b>											<b>30%</b>	<b>0%</b>	<b>70%</b>
<b>Trimmed Average</b>											<b>34%</b>	<b>0%</b>	<b>66%</b>
High											66%	15%	96%
Low											4%	0%	19%
<b>Selected</b>											<b>34%</b>		<b>66%</b>

Notes:

[1] Market value of preferred stock assumed to equal book value

[2] Market value of debt is fair value of long term debt from 10-K notes

**2026 Changes to Guideline Companies**

ATUS is now OPTU. Added GOGO. USM acquired by VZ.

		<b>Median</b>	
Current Year	30%	0%	70%
Prior Year	39%	0%	50%
2 Years Prior	42%	0%	58%
3 Year Average	37%	0%	59%

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**MONTANA DEPARTMENT OF REVENUE**

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**Capital Asset Pricing Model (CAPM)  
Telecommunications - Medium & Small  
2026 Assessment Year**

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$$k_e = R_f + \beta \times ERP$$

		<i>Ex Post</i>	<i>Ex Ante</i>
$k_e =$	Cost of Equity	<b>13.27%</b>	<b>10.33%</b>
$R_f =$	Risk Free Rate	4.79%	4.79%
$\beta =$	Beta	1.15	1.15
$ERP =$	Equity Risk Premium ( $R_m - R_f$ )	7.37%	4.82%
$R_m =$	Market Rate of Return	12.16%	9.61%

**Risk Free Rate Measures ( $R_f$ ):**

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The Value Line Investment Survey: Selection & Opinion<sup>[1]</sup>

January 2, 2026 Page 1934

Selected Yields on Taxable U.S. Treasury Securities as of 12/22/25

10-year	4.17%
30-year	4.84%

Federal Reserve Statistical Release<sup>[2]</sup>

U.S. government securities, Treasury constant maturities, Nominal, December 31, 2025

10-year	4.18%
20-year	4.79%
30-year	4.84%

**Risk Free Rate Selected**

**4.79%**

Notes

[1] "Value Line Selection & Opinion", Value Line (January 2, 2026)

[2] <https://www.federalreserve.gov/releases/h15/>

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**MONTANA DEPARTMENT OF REVENUE**

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Capital Asset Pricing Model (CAPM)  
Telecommunications - Medium & Small  
2026 Assessment Year

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$$k_e = R_f + \beta \times ERP$$

**Ex Post - Equity Risk Premium Measures (ERP = Rm - Rf)**

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Kroll, 2026 Cost of Capital Navigator

		<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
ERP "Historical" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	12.16%	4.79%	7.37%
ERP "Supply-side" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	11.10%	4.79%	6.31%
<b>Ex Post Equity Risk Premium Selected</b>		<b>12.16%</b>	<b>4.79%</b>	<b>7.37%</b>

**Ex Ante - Equity Risk Premium Measures (ERP = Rm - Rf)**

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DOR 3 Stage Dividend Growth Model, S & P 500, See Exhibit

		<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
3 Stage Dividend Discount Model - <i>Ex Ante</i>		7.73%	4.79%	2.94%
Implied Premium - <i>Ex Ante</i>		8.92%	4.79%	

Kroll, 2026 Cost of Capital Navigator

		<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
ERP "Conditional" - <i>Ex Ante</i>		9.79%	4.79%	5.00%

Damodaran Implied ERP (Jan 1, 2026)

		<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
Implied Premium - <i>Ex Ante</i> - Trailing 12 month, with sustainable payout		8.36%	4.18%	4.18%
Implied Premium - <i>Ex Ante</i> - Trailing 12 month cash yields		8.41%	4.18%	4.23%
Implied Premium - <i>Ex Ante</i> - Average CF yield last 10 years		10.36%	4.18%	6.18%
Implied Premium - <i>Ex Ante</i> - Net cash yield		8.14%	4.18%	3.96%
Implied Premium - <i>Ex Ante</i> - Normalized earnings and payout		<u>7.80%</u>	<u>4.18%</u>	<u>3.62%</u>
Damodaran Average		8.61%	4.18%	4.43%

		<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
<u>Average</u>		8.69%		4.30%
<u>Median</u>		8.39%		4.18%
<u>High</u>		10.36%		6.18%
<u>Low</u>		7.73%		2.94%

**Ex Ante Equity Risk Premium Selected**

		<b>9.61%</b>	<b>4.79%</b>	<b>4.82%</b>
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**MONTANA DEPARTMENT OF REVENUE**

Support for Beta Selection in CAPM  
Telecommunications - Medium & Small  
2026 Assessment Year

A	B	C	D	E
Ticker	Company	Industry Group	Financial Strength	Beta
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>
CABO	Cable One	CABLETV	C++	0.95
CCOI	Cogent Comms. Hldgs	TELESERV	B	0.95
GOGO	Gogo Inc.	TELESERV	C++	1.35
LUMN	Lumen Technologies	TELESERV	C+	1.45
OPTU	Optimum Comms. Inc.	CABLETV	C+	1.60
SHEN	Shenandoah Telecom.	TELESERV	B+	0.85
TDS	Telephone & Data	TELESERV	B+	1.00
<b>Average</b>				<b>1.16</b>
<b>Median</b>				<b>1.00</b>
<b>Trimmed Average</b>				<b>1.14</b>
High				1.60
Low				0.85
<b>Selected</b>				<b>1.15</b>

**MONTANA DEPARTMENT OF REVENUE**

**Inflation & Real Growth  
Telecommunications - Medium & Small  
2026 Assessment Year**

A	B	C	D	Nominal Growth	
				E	F
Source Description	Inflation (CPI)	Real Growth (GDP)	Nominal Growth	Low	High
Livingston Survey <sup>[1]</sup>	2.29%	2.01%	4.30%		
Survey of Professional Forecasters <sup>[2]</sup>	2.25%	2.40%	4.65%		
Congressional Budget Office <sup>[3]</sup>	2.30%	1.80%	4.10%		
<b>Average</b>	<b>2.28%</b>	<b>2.07%</b>	<b>4.35%</b>		
<b>Median</b>	<b>2.29%</b>	<b>2.01%</b>	<b>4.30%</b>		
High	2.30%	2.40%	4.70%		
Low	2.25%	1.80%	4.05%		
<b>Selected</b>	<b>2.30%</b>	<b>2.00%</b>	<b>4.30%</b>	<b>4.05%</b>	<b>4.70%</b>

Inflationary Trend Factors						
Year	Dec. CPI-U Index	Percent Change From Previous	Dec. to Dec. Conversion Factor	Annual Avg. CPI-U Index	Percent Change From Previous	Annual Conversion Factor
	<i>Note [5]</i>	<i>Note [6]</i>	<i>Note [7]</i>	<i>Note [5]</i>	<i>Note [6]</i>	<i>Note [7]</i>
2014	234.812	0.8%	1.3801	236.736	1.6%	1.3599
2015	236.525	0.7%	1.3701	237.017	0.1%	1.3583
2016	241.432	2.0%	1.3422	240.007	1.2%	1.3414
2017	246.524	2.1%	1.3145	245.120	2.1%	1.3134
2018	251.233	1.9%	1.2899	251.107	2.4%	1.2821
2019	256.974	2.2%	1.2610	255.657	1.8%	1.2593
2020	260.474	1.3%	1.2441	258.811	1.2%	1.2439
2021	278.802	6.6%	1.1623	270.970	4.5%	1.1881
2022	296.797	6.1%	1.0918	292.655	7.4%	1.1001
2023	306.746	3.2%	1.0564	304.702	4.0%	1.0566
2024	315.605	2.8%	1.0268	313.689	2.9%	1.0263
2025	324.054	2.6%	1.0000	321.943	2.6%	1.0000

Notes

[1] Federal Reserve Bank of Philadelphia The Livingston Survey December 19, 2025 Table 3 Inflation Rate and Real GDP mean

<https://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey>

[2] Federal Reserve Bank of Philadelphia Survey of Professional Forecasters November 17, 2025 Table 8 Average over next 10-Year mean

<https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/survey-of-professional-forecasters>

[3] The Budget and Economic Outlook: 2026 To 2036

<https://www.cbo.gov/data/budget-economic-data#4>

[5] Historical Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, all items, index averages (1982-84=100, unless otherwise noted)

<https://www.bls.gov/cpi/tables/supplemental-files/>

[6] (Row year - Previous Year) / Row Year

[7] Most current year / Row year

**MONTANA DEPARTMENT OF REVENUE**

**3 Stage Dividend Discount Model (DDM)**

**Telecommunications - Medium & Small**

**2026 Assessment Year**

$$k_e = (D_1 / P_0) + g$$

$k_e$  = Cost of Equity

$D_1$  = Expected Dividend

$P_0$  = Current Price Per Share

$g$  = Sustainable Long-Term Growth

A	B	C	D	E	F	G	H	I
Ticker	Company	2025 Year End Stock Price	2026 Est Div'ds Decl'd per sh	Expected Equity Payout Yield	Sustainable Long-Term Growth Rate <sup>[1]</sup>	Sustainable Long-Term Growth Rate <sup>[1]</sup>	Cost of Equity Dividend Growth	Cost of Equity Earnings Growth
		<i>Yahoo</i>	<i>Value Line</i>	<i>D/C</i>	<i>Dividends</i>	<i>Earnings</i>	<i>E+F</i>	<i>E+G</i>
		$P_0$	$D_1$	$D_1/P_0$	$g$	$g$	$k_e$	$k_e$
CABO	Cable One	112.85	0.00	0.00%	0.00%	0.00%		
CCOI	Cogent Comms. Hldgs	21.56	0.08	0.37%	37.13%	3.86%	37.50%	4.23%
GOGO	Gogo Inc.	4.66	0.00	0.00%	0.00%	0.00%		
LUMN	Lumen Technologies	7.77	0.00	0.00%	0.00%	0.00%		
OPTU	Optimum Comms. Inc.	1.65	0.00	0.00%	0.00%	0.00%		
SHEN	Shenandoah Telecom.	11.56	0.12	1.04%	4.99%	3.71%	6.03%	4.75%
TDS	Telephone & Data	41.00	0.20	0.49%	6.69%	12.54%	7.18%	13.03%
<b>Average</b>							<b>16.90%</b>	<b>7.34%</b>
<b>Median</b>							<b>7.18%</b>	<b>4.75%</b>
High							37.50%	13.03%
Low							6.03%	4.23%
<b>Selected</b>							<b>7.18%</b>	<b>7.34%</b>

Notes

[1] From worksheet: DDM Sustainable Long-Term Growth

*Implied Sustainable LTG:*

16.27%

6.71%

**MONTANA DEPARTMENT OF REVENUE**

**Support for DDM - Short Term Growth Rate Calculations**

**Telecommunications - Medium & Small**

**2026 Assessment Year**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>
<b>Ticker</b>	<b>Company</b>	<b>End of Year Closing Stock Price</b>	<b>Div'ds Decl'd per sh 2026 Est</b>	<b>Expected Dividend Yield</b>	<b>Div'ds Decl'd per sh 2028-2030 Est</b>	<b>Short-Term Growth Rate</b>
		<i>Yahoo</i>	<i>Value Line</i>	<i>D / C</i>	<i>Value Line</i>	<i>Note [1]</i>
CABO	Cable One	112.85	0.00	0.00%	0.00	
CCOI	Cogent Comms. Hldgs	21.56	0.08	0.37%	0.40	71.00%
GOGO	Gogo Inc.	4.66	0.00	0.00%	0.00	
LUMN	Lumen Technologies	7.77	0.00	0.00%	0.00	
OPTU	Optimum Comms. Inc.	1.65	0.00	0.00%	0.00	
SHEN	Shenandoah Telecom.	11.56	0.12	1.04%	0.15	7.72%
TDS	Telephone & Data	41.00	0.20	0.49%	0.32	16.96%

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>Ticker</b>	<b>Company</b>	<b>Earnings per share 2026 Est</b>	<b>Earnings per share 2028-2030 Est</b>	<b>Short-Term Growth Rate</b>
		<i>Value Line</i>	<i>Value Line</i>	<i>Note [1]</i>
CABO	Cable One	28.00	32.50	5.09%
CCOI	Cogent Comms. Hldgs	3.55	0.50	
GOGO	Gogo Inc.	0.50	1.20	33.89%
LUMN	Lumen Technologies	0.45	0.40	
OPTU	Optimum Comms. Inc.	0.15	0.35	32.64%
SHEN	Shenandoah Telecom.	0.70	0.40	
TDS	Telephone & Data	0.50	1.10	30.06%

Notes

[1] 4 year compound annual growth rate (CAGR) - 3 periods

**MONTANA DEPARTMENT OF REVENUE**

**Support for DDM - Sustainable Long Term Growth**

**Telecommunications - Medium & Small**

**2026 Assessment Year**

Dividend Growth Rate									Stage 1				
Ticker	Company	Year End Stock Price	Expected Short-Term Dividend Growth Rate	Expected Long-Term Growth Rate	Expected Dividend Yield	Internal Rate of Return	Implied Sustainable Long-Term Growth Rate (g)	Initial Investment	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>
		Yahoo	Note [1]	Note [2]	$D_1/P_0$	$K_e = IRR \text{ of } D_1:D_{500}$	$g = IRR - Div. \text{ Yield}$						
CABO	Cable One	112.85	0.00%	4.30%	0.00%			(112.85)	0.00	0.00	0.00	0.00	0.00
CCOI	Cogent Comms. Hldgs	21.56	71.00%	4.30%	0.37%	37.50%	37.13%	(21.56)	0.08	0.14	0.23	0.40	0.68
GOGO	Gogo Inc.	4.66	0.00%	4.30%	0.00%			(4.66)	0.00	0.00	0.00	0.00	0.00
LUMN	Lumen Technologies	7.77	0.00%	4.30%	0.00%			(7.77)	0.00	0.00	0.00	0.00	0.00
OPTU	Optimum Comms. Inc.	1.65	0.00%	4.30%	0.00%			(1.65)	0.00	0.00	0.00	0.00	0.00
SHEN	Shenandoah Telecom.	11.56	7.72%	4.30%	1.04%	6.03%	4.99%	(11.56)	0.12	0.13	0.14	0.15	0.16
TDS	Telephone & Data	41.00	16.96%	4.30%	0.49%	7.18%	6.69%	(41.00)	0.20	0.23	0.27	0.32	0.37

Earnings Growth Rate									Stage 1				
Ticker	Company	Year End Stock Price	Expected Short-Term Earnings Growth Rate	Expected Long-Term Growth Rate	Expected Dividend Yield	Internal Rate of Return	Implied Sustainable Long-Term Growth Rate (g)	Initial Investment	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>
		Yahoo	Note [1]	Note [2]	$D_1/P_0$	$K_e = IRR \text{ of } D_1:D_{500}$	$g = IRR - Div. \text{ Yield}$						
CABO	Cable One	112.85	5.09%	4.30%	0.00%			(112.85)	0.00	0.00	0.00	0.00	0.00
CCOI	Cogent Comms. Hldgs	21.56	0.00%	4.30%	0.37%	4.23%	3.86%	(21.56)	0.08	0.08	0.08	0.08	0.08
GOGO	Gogo Inc.	4.66	33.89%	4.30%	0.00%			(4.66)	0.00	0.00	0.00	0.00	0.00
LUMN	Lumen Technologies	7.77	0.00%	4.30%	0.00%			(7.77)	0.00	0.00	0.00	0.00	0.00
OPTU	Optimum Comms. Inc.	1.65	32.64%	4.30%	0.00%			(1.65)	0.00	0.00	0.00	0.00	0.00
SHEN	Shenandoah Telecom.	11.56	0.00%	4.30%	1.04%	4.75%	3.71%	(11.56)	0.12	0.12	0.12	0.12	0.12
TDS	Telephone & Data	41.00	30.06%	4.30%	0.49%	13.03%	12.54%	(41.00)	0.20	0.26	0.34	0.44	0.57

Notes

[1] From worksheet: DDM Short Term Growth Rate Calculations

[2] From worksheet: Inflation & Real Growth

**MONTANA DEPARTMENT OF REVENUE**

Support for DDM - Sustainable Long Term Growth

Telecommunications - Medium & Small

2026 Assessment Year

Dividend	Stage 2															Stage 3		
	D <sub>6</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>	D <sub>10</sub>	D <sub>11</sub>	D <sub>12</sub>	D <sub>13</sub>	D <sub>14</sub>	D <sub>15</sub>	D <sub>16</sub>	D <sub>17</sub>	D <sub>18</sub>	D <sub>19</sub>	D <sub>20</sub>	D <sub>21</sub>	D <sub>22</sub>	D <sub>500</sub>
CABO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
CCOI	1.14	1.90	3.16	5.26	8.77	14.60	24.32	40.50	67.45	112.34	187.10	311.62	519.00	864.40	1,439.67	1,501.57	1,566.14	860,458,962,675
GOGO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
LUMN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
OPTU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
SHEN	0.17	0.19	0.20	0.22	0.23	0.25	0.27	0.29	0.31	0.33	0.36	0.38	0.41	0.44	0.48	0.50	0.52	285,497,889
TDS	0.43	0.50	0.59	0.68	0.79	0.92	1.07	1.24	1.44	1.67	1.94	2.25	2.61	3.03	3.52	3.67	3.83	2,104,147,452

Earnings	Stage 2															Stage 3		
	D <sub>6</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>	D <sub>10</sub>	D <sub>11</sub>	D <sub>12</sub>	D <sub>13</sub>	D <sub>14</sub>	D <sub>15</sub>	D <sub>16</sub>	D <sub>17</sub>	D <sub>18</sub>	D <sub>19</sub>	D <sub>20</sub>	D <sub>21</sub>	D <sub>22</sub>	D <sub>500</sub>
CABO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
CCOI	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	49,912,116
GOGO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
LUMN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
OPTU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
SHEN	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.14	74,868,173
TDS	0.73	0.94	1.21	1.55	1.99	2.56	3.28	4.21	5.41	6.94	8.91	11.43	14.67	18.83	24.16	25.20	26.28	14,440,657,756

**MONTANA DEPARTMENT OF REVENUE**

**Support for Yield Capitalization Rate - Debt Rating**

**Telecommunications - Medium & Small**

**2026 Assessment Year**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>I</b>
<b>Ticker</b>	<b>Company</b>	<b>Industry Group</b>	<b>Financial Strength</b>	<b>Moody's Long Term Rating</b>	<b>Yield to Maturity</b>
		<i>Value Line</i>	<i>Value Line</i>	<i>Moody's</i>	
CABO	Cable One	CABLETV	C++	B1	8.47%
CCOI	Cogent Comms. Hldgs	TELESERV	B	B2	8.47%
GOGO	Gogo Inc.	TELESERV	C++	B2	8.47%
LUMN	Lumen Technologies	TELESERV	C+	B2	8.47%
OPTU	Optimum Comms. Inc.	CABLETV	C+	Ba1	7.39%
SHEN	Shenandoah Telecom.	TELESERV	B+	B1	8.47%
TDS	Telephone & Data	TELESERV	B+	Ba1	7.39%
	<b>Average</b>				<b>8.16%</b>
	<b>Median</b>				<b>8.47%</b>
	<b>Trimmed Average</b>				<b>8.25%</b>
	High				8.47%
	Low				7.39%
	<b>Selected</b>				<b>8.16%</b>

*\*Highlighted ratings are estimated based on financial strength and historical interest coverage ratios*

**MONTANA DEPARTMENT OF REVENUE**  
**Support for Direct Capitalization - Equity Capitalization Rates**  
**Telecommunications - Medium & Small**  
**2026 Assessment Year**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Ticker	Company	End of Year Closing Stock Price	VL Historic EPS	VL Est EPS	VL Historic P/E Ratio	VL Est P/E Ratio	Ke Estimate - Earnings (Hist. P/E)	Ke Estimate - Earnings (Est. P/E)	VL Historic Cash Flow Per Share	VL Est Cash Flow Per Share	VL Historic P/CF Ratio	VL Est P/CF Ratio	Ke Estimate - Cash Flow (Hist. P/CF)	Ke Estimate - Cash Flow (Est. P/CF)	Market Value of Equity	Book Value of Equity	MTBR
		Yahoo	Value Line	Value Line	C/D	C/E	1/F	1/G	Value Line	Value Line	C/J	C/K	1/L	1/M	Price x Shrs	Value Line	P/Q
CABO	Cable One	112.85	(64.07)	28.00	(1.76)	4.03		24.81%	63.40	12.30	1.78	9.17	56.18%	10.90%	636	1,796	0.35
CCOI	Cogent Comms. Hldgs	21.56	(3.81)	3.55	(5.66)	6.07		16.47%	1.76	2.10	12.25	10.27	8.16%	9.74%	1,079	(64)	(16.92)
GOGO	Gogo Inc.	4.66	0.19	0.50	24.53	9.32	4.08%	10.73%	0.53	0.80	8.79	5.83	11.37%	17.17%	627	69	9.05
LUMN	Lumen Technologies	7.77	(0.13)	0.45	(59.77)	17.27		5.79%	2.56	2.15	3.04	3.61	32.95%	27.67%	7,959	(1,117)	(7.13)
OPTU	Optimum Comms. Inc.	1.65	(3.99)	0.15	(0.41)	11.00		9.09%	3.32	3.15	0.50	0.52	201.21%	190.91%	776	(469)	(1.65)
SHEN	Shenandoah Telecom.	11.56	(0.68)	0.70	(17.00)	16.51		6.06%	1.80	1.55	6.42	7.46	15.57%	13.41%	635	881	0.72
TDS	Telephone & Data	41.00	(0.65)	0.50	(63.08)	82.00		1.22%	7.42	1.40	5.53	29.29	18.10%	3.41%	4,665	5,091	0.92
<b>Average</b>					<b>(17.59)</b>	<b>20.89</b>	<b>4.08%</b>	<b>10.59%</b>			<b>5.47</b>	<b>9.45</b>	<b>49.08%</b>	<b>39.03%</b>			<b>(2.09)</b>
<b>Median</b>					<b>(5.66)</b>	<b>11.00</b>	<b>4.08%</b>	<b>9.09%</b>			<b>5.53</b>	<b>7.46</b>	<b>18.10%</b>	<b>13.41%</b>			<b>0.35</b>
<b>Trimmed Average</b>						<b>12.03</b>		<b>9.63%</b>			<b>5.11</b>	<b>7.27</b>	<b>26.83%</b>	<b>15.78%</b>			<b>(1.36)</b>
High					24.53	82.00	4.08%	24.81%			12.25	29.29	201.21%	190.91%			9.05
Low					(63.08)	4.03	4.08%	1.22%			0.50	0.52	8.16%	3.41%			(16.92)
<b>Selected</b>					10.39		<b>9.63%</b>				6.54		<b>15.28%</b>				<b>4.40</b>

**MONTANA DEPARTMENT OF REVENUE**

**Support for Direct Capitalization - Debt Capitalization Rate  
Telecommunications - Medium & Small  
2026 Assessment Year**

(\$ in Millions)

A	B	C	D	E	F	G	H	I	J
Ticker	Company	Current Year Interest Exp.	Previous Year MV LT Debt	Previous Year BV LT Debt	Current Year MV LT Debt	Current Year BV LT Debt	Average MV LT Debt	Current Yield	MTBR
		10-K	10-K	10-K	10-K	10-K	(D+F)/2	(C/H)	(F/G)
CABO	Cable One	130	3,351	3,590	2,925	3,194	3,138	4.14%	0.92
CCOI	Cogent Comms. Hldgs	161	1,983	1,978	2,267	2,337	2,125	7.59%	0.97
GOGO	Gogo Inc.	68	806	834	781	836	793	8.60%	0.93
LUMN	Lumen Technologies	1,284	17,381	17,906	17,321	17,441	17,351	7.40%	0.99
OPTU	Optimum Comms. Inc.	1,791	20,726	25,057	19,484	26,206	20,105	8.91%	0.74
SHEN	Shenandoah Telecom.	25	417	417	572	628	494	5.13%	0.91
TDS	Telephone & Data	40	2,421	2,447	751	829	1,586	2.54%	0.91
<b>All Companies</b>		3,501	47,085	52,229	44,102	51,471	45,593	<b>7.68%</b>	<b>0.86</b>
<b>Average</b>								<b>6.33%</b>	<b>0.91</b>
<b>Median</b>								<b>7.40%</b>	<b>0.92</b>
<b>Trimmed Average</b>								<b>6.57%</b>	<b>0.93</b>
High								8.91%	0.99
Low								2.54%	0.74
<b>Selected</b>								<b>6.33%</b>	<b>0.91</b>

**MONTANA DEPARTMENT OF REVENUE**

Support of Stock Price - From YAHOO Finance

Telecommunications - Medium & Small

2026 Assessment Year

		End of Period Closing Stock Price											
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ticker	Company	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
CABO	Cable One	304.01	260.18	265.77	267.27	146.33	135.81	127.98	161.48	177.05	148.55	117.19	112.85
CCOI	Cogent Comms. Hldgs	75.34	73.07	61.31	54.35	45.71	48.21	45.59	38.23	38.35	41.25	19.08	21.56
GOGO	Gogo Inc.	8.44	7.33	8.62	7.57	10.61	14.68	15.86	10.98	8.59	9.10	7.15	4.66
LUMN	Lumen Technologies	4.94	4.72	3.92	3.54	3.92	4.38	4.45	4.97	6.12	10.28	8.11	7.77
OPTU	Optimum Comms. Inc.	2.81	2.86	2.66	2.48	2.31	2.14	2.60	2.34	2.41	2.23	1.90	1.65
SHEN	Shenandoah Telecom.	10.80	10.81	12.57	11.14	12.58	13.66	14.68	13.25	13.42	12.32	10.93	11.56
TDS	Telephone & Data	35.35	36.10	38.74	37.49	34.36	35.58	39.04	40.09	39.24	38.82	40.27	41.00

