



2016 Capitalization Rate Study

Revised 4/14/2016

**Telecommunications**

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**MONTANA DEPARTMENT OF REVENUE**

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**Yield Capitalization Rate Study  
Industry: Telecommunications - Telephone  
2016 Assessment Year**

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**Equity Measures**

Capital Asset Pricing Model	8.31%	<i>Page T-8</i>
Dividend Growth Model (g = Dividend Growth)	8.50%	<i>Page T-20</i>
Dividend Growth Model (g = Earnings Growth)	12.00%	<i>Page T-20</i>
Dividend Growth Model (g = b x ROE)	9.60%	<i>Page T-20</i>

**Estimated Cost of Equity**

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**9.00%**

**Estimated Cost of Debt**

**6.00%** *Page T-27*

**Capital Structure**

Equity	<b>61.00%</b>	<i>Page T-11</i>
Debt	<b>39.00%</b>	<i>Page T-11</i>

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

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Source of Capital	Capital Structure	Cost of Capital	Marginal Tax Rate	After-tax Cost of Capital	Weighted Cost
Equity	61.00%	9.00%		9.00%	5.49%
Debt	39.00%	6.00%	38.00%	3.72%	1.45%
<b>WACC</b>	<b>100.00%</b>				<b>6.94%</b>
<b>WACC (Rounded)</b>					<b>7.00%</b>

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**MONTANA DEPARTMENT OF REVENUE**

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**Yield Capitalization Rate Study  
Industry: Telecommunications - Wireless  
2016 Assessment Year**

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**Equity Measures**

Capital Asset Pricing Model	8.85%	<i>Page T-8</i>
Dividend Growth Model (g = Dividend Growth)	7.10%	<i>Page T-21</i>
Dividend Growth Model (g = Earnings Growth)	8.70%	<i>Page T-21</i>
Dividend Growth Model (g = b x ROE)	9.80%	<i>Page T-21</i>

**Estimated Cost of Equity**

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**9.20%**

**Estimated Cost of Debt**

**6.00%** *Page T-27*

**Capital Structure**

Equity	<b>60.00%</b>	<i>Page T-12</i>
Debt	<b>40.00%</b>	<i>Page T-12</i>

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

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Source of Capital	Capital Structure	Cost of Capital	Marginal Tax Rate	After-tax Cost of Capital	Weighted Cost
Equity	60.00%	9.20%		9.20%	5.52%
Debt	40.00%	6.00%	38.00%	3.72%	1.49%
<b>WACC</b>	<b>100.00%</b>				<b>7.01%</b>
<b>WACC (Rounded)</b>					<b>7.10%</b>

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**MONTANA DEPARTMENT OF REVENUE**

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**Yield Capitalization Rate Study  
Industry: Telecommunications - Cable  
2016 Assessment Year**

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**Equity Measures**

Capital Asset Pricing Model	8.85%	<i>Page T-8</i>
Dividend Growth Model (g = Dividend Growth)	8.00%	<i>Page T-22</i>
Dividend Growth Model (g = Earnings Growth)	19.00%	<i>Page T-22</i>
Dividend Growth Model (g = b x ROE)	10.00%	<i>Page T-22</i>

<b>Estimated Cost of Equity</b>	<b>9.40%</b>	
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<b>Estimated Cost of Debt</b>	<b>6.00%</b>	<i>Page T-28</i>
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**Capital Structure**

Equity	<b>62.00%</b>	<i>Page T-13</i>
Debt	<b>38.00%</b>	<i>Page T-13</i>

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

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Source of Capital	Capital Structure	Cost of Capital	Marginal Tax Rate	After-tax Cost of Capital	Weighted Cost
Equity	62.00%	9.40%		9.40%	5.83%
Debt	38.00%	6.00%	38.00%	3.72%	1.41%
<b>WACC</b>	<b>100.00%</b>				<b>7.24%</b>
<b>WACC (Rounded)</b>					<b>7.30%</b>

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**MONTANA DEPARTMENT OF REVENUE**

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**Direct Capitalization Rate Study  
Industry: Telecommunications - Telephone  
2016 Assessment Year**

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**Benefit Stream Capitalized:**

**Net Operating Profit After Tax (NOPAT)**

$$\text{NOPAT} = \text{EBIT} \times (1-t)$$

**Gross Cash Flow (GCF)**

$$\text{GCF} = \text{NOPAT} + \text{Dep. \& Amort.}$$

**Capitalization Rate:**

NOPAT	<b>5.50%</b>	<i>Page T-17</i>
GCF	<b>13.10%</b>	<i>Page T-17</i>

**Capital Structure:**

Equity	<b>61%</b>	<i>Page T-17</i>
Debt	<b>39%</b>	<i>Page T-17</i>

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**NOPAT - Band of Investment - Telephone**

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<b>Source of Capital</b>	<b>Capital Structure</b>	<b>Weighted After-Tax Cost</b>
Equity	61%	3.35%
Debt	39%	2.15%
<b>Total</b>	<b>100%</b>	<b>5.50%</b>

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**GCF - Band of Investment - Telephone**

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<b>Source of Capital</b>	<b>Capital Structure</b>	<b>Weighted After-Tax Cost</b>
Equity	61%	7.98%
Debt	39%	5.12%
<b>Total</b>	<b>100%</b>	<b>13.10%</b>

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**MONTANA DEPARTMENT OF REVENUE**

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**Direct Capitalization Rate Study  
Industry: Telecommunications - Wireless  
2016 Assessment Year**

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**Benefit Stream Capitalized:**

**Net Operating Profit After Tax (NOPAT)**

NOPAT = EBIT x (1-t)

**Gross Cash Flow (GCF)**

GCF = NOPAT + Dep. & Amort.

**Capitalization Rate:**

NOPAT	<b>5.25%</b>	<i>Page T-18</i>
GCF	<b>13.90%</b>	<i>Page T-18</i>

**Capital Structure:**

Equity	<b>61%</b>	<i>Page T-18</i>
Debt	<b>39%</b>	<i>Page T-18</i>

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**NOPAT - Band of Investment - Wireless**

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<b>Source of Capital</b>	<b>Capital Structure</b>	<b>Weighted After-Tax Cost</b>
Equity	61%	3.22%
Debt	39%	2.03%
<b>Total</b>	<b>100%</b>	<b>5.25%</b>

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**GCF - Band of Investment - Wireless**

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<b>Source of Capital</b>	<b>Capital Structure</b>	<b>Weighted After-Tax Cost</b>
Equity	61%	8.53%
Debt	39%	5.37%
<b>Total</b>	<b>100%</b>	<b>13.90%</b>

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**MONTANA DEPARTMENT OF REVENUE**

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**Direct Capitalization Rate Study  
Industry: Telecommunications - Cable  
2016 Assessment Year**

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**Benefit Stream Capitalized:**

**Net Operating Profit After Tax (NOPAT)**

$$\text{NOPAT} = \text{EBIT} \times (1-t)$$

**Gross Cash Flow (GCF)**

$$\text{GCF} = \text{NOPAT} + \text{Dep. \& Amort.}$$

**Capitalization Rate:**

NOPAT	<b>5.15%</b>	<i>Page T-19</i>
GCF	<b>13.30%</b>	<i>Page T-19</i>

**Capital Structure:**

Equity	<b>62%</b>	<i>Page T-19</i>
Debt	<b>38%</b>	<i>Page T-19</i>

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**NOPAT - Band of Investment - Cable**

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<b>Source of Capital</b>	<b>Capital Structure</b>	<b>Weighted After-Tax Cost</b>
Equity	62%	3.19%
Debt	38%	1.96%
<b>Total</b>	<b>100%</b>	<b>5.15%</b>

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**GCF - Band of Investment - Cable**

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<b>Source of Capital</b>	<b>Capital Structure</b>	<b>Weighted After-Tax Cost</b>
Equity	62%	8.24%
Debt	38%	5.06%
<b>Total</b>	<b>100%</b>	<b>13.30%</b>

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**MONTANA DEPARTMENT OF REVENUE**

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**Capital Asset Pricing Model (CAPM)  
Industry: Telecommunications - Telephone, Wireless & Cable  
2016 Assessment Year**

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

		Telephone	Wireless	Cable
$k_e =$	Cost of Equity	8.31%	8.85%	8.85%
$R_f =$	Risk Free Rate	2.67%	2.67%	2.67%
$\beta =$	Beta	0.94	1.03	1.03
$ERP =$	Equity Risk Premium ( $R_m - R_f$ )	6.00%	6.00%	6.00%
$R_m =$	Market Rate of Return	8.67%	8.67%	8.67%

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

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

January 8, 2016

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Selected Yields on Taxable U.S. Treasury Securities

10-year	2.31%
30-year	3.04%

Federal Reserve Statistical Release<sup>2</sup> and U.S. Department of the Treasury, Daily Treasury Yield Curve Rates<sup>3</sup>

January 4, 2016

Page 1

U.S. government securities, Treasury constant maturities, Nominal, December 31, 2015

10-year	2.27%
20-year	2.67%
30-year	3.01%

**Risk Free Rate Selected**

**2.67%**

<sup>1</sup> "Value Line Selection & Opinion", Value Line (January 8, 2016)

<sup>2</sup> <http://www.federalreserve.gov/releases/h15/20160104/>

<sup>3</sup> <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2015>



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**MONTANA DEPARTMENT OF REVENUE**

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**Capital Asset Pricing Model (CAPM)**  
**Industry: Telecommunications - Telephone, Wireless & Cable**  
**2016 Assessment Year**

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

**Equity Risk Premium Measures (ERP = R<sub>m</sub> - R<sub>f</sub>)**

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

	<u>R<sub>m</sub><sup>4</sup></u>	<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
ERP - <i>Ex Ante</i>	8.22%	8.22%	2.67%	5.55%

Duff & Phelps, 2015 Valuation Handbook

		<u>R<sub>m</sub><sup>4</sup></u>	<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>	9.67%	9.40%	2.40%	7.00%
ERP "Supply-side" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	8.88%	8.61%	2.40%	6.21%
ERP "Adj. Supply-side" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	7.77%	7.50%	2.40%	5.10%
ERP "Conditional" - <i>Ex Ante</i>			9.00%	4.00%	5.00%

Damodaran's Implied ERP (Jan 1, 2016)

	<u>R<sub>m</sub><sup>4</sup></u>	<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
Implied Premium (FCFE) - <i>Ex Ante</i>	8.79%	8.39%	2.27%	6.12%
Implied Premium (FCFE with sustainable payout) - <i>Ex Ante</i>	7.83%	7.43%	2.27%	5.16%

	<u>R<sub>m</sub><sup>4</sup></u>	<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
<u>Average</u>	8.53%	8.36%		5.73%
<u>Median</u>	8.51%	8.39%		5.55%
<u>High</u>	9.67%	9.40%		7.00%
<u>Low</u>	7.77%	7.43%		5.00%

**Equity Risk Premium Selected**

<b>8.67%</b>	<b>2.67%</b>	<b>6.00%</b>
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<sup>4</sup> R<sub>m</sub> estimated using selected Risk Free Rate (R<sub>f</sub>)

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**MONTANA DEPARTMENT OF REVENUE**

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**Capital Asset Pricing Model (CAPM)  
Industry: Telecommunications - Telephone, Wireless & Cable  
2016 Assessment Year**

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

**Inflation and Growth Estimates**<sup>5</sup>

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	<u>Inflation</u> (CPI)	<u>Real Growth</u> (GDP)	<u>Nominal</u> <u>Growth</u>	<u>Nominal Growth</u>	
				<u>Low</u>	<u>High</u>
Livingston Survey	2.25%	2.25%	4.50%		
Survey of Professional Forecasters	2.12%	2.25%	4.37%		
Congressional Budget Office	2.28%	2.56%	4.84%		
Office of Budget and Management	2.22%	2.00%	4.22%		
OASDI Trustee Report	2.90%	2.80%	5.70%		
Average	2.35%	2.37%	4.73%		
Median	2.25%	2.25%	4.50%		
High	2.90%	2.80%	5.70%		
Low	2.12%	2.00%	4.12%		
<b>Say</b>	<b>2.25%</b>	<b>2.25%</b>	<b>4.50%</b>	<b>4.12%</b>	<b>5.70%</b>
<b>Rounded</b>					<b>6.00%</b>

<sup>5</sup> Real Growth Sources: "The Livingston Survey", Federal Reserve Bank of Philadelphia (December 10, 2015); "Survey of Professional Forecasters", Federal Reserve Bank of Philadelphia (February 12, 2016); "Congressional Budget Office", An Update to the Budget and Economic Outlook: 2015 to 2025 (August 2015); "Office of Budget and Management", FY 2016 Mid-Session Review (July 14, 2015); "OASDI Trustee Report", Board of Trustees of the Federal Old-Age Survivors Insurance and Federal Disability Insurance Trust Funds (July 22, 2015)

**MONTANA DEPARTMENT OF REVENUE**

**Support for Capital Structure  
Industry: Telecommunications - Telephone  
2016 Assessment Year**

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	Industry Group	Financial Strength	Shares Outstanding	Avg. 4Q Stock Price	MV Common Stock	MV Preferred Stock*	MV Long Term Debt*	Total MV of Invested Capital	% Common	% Preferred	% Debt
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>	<i>Yahoo</i>	<i>ExF</i>	<i>Value Line</i>	<i>Value Line</i>	<i>G+H+I</i>	<i>G/J</i>	<i>H/J</i>	<i>I/J</i>
AT&T Corp	T	TELESERV	A++	6,144,900	33.49	205,761,977	0	118,515,000	324,276,977	63%	0%	37%
CenturyLink Inc	CTL	TELUTIL	B++	543,800	26.70	14,516,741	0	18,722,000	33,238,741	44%	0%	56%
Cincinnati Bell	CBB	TELUTIL	C+	209,300	3.62	758,015	129,400	1,771,000	2,658,415	29%	5%	67%
Consol. Communic.	CNSL	TELUTIL	C++	50,500	21.16	1,068,580	0	1,377,900	2,446,480	44%	0%	56%
Frontier Communications	FTR	TELUTIL	B	1,168,200	4.92	5,745,597	1,925,000	15,508,000	23,178,597	25%	8%	67%
Gen'l Communic. 'A'	GNCMA	TELESERV	C++	38,700	19.92	771,033	0	1,404,400	2,175,433	35%	0%	65%
Verizon Communications	VZ	TELESERV	A++	4,155,400	45.33	188,378,137	0	110,536,000	298,914,137	63%	0%	37%
<b>All Companies</b>						417,000,079	2,054,400	267,834,300	686,888,779	<b>61%</b>	<b>0%</b>	<b>39%</b>
<b>Average</b>										<b>43%</b>	<b>2%</b>	<b>55%</b>
<b>Median</b>										<b>44%</b>	<b>0%</b>	<b>56%</b>
High										63%	8%	67%
Low										25%	0%	37%
<b>Say</b>										<b>61%</b>	<b>0%</b>	<b>39%</b>

\*Market value assumed to equal book value

**Notes/Rational for Changes to Guideline Companies**

2016 - No changes to Guideline Companies

**MONTANA DEPARTMENT OF REVENUE**

**Support for Capital Structure  
Industry: Telecommunications - Wireless  
2016 Assessment Year**

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	Industry Group	Financial Strength	Shares Outstanding	Avg. 4Q Stock Price	MV Common Stock	MV Preferred Stock*	MV Long Term Debt*	Total MV of Invested Capital	% Common	% Preferred	% Debt
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>	<i>Yahoo</i>	<i>ExF</i>	<i>Value Line</i>	<i>Value Line</i>	<i>G+H+I</i>	<i>G/J</i>	<i>H/J</i>	<i>I/J</i>
AT&T Corp	T	TELESERV	A++	6,144,900	33.49	205,761,977	0	118,515,000	324,276,977	63%	0%	37%
Gen'l Communic. 'A'	GNCMA	TELESERV	C++	38,700	19.92	771,033	0	1,404,400	2,175,433	35%	0%	65%
Sprint Nextel Corp	S	TELESERV	C++	3,967,000	4.16	16,496,108	0	32,531,000	49,027,108	34%	0%	66%
Telephone & Data Sys	TDS	TELESERV	B	107,900	27.66	2,985,053	0	1,993,600	4,978,653	60%	0%	40%
T-Mobile US	TMUS	TELESERV	B	818,400	38.31	31,352,904	0	28,742,000	60,094,904	52%	0%	48%
U.S. Cellular	USM	TELESERV	B+	84,000	40.03	3,362,800	0	1,151,800	4,514,600	74%	0%	26%
Verizon Communications	VZ	TELESERV	A++	4,155,400	45.33	188,378,137	0	110,536,000	298,914,137	63%	0%	37%
<b>All Companies</b>						449,108,012	0	294,873,800	743,981,812	<b>60%</b>	<b>0%</b>	<b>40%</b>
<b>Average</b>										<b>55%</b>	<b>0%</b>	<b>45%</b>
<b>Median</b>										<b>60%</b>	<b>0%</b>	<b>40%</b>
High										74%	0%	66%
Low										34%	0%	26%
<b>Say</b>										<b>60%</b>	<b>0%</b>	<b>40%</b>

\*Market value assumed to equal book value

**Notes/Rational for Changes to Guideline Companies**

2016 - No changes to Guideline Companies

**MONTANA DEPARTMENT OF REVENUE**

**Support for Capital Structure  
Industry: Telecommunications - Cable  
2016 Assessment Year**

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	Industry Group	Financial Strength	Shares Outstanding	Avg. 4Q Stock Price	MV Common Stock	MV Preferred Stock*	MV Long Term Debt*	Total MV of Invested Capital	% Common	% Preferred	% Debt
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>	<i>Yahoo</i>	<i>ExF</i>	<i>Value Line</i>	<i>Value Line</i>	<i>G+H+I</i>	<i>G/J</i>	<i>H/J</i>	<i>I/J</i>
Cablevision Sys. 'A'	CVC	CABLETV	C+	276,700	31.49	8,712,361	0	8,620,400	17,332,761	50%	0%	50%
CenturyLink Inc	CTL	TELUTIL	B++	543,800	26.70	14,516,741	0	18,722,000	33,238,741	44%	0%	56%
Charter Communications	CHTR	CABLETV	B	112,400	185.10	20,804,865	0	35,723,000	56,527,865	37%	0%	63%
Cincinnati Bell	CBB	TELUTIL	C+	209,300	3.62	758,015	129,400	1,771,000	2,658,415	29%	5%	67%
Comcast Corp.	CMCSA	CABLETV	A	2,442,400	60.08	146,743,462	0	48,994,000	195,737,462	75%	0%	25%
Consol. Communic.	CNSL	TELUTIL	C++	50,500	21.16	1,068,580	0	1,377,900	2,446,480	44%	0%	56%
Crown Media Holdings Inc Cl A	CRWN	CABLETV	B+	359,700	5.57	2,001,731	0	310,200	2,311,931	87%	0%	13%
FairPoint Communications Inc.	FRP	TELESERV	C+	26,900	16.62	447,123	0	901,400	1,348,523	33%	0%	67%
Frontier Communications	FTR	TELUTIL	B	1,168,200	4.92	5,745,597	1,925,000	15,508,000	23,178,597	25%	8%	67%
Gen'l Communic. 'A'	GNCMA	TELESERV	C++	38,700	19.92	771,033	0	1,404,400	2,175,433	35%	0%	65%
Hawaiian Telcom Holdco Inc	HCOM	TELUTIL	C++	11,500	23.61	271,477	0	283,000	554,477	49%	0%	51%
Time Warner Cable	TWC	CABLETV	B++	283,300	184.17	52,175,360	0	22,497,000	74,672,360	70%	0%	30%
<b>All Companies</b>						254,016,344	2,054,400	156,112,300	412,183,044	<b>62%</b>	<b>0%</b>	<b>38%</b>
<b>Average</b>										<b>48%</b>	<b>1%</b>	<b>51%</b>
<b>Median</b>										<b>44%</b>	<b>0%</b>	<b>56%</b>
High										87%	8%	67%
Low										25%	0%	13%
<b>Say</b>										<b>62%</b>	<b>0%</b>	<b>38%</b>

\*Market value assumed to equal book value

**Notes/Rational for Changes to Guideline Companies**  
2016 - No changes to Guideline Companies

**MONTANA DEPARTMENT OF REVENUE**

Support for Beta Selection in CAPM  
 Industry: Telecommunications - Telephone  
 2016 Assessment Year

A	B	C	D	E
Company	Ticker Symbol	Industry Group	Financial Strength	Beta
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>
AT&T Corp	T	TELESERV	A++	0.75
Verizon Communications	VZ	TELESERV	A++	0.75
CenturyLink Inc	CTL	TELUTIL	B++	0.90
Frontier Communications	FTR	TELUTIL	B	1.05
Consol. Communic.	CNSL	TELUTIL	C++	0.80
Gen'l Communic. 'A'	GNCMA	TELESERV	C++	1.15
Cincinnati Bell	CBB	TELUTIL	C+	1.15
<b>Average</b>				<b>0.94</b>
<b>Median</b>				<b>0.90</b>
High				1.15
Low				0.75
<b>Say</b>				<b>0.94</b>

**MONTANA DEPARTMENT OF REVENUE**

**Support for Beta Selection in CAPM  
Industry: Telecommunications - Wireless  
2016 Assessment Year**

A	B	C	D	E
Company	Ticker Symbol	Industry Group	Financial Strength	Beta
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>
AT&T Corp	T	TELESERV	A++	0.75
Gen'l Communic. 'A'	GNCMA	TELESERV	C++	1.15
Sprint Nextel Corp	S	TELESERV	C++	1.30
Telephone & Data Sys	TDS	TELESERV	B	1.25
T-Mobile US	TMUS	TELESERV	B	0.95
U.S. Cellular	USM	TELESERV	B+	1.05
Verizon Communications	VZ	TELESERV	A++	0.75
<b>Average</b>				<b>1.03</b>
<b>Median</b>				<b>1.05</b>
High				1.30
Low				0.75
<b>Say</b>				<b>1.03</b>

**MONTANA DEPARTMENT OF REVENUE**

**Support for Beta Selection in CAPM  
Industry: Telecommunications - Cable  
2016 Assessment Year**

A	B	C	D	E
Company	Ticker Symbol	Industry Group	Financial Strength	Beta
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>
Cablevision Sys. 'A'	CVC	CABLETV	C+	1.20
CenturyLink Inc	CTL	TELUTIL	B++	0.90
Charter Communications	CHTR	CABLETV	B	1.00
Cincinnati Bell	CBB	TELUTIL	C+	1.15
Comcast Corp.	CMCSA	CABLETV	A	1.05
Consol. Communic.	CNSL	TELUTIL	C++	0.80
Crown Media Holdings Inc Cl A	CRWN	CABLETV	B+	1.05
FairPoint Communications Inc.	FRP	TELESERV	C+	1.30
Frontier Communications	FTR	TELUTIL	B	1.05
Gen'l Communic. 'A'	GNCMA	TELESERV	C++	1.15
Hawaiian Telcom Holdco Inc	HCOM	TELUTIL	C++	0.85
Time Warner Cable	TWC	CABLETV	B++	0.90
<b>Average</b>				<b>1.03</b>
<b>Median</b>				<b>1.05</b>
High				1.30
Low				0.80
<b>Say</b>				<b>1.03</b>



**MONTANA DEPARTMENT OF REVENUE**

**Support for Direct Capitalization Cost of Capital  
Industry: Telecommunications - Telephone  
2016 Assessment Year**

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	Avg. 4Q Stock Price	Common Shares Outs.	MV Equity	MV Long-Term Debt	MVIC	NOPAT = EBIT*(1-t)	MVIC to NOPAT Multiple	NOPAT Cap Rate	GCF = NOPAT + D&A	MVIC to GCF Multiple	GCF Cap Rate
		<i>Yahoo</i>	<i>Value Line</i>	<i>CxD</i>	<i>Value Line</i>	<i>E+F</i>	<i>Nx(1-R)</i>	<i>G/H</i>	<i>1/I</i>	<i>H+S</i>	<i>G/K</i>	<i>1/L</i>
AT&T Corp	T	33.49	6,144.9	205,762	118,515	324,277	16,412	19.76	5.06%	38,428	8.44	11.85%
CenturyLink Inc	CTL	26.70	543.8	14,517	18,722	33,239	1,753	18.96	5.27%	5,939	5.60	17.87%
Cincinnati Bell	CBB	3.62	209.3	758	1,771	2,529	357	7.08	14.13%	521	4.85	20.60%
Consol. Communic.	CNSL	21.16	50.5	1,069	1,378	2,446	48	51.05	1.96%	228	10.74	9.31%
Frontier Communications	FTR	4.92	1,168.2	5,746	15,508	21,254	408	52.06	1.92%	1,919	11.07	9.03%
Gen'l Communic. 'A'	GNCMA	19.92	38.7	771	1,404	2,175	54	40.41	2.47%	236	9.23	10.83%
Verizon Communications	VZ	45.33	4,155.4	188,378	110,536	298,914	21,576	13.85	7.22%	37,593	7.95	12.58%
<b>All Companies</b>				417,000	267,834	684,834	40,609	<b>16.86</b>	<b>5.93%</b>	84,865	<b>8.07</b>	<b>12.39%</b>
<b>Average</b>								<b>27.50</b>	<b>5.50%</b>		<b>8.24</b>	<b>13.06%</b>
<b>Median</b>								<b>19.76</b>	<b>5.06%</b>		<b>8.44</b>	<b>11.85%</b>
<b>High</b>								52.06	14.13%		11.07	20.60%
<b>Low</b>								7.08	1.92%		4.85	9.03%
<b>Say</b>									<b>5.50%</b>			<b>13.10%</b>

*Income and Cash Flow (in Million's)*

A	B	N	O	P	Q	R	S
Company	Ticker Symbol	EBIT	Interest Exp	Income Before Tax	Income Tax Exp	Effective Tax Rate	Dep & Amort
		<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>
AT&T Corp	T	24,812.00	4,120.00	20,692.00	7,005.00	33.85%	22,016.00
CenturyLink Inc	CTL	2,628.00	1,312.00	1,316.00	438.00	33.28%	4,186.00
Cincinnati Bell	CBB	553.70	103.10	450.60	159.80	35.46%	163.70
Consol. Communic.	CNSL	81.70	79.60	2.10		41.35%	179.90
Frontier Communications	FTR	752.00	1,113.00	(361.00)	(165.00)	45.71%	1,511.00
Gen'l Communic. 'A'	GNCMA	57.68	85.39	(27.71)	(1.85)	6.66%	181.77
Verizon Communications	VZ	33,160.00	4,920.00	28,240.00	9,865.00	34.93%	16,017.00

*Implied Capital Structure*

*Implied Cost of Capital*

Source of Capital	MV	%	NOPAT	Cash Flow
Equity	417,000	61%	3.35%	7.98%
Debt	267,834	39%	2.15%	5.12%
	684,834	100%	5.50%	13.10%

**MONTANA DEPARTMENT OF REVENUE**

**Support for Direct Capitalization Cost of Capital  
Industry: Telecommunications - Wireless  
2016 Assessment Year**

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	Avg. 4Q Stock Price	Common Shares Outs.	MV Equity	MV Long-Term Debt	MVIC	NOPAT = EBIT*(1-t)	MVIC to NOPAT Multiple	NOPAT Cap Rate	GCF = NOPAT + D&A	MVIC to GCF Multiple	GCF Cap Rate
		<i>Yahoo</i>	<i>Value Line</i>	<i>CxD</i>	<i>Value Line</i>	<i>E+F</i>	<i>Nx(1-R)</i>	<i>G/H</i>	<i>1/I</i>	<i>H+S</i>	<i>G/K</i>	<i>1/L</i>
AT&T Corp	T	33.49	6,144.9	205,762	118,515	324,277	16,412	19.76	5.06%	38,428	8.44	11.85%
Gen'l Communic. 'A'	GNCMA	19.92	38.7	771	1,404	2,175	54	40.41	2.47%	236	9.23	10.83%
Sprint Nextel Corp	S	4.16	3,967.0	16,496	32,531	49,027	(1,594)			3,452	14.20	7.04%
Telephone & Data Sys	TDS	27.66	107.9	2,985	1,994	4,979	348	14.30	6.99%	1,193	4.17	23.95%
T-Mobile US	TMUS	38.31	818.4	31,353	28,742	60,095	1,854	32.41	3.09%	6,542	9.19	10.89%
U.S. Cellular	USM	40.03	84.0	3,363	1,152	4,515	300	15.04	6.65%	907	4.98	20.08%
Verizon Communications	VZ	45.33	4,155.4	188,378	110,536	298,914	21,576	13.85	7.22%	37,593	7.95	12.58%
<b>All Companies</b>				449,108	294,874	743,982	38,951	<b>19.10</b>	<b>5.24%</b>	88,350	<b>8.42</b>	<b>11.88%</b>
<b>Average</b>								<b>22.63</b>	<b>5.25%</b>		<b>8.31</b>	<b>13.89%</b>
<b>Median</b>								<b>17.40</b>	<b>5.85%</b>		<b>8.44</b>	<b>11.85%</b>
<b>High</b>								40.41	7.22%		14.20	23.95%
<b>Low</b>								13.85	2.47%		4.17	7.04%
<b>Say</b>									<b>5.25%</b>			<b>13.90%</b>

*Income and Cash Flow (in Million's)*

A	B	N	O	P	Q	R	S
Company	Ticker Symbol	EBIT	Interest Exp	Income Before Tax	Income Tax Exp	Effective Tax Rate	Dep & Amort
		<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>	<i>Yahoo</i>
AT&T Corp	T	24,812.00	4,120.00	20,692.00	7,005.00	33.85%	22,016.00
Gen'l Communic. 'A'	GNCMA	57.68	85.39	(27.71)	(1.85)	6.66%	181.77
Sprint Nextel Corp	S	(1,868.00)	2,051.00	(3,919.00)	(574.00)	14.65%	5,046.00
Telephone & Data Sys	TDS	576.32	141.72	434.60	171.99	39.57%	844.36
T-Mobile US	TMUS	2,474.00	1,496.00	978.00	245.00	25.05%	4,688.00
U.S. Cellular	USM	489.82	86.19	403.63	156.33	38.73%	606.46
Verizon Communications	VZ	33,160.00	4,920.00	28,240.00	9,865.00	34.93%	16,017.00

*Implied Capital Structure*

*Implied Cost of Capital*

Source of Capital	MV	%	NOPAT	Cash Flow
Equity	226,079	61%	3.22%	8.53%
Debt	142,423	39%	2.03%	5.37%
	368,502	100%	5.25%	13.90%

**MONTANA DEPARTMENT OF REVENUE**

**Support for Direct Capitalization Cost of Capital  
Industry: Telecommunications - Cable  
2016 Assessment Year**

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	Avg. 4Q Stock Price	Common Shares Outs.	MV Equity	MV Long-Term Debt	MVIC	NOPAT = EBIT*(1-t)	MVIC to NOPAT Multiple	NOPAT Cap Rate	GCF = NOPAT + D&A	MVIC to GCF Multiple	GCF Cap Rate
		Yahoo	Value Line	CxD	Value Line	E+F	Nx(1-R)	G/H	1/I	H+S	G/K	1/L
Cablevision Sys. 'A'	CVC	31.49	276.7	8,712	8,620	17,333	509	34.07	2.94%	1,403	12.36	8.09%
CenturyLink Inc	CTL	26.70	543.8	14,517	18,722	33,239	1,753	18.96	5.27%	5,939	5.60	17.87%
Charter Communications	CHTR	185.10	112.4	20,805	35,723	56,528	798	70.81	1.41%	2,923	19.34	5.17%
Cincinnati Bell	CBB	3.62	209.3	758	1,771	2,529	357	7.08	14.13%	521	4.85	20.60%
Comcast Corp.	CMCSA	60.08	2,442.4	146,743	48,994	195,737	10,113	19.36	5.17%	18,793	10.42	9.60%
Consol. Communic.	CNSL	21.16	50.5	1,069	1,378	2,446	48			228	10.74	9.31%
Crown Media Holdings Inc Cl A	CRWN	5.57	359.7	2,002	310	2,312	125	18.44	5.42%	308	7.50	13.34%
FairPoint Communications Inc.	FRP	16.62	26.9	447	901	1,349	172	7.84	12.76%	396	3.41	29.36%
Frontier Communications	FTR	4.92	1,168.2	5,746	15,508	21,254	408	52.06	1.92%	1,919	11.07	9.03%
Gen'l Communic. 'A'	GNCMA	19.92	38.7	771	1,404	2,175	54	40.41	2.47%	236	9.23	10.83%
Hawaiian Telcom Holdco Inc	HCOM	23.61	11.5	271	283	554	9	64.36	1.55%	98	5.63	17.75%
Time Warner Cable	TWC	184.17	283.3	52,175	22,497	74,672	2,709	27.57	3.63%	6,405	11.66	8.58%
<b>All Companies</b>				254,016	156,112	410,129	17,055	<b>24.05</b>	<b>4.16%</b>	39,170	<b>10.47</b>	<b>9.55%</b>
<b>Average</b>								<b>32.81</b>	<b>5.15%</b>		<b>9.32</b>	<b>13.29%</b>
<b>Median</b>								<b>27.57</b>	<b>3.63%</b>		<b>9.82</b>	<b>10.22%</b>
<b>High</b>								70.81	14.13%		19.34	29.36%
<b>Low</b>								7.08	1.41%		3.41	5.17%
<b>Say</b>									<b>5.15%</b>			<b>13.30%</b>

*Income and Cash Flow (in Million's)*

A	B	N	O	P	Q	R	S
Company	Ticker Symbol	EBIT	Interest Exp	Income Before Tax	Income Tax Exp	Effective Tax Rate	Dep & Amort
		Yahoo	Yahoo	Yahoo	Yahoo	Yahoo	Yahoo
Cablevision Sys. 'A'	CVC	928.43	585.76	342.66	154.87	45.20%	894.06
CenturyLink Inc	CTL	2,628.00	1,312.00	1,316.00	438.00	33.28%	4,186.00
Charter Communications	CHTR	975.00	1,306.00	(331.00)	(60.00)	18.13%	2,125.00
Cincinnati Bell	CBB	553.70	103.10	450.60	159.80	35.46%	163.70
Comcast Corp.	CMCSA	16,074.00	2,702.00	13,372.00	4,959.00	37.08%	8,680.00
Consol. Communic.	CNSL	81.70	79.60	2.10		41.35%	179.90
Crown Media Holdings Inc Cl A	CRWN	185.25	25.39	159.86	51.66	32.32%	183.03
FairPoint Communications Inc.	FRP	170.08	80.72	89.36	(1.06)	-1.18%	223.82
Frontier Communications	FTR	752.00	1,113.00	(361.00)	(165.00)	45.71%	1,511.00
Gen'l Communic. 'A'	GNCMA	57.68	85.39	(27.71)	(1.85)	6.66%	181.77
Hawaiian Telcom Holdco Inc	HCOM	19.24	16.79	2.46	1.36	55.23%	89.80
Time Warner Cable	TWC	4,389.00	1,401.00	2,988.00	1,144.00	38.29%	3,696.00

*Implied Capital Structure*

*Implied Cost of Capital*

Source of Capital	MV	%	NOPAT	GCF
Equity	254,016	62%	3.19%	8.24%
Debt	156,112	38%	1.96%	5.06%
	410,129	100%	5.15%	13.30%

**MONTANA DEPARTMENT OF REVENUE**

**Support for Yield Capitalization Cost of Equity Component - Based on Dividend Growth Model**  
**Industry: Telecommunications - Telephone**  
**2016 Assessment Year**

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

$K_e$  = Cost of Equity

$g$  = Sustainable Growth

$D_1$  = Expected Dividend

$b$  = Retention Ratio (1 - Payout Ratio)

$P_0$  = Current Price Per Share

ROE = Return on Equity

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Company Name	Ticker	Avg. 4Q Stock Price $P_0$	2016 Expected Dividend $D_1$	Dividend Yield $D_1/P_0$	Payout Ratio	Retention Ratio $b = 1 - \text{Payout Ratio}$	Return on Equity ROE	Expected Dividend Growth Next 5 yrs* $g = \text{Dividend } g$	Expected Earnings Growth Next 5 yrs* $g = \text{Earnings } g$	Sustainable Growth* $g = b \times \text{ROE}$	Cost of Equity $K_e$ $g = \text{Dividend } g$	Cost of Equity $K_e$ $g = \text{Earnings } g$	Cost of Equity $K_e$ $g = b \times \text{ROE}$
		<i>Yahoo</i>	<i>Value Line</i>	<i>D/C</i>	<i>Value Line</i>	<i>1-F</i>	<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>	<i>G*H</i>	<i>E+I</i>	<i>E+J</i>	<i>E+K</i>
AT&T Corp	T	33.49	1.92	5.73%	69.00%	31.00%	13.50%	2.50%	5.50%	4.19%	8.23%	11.23%	9.92%
CenturyLink Inc	CTL	26.70	2.16	8.09%	90.00%	10.00%	8.00%	0.00%	9.50%	0.80%	8.09%	17.59%	8.89%
Cincinnati Bell	CBB	3.62	Nil										
Consol. Communic.	CNSL	21.16	1.55	7.33%			24.00%	0.00%			7.33%		
Frontier Communications	FTR	4.92	0.42	8.54%			6.50%	2.50%	26.00%		11.04%	34.54%	
Gen'l Communic. 'A'	GNCMA	19.92	Nil				18.50%		43.00%				
Verizon Communications	VZ	45.33	2.32	5.12%	57.00%	43.00%		2.00%	8.00%		7.12%	13.12%	
<b>Average</b>				<b>6.96%</b>	<b>72.00%</b>	<b>28.00%</b>	<b>14.10%</b>	<b>1.40%</b>	<b>18.40%</b>	<b>2.49%</b>	<b>8.36%</b>	<b>19.12%</b>	<b>9.41%</b>
<b>Median</b>				<b>7.33%</b>	<b>69.00%</b>	<b>31.00%</b>	<b>13.50%</b>	<b>2.00%</b>	<b>9.50%</b>	<b>2.49%</b>	<b>8.09%</b>	<b>15.35%</b>	<b>9.41%</b>
<b>Average (With Sustainable Growth)</b>								<b>1.40%</b>	<b>5.50%</b>	<b>2.49%</b>	<b>8.36%</b>	<b>11.23%</b>	<b>9.41%</b>
High				8.54%	90.00%	43.00%	24.00%	2.50%	43.00%	4.19%	11.04%	34.54%	9.92%
Low				5.12%	57.00%	10.00%	6.50%	0.00%	5.50%	0.80%	7.12%	11.23%	8.89%
<b>Say</b>											<b>8.50%</b>	<b>12.00%</b>	<b>9.60%</b>

\*Highlighted cells have growth rates higher than the sustainable long term growth rate (Inflation + Real Growth) see the CAPM page  
 Conditional Formatting highlights cells with growth rates greater than = 6.0%

**MONTANA DEPARTMENT OF REVENUE**

**Support for Yield Capitalization Cost of Equity Component - Based on Dividend Growth Model  
Industry: Telecommunications - Wireless  
2016 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 Growth  
 $b$  = Retention Ratio (1 - Payout Ratio)  
 $ROE$  = Return on Equity

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Company Name	Ticker	Avg. 4Q Stock Price $P_0$	2016 Expected Dividend $D_1$	Dividend Yield $D_1/P_0$	Payout Ratio	Retention Ratio $b = 1 - \text{Payout Ratio}$	Return on Equity $ROE$	Expected Dividend Growth Next 5 yrs* $g = \text{Dividend } g$	Expected Earnings Growth Next 5 yrs* $g = \text{Earnings } g$	Sustainable Growth* $g = b \times ROE$	Cost of Equity $K_e$ $g = \text{Dividend } g$	Cost of Equity $K_e$ $g = \text{Earnings } g$	Cost of Equity $K_e$ $g = b \times ROE$
		<i>Yahoo</i>	<i>Value Line</i>	<i>D/C</i>	<i>Value Line</i>	<i>1-F</i>	<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>	<i>G*H</i>	<i>E+I</i>	<i>E+J</i>	<i>E+K</i>
AT&T Corp	T	33.49	1.92	5.73%	69.00%	31.00%	13.50%	2.50%	5.50%	4.19%	8.23%	11.23%	9.92%
Gen'l Communic. 'A'	GNCMA	19.92	Nil		90.00%		18.50%		43.00%				
Sprint Nextel Corp	S	4.16	Nil										
Telephone & Data Sys	TDS	27.66	0.58	2.10%				4.00%	4.00%		6.10%	6.10%	
T-Mobile US	TMUS	38.31	Nil				8.00%						
U.S. Cellular	USM	40.03	Nil				6.00%		4.50%				
Verizon Communications	VZ	45.33	2.32	5.12%	57.00%	43.00%		2.00%	8.00%		7.12%	13.12%	
<b>Average</b>				<b>4.32%</b>	<b>72.00%</b>	<b>37.00%</b>	<b>11.50%</b>	<b>2.83%</b>	<b>13.00%</b>	<b>4.19%</b>	<b>7.15%</b>	<b>10.15%</b>	<b>9.92%</b>
<b>Median</b>				<b>5.12%</b>	<b>69.00%</b>	<b>37.00%</b>	<b>10.75%</b>	<b>2.50%</b>	<b>5.50%</b>	<b>4.19%</b>	<b>7.12%</b>	<b>11.23%</b>	<b>9.92%</b>
<b>Average (With Sustainable Growth)</b>								<b>2.83%</b>	<b>4.67%</b>	<b>4.19%</b>	<b>7.15%</b>	<b>8.67%</b>	<b>9.92%</b>
High				5.73%	90.00%	43.00%	18.50%	4.00%	43.00%	4.19%	8.23%	13.12%	9.92%
Low				2.10%	57.00%	31.00%	6.00%	2.00%	4.00%	4.19%	6.10%	6.10%	9.92%
<b>Say</b>											<b>7.10%</b>	<b>8.70%</b>	<b>9.80%</b>

\*Highlighted cells have growth rates higher than the sustainable long term growth rate (Inflation + Real Growth) see the CAPM page  
 Conditional Formatting highlights cells with growth rates greater than = 6.0%

**MONTANA DEPARTMENT OF REVENUE**

**Support for Yield Capitalization Cost of Equity Component - Based on Dividend Growth Model  
Industry: Telecommunications - Cable  
2016 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 Growth  
 $b$  = Retention Ratio (1 - Payout Ratio)  
 $ROE$  = Return on Equity

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Company Name	Ticker	Avg. 4Q Stock Price $P_0$	2016 Expected Dividend $D_1$	Dividend Yield $D_1/P_0$	Payout Ratio	Retention Ratio $b = 1 - \text{Payout Ratio}$	Return on Equity $ROE$	Expected Dividend Growth Next 5 yrs* $g = \text{Dividend } g$	Expected Earnings Growth Next 5 yrs* $g = \text{Earnings } g$	Sustainable Growth* $g = b \times ROE$	Cost of Equity $K_e$ $g = \text{Dividend } g$	Cost of Equity $K_e$ $g = \text{Earnings } g$	Cost of Equity $K_e$ $g = b \times ROE$
		<i>Yahoo</i>	<i>Value Line</i>	<i>D/C</i>	<i>Value Line</i>	<i>1-F</i>	<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>	<i>G*H</i>	<i>E+I</i>	<i>E+J</i>	<i>E+K</i>
Cablevision Sys. 'A'	CVC	31.49	0.68	2.16%	67.00%	33.00%		1.00%	18.50%		3.16%	20.66%	
CenturyLink Inc	CTL	26.70	2.16	8.09%	90.00%	10.00%	8.00%	0.00%	9.50%	0.80%	8.09%	17.59%	8.89%
Frontier Communications	FTR	4.92	0.42	8.54%			6.50%	2.50%	26.00%		11.04%	34.54%	
Cincinnati Bell	CBB	3.62	Nil										
Consol. Communic.	CNSL	21.16	1.55	7.33%			12.00%	0.00%	25.50%		7.33%	32.83%	
FairPoint Communications I	FRP	16.62											
Hawaiian Telcom Holdco In	HCOM	23.61											
Gen'l Communic. 'A'	GNCMA	19.92	Nil				30.00%						
Time Warner Cable	TWC	184.17	3.00	1.63%			22.50%	6.00%	7.00%		7.63%	8.63%	
Comcast Corp.	CMCSA	60.08	1.10	1.83%	30.00%	70.00%	15.50%	9.00%	8.00%	10.85%	10.83%	9.83%	12.68%
Charter Communications	CHTR	185.10	Nil					0.00%					
Crown Media Holdings Inc C	CRWN	5.57							37.00%				
<b>Average</b>				<b>4.93%</b>	<b>62.33%</b>	<b>37.67%</b>	<b>15.75%</b>	<b>2.64%</b>	<b>18.79%</b>	<b>5.83%</b>	<b>8.01%</b>	<b>20.68%</b>	<b>10.79%</b>
<b>Median</b>				<b>4.74%</b>	<b>67.00%</b>	<b>33.00%</b>	<b>13.75%</b>	<b>1.00%</b>	<b>18.50%</b>	<b>5.83%</b>	<b>7.86%</b>	<b>19.13%</b>	<b>10.79%</b>
<b>Average (With Sustainable Growth)</b>								<b>1.58%</b>		<b>0.80%</b>	<b>7.45%</b>		<b>8.89%</b>
High				8.54%	90.00%	70.00%	30.00%	9.00%	37.00%	10.85%	11.04%	34.54%	12.68%
Low				1.63%	30.00%	10.00%	6.50%	0.00%	7.00%	0.80%	3.16%	8.63%	8.89%
<b>Say</b>											<b>8.00%</b>	<b>19.00%</b>	<b>10.00%</b>

\*Highlighted cells have growth rates higher than the sustainable long term growth rate (Inflation + Real Growth) see the CAPM page  
 Conditional Formatting highlights cells with growth rates greater than = 6.0%

**MONTANA DEPARTMENT OF REVENUE**

**Support of Stock Price - From YAHOO Finance  
Industry: Telecommunications - Telephone, Wireless & Cable  
2016 Assessment Year**

Ticker	Company														End of Year Closing	4th Qtr Average	Annual Average
			Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15			
ALSK	Alaska Communic Sys Grp	high	\$ 1.83	\$ 1.85	\$ 1.87	\$ 2.35	\$ 2.50	\$ 2.58	\$ 2.41	\$ 2.23	\$ 2.33	\$ 2.49	\$ 2.40	\$ 1.96	\$ 1.75	\$ 2.08	\$ 2.05
		low	\$ 1.50	\$ 1.63	\$ 1.51	\$ 1.64	\$ 2.13	\$ 2.30	\$ 1.89	\$ 1.95	\$ 2.12	\$ 2.11	\$ 1.80	\$ 1.70			
AMT	American Tower Corp	high	\$ 101.88	\$ 100.80	\$ 99.89	\$ 98.64	\$ 95.77	\$ 97.06	\$ 98.31	\$ 101.54	\$ 93.02	\$ 102.62	\$ 104.12	\$ 101.24	\$ 96.95	\$ 97.35	\$ 95.88
		low	\$ 95.87	\$ 94.05	\$ 93.21	\$ 93.50	\$ 92.10	\$ 91.99	\$ 93.18	\$ 89.39	\$ 86.83	\$ 87.23	\$ 96.00	\$ 92.88			
CBB	Cincinnati Bell	high	\$ 3.25	\$ 3.43	\$ 3.73	\$ 3.70	\$ 3.67	\$ 4.16	\$ 3.96	\$ 3.98	\$ 3.66	\$ 3.88	\$ 4.00	\$ 3.88	\$ 3.60	\$ 3.62	\$ 3.52
		low	\$ 2.85	\$ 2.95	\$ 3.34	\$ 3.41	\$ 3.32	\$ 3.43	\$ 3.54	\$ 3.27	\$ 3.07	\$ 3.07	\$ 3.51	\$ 3.39			
CHTR	Charter Communications	high	\$ 167.30	\$ 183.24	\$ 199.00	\$ 194.00	\$ 191.90	\$ 181.90	\$ 189.99	\$ 195.46	\$ 195.00	\$ 194.92	\$ 193.63	\$ 190.68	\$ 183.10	\$ 185.10	\$ 179.26
		low	\$ 149.47	\$ 150.29	\$ 178.69	\$ 179.77	\$ 172.17	\$ 166.54	\$ 168.73	\$ 161.91	\$ 166.33	\$ 175.08	\$ 183.06	\$ 173.21			
CMCSA	Comcast Corp.	high	\$ 58.35	\$ 59.89	\$ 60.70	\$ 60.85	\$ 60.10	\$ 61.64	\$ 64.99	\$ 63.37	\$ 59.27	\$ 63.38	\$ 63.26	\$ 61.78	\$ 56.18	\$ 60.08	\$ 58.55
		low	\$ 53.02	\$ 52.45	\$ 55.67	\$ 56.05	\$ 56.20	\$ 57.08	\$ 60.38	\$ 50.00	\$ 54.65	\$ 56.53	\$ 60.15	\$ 55.39			
CNSL	Consol. Communic.	high	\$ 28.37	\$ 24.52	\$ 21.84	\$ 21.98	\$ 21.42	\$ 21.95	\$ 21.28	\$ 20.75	\$ 20.42	\$ 22.50	\$ 22.79	\$ 22.68	\$ 20.95	\$ 21.16	\$ 21.23
		low	\$ 22.95	\$ 21.12	\$ 20.15	\$ 20.27	\$ 18.89	\$ 19.95	\$ 19.32	\$ 18.51	\$ 18.88	\$ 18.27	\$ 20.36	\$ 20.36			
CRWN	Crown Media Holdings Inc Cl A	high	\$ 3.59	\$ 3.55	\$ 4.41	\$ 4.19	\$ 4.15	\$ 4.67	\$ 4.79	\$ 5.37	\$ 5.50	\$ 6.16	\$ 6.10	\$ 5.87	\$ 5.61	\$ 5.57	\$ 4.50
		low	\$ 3.19	\$ 3.03	\$ 3.35	\$ 3.68	\$ 3.72	\$ 4.06	\$ 4.26	\$ 4.25	\$ 4.81	\$ 5.04	\$ 5.32	\$ 4.90			
CVC	Cablevision Sys. 'A'	high	\$ 21.06	\$ 20.78	\$ 19.21	\$ 20.55	\$ 26.50	\$ 25.22	\$ 28.95	\$ 28.61	\$ 33.27	\$ 33.28	\$ 32.66	\$ 32.01	\$ 31.90	\$ 31.49	\$ 24.88
		low	\$ 18.55	\$ 18.17	\$ 17.66	\$ 17.70	\$ 19.75	\$ 23.41	\$ 23.51	\$ 21.37	\$ 23.83	\$ 32.40	\$ 29.50	\$ 29.07			
CTL	CenturyLink Inc	high	\$ 40.04	\$ 40.59	\$ 38.33	\$ 37.00	\$ 36.39	\$ 33.37	\$ 31.13	\$ 29.03	\$ 27.52	\$ 28.39	\$ 29.37	\$ 27.20	\$ 25.16	\$ 26.70	\$ 31.41
		low	\$ 36.81	\$ 36.21	\$ 34.04	\$ 34.42	\$ 33.01	\$ 29.28	\$ 27.50	\$ 24.81	\$ 24.29	\$ 24.11	\$ 26.89	\$ 24.21			
DISH	Dish Network 'A'	high	\$ 74.75	\$ 80.75	\$ 76.52	\$ 72.20	\$ 70.96	\$ 76.29	\$ 69.92	\$ 69.82	\$ 62.72	\$ 63.91	\$ 65.49	\$ 63.80	\$ 57.18	\$ 61.32	\$ 66.74
		low	\$ 67.50	\$ 69.19	\$ 69.53	\$ 67.38	\$ 65.18	\$ 67.28	\$ 63.71	\$ 54.62	\$ 55.50	\$ 57.91	\$ 60.04	\$ 56.78			
DTV	DIRECTV		Acquired by AT&T July 2015														
DY	Dycom Industries	high	\$ 36.58	\$ 45.55	\$ 49.93	\$ 50.48	\$ 60.39	\$ 60.82	\$ 70.80	\$ 72.61	\$ 80.85	\$ 79.98	\$ 90.82	\$ 89.49	\$ 69.96	\$ 78.85	\$ 59.97
		low	\$ 30.66	\$ 31.56	\$ 43.20	\$ 45.97	\$ 45.45	\$ 56.88	\$ 60.55	\$ 55.84	\$ 68.06	\$ 68.25	\$ 76.32	\$ 68.21			
FRP	FairPoint Communications Inc.	high	\$ 15.82	\$ 17.74	\$ 18.08	\$ 20.98	\$ 20.45	\$ 20.90	\$ 19.07	\$ 18.38	\$ 17.23	\$ 16.65	\$ 18.76	\$ 18.87	\$ 16.07	\$ 16.62	\$ 17.16
		low	\$ 13.51	\$ 14.66	\$ 16.00	\$ 17.50	\$ 17.24	\$ 18.08	\$ 16.40	\$ 14.93	\$ 15.07	\$ 14.56	\$ 15.64	\$ 15.25			

**MONTANA DEPARTMENT OF REVENUE**

**Support of Stock Price - From YAHOO Finance  
Industry: Telecommunications - Telephone, Wireless & Cable  
2016 Assessment Year**

Ticker	Company		Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	End of Year Closing	4th Qtr Average	Annual Average
FTR	Frontier Communications	high	\$ 6.94	\$ 8.46	\$ 8.02	\$ 7.50	\$ 6.91	\$ 5.52	\$ 5.31	\$ 5.64	\$ 5.58	\$ 5.47	\$ 5.21	\$ 5.15	\$ 4.67	\$ 4.92	\$ 5.81
		low	\$ 6.36	\$ 6.74	\$ 7.05	\$ 6.73	\$ 4.90	\$ 4.86	\$ 4.19	\$ 4.57	\$ 4.64	\$ 4.63	\$ 4.61	\$ 4.44			
GNCMA	Gen'l Communic. 'A'	high	\$ 15.87	\$ 15.36	\$ 16.57	\$ 17.56	\$ 16.49	\$ 17.16	\$ 18.97	\$ 20.31	\$ 18.53	\$ 21.09	\$ 22.44	\$ 21.96	\$ 19.78	\$ 19.92	\$ 17.15
		low	\$ 13.42	\$ 13.82	\$ 12.79	\$ 15.67	\$ 14.75	\$ 15.66	\$ 16.95	\$ 15.80	\$ 16.39	\$ 16.00	\$ 20.25	\$ 17.80			
HCOM	Hawaiian Telcom Holdco Inc	high	\$ 27.73	\$ 27.17	\$ 26.67	\$ 28.20	\$ 26.50	\$ 27.67	\$ 26.22	\$ 25.12	\$ 22.20	\$ 24.73	\$ 24.55	\$ 26.19	\$ 24.86	\$ 23.61	\$ 24.84
		low	\$ 25.62	\$ 25.95	\$ 25.60	\$ 26.09	\$ 24.67	\$ 24.84	\$ 24.11	\$ 19.99	\$ 20.05	\$ 20.25	\$ 22.31	\$ 23.61			
IDT	IDT Corp	high	\$ 23.24	\$ 22.90	\$ 22.11	\$ 19.37	\$ 18.12	\$ 19.99	\$ 18.46	\$ 17.85	\$ 15.95	\$ 14.53	\$ 13.49	\$ 14.90	\$ 11.66	\$ 13.09	\$ 17.01
		low	\$ 19.54	\$ 20.81	\$ 16.10	\$ 16.94	\$ 16.16	\$ 17.75	\$ 15.95	\$ 14.78	\$ 13.73	\$ 12.57	\$ 12.07	\$ 11.00			
LVLT	Level 3 Communications	high	\$ 50.48	\$ 54.46	\$ 55.95	\$ 57.04	\$ 57.08	\$ 56.45	\$ 54.50	\$ 50.91	\$ 47.32	\$ 52.21	\$ 52.13	\$ 54.72	\$ 54.36	\$ 50.14	\$ 50.96
		low	\$ 46.64	\$ 49.32	\$ 53.04	\$ 51.76	\$ 54.28	\$ 52.05	\$ 47.08	\$ 43.01	\$ 40.86	\$ 41.97	\$ 49.52	\$ 50.28			
MDTV	MDU Communications Inc	high	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.02	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
		low	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01			
PGI	Premiere Global Services		Acquired by Siris Capital Group December 2015														
S	Sprint Nextel Corp	high	\$ 4.55	\$ 5.28	\$ 5.45	\$ 5.39	\$ 5.29	\$ 4.81	\$ 4.60	\$ 5.29	\$ 5.22	\$ 5.12	\$ 4.90	\$ 3.95	\$ 3.62	\$ 4.16	\$ 4.47
		low	\$ 4.01	\$ 4.21	\$ 4.65	\$ 4.65	\$ 4.54	\$ 4.41	\$ 3.10	\$ 3.14	\$ 3.71	\$ 3.86	\$ 3.62	\$ 3.50			
T	AT&T Corp	high	\$ 34.23	\$ 35.07	\$ 34.65	\$ 35.23	\$ 35.22	\$ 36.45	\$ 35.93	\$ 35.02	\$ 33.50	\$ 34.74	\$ 33.78	\$ 34.99	\$ 34.41	\$ 33.49	\$ 33.76
		low	\$ 32.41	\$ 32.80	\$ 32.52	\$ 32.37	\$ 33.03	\$ 34.24	\$ 33.86	\$ 30.97	\$ 31.85	\$ 32.17	\$ 32.22	\$ 33.01			
TDS	Telephone & Data Sys	high	\$ 25.50	\$ 26.64	\$ 26.48	\$ 27.40	\$ 30.32	\$ 30.76	\$ 30.02	\$ 30.64	\$ 28.20	\$ 29.33	\$ 30.59	\$ 28.64	\$ 25.89	\$ 27.66	\$ 27.15
		low	\$ 23.00	\$ 23.17	\$ 24.28	\$ 24.84	\$ 26.89	\$ 29.07	\$ 27.14	\$ 26.74	\$ 24.51	\$ 24.83	\$ 27.31	\$ 25.29			
TMUS	T-Mobile US	high	\$ 31.14	\$ 33.22	\$ 33.48	\$ 35.28	\$ 39.07	\$ 40.77	\$ 41.21	\$ 42.56	\$ 43.43	\$ 42.06	\$ 41.19	\$ 40.35	\$ 39.12	\$ 38.31	\$ 36.31
		low	\$ 26.46	\$ 30.19	\$ 31.57	\$ 31.19	\$ 32.90	\$ 37.58	\$ 36.33	\$ 36.43	\$ 38.65	\$ 36.54	\$ 35.48	\$ 34.24			
TWC	Time Warner Cable	high	\$ 153.54	\$ 155.07	\$ 159.94	\$ 161.14	\$ 184.89	\$ 182.61	\$ 191.73	\$ 194.22	\$ 192.00	\$ 192.85	\$ 190.79	\$ 187.45	\$ 185.59	\$ 184.17	\$ 170.60
		low	\$ 135.52	\$ 134.21	\$ 146.74	\$ 145.44	\$ 152.81	\$ 174.64	\$ 177.88	\$ 173.49	\$ 173.42	\$ 179.08	\$ 176.98	\$ 177.87			



**MONTANA DEPARTMENT OF REVENUE**

**Support of Stock Price - From YAHOO Finance  
Industry: Telecommunications - Telephone, Wireless & Cable  
2016 Assessment Year**

Ticker	Company														End of Year Closing	4th Qtr Average	Annual Average
			Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15			
USM	U.S. Cellular	high	\$ 40.19	\$ 40.00	\$ 38.20	\$ 38.40	\$ 39.90	\$ 39.50	\$ 38.64	\$ 39.50	\$ 37.05	\$ 40.97	\$ 43.49	\$ 42.42	\$ 40.81	\$ 40.03	\$ 37.89
		low	\$ 34.10	\$ 34.56	\$ 34.90	\$ 35.78	\$ 37.72	\$ 37.15	\$ 34.27	\$ 34.83	\$ 34.55	\$ 34.42	\$ 39.79	\$ 39.11			
VOD	Vodafone Grp	high	\$ 36.17	\$ 36.03	\$ 34.71	\$ 35.83	\$ 39.46	\$ 39.20	\$ 37.98	\$ 38.43	\$ 35.67	\$ 33.53	\$ 34.65	\$ 33.69	\$ 32.26	\$ 32.58	\$ 34.56
		low	\$ 32.45	\$ 34.41	\$ 32.07	\$ 32.48	\$ 34.67	\$ 35.85	\$ 34.79	\$ 33.06	\$ 30.73	\$ 30.58	\$ 32.18	\$ 30.82			
VG	Vonage Holdings Corp	high	\$ 4.60	\$ 4.69	\$ 5.16	\$ 5.20	\$ 4.88	\$ 5.03	\$ 6.69	\$ 6.60	\$ 6.48	\$ 6.42	\$ 7.42	\$ 6.56	\$ 5.74	\$ 6.28	\$ 5.35
		low	\$ 3.74	\$ 4.17	\$ 4.38	\$ 4.63	\$ 4.44	\$ 4.54	\$ 4.59	\$ 5.52	\$ 5.41	\$ 5.66	\$ 6.02	\$ 5.61			
VZ	Verizon Communications	high	\$ 48.48	\$ 49.99	\$ 49.90	\$ 50.65	\$ 50.86	\$ 49.54	\$ 48.26	\$ 48.21	\$ 46.55	\$ 46.98	\$ 47.08	\$ 47.23	\$ 46.22	\$ 45.33	\$ 46.83
		low	\$ 45.37	\$ 45.76	\$ 47.36	\$ 48.43	\$ 48.97	\$ 46.60	\$ 45.66	\$ 38.06	\$ 43.28	\$ 42.20	\$ 44.18	\$ 44.33			
WIN	Windstream Hldgs.	high	\$ 8.59	\$ 8.99	\$ 8.10	\$ 13.05	\$ 11.85	\$ 8.15	\$ 6.65	\$ 7.21	\$ 8.09	\$ 7.76	\$ 6.73	\$ 7.24	\$ 6.44	\$ 6.45	\$ 7.44
		low	\$ 7.86	\$ 7.66	\$ 7.23	\$ 7.32	\$ 7.91	\$ 6.10	\$ 4.42	\$ 4.80	\$ 5.94	\$ 5.55	\$ 5.52	\$ 5.88			
ZAYO	Zayo Group Holdings Inc	high	\$ 31.20	\$ 30.94	\$ 29.69	\$ 28.75	\$ 28.50	\$ 28.86	\$ 26.97	\$ 29.62	\$ 29.60	\$ 26.81	\$ 26.93	\$ 27.74	\$ 26.59	\$ 25.19	\$ 26.82
		low	\$ 26.56	\$ 27.03	\$ 25.57	\$ 26.20	\$ 24.48	\$ 25.25	\$ 23.91	\$ 25.45	\$ 24.00	\$ 24.21	\$ 21.89	\$ 23.57			
PPL	PPL Corp.	high	\$ 36.58	\$ 36.74	\$ 34.47	\$ 34.75	\$ 35.09	\$ 34.97	\$ 32.08	\$ 33.83	\$ 32.91	\$ 34.92	\$ 35.00	\$ 34.48	\$ 34.13	\$ 33.60	\$ 33.21
		low	\$ 34.70	\$ 34.02	\$ 31.31	\$ 32.84	\$ 32.92	\$ 29.33	\$ 29.32	\$ 30.51	\$ 29.18	\$ 32.22	\$ 32.62	\$ 32.36			
SCG	SCANA Corp.	high	\$ 65.57	\$ 64.04	\$ 57.00	\$ 56.26	\$ 54.36	\$ 53.73	\$ 55.50	\$ 57.73	\$ 56.34	\$ 59.49	\$ 60.50	\$ 61.95	\$ 60.49	\$ 58.31	\$ 56.04
		low	\$ 59.94	\$ 56.51	\$ 52.03	\$ 52.56	\$ 51.26	\$ 49.89	\$ 50.48	\$ 51.67	\$ 50.17	\$ 54.84	\$ 56.60	\$ 56.50			
SO	Southern Co.	high	\$ 53.16	\$ 51.14	\$ 45.80	\$ 45.44	\$ 45.33	\$ 43.92	\$ 45.10	\$ 46.84	\$ 44.78	\$ 46.62	\$ 46.04	\$ 47.50	\$ 46.79	\$ 45.19	\$ 45.18
		low	\$ 48.84	\$ 45.22	\$ 43.55	\$ 43.80	\$ 42.73	\$ 41.40	\$ 41.84	\$ 42.49	\$ 41.81	\$ 43.90	\$ 43.38	\$ 43.72			
SRE	Sempra Energy	high	\$ 116.21	\$ 114.02	\$ 112.90	\$ 111.09	\$ 108.83	\$ 108.36	\$ 103.96	\$ 106.70	\$ 96.81	\$ 102.96	\$ 105.78	\$ 100.14	\$ 94.01	\$ 98.93	\$ 103.33
		low	\$ 108.92	\$ 104.64	\$ 105.62	\$ 105.09	\$ 102.45	\$ 98.67	\$ 98.49	\$ 94.05	\$ 89.44	\$ 95.49	\$ 98.67	\$ 90.52			
TE	TECO Energy	high	\$ 22.02	\$ 21.97	\$ 20.15	\$ 19.94	\$ 19.27	\$ 18.97	\$ 22.24	\$ 22.45	\$ 26.87	\$ 27.23	\$ 27.10	\$ 26.99	\$ 26.65	\$ 26.62	\$ 21.87
		low	\$ 20.07	\$ 19.39	\$ 18.55	\$ 18.77	\$ 18.14	\$ 17.60	\$ 17.61	\$ 20.51	\$ 20.57	\$ 26.08	\$ 26.13	\$ 26.22			
VVC	Vectren Corp.	high	\$ 49.47	\$ 48.75	\$ 44.91	\$ 45.24	\$ 44.00	\$ 42.83	\$ 42.57	\$ 43.08	\$ 42.12	\$ 47.00	\$ 46.25	\$ 43.80	\$ 42.42	\$ 43.11	\$ 42.89
		low	\$ 45.38	\$ 43.98	\$ 42.47	\$ 42.87	\$ 40.91	\$ 38.41	\$ 38.49	\$ 37.26	\$ 38.06	\$ 41.23	\$ 40.40	\$ 39.98			
XEL	Xcel Energy Inc.	high	\$ 38.35	\$ 37.84	\$ 35.39	\$ 35.35	\$ 34.85	\$ 34.30	\$ 35.15	\$ 36.48	\$ 35.45	\$ 37.25	\$ 36.32	\$ 36.72	\$ 35.91	\$ 35.60	\$ 34.82
		low	\$ 35.60	\$ 34.60	\$ 33.41	\$ 33.51	\$ 32.71	\$ 31.76	\$ 32.12	\$ 32.83	\$ 32.43	\$ 34.64	\$ 34.33	\$ 34.33			

MONTANA DEPARTMENT OF REVENUE

Support for Cost of Debt Component - Yield to Maturity From Standard & Poor's Bond Guide  
 Industry: Telecommunications - Telephone & Wireless  
 2016 Assessment Year

Company Name	Coupon	CUSIP	Issue	Maturity Date	Years to Maturity	S&P Bond Rating	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Avg Full Year	Avg 4th QTR
GTE Southwest	8.5	362338AQ8	1st	11/15/31	16	A	4.20	6.03	6.02	6.13	6.13	6.48	6.23	6.55	6.71	7.09	6.85	7.09	6.29%	7.01%
AT&T Corp.	6.5	001957AW9	Nts	03/15/29	14	A-	4.20	4.40	4.23	4.25	4.89	4.92	4.89	4.96	4.95	4.87	5.08	4.92	4.71%	4.96%
AT&T Corp.	8	001957BD0	Sr Nts	11/15/31	16	A-	3.78	4.02	4.02	4.24	4.47	5.16	5.03	5.10	5.15	5.07	5.25	5.04	4.69%	5.12%
AT&T Inc.	6.8	00206RAB8	Nts	05/15/36	21	A-	4.48	4.82	4.85	4.87	5.22	5.57	5.42	5.55	5.42	5.44	5.42	5.47	5.21%	5.44%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/37	22	A-	4.48	4.82	4.85	4.87	5.22	5.57	5.42	5.55	5.42	5.44	5.42	5.47	5.21%	5.44%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/38	23	A-	4.50	4.88	4.88	4.87	5.19	5.58	5.41	5.62	5.50	5.45	5.41	5.45	5.23%	5.44%
AT&T Inc.	5.5	00206RAJ1	GlobalNts	02/01/18	3	A-	1.69	1.91	1.83	1.68	1.77	1.87	1.88	2.05	1.88	1.76	1.70	1.96	1.83%	1.81%
AT&T Inc.	5.6	00206RAM4	GlobalNts	05/15/18	3	A-	1.78	1.95	1.95	1.80	1.85	2.00	2.00	2.08	1.86	1.60	1.82	1.90	1.88%	1.77%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/38	23	A-	4.46	4.84	4.85	4.84	5.19	5.62	5.38	5.62	5.60	5.55	5.51	5.55	5.25%	5.54%
AT&T Wireless Services	8.75	00209AAF3	Sr Nts	03/01/31	16	A-	3.64	4.06	4.32	4.61	4.81	5.25	5.06	5.07	4.89	5.00	4.97	5.04	4.73%	5.00%
AT&T Broadband	9.46	00209TAB1	Nts	11/15/22	7	A-	2.64	2.81	2.80	2.79	3.04	3.73	3.54	3.47	3.19	3.23	3.10	3.17	3.13%	3.17%
ALLTEL Corp	6.8	020039AJ2	Deb	05/01/29	14	A-	3.99	4.68	4.70	4.39	4.56	4.95	4.74	4.64	4.53	4.65	4.85	4.89	4.63%	4.80%
ALLTEL Corp	7.88	020039DC4	Sr Nt	07/01/32	17	A-	3.96	4.13	4.28	4.34	4.56	5.12	5.01	4.94	5.30	5.57	5.62	5.62	4.87%	5.60%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	03/01/35	20	A-	4.26	4.37	4.44	4.51	4.81	5.08	4.97	5.18	5.00	5.15	5.12	5.43	4.86%	5.23%
BellSouth Capital Funding	6.04	079857AC2	Deb	11/15/26	11	A-	4.38	4.59	4.58	4.59	4.76	5.10	4.90	4.82	4.71	4.83	4.90	4.89	4.75%	4.87%
BellSouth Capital Funding	7.88	079857AH1	Deb	02/15/30	15	A-	4.42	4.64	4.63	4.64	4.81	5.52	5.34	5.66	5.55	5.67	5.84	5.83	5.21%	5.78%
BellSouth Corp.	6.875	079860AD4	Nts	10/15/31	16	A-	4.39	4.95	4.93	5.13	5.33	5.79	5.55	5.51	5.45	5.80	5.88	5.87	5.38%	5.85%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/34	19	A-	4.04	5.00	5.08	5.21	5.44	5.96	5.72	5.74	5.71	5.84	6.04	6.04	5.49%	5.97%
BellSouth Corp.	6	079860AK8	Nts	11/15/34	19	A-	4.34	5.00	5.08	5.21	5.44	5.96	5.72	5.74	5.71	5.73	5.94	5.94	5.48%	5.87%
BellSouthTelecommunications	7	079867AM9	Deb	10/01/25	10	A-	3.98	4.08	4.18	4.20	4.37	4.81	4.61	4.67	4.55	4.67	4.75	4.43	4.44%	4.62%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/45	30	A-	4.84	5.15	5.14	5.24	5.47	5.84	5.60	5.49	5.44	5.74	5.79	5.94	5.47%	5.82%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/95	80	A-	4.90	5.20	5.55	5.66	6.13	6.51	6.24	6.23	6.18	6.29	6.33	6.27	5.96%	6.30%
BellSouthTelecommunications	6.375	079867AW7	Deb	06/01/28	13	A-	3.97	4.63	4.68	4.70	4.87	5.45	5.25	5.17	5.06	5.04	5.12	5.32	4.94%	5.16%
Indiana Bell Telephone	7.3	454614AK4	Deb	08/15/26	11	A-	3.94	4.17	4.15	4.17	4.34	4.68	4.68	4.66	4.68	4.74	4.67	4.66	4.46%	4.69%
Michigan Bell Telephone	7.85	594185AQ3	Deb	01/15/22	7	A-	3.97	3.96	3.89	3.86	4.09	4.29	3.91	3.92	3.78	3.92	4.06	4.11	3.98%	4.03%
Pacific Bell	7.125	694032AT0	Deb	03/15/26	11	A-	3.64	3.89	3.98	4.08	4.23	4.63	4.43	4.41	4.43	4.49	4.42	4.41	4.25%	4.44%
Pacific Bell	7.375	694032AV5	Deb	07/15/43	28	A-	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13%	7.13%
SBCCommunications	6.45	78387GAM5	Gbl Nt	06/15/34	19	A-	4.31	4.70	4.62	4.83	5.07	5.51	5.26	5.50	5.35	5.46	5.30	5.32	5.10%	5.36%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	09/15/34	19	A-	4.31	4.56	4.64	4.81	5.07	5.44	5.31	5.50	5.34	5.42	5.31	5.49	5.10%	5.41%
Southwest'n Bell Tel	7	845335BQ0	Deb	07/01/15	0	A-	0.95	1.13	1.03	0.81	1.26								1.04%	
TCI Communications	8.75	872287AC1	Sr Deb	08/01/15	0	A-	0.66	0.82	0.29	0.80	0.22	0.25							0.51%	
TCI Communications	7.875	872287AF4	Sr Deb	02/15/26	11	A-	3.25	3.31	3.32	3.31	3.54	3.96	3.81	3.79	3.65	3.57	3.61	3.62	3.56%	3.60%
TCI Communications	7.125	872287AL1	Sr Nts	02/15/28	13	A-	3.24	3.46	3.50	3.59	3.78	4.14	4.04	4.09	4.06	4.15	4.01	3.98	3.84%	4.05%
Tele-Communications(Old)	10.125	879240AQ2	Sr Deb	04/15/22	7	A-	3.44	3.67	3.71	3.77	3.86	4.21	4.06	3.95	3.81	4.14	4.11	4.10	3.90%	4.12%
Vodafone Group plc	6.25	92857WAB6	Deb	11/30/32	17	A-	4.13	4.54	4.39	4.51	4.93	5.44	5.38	5.68	5.50	5.44	5.60	5.74	5.11%	5.59%
Vodafone Group plc	4.62	92857WAE0	Gbl Nt	07/15/18	3	A-	1.93	2.22	1.53	1.68	1.80	2.35	2.43	2.41	2.31	2.19	2.17	2.26	2.11%	2.21%
Vodafone Group Plc	5.62	92857WAP5	Notes	02/27/17	2	A-	1.46	1.50	1.54	1.24	1.29	1.67	2.02	1.70	1.64	1.54	1.49	1.66	1.56%	1.56%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/37	22	A-	4.30	4.66	4.56	4.50	5.08	5.56	5.45	5.60	5.50	5.53	5.92	6.05	5.23%	5.83%
Wisconsin Bell Inc	6.35	976585AG4	Deb	12/01/26	11	A-	5.28	5.49	5.48	5.49	5.66	6.00	5.80	5.72	5.61	5.73	5.80	5.79	5.65%	5.77%
Bell Atlantic-PA	6	07786DA44	Deb	12/01/28	13	BBB+	4.39	4.55	4.57	4.87	5.04	5.43	5.23	5.15	5.04	5.25	5.21	5.47	5.02%	5.31%
Bell Tel. of Penna	8.35	078167AZ6	Deb	12/15/30	15	BBB+	5.10	5.26	5.28	5.29	5.46	5.85	5.65	5.85	5.86	5.70	5.66	6.37	5.61%	5.91%
Bell Tel. of Penna	8.75	078167BA0	Deb	08/15/31	16	BBB+	4.42	4.61	4.60	4.71	4.94	5.91	5.67	6.14	5.92	5.95	6.48	6.53	5.49%	6.32%
Chesapeake Pot. Tel Md	8	165069AP0	Deb	10/15/29	14	BBB+	4.49	4.65	4.67	4.68	5.08	5.47	5.87	5.79	5.86	5.99	6.07	5.98	5.38%	6.01%
Chesapeake Pot. Tel Md	8.3	165069AQ8	Deb	08/01/31	16	BBB+	4.75	4.95	4.93	5.04	5.53	5.96	5.57	5.53	5.43	5.54	5.54	6.17	5.41%	5.75%
Chesapeake Pot. Tel Md	7.15	165069AS4	Deb	05/01/23	8	BBB+	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14%	7.14%
Chesapeake&Pot.Tel VA	8.38	165087AL1	Forty Yr Deb	10/01/29	14	BBB+	4.70	4.86	4.85	4.87	5.04	5.57	5.37	5.29	5.42	5.31	5.33	5.47	5.17%	5.37%
Chesapeake&Pot.Tel VA	7.88	165087AN7	Deb	01/15/22	7	BBB+	3.86	3.68	3.65	3.61	3.76	4.02	3.87	3.74	3.61	3.75	3.89	3.94	3.78%	3.86%
GTE Corp	8.75	362320AT0	Deb	11/01/21	6	BBB+	3.26	3.87	3.49	3.46	3.61	3.86	3.71	3.58	3.45	3.60	3.91	4.11	3.66%	3.87%
GTE Corp	6.84	362320AZ6	Deb	04/15/18	3	BBB+	1.59	1.79	1.74	1.68	1.77	1.87	1.80	1.72	1.64	1.74	1.93	2.36	1.80%	2.01%
GTE Corp	6.94	362320BA0	Deb	04/15/28	13	BBB+	4.15	4.16	4.17	4.17	4.33	4.80	4.70	4.94	4.75	4.87	4.88	4.87	4.57%	4.87%
New England Tel. & Tel.	7.88	644239AY1	Deb	11/15/29	14	BBB+	4.72	4.86	4.88	5.11	5.29	5.27	5.07	5.16	5.08	5.31	5.39	5.38	5.13%	5.36%
New Jersey Bell Tel	7.85	645767AW4	Deb	11/15/29	14	BBB+	4.43	4.59	4.61	4.63	5.39	5.37	5.37	5.46	5.38	5.61	5.69	5.68	5.18%	5.66%
New Jersey Bell Tel	8	645767AY0	Deb	06/01/22	7	BBB+	3.45	3.83	3.79	3.76	3.91	4.16	4.01	3.88	3.75	3.90	4.03	4.08	3.88%	4.00%
New York Telephone Co	7	650094CB9	Deb	12/01/33	18	BBB+	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99%	6.99%
New York Telephone Co	6.5	650094CJ2	Deb	04/15/28	13	BBB+	4.45	4.61	4.63	4.64	5.14	5.52	5.32	5.41	5.30	5.42	5.49	5.48	5.12%	5.46%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/37	22	BBB+	4.32	4.39	4.57	4.71	4.97	5.34	5.16	5.22	5.18	5.19	5.23	5.19	4.96%	5.20%

**MONTANA DEPARTMENT OF REVENUE**

**Support for Cost of Debt Component - Yield to Maturity From Standard & Poor's Bond Guide  
Industry: Telecommunications - Telephone & Wireless  
2016 Assessment Year**

Company Name	Coupon	CUSIP	Issue	Maturity Date	Years to Maturity	S&P Bond Rating	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Avg Full Year	Avg 4th QTR
Verizon Global Fndg	7.75	92344GAS5	Nts	06/15/32	17	BBB+	4.30	4.41	4.40	4.61	4.83	5.51	5.27	5.32	5.02	5.34	5.43	5.60	5.00%	5.46%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/35	20	BBB+	4.19	4.39	4.46	4.53	4.82	5.25	5.12	5.26	5.10	5.04	5.02	5.19	4.86%	5.08%
Centel Capital	9	15133KAC7	Deb	10/15/19	4	BBB-	3.94	4.13	3.91	3.87	4.02	4.22	4.08	3.95	3.81	4.52	4.66	4.71	4.15%	4.63%
Mountain States Tel&Tel	7.38	624284BD6	Deb	05/01/30	15	BBB-	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54%	7.54%
Northwestern Bell Tel	7.75	668027AT2	Deb	05/01/30	15	BBB-	6.44	6.71	6.70	6.81	7.01	6.68	6.64	6.51	6.59	6.66	6.73	6.85	6.69%	6.75%
Qwest Corp	7.62	74913GAK1	Nts	06/15/15	0	BBB-	1.54	2.18	1.92	2.08									1.93%	
Qwest Corp	6.5	74913GAT2	Nts	06/01/17	2	BBB-	2.39	2.40	2.24	2.14	2.41	2.19	2.56	2.82	2.33	2.61	2.56	3.12	2.48%	2.76%
TCA Cable TV	6.53	872241AB0	Deb	02/01/28	13	BBB-	4.54	4.29	4.28	4.34	4.57	4.93	4.82	4.71	4.95	5.07	5.11	5.42	4.75%	5.20%
United States Cellular Corp.	6.7	911684AD0	Sr Nts	12/15/33	18	BBB-	7.12	7.17	7.09	7.14	6.99	7.43	7.43	7.70	7.51	7.71	7.66	7.76	7.39%	7.71%
U S WESTCommunications	7.5	912920AB1	Deb	06/15/23	8	BBB-	7.44	7.44	7.44	7.44	7.44	7.44	7.44	7.43	7.43	7.43	7.43	7.43	7.44%	7.43%
U S WESTCommunications	6.875	912920AC9	Deb	09/15/33	18	BBB-	6.79	6.78	6.85	6.79	6.79	6.92	7.04	7.02	7.19	6.97	7.06	7.20	6.95%	7.08%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/43	28	BBB-	6.91	6.91	6.91	6.92	6.96	7.27	7.16	7.29	7.32	7.32	7.09	7.56	7.14%	7.32%
U S WESTCommunications	7.25	912920AK1	Deb	09/15/25	10	BBB-	5.00	5.25	5.23	5.21	5.23	5.56	5.31	5.68	5.70	6.24	6.31	6.30	5.59%	6.28%
U S WESTCommunications	7.2	912920AL9	Deb	11/10/26	11	BBB-	7.15	7.15	7.14	7.14	7.14	7.08	7.19	7.16	7.17	7.15	7.15	7.15	7.15%	7.15%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/35	20	BBB-	6.96	6.89	6.91	6.94	6.99	7.01	7.15	7.32	7.34	7.27	7.64	7.41	7.15%	7.44%
United Tel Co(Florida)	8.375	913026AT7	1st HH	01/15/25	10	BBB-	5.00	5.21	5.20	5.21	5.35	5.69	5.49	5.38	5.27	5.39	5.46	5.45	5.34%	5.43%
United Tel Co(Florida)	7.125	913026AU4	1st GG	07/15/23	8	BBB-	4.36	4.57	4.73	4.74	4.92	5.25	5.05	4.94	4.83	4.95	5.30	5.29	4.91%	5.18%
Aliant Communications	6.75	016090AA0	Nts	04/01/28	13	BB+	7.16	7.41	7.47	7.38	7.10	7.48	7.96	9.74	12.52	10.55	11.41	12.80	9.08%	11.59%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts D'	12/01/25	10	BB	6.67	6.17	6.04	6.03	6.47	7.13	7.62	8.03	8.38	7.34	8.08	8.07	7.17%	7.83%
Century Tel Enterpr	6.875	156686AM9	Deb G'	01/15/28	13	BB	6.99	6.58	6.41	6.43	6.75	7.36	7.33	8.24	9.28	8.68	9.07	10.68	7.82%	9.48%
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts Ser N	04/01/17	2	BB	2.65	2.66	2.70	2.51	2.50	2.76	3.20	3.31	4.09	2.91	2.38	3.32	2.92%	2.87%
Embarq Corp.	8	29078EAA3	Nts	06/01/36	21	BB	6.66	6.55	6.36	6.34	6.71	6.99	7.13	7.44	7.68	7.49	7.51	7.70	7.05%	7.57%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/16	1	BB	1.97	1.49	1.78	1.87	1.69	2.09	2.07	2.59	1.79	2.44	2.12	3.29	2.10%	2.62%
Qwest Cap Funding	7.75	74913EAJ9	Nts	02/15/31	16	BB	7.58	7.33	7.21	7.21	7.10	7.39	7.74	8.21	8.57	8.47	8.67	9.90	7.95%	9.01%
Qwest Cap Funding	7.62	74913EAQ3	Nts	08/03/21	6	BB	6.16	6.14	5.90	5.90	6.00	6.20	6.21	6.49	6.73	6.56	6.63	6.64	6.30%	6.61%
U S WEST Cap Fndg	6.88	912912AQ5	Deb	07/15/28	13	BB	6.99	6.61	6.70	6.53	6.64	7.05	7.17	7.86	8.92	8.86	8.79	9.90	7.67%	9.18%
U S WEST Cap Fndg	6.5	912912AR3	Deb	11/15/18	3	BB	3.64	3.48	3.81	3.87	4.00	4.09	4.11	4.47	5.01	4.71	5.21	5.73	4.34%	5.22%
Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/23	8	BB-	6.97	10.81	10.84	10.87	10.90	10.93	10.95	10.98	11.01	11.04	11.07	11.11	10.62%	11.07%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>GtdDeb	12/01/28	13	BB-	6.98	6.74	6.86	6.69	6.69	6.66	6.75	7.06	7.06	7.51	7.38	7.45	6.99%	7.45%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/31	16	BB-	8.19	8.03	8.18	8.34	9.26	9.87	10.35	10.49	11.71	10.25	11.17	11.10	9.75%	10.84%
Sprint Nextel Corp.	9.25	852061AA8	Deb	04/15/22	7	BB-	7.17	6.74	7.05	7.12	7.36	7.52	8.35	8.39	9.50	8.63	9.56	9.89	8.11%	9.36%
Sprint Nextel Corp.	6	852061AD2	Nt	12/01/16	1	BB-	3.37	2.99	3.35	3.27	3.03	3.40	4.43	4.34	6.66	5.03	6.38	5.47	4.31%	5.63%
Sprint Capital	6.88	852060AD4	Nts	11/15/28	13	B+	7.83	7.69	7.85	7.94	8.07	8.59	8.99	8.81	10.95	9.13	11.20	11.69	9.06%	10.67%
Sprint Capital	6.9	852060AG7	Nts	05/01/19	4	B+	6.41	5.97	5.98	5.90	5.74	6.15	7.20	6.81	11.12	8.32	11.20	14.13	7.91%	11.22%
Sprint Capital	8.75	852060AT9	Nts	03/15/32	17	B+	8.41	8.19	8.38	8.28	8.57	9.01	9.42	9.47	11.81	10.03	11.94	12.34	9.65%	11.44%
NII Holdings, Inc.	2.88	62913FAC6	Nt Conv 144a	02/01/34	19	NR	4.90	4.90	4.70	4.91	4.92	4.93	4.94	4.94	4.95	4.96	4.96	4.97	4.92%	4.96%
Pacific Bell	6.625	694032AX1	Deb	10/15/34	19	NR	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.51	6.52%	6.52%
Southwest'n Bell Tel	7.375	845335BX5	Deb	07/15/27	12	NR	7.03	7.03	7.03	7.03	7.03	7.02	7.02	7.02	7.02	7.02	7.02	7.01	7.02%	7.02%
Tele-Communications(Old)	9.88	879240AR0	Sr Deb	06/15/22	7	NR	3.53	3.77	3.64	3.74	4.04	4.37	4.21	4.10	3.96	4.28	4.01	4.00	3.97%	4.10%
						95	95	95	95	95	94	93	92	92	92	92	92	92		

NOTES:

Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.

means the data was not available in S&P Guide

means issuance matured or called

All Bonds	
Annual	4th Qtr

All Ratings	5.31%	5.87%
Investment Grade (BBB- & Above)	4.83%	5.26%

Bonds With 20 or More Years to Maturity

All Ratings	5.76%	6.06%
Investment Grade (BBB- & Above)	5.67%	5.94%

<b>Say:</b>	<b>6.00%</b>
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**MONTANA DEPARTMENT OF REVENUE**

**Support for Cost of Debt Component - Yield to Maturity From Standard & Poor's Bond Guide  
Industry: Telecommunications - Cable  
2016 Assessment Year**

Company Name	Coupon	CUSIP	Issue	Maturity Date	Years to Maturity	S&P Bond Rating	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Avg Full Year	Avg 4th QTR
Comcast Cable Commun	8.88	20029PAG4	Sr Nt - Exchanged From C	05/01/17	2	A-	1.17	1.19	1.17	1.14	1.17	1.34	1.48	1.44	1.22	1.30	1.31	1.46	1.28%	1.36%
Comcast Cable Commun	8.5	20029PAH2	Sr Nt - Exchanged From C	05/01/27	12	A-	3.62	3.84	3.83	3.84	4.15	4.53	4.36	4.30	4.39	4.41	4.48	4.47	4.19%	4.45%
Comcast Corp.	7.05	20030NAC5	Sr Nt	03/15/33	18	A-	3.64	3.85	3.82	4.11	4.45	4.79	4.57	4.52	4.38	4.53	4.53	4.52	4.31%	4.53%
Comcast Corp.	5.65	20030NAF8	Gtd Fixed Rt Sr Nt	06/15/35	20	A-	3.56	3.75	3.93	4.01	4.30	4.73	4.49	4.50	4.44	4.35	4.35	4.30	4.23%	4.33%
Comcast Corp.	4.95	20030NAG6	Gtd Fixed Rt Sr Nt	06/15/16	1	A-	0.65	0.73	0.73	0.60	0.77	0.77	0.82	0.72	0.65	0.80	0.71	1.16	0.76%	0.89%
Comcast Corp.	5.9	20030NAL5	Gtd Nt	03/15/16	1	A-	0.64	0.72	0.68	0.60	0.59	0.38							0.60%	
Comcast Corp.	6.45	20030NAM3	Gtd Nt	03/15/37	22	A-	3.79	3.96	4.04	4.10	4.46	4.84	4.62	4.59	4.48	4.60	4.49	4.54	4.38%	4.54%
Comcast Corp.	6.5	20030NAP6	Nts	01/15/17	2	A-	0.98	1.02	1.03	0.89	0.99	1.10	1.20	0.88	1.11	1.00	0.99	1.32	1.04%	1.10%
Comcast Corp.	5.88	20030NAR2	Nt	02/15/18	3	A-	1.38	1.44	1.38	1.25	1.36	1.63	1.50	1.58	1.44	1.46	1.53	1.60	1.46%	1.53%
Comcast Corp.	6.3	20030NAU5	Sr Nts	11/15/17	2	A-	1.32	1.33	1.29	1.18	1.28	1.41	1.51	1.48	1.37	1.32	1.34	1.54	1.36%	1.40%
Comcast Corp.	6.95	20030NAV3	Sr Nts	08/15/37	22	A-	3.85	3.99	4.05	4.17	4.53	4.85	4.64	4.68	4.47	4.56	4.54	4.60	4.41%	4.57%
AOL Time Warner	7.62	00184AAC9	Deb	04/15/31	16	BBB	3.94	4.10	4.20	4.27	4.50	4.98	4.86	5.19	4.98	4.99	5.13	5.24	4.70%	5.12%
Time Warner Cos Inc	9.15	887315AM1	Deb Dtd 02/04/1993	02/01/23	8	BBB	3.39	3.60	3.55	3.61	3.74	4.28	4.14	4.20	4.08	4.23	4.18	4.17	3.93%	4.19%
Time Warner Cos Inc	6.88	887315AY5	Deb	06/15/18	3	BBB	1.83	1.85	1.66	1.71	1.85	2.00	1.94	1.94	1.89	1.82	1.99	2.19	1.89%	2.00%
Time Warner Cos Inc	8.05	887315BA6	Deb	01/15/16	1	BBB	1.14	1.25	1.08	1.06	1.13	1.17	1.18	1.31	1.07	1.29	1.65		1.21%	1.47%
Time Warner Cos Inc	6.85	887315BB4	Deb	01/15/26	11	BBB	4.50	4.72	4.55	4.57	4.74	5.15	5.00	4.97	4.88	5.28	5.36	5.35	4.92%	5.33%
Time Warner Cos Inc	7.57	887315BH1	Deb	02/01/24	9	BBB	3.40	3.57	3.50	3.52	3.63	4.33	4.20	4.43	4.11	4.13	4.21	4.21	3.94%	4.18%
Time Warner Cos Inc	7.25	887315BJ7	Deb	10/15/17	2	BBB	1.42	1.49	1.42	1.46	1.39	1.61	1.70	1.67	1.71	1.68	1.80	1.82	1.60%	1.77%
Time Warner Cos Inc	6.95	887315BM0	Gtd Deb	01/15/28	13	BBB	3.86	4.08	3.96	4.00	4.18	4.58	4.59	4.56	4.38	4.50	4.56	4.83	4.34%	4.63%
Time Warner Cos Inc	6.62	887315BN8	Deb	05/15/29	14	BBB	3.80	3.95	3.94	3.99	4.19	4.82	4.58	4.61	4.42	4.46	4.63	4.81	4.35%	4.63%
Time Warner Inc.	5.88	887317AC9	Nt	11/15/16	1	BBB	1.13	1.08	1.09	1.03	1.15	1.30	1.38	1.35	1.08	0.71	0.33	0.00	0.97%	0.35%
Time Warner Inc.	6.5	887317AD7	Deb	11/15/36	21	BBB	4.19	4.30	4.37	4.47	4.87	5.25	5.11	5.27	5.30	5.16	5.28	5.36	4.91%	5.27%
Time Warner Entertainment	8.38	88731EAF7	Sr Deb	03/15/23	8	BBB	3.05	3.60	3.42	4.87	4.58	4.78	4.60	4.82	4.75	4.51	4.58	4.55	4.34%	4.55%
Qwest Corp	7.62	74913GAK1	Nts	06/15/15	0	BBB-	1.54	2.18	1.92	2.08									1.93%	
Qwest Corp	6.5	74913GAT2	Nts	06/01/17	2	BBB-	2.39	2.40	2.24	2.14	2.41	2.19	2.56	2.82	2.33	2.61	2.56	3.12	2.48%	2.76%
TCA Cable TV	6.53	872241AB0	Deb	02/01/28	13	BBB-	4.54	4.29	4.28	4.34	4.57	4.93	4.82	4.71	4.95	5.07	5.11	5.42	4.75%	5.20%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/25	10	BB	6.67	6.17	6.04	6.03	6.47	7.13	7.62	8.03	8.38	7.34	8.08	8.07	7.17%	7.83%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/28	13	BB	6.99	6.58	6.41	6.43	6.75	7.36	7.33	8.24	9.28	8.68	9.07	10.68	7.82%	9.48%
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts Ser N	04/01/17	2	BB	2.65	2.66	2.70	2.51	2.50	2.76	3.20	3.31	4.09	2.91	2.38	3.32	2.92%	2.87%
Embarq Corp.	8	29078EAA3	Nts	06/01/36	21	BB	6.66	6.55	6.36	6.34	6.71	6.99	7.13	7.44	7.68	7.49	7.51	7.70	7.05%	7.57%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/16	1	BB	1.97	1.49	1.78	1.87	1.69	2.09	2.07	2.59	1.79	2.44	2.12	3.29	2.10%	2.62%
Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/23	8	BB-	6.97	10.81	10.84	10.87	10.90	10.93	10.95	10.98	11.01	11.04	11.07	11.11	10.62%	11.07%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>GtdDeb	12/01/28	13	BB-	6.98	6.74	6.86	6.69	6.69	6.66	6.75	7.06	7.06	7.51	7.38	7.45	6.99%	7.45%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/31	16	BB-	8.19	8.03	8.18	8.34	9.26	9.87	10.35	10.49	11.71	10.25	11.17	11.10	9.75%	10.84%
						34	34	34	34	34	33	33	32	32	32	32	32	31		

NOTES:

Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.

means the data was not available in S&P Guide  
means issuance matured or called

All Bonds		Annual	4th Qtr
All Bonds			
All Ratings		3.90%	4.37%
Investment Grade (BBB- & Above)		3.01%	3.34%
<b>Bonds With 20 or More Years to Maturity</b>			
All Ratings		4.99%	5.26%
Investment Grade (BBB- & Above)		4.48%	4.68%
<b>Say:</b>		<b>6.00%</b>	

MONTANA DEPARTMENT OF REVENUE

Support for Cost of Debt Component - Current Yield From Standard & Poor's Bond Guide  
 Industry: Telecommunications - Telephone & Wireless  
 2016 Assessment Year

Company Name	Coupon	CUSIP	Issue	Maturity Date	Years to Maturity	S&P Bond Rating	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Avg Full Year	Avg 4th QTR
GTE Southwest	8.5	362338AQ8	1st	11/15/31	16	A	5.61	6.76	6.76	6.83	6.84	7.07	6.91	7.13	7.23	7.49	7.34	7.50	6.96%	7.44%
AT&T Corp.	6.5	001957AW9	Nts	03/15/29	14	A-	5.22	5.34	5.25	5.26	5.60	5.62	5.61	5.65	5.64	5.61	5.72	5.64	5.51%	5.66%
AT&T Corp.	8	001957BD0	Sr Nts	11/15/31	16	A-	5.26	5.40	5.40	5.60	5.74	6.16	6.08	6.14	6.17	6.12	6.24	6.12	5.87%	6.16%
AT&T Inc.	6.8	00206RAB8	Nts	05/15/36	21	A-	5.17	5.39	5.42	5.43	5.67	5.91	5.81	5.89	5.81	5.83	5.82	5.85	5.67%	5.83%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/37	22	A-	5.06	5.29	5.31	5.32	5.57	5.81	5.71	5.80	5.71	5.73	5.72	5.76	5.57%	5.74%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/38	23	A-	5.02	5.27	5.27	5.27	5.49	5.77	5.65	5.80	5.72	5.68	5.65	5.69	5.52%	5.67%
AT&T Inc.	5.5	00206RAJ1	GlobalNts	02/01/18	3	A-	4.95	4.99	4.99	4.98	5.01	5.04	5.05	5.08	5.08	5.08	5.08	5.13	5.04%	5.10%
AT&T Inc.	5.6	00206RAM4	GlobalNts	05/15/18	3	A-	4.99	5.03	5.04	5.03	5.05	5.09	5.10	5.12	5.11	5.09	5.13	5.15	5.08%	5.12%
AT&T Inc.	6.4	00206RAN2	GlobalNts	03/15/38	23	A-	5.00	5.26	5.27	5.26	5.51	5.82	5.65	5.82	5.81	5.77	5.74	5.78	5.56%	5.76%
AT&T Wireless Services	8.75	00209AAF3	Sr Nts	03/01/31	16	A-	5.41	5.65	5.81	5.98	6.11	6.38	6.27	6.29	6.18	6.26	6.25	6.29	6.07%	6.27%
AT&T Broadband	9.46	00209TAB1	Nts	11/15/22	7	A-	6.40	6.48	6.50	6.51	6.63	6.92	6.86	6.86	6.77	6.80	6.77	6.82	6.69%	6.80%
ALLTEL Corp	6.8	020039AJ2	Deb	05/01/29	14	A-	5.22	5.58	5.59	5.44	5.53	5.74	5.64	5.58	5.53	5.60	5.71	5.74	5.58%	5.68%
ALLTEL Corp	7.88	020039DC4	Sr Nt	07/01/32	17	A-	5.29	5.39	5.48	5.52	5.66	6.01	5.94	5.90	6.14	6.30	6.34	6.34	5.86%	6.33%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	03/01/35	20	A-	4.97	5.04	5.08	5.13	5.32	5.49	5.43	5.56	5.45	5.54	5.53	5.74	5.36%	5.60%
BellSouth Capital Funding	6.04	079857AC2	Deb	11/15/26	11	A-	5.24	5.34	5.34	5.35	5.43	5.59	5.50	5.47	5.42	5.47	5.51	5.51	5.43%	5.50%
BellSouth Capital Funding	7.88	079857AH1	Deb	02/15/30	15	A-	5.72	5.85	5.85	5.86	5.96	6.38	6.28	6.47	6.41	6.49	6.59	6.59	6.20%	6.56%
BellSouth Corp.	6.875	079860AD4	Nts	10/15/31	16	A-	5.32	5.65	5.64	5.76	5.89	6.18	6.03	6.00	5.97	6.19	6.24	6.23	5.93%	6.22%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/34	19	A-	4.91	5.50	5.56	5.64	5.79	6.14	5.98	5.99	5.98	6.06	6.20	6.20	5.83%	6.15%
BellSouth Corp.	6	079860AK8	Nts	11/15/34	19	A-	4.92	5.33	5.39	5.47	5.62	5.97	5.81	5.82	5.81	5.82	5.96	5.96	5.66%	5.91%
BellSouth Corp	5.2	079860AL6	Nt	12/15/16	1	A-	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69%	4.69%
BellSouthTelecommunications	7	079867AM9	Deb	10/01/25	10	A-	5.55	5.60	5.65	5.67	5.75	5.95	5.87	5.90	5.86	5.91	5.95	5.82	5.79%	5.89%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/45	30	A-	5.04	5.28	5.27	5.36	5.54	5.84	5.64	5.55	5.51	5.76	5.80	5.93	5.54%	5.83%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/95	80	A-	4.93	5.22	5.56	5.67	6.14	6.51	6.25	6.23	6.18	6.29	6.33	6.27	5.97%	6.30%
BellSouthTelecommunications	6.3	079867AQ0	AmortizingDeb	12/15/15	0	A-	6.12	6.14	6.17	6.19	6.21	6.17	6.19	6.21	6.24	6.26			6.19%	6.26%
BellSouthTelecommunications	6.375	079867AW7	Deb	06/01/28	13	A-	5.11	5.44	5.47	5.48	5.57	5.88	5.77	5.74	5.68	5.67	5.71	5.82	5.61%	5.73%
Indiana Bell Telephone	7.3	454614AK4	Deb	08/15/26	11	A-	5.58	5.68	5.69	5.70	5.79	5.96	5.96	5.97	6.01	5.98	5.98	5.98	5.86%	5.99%
Michigan Bell Telephone	7.85	594185AQ3	Deb	01/15/22	7	A-	6.36	6.37	6.36	6.36	6.45	6.53	6.41	6.43	6.40	6.46	6.52	6.55	6.43%	6.51%
Pacific Bell	7.125	694032AT0	Deb	03/15/26	11	A-	5.41	5.53	5.58	5.63	5.70	5.89	5.81	5.81	5.82	5.85	5.83	5.83	5.72%	5.84%
Pacific Bell	7.375	694032AV5	Deb	07/15/43	28	A-	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16	7.16%	7.16%
SBCCommunications	6.45	78387GAM5	Gbl Nt	06/15/34	19	A-	5.04	5.28	5.24	5.37	5.53	5.81	5.65	5.81	5.71	5.78	5.68	5.70	5.55%	5.72%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	09/15/34	19	A-	4.95	5.10	5.16	5.26	5.43	5.67	5.59	5.72	5.61	5.67	5.59	5.71	5.46%	5.66%
Southwest'n Bell Tel	7	845335BQ0	Deb	07/01/15	0	A-	6.82	6.86	6.89	6.92	6.96								6.89%	
TCI Communications	8.75	872287AC1	Sr Deb	08/01/15	0	A-	8.40	8.46	8.51	8.57	8.62	8.68							8.54%	
TCI Communications	7.875	872287AF4	Sr Deb	02/15/26	11	A-	5.52	5.55	5.57	5.58	5.69	5.89	5.83	5.83	5.78	5.75	5.78	5.80	5.71%	5.78%
TCI Communications	7.125	872287AL1	Sr Nts	02/15/28	13	A-	5.05	5.16	5.19	5.24	5.33	5.52	5.47	5.51	5.50	5.55	5.48	5.48	5.37%	5.50%
Tele-Communications(Old)	10.125	879240AQ2	Sr Deb	04/15/22	7	A-	7.11	7.22	7.26	7.30	7.36	7.52	7.48	7.46	7.43	7.57	7.58	7.60	7.41%	7.58%
Vodafone Group plc	6.25	92857WAB6	Deb	11/30/32	17	A-	4.94	5.18	5.08	5.16	5.42	5.73	5.70	5.88	5.77	5.73	5.84	5.92	5.53%	5.83%
Vodafone Group plc	4.62	92857WAE0	Gbl Nt	07/15/18	3	A-	4.24	4.28	4.24	4.23	4.25	4.33	4.35	4.35	4.35	4.34	4.35	4.36	4.31%	4.35%
Vodafone Group Plc	5.62	92857WAP5	Notes	02/27/17	2	A-	5.18	5.20	5.20	5.21	5.23	5.28	5.32	5.31	5.32	5.34	5.35	5.37	5.28%	5.35%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/37	22	A-	4.87	5.11	5.05	5.00	5.40	5.73	5.65	5.75	5.69	5.71	5.98	6.08	5.50%	5.92%
Wisconsin Bell Inc	6.35	976585AG4	Deb	12/01/26	11	A-	5.80	5.91	5.91	5.92	6.00	6.17	6.07	6.04	5.98	6.04	6.08	6.08	6.00%	6.07%
ALLTEL Corp	7	020039AE3	Deb	03/15/16	1	BBB+	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47%	6.47%
Bell Atlantic-PA	6	07786DAA4	Deb	12/01/28	13	BBB+	5.15	5.23	5.24	5.40	5.49	5.69	5.59	5.55	5.50	5.60	5.58	5.72	5.48%	5.63%
Bell Tel. of Penna	8.35	078167AZ6	Deb	12/15/30	15	BBB+	6.18	6.28	6.30	6.31	6.42	6.67	6.55	6.68	6.69	6.60	6.57	7.02	6.52%	6.73%
Bell Tel. of Penna	8.75	078167BA0	Deb	08/15/31	16	BBB+	5.82	5.94	5.94	6.01	6.15	6.77	6.62	6.92	6.79	6.81	7.16	7.20	6.51%	7.06%
Chesapeake Pot.Tel Md	8	165069AP0	Deb	10/15/29	14	BBB+	5.82	5.91	5.93	5.94	6.17	6.40	6.65	6.61	6.65	6.73	6.78	6.73	6.36%	6.75%
Chesapeake Pot.Tel Md	8.3	165069AQ8	Deb	08/01/31	16	BBB+	5.92	6.04	6.04	6.11	6.42	6.69	6.45	6.43	6.37	6.45	6.45	6.85	6.35%	6.58%
Chesapeake Pot.Tel Md	7.15	165069AS4	Deb	05/01/23	8	BBB+	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15%	7.15%
Chesapeake&Pot. Tel VA	8.38	165087AL1	Forty Yr Deb	10/01/29	14	BBB+	6.04	6.14	6.14	6.15	6.26	6.58	6.46	6.42	6.50	6.44	6.46	6.55	6.35%	6.48%
Chesapeake&Pot. Tel VA	7.88	165087AN7	Deb	01/15/22	7	BBB+	6.33	6.28	6.29	6.29	6.35	6.45	6.42	6.39	6.36	6.42	6.48	6.51	6.38%	6.47%
GTE Corp	8.75	362320AT0	Deb	11/01/21	6	BBB+	6.58	6.81	6.69	6.70	6.77	6.87	6.84	6.81	6.79	6.85	6.98	7.06	6.81%	6.96%
GTE Corp	6.84	362320AZ6	Deb	04/15/18	3	BBB+	5.87	5.93	5.94	5.95	5.99	6.02	6.04	6.04	6.05	6.09	6.14	6.22	6.02%	6.15%
GTE Corp	6.94	362320BA0	Deb	04/15/28	13	BBB+	5.41	5.42	5.44	5.44	5.52	5.77	5.72	5.85	5.76	5.82	5.83	5.83	5.65%	5.83%
GTE Florida	6.86	362333AH9	Deb 'E'	02/01/28	13	BBB+	5.49	6.64	6.48										6.20%	
New England Tel. & Tel.	7.88	644239AY1	Deb	11/15/29	14	BBB+	5.90	5.99	6.01	6.15	6.25	6.25	6.14	6.19	6.15	6.29	6.34	6.34	6.17%	6.32%
New Jersey Bell Tel	7.85	645767AW4	Deb	11/15/29	14	BBB+	5.74	5.83	5.85	5.86	6.30	6.30	6.30	6.32	6.46	6.50	6.50	6.19%	6.49%	
New Jersey Bell Tel	8	645767AY0	Deb	06/01/22	7	BBB+	6.19	6.33	6.34	6.34	6.40	6.51	6.47	6.44	6.40	6.47	6.53	6.56	6.42%	6.52%
New York Telephone Co	7	650094CB9	Deb	12/01/33	18	BBB+	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00%	7.00%

**MONTANA DEPARTMENT OF REVENUE**

**Support for Cost of Debt Component - Current Yield From Standard & Poor's Bond Guide  
Industry: Telecommunications - Telephone & Wireless  
2016 Assessment Year**

Company Name	Coupon	CUSIP	Issue	Maturity Date	Years to Maturity	S&P Bond Rating	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Avg Full Year	Avg 4th QTR
New York Telephone Co	6.5	650094CJ2	Deb	04/15/28	13	BBB+	5.40	5.48	5.50	5.51	5.76	5.97	5.86	5.91	5.86	5.92	5.96	5.96	5.76%	5.95%
Verizon Communications Inc.	5.55	92343VAC8	Nts	02/15/16	1	BBB+	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23%	5.23%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/37	22	BBB+	4.91	4.95	5.07	5.17	5.35	5.60	5.48	5.51	5.49	5.50	5.53	5.50	5.34%	5.51%
Verizon Global Fndg	7.75	92344GAS5	Nts	06/15/32	17	BBB+	5.46	5.53	5.53	5.66	5.80	6.23	6.08	6.11	5.93	6.13	6.19	6.31	5.91%	6.21%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/35	20	BBB+	4.76	4.89	4.93	4.98	5.16	5.45	5.36	5.45	5.35	5.31	5.30	5.41	5.20%	5.34%
Verizon Maryland	5.125	92344WAB7	Deb'B'	06/15/33	18	BBB+	4.70	4.81	4.80										4.77%	
Centel Capital	9	15133KAC7	Deb	10/15/19	4	BBB-	7.40	7.47	7.44	7.45	7.51	7.59	7.57	7.55	7.54	7.75	7.81	7.84	7.58%	7.80%
Mountain States Tel&Tel	7.38	624284BD6	Deb	05/01/30	15	BBB-	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48%	7.48%
Northwestern Bell Tel	7.75	668027AT2	Deb	05/01/30	15	BBB-	6.88	7.05	7.05	7.12	7.26	7.05	7.03	6.94	7.00	7.04	7.09	7.16	7.06%	7.10%
Qwest Corp	7.62	74913GAK1	Nts	06/15/15	0	BBB-	7.45	7.50	7.53	7.57									7.51%	
Qwest Corp	6.5	74913GAT2	Nts	06/01/17	2	BBB-	5.94	5.96	5.96	5.97	6.02	6.01	6.07	6.11	6.08	6.13	6.14	6.21	6.05%	6.16%
TCA Cable TV	6.53	872241AB0	Deb	02/01/28	13	BBB-	5.47	5.35	5.35	5.38	5.50	5.68	5.63	5.58	5.70	5.76	5.79	5.95	5.60%	5.83%
United States Cellular Corp.	6.7	911684AD0	Sr Nts	12/15/33	18	BBB-	7.00	7.04	6.98	7.01	6.90	7.22	7.22	7.42	7.28	7.43	7.39	7.46	7.20%	7.43%
U S WESTCommunications	7.5	912920AB1	Deb	06/15/23	8	BBB-	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47%	7.47%
U S WESTCommunications	6.875	912920AC9	Deb	09/15/33	18	BBB-	6.81	6.81	6.85	6.81	6.82	6.90	6.99	6.97	7.10	6.94	7.01	7.10	6.93%	7.02%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/43	28	BBB-	6.94	6.94	6.94	6.94	6.99	7.25	7.16	7.27	7.29	7.29	7.09	7.50	7.13%	7.29%
U S WESTCommunications	7.25	912920AK1	Deb	09/15/25	10	BBB-	6.12	6.24	6.24	6.24	6.25	6.41	6.30	6.48	6.49	6.75	6.79	6.79	6.43%	6.78%
U S WESTCommunications	7.2	912920AL9	Deb	11/10/26	11	BBB-	7.17	7.17	7.17	7.16	7.17	7.13	7.20	7.18	7.18	7.17	7.17	7.17	7.17%	7.17%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/35	20	BBB-	7.03	6.98	6.99	7.01	7.05	7.07	7.17	7.30	7.32	7.27	7.55	7.37	7.18%	7.40%
United Tel Co(Florida)	8.375	913026AT7	1st HH	01/15/25	10	BBB-	6.63	6.74	6.74	6.76	6.83	7.00	6.91	6.87	6.83	6.89	6.93	6.94	6.84%	6.92%
United Tel Co(Florida)	7.125	913026AU4	1st GG	07/15/23	8	BBB-	5.97	6.05	6.12	6.14	6.21	6.35	6.28	6.24	6.21	6.26	6.40	6.40	6.22%	6.35%
Aliant Communications	6.75	016090AA0	Nts	04/01/28	13	BB+	6.99	7.14	7.18	7.12	6.95	7.18	7.46	8.59	10.54	9.12	9.71	10.71	8.22%	9.85%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/25	10	BB	6.92	6.66	6.60	6.60	6.82	7.16	7.42	7.63	7.82	7.27	7.65	7.64	7.18%	7.52%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/28	13	BB	6.94	6.70	6.61	6.62	6.80	7.16	7.14	7.68	8.33	7.94	8.18	9.22	7.44%	8.45%
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts Ser N	04/01/17	2	BB	5.60	5.62	5.64	5.63	5.64	5.68	5.74	5.76	5.83	5.75	5.72	5.81	5.70%	5.76%
Embarq Corp.	8	29078EAA3	Nts	06/01/36	21	BB	6.95	6.87	6.73	6.71	6.99	7.21	7.31	7.56	7.75	7.59	7.61	7.76	7.25%	7.65%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/16	1	BB	6.63	6.62	6.67	6.70	6.72	6.77	6.80	6.85	6.84	6.89	6.90	6.97	6.78%	6.92%
Qwest Cap Funding	7.75	74913EAJ9	Nts	02/15/31	16	BB	7.63	7.46	7.38	7.38	7.31	7.50	7.75	8.07	8.33	8.26	8.40	9.30	7.90%	8.65%
Qwest Cap Fdg Inc	7.62	74913EAQ3	Nts 144a	08/03/21	6	BB	7.07	7.07	6.99	7.00	7.04	7.11	7.12	7.22	7.31	7.26	7.28	7.29	7.15%	7.28%
U S WEST Cap Fndg	6.88	912912AQ5	Deb	07/15/28	13	BB	6.94	6.72	6.77	6.67	6.74	6.97	7.05	7.46	8.13	8.08	8.04	8.75	7.36%	8.29%
U S WEST Cap Fndg	6.5	912912AR3	Deb	11/15/18	3	BB	5.90	5.88	5.96	5.98	6.01	6.04	6.06	6.13	6.23	6.19	6.28	6.37	6.09%	6.28%
Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/23	8	BB-	7.12	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.82%	8.97%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>GtdDeb	12/01/28	13	BB-	6.70	6.56	6.63	6.52	6.52	6.51	6.56	6.73	6.73	7.00	6.92	6.96	6.70%	6.96%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/31	16	BB-	8.39	8.27	8.39	8.51	9.20	9.67	10.05	10.16	11.16	9.97	10.71	10.65	9.59%	10.44%
GTE North Inc	6.73	362337AK3	Deb 'G'	02/15/28	13	BB-	7.10	7.06	6.91										7.02%	
Sprint Nextel Corp.	9.25	852061AA8	Deb	04/15/22	7	BB-	8.29	8.11	8.25	8.29	8.40	8.48	8.85	8.87	9.36	8.98	9.39	9.53	8.73%	9.30%
Sprint Nextel Corp.	6	852061AD2	Nt	12/01/16	1	BB-	5.73	5.70	5.75	5.75	5.75	5.79	5.88	5.88	6.04	5.94	6.02	5.97	5.85%	5.98%
Sprint Capital	6.88	852060AD4	Nts	11/15/28	13	B+	7.47	7.38	7.48	7.53	7.61	7.94	8.20	8.08	9.55	8.28	9.71	10.06	8.27%	9.35%
Sprint Capital	6.9	852060AG7	Nts	05/01/19	4	B+	6.78	6.67	6.68	6.66	6.63	6.73	6.96	6.88	7.86	7.20	7.84	8.49	7.12%	7.84%
Sprint Capital	8.75	852060AT9	Nts	03/15/32	17	B+	8.49	8.33	8.47	8.39	8.62	8.95	9.27	9.30	11.21	9.74	11.32	11.66	9.48%	10.91%
NII Holdings, Inc.	2.88	62913FAC6	Nt Conv 144a	02/01/34	19	NR	3.82	3.82	3.82	3.82	3.82	3.82	3.82	3.82	3.82	3.82	3.82	3.82	3.82%	3.82%
Pacific Bell	6.625	694032AX1	Deb	10/15/34	19	NR	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55%	6.55%
Southwest'n Bell Tel	7.375	845335BX5	Deb	07/15/27	12	NR	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17%	7.17%
Tele-Communications(Old)	9.88	879240AR0	Sr Deb	06/15/22	7	NR	7.01	7.12	7.09	7.15	7.29	7.44	7.39	7.37	7.34	7.48	7.39	7.42	7.29%	7.43%

102    102    102    102    99    98    97    96    96    96    96    95    95

NOTES:

Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.

means the data was not available in S&P Guide

means issuance matured or called

All Bonds	
Annual	4th Qtr

All Bonds

All Ratings 6.39% 6.60%

Investment Grade (BBB- & Above) 6.13% 6.25%

Bonds With 20 or More Years to Maturity

All Ratings 6.00% 6.22%

Investment Grade (BBB- & Above) 5.90% 6.10%

**Say: 6.20%**

**MONTANA DEPARTMENT OF REVENUE**

**Support for Cost of Debt Component - Current Yield From Standard & Poor's Bond Guide  
Industry: Telecommunications - Cable  
2016 Assessment Year**

Company Name	Coupon	CUSIP	Issue	Maturity Date	Years to Maturity	S&P Bond Rating	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Avg Full Year	Avg 4th QTR
AT&T Inc.	6.8	00206RAB8	Nts	05/15/36	21	A-	4.48	4.82	4.85	4.87	5.22	5.57	5.42	5.55	5.42	5.44	5.42	5.47	5.21%	5.44%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/37	22	A-	4.48	4.82	4.85	4.87	5.22	5.57	5.42	5.55	5.42	5.44	5.42	5.47	5.21%	5.44%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/38	23	A-	4.50	4.88	4.88	4.87	5.19	5.58	5.41	5.62	5.50	5.45	5.41	5.45	5.23%	5.44%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/38	23	A-	4.46	4.84	4.85	4.84	5.19	5.62	5.38	5.62	5.60	5.55	5.51	5.55	5.25%	5.54%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	03/01/35	20	A-	4.26	4.37	4.44	4.51	4.81	5.08	4.97	5.18	5.00	5.15	5.12	5.43	4.86%	5.23%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/45	30	A-	4.84	5.15	5.14	5.24	5.47	5.84	5.60	5.49	5.44	5.74	5.79	5.94	5.47%	5.82%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/95	80	A-	4.90	5.20	5.55	5.66	6.13	6.51	6.24	6.23	6.18	6.29	6.33	6.27	5.96%	6.30%
Pacific Bell	7.375	694032AV5	Deb	07/15/43	28	A-	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13%	7.13%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/37	22	A-	4.30	4.66	4.56	4.50	5.08	5.56	5.45	5.60	5.50	5.53	5.92	6.05	5.23%	5.83%
GTE Corp	8.75	362320AT0	Deb	11/01/21	6	BBB+	3.26	3.87	3.49	3.46	3.61	3.86	3.71	3.58	3.45	3.60	3.91	4.11	3.66%	3.87%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/37	22	BBB+	4.32	4.39	4.57	4.71	4.97	5.34	5.16	5.22	5.18	5.19	5.23	5.19	4.96%	5.20%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/35	20	BBB+	4.19	4.39	4.46	4.53	4.82	5.25	5.12	5.26	5.10	5.04	5.02	5.19	4.86%	5.08%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/43	28	BBB-	6.91	6.91	6.91	6.92	6.96	7.27	7.16	7.29	7.32	7.32	7.09	7.56	7.14%	7.32%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/35	20	BBB-	6.96	6.89	6.91	6.94	6.99	7.01	7.15	7.32	7.34	7.27	7.64	7.41	7.15%	7.44%
Embarq Corp.	8	29078EAA3	Nts	06/01/36	21	BB	6.66	6.55	6.36	6.34	6.71	6.99	7.13	7.44	7.68	7.49	7.51	7.70	7.05%	7.57%
							15	15	15	15	15	15	15	15	15	15	15	15		

NOTES:

Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.

means the data was not available in S&P Guide  
means issuance matured or called

All Bonds		
	Annual	4th Qtr
<u>All Bonds</u>		
All Ratings	5.62%	5.91%
Investment Grade (BBB- & Above)	5.52%	5.79%
<u>Bonds With 20 or More Years to Maturity</u>		
All Ratings	5.76%	6.06%
Investment Grade (BBB- & Above)	5.67%	5.94%
<b>Say:</b>	<b>6.00%</b>	