



**2022 Capitalization Rate Study
Telecommunications - Large**

FINAL

Completed: April 21, 2022

MONTANA DEPARTMENT OF REVENUE

**Yield Capitalization Rate Conclusion
Industry: Telecommunications - Large
2022 Assessment Year**

Capital Structure ^[1]

Equity	55.00%
Debt	45.00%

Equity Cost of Capital

		Weighting
Capital Asset Pricing Model - Ex Post ^[2]	7.91%	25%
Capital Asset Pricing Model - Ex Ante ^[2]	6.67%	25%
3 Stage Dividend Discount Model - Dividends ^[3]	10.20%	25%
3 Stage Dividend Discount Model - Earnings ^[3]	10.05%	<u>25%</u>
Weighted Average	<u>8.71%</u>	100%
Selected Cost of Equity	<u>8.71%</u>	

Debt Cost of Capital

		Weighting
A - Mergent's - Avg. YTM of A Rated Corporate Bonds ^[4]	3.04%	20%
Baa - Mergent's - Avg. YTM of Baa Rated Corporate Bonds ^[4]	3.37%	40%
Ba - Avg of MTDOR Study, Bloomberg and Capital IQ ^[5]	5.31%	40%
B - Avg of MTDOR Study, Bloomberg and Capital IQ ^[5]	7.81%	<u>0%</u>
Weighted Average	<u>4.08%</u>	100%
Selected Cost of Debt	<u>4.08%</u>	

Weighted Average Cost of Capital (WACC)

Source of Capital	Capital Structure	Cost of Capital	Marginal Tax Rate	After-tax Cost of Capital	Weighted Cost
Equity	55.00%	8.71%		8.71%	4.79%
Debt	45.00%	4.08%	24.00%	3.10%	1.40%
WACC	100.00%				6.19%
WACC (Rounded)					6.20%

Notes

[1] From worksheet: Capital Structure

[2] From worksheet: Capital Asset Pricing Model Summary

[3] From worksheet: Yield Equity Summary

[4] January 2022, Mergent Bond Record

[5] Average corporate bond yields from: Montana Department of Revenue High Yield Debt Study and Kroll Capitalization Rate Study.

MONTANA DEPARTMENT OF REVENUE

**Direct Capitalization Rate Conclusion
Industry: Telecommunications - Large
2022 Assessment Year**

Capital Structure ^[1]

Equity	55.00%
Debt	45.00%

Equity Capitalization Rate ^[2]

NOI After-tax	7.30%
GCF	14.65%

Debt Capitalization Rate ^[3]

Calculated Current Yield	3.75%
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NOI After-tax Direct Capitalization Rate

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	After-tax Capitalization Rate	Weighted Capitalization Rate
Equity	55.00%	7.30%		7.30%	4.02%
Debt	45.00%	3.75%	24.00%	2.85%	1.28%
Total	100.00%				5.30%
Total (Rounded)					5.30%

GCF Direct Capitalization Rate

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	After-tax Capitalization Rate	Weighted Capitalization Rate
Equity	55.00%	14.65%		14.65%	8.06%
Debt	45.00%	3.75%	24.00%	2.85%	1.28%
WACC	100.00%				9.34%
Total (Rounded)					9.35%

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 - Large
2022 Assessment Year

Screening Requirements:

The universe of companies is all companies listed in Value Line under the Cable TV, Telecom Services, and Telecom Utilities industries.

Companies were then selected using the following screening criteria:

1. Market value of equity above 100 billion USD.
2. Incorporated in the United States of America.
3. Primarily provides two-way transmission of voice, image, data, or other information over wire, cable, fiber optics, microwave, radio, satellite, or similar facilities.
4. No significant merger & acquisition activity during the year.

The Value Line industry groups listed above were analyzed to determine which companies had a market capitalization over 100 billion U.S. dollars at December 31, 2021. Initial analysis revealed five companies that met this criteria: Charter Communications (CHTR), Comcast Corp. (CMCSA), AT&T Inc. (T), T-Mobile US, Inc. (TMUS), and Verizon Communications (VZ). All five companies were then verified as incorporated in the United States. The five companies were analyzed for significant merger and acquisition activity during the previous year. Finding none, the five companies were selected for use as guideline public companies in estimating the cost of capital in this study (CHTR, CMCSA, T, TMUS, VZ).

MONTANA DEPARTMENT OF REVENUE

Support for Capital Structure
Industry: Telecommunications - Large
2022 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 Symbol	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
		<i>Value Line</i>	<i>Value Line</i>	<i>10-K</i>	<i>Yahoo</i>	<i>ExF</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>G+H+I+J</i>	<i>G/K</i>	<i>H/K</i>	<i>(I+J)/K</i>
							<i>Note [1]</i>	<i>Note [2]</i>					
CHTR	Charter Communic.	CABLETV	B++	173	651.97	112,622	0	99,641	1,451	213,714	53%	0%	47%
CMCSA	Comcast Corp.	CABLETV	A+	4,533	50.33	228,157	0	109,300	7,239	344,696	66%	0%	34%
T	AT&T Inc.	TELESERV	A	7,141	24.60	175,670	0	204,439	24,967	405,076	43%	0%	57%
TMUS	T-Mobile US	TELESERV	B+	1,249	115.98	144,884	0	78,377	29,243	252,504	57%	0%	43%
VZ	Verizon Communic.	TELESERV	A++	4,138	51.96	215,017	0	170,530	27,062	412,609	52%	0%	48%
All Companies						876,351	0	662,287	89,962	1,628,600	54%	0%	46%
Average											54%	0%	46%
Median											53%	0%	47%
High											66%	0%	57%
Low											43%	0%	34%
Selected											55%		45%

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

MCA 15-1-210, rationale for changes to guideline companies:

2022 - No Changes

		<u>Median</u>	
Current Year	53%	0%	47%
Prior Year	58%	0%	42%
2 Years Prior	60%	0%	40%
3 Year Average	57%	0%	43%

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model (CAPM)
Industry: Telecommunications - Large
2022 Assessment Year

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

		<i>Ex Post</i>	<i>Ex Ante</i>
$k_e =$	Cost of Equity	7.91%	6.67%
$R_f =$	Risk Free Rate	1.94%	1.94%
$\beta =$	Beta	0.80	0.80
$ERP =$	Equity Risk Premium ($R_m - R_f$)	7.46%	5.91%
$R_m =$	Market Rate of Return	9.40%	7.85%

Risk Free Rate Measures (R_f):

The Value Line Investment Survey: Selection & Opinion^[1]

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Selected Yields on Taxable U.S. Treasury Securities as of 12/27/21

10-year	1.48%
30-year	1.88%

Federal Reserve Statistical Release^[2]

U.S. government securities, Treasury constant maturities, Nominal, December 31, 2021

10-year	1.52%
20-year	1.94%
30-year	1.90%

Risk Free Rate Selected

1.94%

Notes

[1] "Value Line Selection & Opinion", Value Line (January 7, 2022)

[2] <https://www.federalreserve.gov/datadownload/Choose.aspx?rel=H.15>

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model (CAPM)
Industry: Telecommunications - Large
2022 Assessment Year

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

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

Duff & Phelps, 2022 Cost of Capital Navigator

		<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
ERP "Historical" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	9.40%	1.94%	7.46%
ERP "Supply-side" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	8.16%	1.94%	6.22%
Ex Post Equity Risk Premium Selected		9.40%	1.94%	7.46%

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

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

		<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
ERP - <i>Ex Ante</i>		8.05%	1.94%	6.11%

Duff & Phelps, 2022 Cost of Capital Navigator

		<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
ERP "Conditional" - <i>Ex Ante</i>		8.00%	2.50%	5.50%

Damodaran Implied ERP (Jan 5, 2022)

		<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
Implied Premium (FCFE) - <i>Ex Ante</i>		5.76%	1.52%	4.24%
Implied Premium (FCFE with sustainable payout) - <i>Ex Ante</i>		6.42%	1.52%	4.90%

		<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
<u>Average</u>		7.06%		5.19%
<u>Median</u>		7.21%		5.20%
<u>High</u>		8.05%		6.11%
<u>Low</u>		5.76%		4.24%

Equity Risk Premium Selected

		7.85%	1.94%	5.91%
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Notes

[4] R_m estimated using selected Risk Free Rate (R_f)

MONTANA DEPARTMENT OF REVENUE

Support for Beta Selection in CAPM
 Industry: Telecommunications - Large
 2022 Assessment Year

A	B	C	D	E
Ticker Symbol	Company	Industry Group	Financial Strength	Beta
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>
CHTR	Charter Communic.	CABLETV	B++	0.85
CMCSA	Comcast Corp.	CABLETV	A+	0.80
T	AT&T Inc.	TELESERV	A	0.80
TMUS	T-Mobile US	TELESERV	B+	0.75
VZ	Verizon Communic.	TELESERV	A++	0.60
Average				0.76
Median				0.80
Trimmed Average				0.78
High				0.85
Low				0.60
Selected				0.80

MONTANA DEPARTMENT OF REVENUE

Inflation & Real Growth

Industry: Telecommunications - Large

2022 Assessment Year

A	B	C	D	Nominal Growth	
				E	F
Source Description	Inflation (CPI)	Real Growth (GDP)	Nominal Growth	Low	High
Livingston Survey ^[1]	2.44%	2.21%	4.65%		
Survey of Professional Forecasters ^[2]	2.49%	2.25%	4.74%		
Congressional Budget Office ^[3]					
Average	2.47%	2.23%	4.70%		
Median	2.47%	2.23%	4.70%		
High	2.49%	2.25%	4.74%		
Low	2.44%	2.21%	4.65%		
Selected	2.45%	2.25%	4.70%	4.65%	4.74%

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>
2011	225.672	2.9%	1.2354	224.939	3.1%	1.2046
2012	229.601	1.7%	1.2143	229.594	2.0%	1.1802
2013	233.049	1.5%	1.1963	232.957	1.4%	1.1632
2014	234.812	0.8%	1.1873	236.736	1.6%	1.1446
2015	236.525	0.7%	1.1787	237.017	0.1%	1.1433
2016	241.432	2.0%	1.1548	240.007	1.2%	1.1290
2017	246.524	2.1%	1.1309	245.120	2.1%	1.1055
2018	251.233	1.9%	1.1097	251.107	2.4%	1.0791
2019	256.974	2.2%	1.0849	255.657	1.8%	1.0599
2020	260.474	1.3%	1.0704	258.811	1.2%	1.0470
2021	278.802	6.6%	1.0000	270.970	4.5%	1.0000

Notes

[1] Federal Reserve Bank of Philadelphia The Livingston Survey December 17, 2021 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 February 11, 2022 Table 8 and Table 9 Average over next 10-Year mean

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

[3] Not available at study date

<https://www.cbo.gov/about/products/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/historical-cpi-u-202001.pdf>

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

[7] Most current year / Row year

MONTANA DEPARTMENT OF REVENUE

3 Stage Dividend Discount Model (DDM)

Industry: Telecommunications - Large

2022 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	2021 Year End Stock Price	2022 Est Div'ds Decl'd per sh	Expected Equity Payout Yield	Sustainable Long-Term Growth Rate ^[1]	Sustainable Long-Term Growth Rate ^[1]	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
CHTR	Charter Communic.	651.97	0.00	0.00%				
CMCSA	Comcast Corp.	50.33	1.08	2.15%	7.23%	6.99%	9.38%	9.13%
T	AT&T Inc.	24.60	2.08	8.46%	4.84%	4.78%	13.29%	13.24%
TMUS	T-Mobile US	115.98	0.00	0.00%				
VZ	Verizon Communic.	51.96	2.52	4.85%	3.15%	2.95%	8.00%	7.80%
Average							10.22%	10.06%
Median							9.38%	9.13%
High							13.29%	13.24%
Low							8.00%	7.80%
Selected							10.20%	10.05%

Notes

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

MONTANA DEPARTMENT OF REVENUE

Support for DDM - Short Term Growth Rate Calculations

Industry: Telecommunications - Large

2022 Assessment Year

A	B	C	D	E	F	G
Ticker	Company	End of Year Closing Stock Price	Div'ds Decl'd per sh 2022 Est^[1]	Expected Dividend Yield	Div'ds Decl'd per sh 2024-2026 Est^[1]	Short Term Growth Rate
		<i>Yahoo</i>	<i>Value Line</i>	<i>D / C</i>	<i>Value Line</i>	<i>Note [2]</i>
CHTR	Charter Communic.	651.97	0.00	0.00%	0.00	
CMCSA	Comcast Corp.	50.33	1.08	2.15%	1.48	11.07%
T	AT&T Inc.	24.60	2.08	8.46%	2.40	4.89%
TMUS	T-Mobile US	115.98	0.00	0.00%	0.00	
VZ	Verizon Communic.	51.96	2.57	4.95%	2.70	1.66%

A	B	C	D	E
Ticker	Company	Earnings per share 2022 Est^[1]	Earnings per share 2024-2026 Est^[1]	Short Term Growth Rate
		<i>Value Line</i>	<i>Value Line</i>	<i>Note [2]</i>
CHTR	Charter Communic.	31.00	43.95	12.34%
CMCSA	Comcast Corp.	3.70	5.00	10.56%
T	AT&T Inc.	3.30	3.80	4.81%
TMUS	T-Mobile US	3.80	6.05	16.77%
VZ	Verizon Communic.	5.45	5.65	1.21%

Notes

[1] From Value Line Tissue

[2] 4 year compound annual growth rate (CAGR) - 3 periods

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Support for DDM - Sustainable Long Term Growth

Industry: Telecommunications - Large

2022 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 ₁	D ₂	D ₃	D ₄	D ₅
		Yahoo	Note [1]	Note [2]	D_1/P_0	$K_e = IRR \text{ of } D_1:D_{500}$	$g = IRR - Div. \text{ Yield}$						
CHTR	Charter Communic.	651.97	0.00%	4.70%	0.00%			(651.97)	0.00	0.00	0.00	0.00	0.00
CMCSA	Comcast Corp.	50.33	11.07%	4.70%	2.15%	9.38%	7.23%	(50.33)	1.08	1.20	1.33	1.48	1.64
T	AT&T Inc.	24.60	4.89%	4.70%	8.46%	13.29%	4.84%	(24.60)	2.08	2.18	2.29	2.40	2.52
TMUS	T-Mobile US	115.98	0.00%	4.70%	0.00%			(115.98)	0.00	0.00	0.00	0.00	0.00
VZ	Verizon Communic.	51.96	1.66%	4.70%	4.95%	8.10%	3.15%	(51.96)	2.57	2.61	2.66	2.70	2.74

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 ₁	D ₂	D ₃	D ₄	D ₅
		Yahoo	Note [1]	Note [2]	D_1/P_0	$K_e = IRR \text{ of } D_1:D_{500}$	$g = IRR - Div. \text{ Yield}$						
CHTR	Charter Communic.	651.97	12.34%	4.70%	0.00%			(651.97)	0.00	0.00	0.00	0.00	0.00
CMCSA	Comcast Corp.	50.33	10.56%	4.70%	2.15%	9.13%	6.99%	(50.33)	1.08	1.19	1.32	1.46	1.61
T	AT&T Inc.	24.60	4.81%	4.70%	8.46%	13.24%	4.78%	(24.60)	2.08	2.18	2.29	2.40	2.51
TMUS	T-Mobile US	115.98	16.77%	4.70%	0.00%			(115.98)	0.00	0.00	0.00	0.00	0.00
VZ	Verizon Communic.	51.96	1.21%	4.70%	4.95%	7.90%	2.95%	(51.96)	2.57	2.60	2.63	2.66	2.70

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

Industry: Telecommunications - Large

2022 Assessment Year

Dividend	Stage 2															Stage 3		
Ticker	D ₆	D ₇	D ₈	D ₉	D ₁₀	D ₁₁	D ₁₂	D ₁₃	D ₁₄	D ₁₅	D ₁₆	D ₁₇	D ₁₈	D ₁₉	D ₂₀	D ₂₁	D ₂₂	D ₅₀₀
CHTR	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
CMCSA	1.82	2.01	2.23	2.46	2.73	3.02	3.34	3.69	4.09	4.52	5.00	5.54	6.13	6.78	7.50	7.85	8.22	28,151,483,815
T	2.64	2.77	2.90	3.04	3.19	3.35	3.51	3.68	3.86	4.05	4.25	4.46	4.67	4.90	5.14	5.38	5.63	19,288,803,932
TMUS	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
VZ	2.80	2.85	2.90	2.95	3.01	3.07	3.12	3.18	3.24	3.30	3.36	3.42	3.49	3.55	3.62	3.79	3.97	13,584,651,538

Earnings	Stage 2															Stage 3		
Ticker	D ₆	D ₇	D ₈	D ₉	D ₁₀	D ₁₁	D ₁₂	D ₁₃	D ₁₄	D ₁₅	D ₁₆	D ₁₇	D ₁₈	D ₁₉	D ₂₀	D ₂₁	D ₂₂	D ₅₀₀
CHTR	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
CMCSA	1.78	1.96	2.16	2.38	2.62	2.88	3.18	3.50	3.86	4.25	4.68	5.16	5.68	6.26	6.90	7.22	7.56	25,880,854,814
T	2.63	2.76	2.89	3.03	3.17	3.33	3.49	3.66	3.83	4.01	4.21	4.41	4.62	4.84	5.08	5.32	5.57	19,056,160,714
TMUS	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
VZ	2.74	2.77	2.81	2.86	2.90	2.94	2.98	3.02	3.07	3.11	3.16	3.20	3.25	3.29	3.34	3.50	3.66	12,543,944,049

MONTANA DEPARTMENT OF REVENUE

Support for Yield Capitalization Rate - Debt Rating

Industry: Telecommunications - Large

2022 Assessment Year

A	B	C	D	E	F
Ticker Symbol	Company	Industry Group	Financial Strength	Moody's Long Term Rating	Yield to Maturity
		<i>Value Line</i>	<i>Value Line</i>	<i>Moodys.com</i>	
CHTR	Charter Communic.	CABLETV	B++	Ba2	5.31%
CMCSA	Comcast Corp.	CABLETV	A+	A3	3.04%
T	AT&T Inc.	TELESERV	A	Baa2	3.37%
TMUS	T-Mobile US	TELESERV	B+	Ba1	5.31%
VZ	Verizon Communic.	TELESERV	A++	Baa1	3.37%
Average					4.08%
Median					3.37%
Trimmed Average					4.02%
High					5.31%
Low					3.04%
Selected					4.08%

MONTANA DEPARTMENT OF REVENUE

Support for Direct Capitalization - Equity Capitalization Rates

Industry: Telecommunications - Large

2022 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Ticker Symbol	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	10-K	P/Q
CHTR	Charter Communic.	651.97	24.83	31.00	26.26	21.03	3.81%	4.75%	81.04	87.75	8.05	7.43	12.43%	13.46%	112,622	14,050	8.02
CMCSA	Comcast Corp.	50.33	3.24	3.70	15.53	13.60	6.44%	7.35%	5.84	6.50	8.62	7.74	11.60%	12.91%	228,157	96,092	2.37
T	AT&T Inc.	24.60	3.18	3.30	7.74	7.45	12.93%	13.41%	7.21	6.55	3.41	3.76	29.31%	26.63%	175,670	161,673	1.09
TMUS	T-Mobile US	115.98	2.41	3.80	48.12	30.52	2.08%	3.28%	14.80	16.00	7.84	7.25	12.76%	13.80%	144,884	65,344	2.22
VZ	Verizon Communic.	51.96	5.40	5.45	9.62	9.53	10.39%	10.49%	8.94	9.15	5.81	5.68	17.21%	17.61%	215,017	67,842	3.17
Average					21.45	16.43	7.13%	7.86%			6.74	6.37	16.66%	16.88%			3.37
Median					15.53	13.60	6.44%	7.35%			7.84	7.25	12.76%	13.80%			2.37
Trimmed Average					17.14	14.72	6.88%	7.53%			7.23	6.79	14.13%	14.95%			1.77
High					48.12	30.52	12.93%	13.41%			8.62	7.74	29.31%	26.63%			8.02
Low					7.74	7.45	2.08%	3.28%			3.41	3.76	11.60%	12.91%			1.09
Selected							7.30%						14.65%				1.80

MONTANA DEPARTMENT OF REVENUE

Support for Direct Capitalization Cost of Debt Component - Calculated Current Yield

Industry: Telecommunications - Large

2022 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
		<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>(D+F)/2</i>	<i>(C/H)</i>	<i>(F/G)</i>
CHTR	Charter Communic.	4,037	94,226	82,752	99,641	91,561	96,934	4.16%	1.09
CMCSA	Comcast Corp.	4,281	125,600	103,760	109,300	94,850	117,450	3.64%	1.15
T	AT&T Inc.	6,884	189,260	157,245	204,439	178,695	196,850	3.50%	1.14
TMUS	T-Mobile US	3,362	78,202	71,125	78,377	74,193	78,290	4.29%	1.06
VZ	Verizon Communic.	3,485	158,036	129,062	170,530	150,868	164,283	2.12%	1.13
All Companies		22,049			662,287	590,167	653,806	3.37%	1.12
Average								3.54%	1.11
Median								3.64%	1.13
Trimmed Average								3.77%	1.12
High								4.29%	1.15
Low								2.12%	1.06
Selected								3.75%	1.12

MONTANA DEPARTMENT OF REVENUE

Support of Stock Price - From YAHOO Finance

Industry: Telecommunications - Large

2022 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.
CHTR	Charter Communic.	607.56	613.42	617.02	673.45	694.53	721.45	744.05	816.66	727.56	674.89	646.28	651.97
CMCSA	Comcast Corp.	49.57	52.72	54.11	56.15	57.34	57.02	58.83	60.68	55.93	51.43	49.98	50.33
T	AT&T Inc.	28.63	27.89	30.27	31.41	29.43	28.78	28.05	27.42	27.01	25.26	22.83	24.60
TMUS	T-Mobile US	126.08	119.97	125.29	132.13	141.45	144.83	144.02	137.02	127.76	115.03	108.81	115.98
VZ	Verizon Communic.	54.75	55.30	58.15	57.79	56.49	56.03	55.78	55.00	54.01	52.99	50.27	51.96

