

Capitalization Rate Study

January, 2015



Oklahoma Tax Commission

Ad Valorem Tax Division

Public Service Section

P. O. Box 269060 – Oklahoma City, OK

73216-9060 – 405.319.8200

OKLAHOMA TAX COMMISSION

AD VALOREM DIVISION
PHONE (405) 319-8200



POST OFFICE BOX 269060
OKLAHOMA CITY, OK 73126-9060
FACSIMILE (405) 521-0166

April 30, 2015

The Public Service Section of the Ad Valorem Division acknowledges the contribution of those individuals taking part in the development of our capitalization rates for 2014. Through the Capitalization Rate Conference, the draft posted on our website and the following comment period, participation has been helpful and positive.

This is an ongoing process, concepts in valuation methodology change, continuing the education process. It is our intent to be as transparent as possible while being receptive to any input given.

We look forward to your continued participation in this process.

Sincerely,

Oklahoma Tax Commission
Ad Valorem Division

A handwritten signature in blue ink, appearing to read "Mike Isbell".

Mike Isbell, Administrator
Public Service Section

EXECUTIVE SUMMARY

Executive Summary

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

This booklet contains a study of each of the eight state assessed industry groups in Oklahoma. Industry data was gathered by group as identified by Value Line Investment Survey published from the period of November 2014 through January 2015.

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

Authority for Valuation

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

Band of Investment, Capital Structure

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

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

Cost of Debt

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

Executive Summary

Cost of Capital

Equity rate calculations were derived upon review of Discounted Cash Flow, Capital Asset Pricing Model (CapM), and Earnings Price Ratios.

Discounted Cash Flow (Gordon Growth Model) Allows for the calculation of two rates within its model utilizing the dividend yield, dividend growth rate estimates and earnings growth rate estimates as listed in Value Line Investment Survey. Cost of capital being calculated for dividends by adding the dividend yield and the dividend estimate. Similarly the cost of capital for earnings is calculated by adding the dividend yield and the earnings estimate. No calculation is utilized where yield or growth estimates for a given company are not available as provided by our sources.

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

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

Flotation Costs

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

Utilization of Other Studies and Data

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

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

Industry Capitalization Rate Summary

<i>Industry</i>	<i>Equity Rate</i>	<i>Debt Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>	
<i>Airline</i>						
	<i>Cargo</i>	13.40%	4.91%	90.77%	9.23%	12.62%
	<i>Passenger</i>	13.50%	4.91%	76.60%	23.40%	11.49%
<i>Electric</i>		10.10%	4.80%	63.54%	36.46%	8.17%
<i>Fluid Pipeline (Petroleum Integrated)</i>		12.20%	4.91%	90.65%	9.35%	11.52%
<i>Gas Distribution (Natural Gas Utility)</i>		10.10%	4.80%	63.39%	36.61%	8.16%
<i>Gas Transmission (Natural Gas Diversified)</i>		12.00%	4.91%	80.55%	19.45%	10.62%
<i>Oil/Gas Distribution</i>		11.70%	4.91%	61.62%	38.38%	9.09%
<i>Pipeline MLPs</i>		12.50%	4.91%	77.31%	22.69%	10.78%
<i>Railroad</i>		13.10%	4.91%	88.65%	11.35%	12.17%
<i>Telecommunications Services</i>		12.65%	4.91%	66.60%	33.40%	10.06%
<i>Telecommunications Utility</i>		13.20%	4.80%	50.77%	49.23%	9.06%
<i>Water</i>		10.00%	4.42%	65.53%	34.47%	8.08%

Airline Industry

2015 Capitalization Rate Study Airline Industry Notes

- Recognizing the different operational services as provided by this industry group, it was broken out into two segments, cargo and passenger service.
- From the passenger service segment, Bristow Group, Inc. was excluded as their core business is the helicopter transport of personnel from onshore bases to offshore drilling rigs, platforms, and other installations. US Airways Group merged with AMR Corporation to form American Airlines Group.
- Staff considered capitalization studies gathered and submitted by:

No Submissions

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Airline</i>				
<i>Cargo</i>	13.40%	90.77%	9.23%	12.62%
<i>Passenger</i>	13.50%	76.60%	23.40%	11.49%

Industry Equity Rate Summary

Airline

Cargo

CapM Ex Post Equity Rate	10.69%
CapM Ex Ante Equity Rate	14.46%
DCF (Dividend) Equity Rate	11.30%
DCF (Earnings) Equity Rate	14.30%
Earnings Price Ratio	8.92%

Passenger

CapM Ex Post Equity Rate	9.99%
CapM Ex Ante Equity Rate	13.42%
DCF (Dividend) Equity Rate	22.33%
DCF (Earnings) Equity Rate	16.08%
Earnings Price Ratio	11.58%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Airline</i>					
<i>Cargo</i>	9.99%	13.42%	1.10	10.69%	14.46%
<i>Passenger</i>	9.99%	13.42%	1.00	9.99%	13.42%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Airline								
Cargo	Atlas Air Worldwide Holdings, Inc.	B+	1,000,000,000	0.00%	0.00%	3.50%		
	FedEx Corporation	A+	48,700,000,000	0.50%	12.50%	15.50%	13.00%	16.00%
	United Parcel Service, Inc.	A	96,000,000,000	2.60%	7.00%	10.00%	9.60%	12.60%
Median			48,700,000,000				11.30%	14.30%
Arithmetic Mean			48,566,666,667				11.30%	14.30%
Passenger								
Passenger	Alaska Air Group, Inc.	B++	7,500,000,000	0.90%	0.00%	9.50%		10.40%
	Allegiant Travel Company	B++	2,300,000,000	0.00%	0.00%	16.50%		
	American Airlines Group	B	32,300,000,000	0.90%	0.00%	0.00%		
	Copa Holdings S.A.	B+	5,200,000,000	3.30%	12.50%	11.00%	15.80%	14.30%
	Delta Air Lines, Inc.	B+	37,500,000,000	0.80%	0.00%	16.00%		16.80%
	Hawaiian Holdings, Inc.	B	1,000,000,000	0.00%	0.00%	12.50%		
	JetBlue Airways Corp.	C++	3,700,000,000	0.00%	0.00%	14.50%		
	SkyWest, Inc.	B	600,000,000	1.30%	0.00%	22.00%		23.30%
	Southwest Airlines	B++	26,700,000,000	0.60%	31.00%	17.00%	31.60%	17.60%
	Spirit Airlines, Inc.	B++	5,600,000,000	0.00%	0.00%	20.50%		
	United Continental Holdings, Inc.	C++	21,500,000,000	0.00%	0.00%	21.00%		
WestJet Airlines Ltd. (TSE)	B++	3,900,000,000	1.60%	18.00%	12.50%	19.60%	14.10%	
Median			5,400,000,000				19.60%	15.55%
Arithmetic Mean			12,316,666,667				22.33%	16.08%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Airline						
Cargo	Atlas Air Worldwide Holdings, Inc.	B+	1,000,000,000	41.86	5.00	11.94%
	FedEx Corporation	A+	48,700,000,000	172.00	12.50	7.27%
	United Parcel Service, Inc.	A	96,000,000,000	106.03	8.00	7.55%
Median			48,700,000,000			7.55%
Arithmetic Mean			48,566,666,667			8.92%
Passenger						
Passenger	Alaska Air Group, Inc.	B++	7,500,000,000	55.86	5.50	9.85%
	Allegiant Travel Company	B++	2,300,000,000	134.91	9.50	7.04%
	American Airlines Group	B	32,300,000,000	45.05	9.00	19.98%
	Copa Holdings S.A.	B+	5,200,000,000	116.07	14.00	12.06%
	Delta Air Lines, Inc.	B+	37,500,000,000	44.79	5.20	11.61%
	Hawaiian Holdings, Inc.	B	1,000,000,000	18.76	2.25	11.99%
	JetBlue Airways Corp.	C++	3,700,000,000	12.72	1.50	11.79%
	SkyWest, Inc.	B	600,000,000	12.14	1.75	14.42%
	Southwest Airlines	B++	26,700,000,000	39.67	3.25	8.19%
	Spirit Airlines, Inc.	B++	5,600,000,000	76.33	5.50	7.21%
	United Continental Holdings, Inc.	C++	21,500,000,000	58.29	8.20	14.07%
	WestJet Airlines Ltd. (TSE)	B++	3,900,000,000	30.69	3.30	10.75%
Median			5,400,000,000			11.70%
Arithmetic Mean			12,316,666,667			11.58%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
Airline							
Cargo	Atlas Air Worldwide Holdings, Inc.	B+	1,000,000,000	1,829,100,000	1.83	35.35%	64.65%
	FedEx Corporation	A+	48,700,000,000	4,735,000,000	0.10	91.14%	8.86%
	United Parcel Service, Inc.	A	96,000,000,000	9,858,000,000	0.10	90.69%	9.31%
Median			48,700,000,000	4,735,000,000	0.10	90.69%	9.31%
Arithmetic Mean			48,566,666,667	5,474,033,333	0.68	72.39%	27.61%
Weighted Average			79,538,023,336	8,090,539,465		90.77%	9.23%
Passenger							
Passenger	Alaska Air Group, Inc.	B++	7,500,000,000	710,000,000	0.09	91.35%	8.65%
	Allegiant Travel Company	B++	2,300,000,000	554,400,000	0.24	80.58%	19.42%
	American Airlines Group	B	32,300,000,000	15,651,000,000	0.48	67.36%	32.64%
	Copa Holdings S.A.	B+	5,200,000,000	982,200,000	0.19	84.11%	15.89%
	Delta Air Lines, Inc.	B+	37,500,000,000	8,970,000,000	0.24	80.70%	19.30%
	Hawaiian Holdings, Inc.	B	1,000,000,000	885,500,000	0.89	53.04%	46.96%
	JetBlue Airways Corp.	C++	3,700,000,000	2,088,000,000	0.56	63.93%	36.07%
	SkyWest, Inc.	B	600,000,000	1,467,500,000	2.45	29.02%	70.98%
	Southwest Airlines	B++	26,700,000,000	2,125,000,000	0.08	92.63%	7.37%
	Spirit Airlines, Inc.	B++	5,600,000,000	0	0.00	100.00%	0.00%
	United Continental Holdings, Inc.	C++	21,500,000,000	10,655,000,000	0.50	66.86%	33.14%
	WestJet Airlines Ltd. (TSE)	B++	3,900,000,000	1,051,700,000	0.27	78.76%	21.24%
Median			5,400,000,000	1,259,600,000	0.26	79.67%	20.33%
Arithmetic Mean			12,316,666,667	3,761,691,667	0.50	74.03%	25.97%
Weighted Average			25,540,460,081	7,801,238,769		76.60%	23.40%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
Airline, Selected Comparables						
Cargo	Atlas Air Worldwide Holdings, Inc.	1.60	1.65	1.65	1.60	1.35
	FedEx Corporation	1.00	1.00	1.00	1.05	1.05
	United Parcel Service, Inc.	0.85	0.85	0.85	0.90	0.90
Median		1.00	1.00	1.00	1.05	1.05
Arithmetic Mean		1.15	1.17	1.17	1.18	1.10
<hr/>						
Passenger	Alaska Air Group, Inc.	1.15	1.15	1.10	1.05	1.05
	Allegiant Travel Company	0.80	0.80	0.75	0.65	0.70
	American Airlines Group					
	Copa Holdings S.A.					0.95
	Delta Air Lines, Inc.	1.50	1.40	1.40	1.30	1.15
	Hawaiian Holdings, Inc.		1.10	1.10	1.10	1.00
	JetBlue Airways Corp.	1.25	1.25	1.25	1.25	1.05
	SkyWest, Inc.	1.20	1.10	1.15	1.10	1.00
	Southwest Airlines	0.95	1.00	1.00	1.05	1.05
	Spirit Airlines, Inc.				1.00	1.15
	United Continental Holdings, Inc.	1.80	1.70	1.60	1.40	1.15
WestJet Airlines Ltd. (TSE)					0.75	
Median		1.20	1.13	1.13	1.10	1.05
Arithmetic Mean		1.24	1.19	1.17	1.10	1.00

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Airline, Value Line</i>						
	Alaska Air Group, Inc.	1.15	1.15	1.10	1.05	1.05
	Allegiant Travel Co.	0.80	0.80	0.75	0.65	0.70
	American Airlines Group					
	Atlas Air Worldwide Holdings, Inc.	1.60	1.65	1.65	1.60	1.35
	Bristow Group, Inc.	1.35	1.30	1.25	1.25	1.05
	Copa Holdings S.A.		1.00	0.95	0.95	0.95
	Delta Air Lines, Inc.	1.50	1.40	1.40	1.30	1.15
	FedEx Corporation	1.00	1.00	1.00	1.05	1.05
	Hawaiian Holdings, Inc.		1.10	1.10	1.10	1.00
	JetBlue Airways Corp.	1.25	1.25	1.25	1.25	1.05
	Skywest, Inc.	1.20	1.10	1.15	1.10	1.00
	Southwest Airlines	0.95	1.00	1.00	1.05	1.05
	Spirit Airlines, Inc.				1.00	1.15
	United Continental Holdings, Inc.	1.80	1.70	1.60	1.40	1.15
	United Parcel Service, Inc.	0.85	0.85	0.85	0.90	0.90
	WestJet Airlines Ltd. (TSE)					0.75
<i>Median</i>		1.20	1.10	1.10	1.08	1.05
<i>Arithmetic Mean</i>		1.22	1.18	1.16	1.12	1.02

Mergents 2014 Corporate Bond Yield Averages

<i>Month</i>	<i>Corporate by Groups</i>		<i>Public Utility Bonds</i>			<i>Industrial Bonds</i>			
	<i>Public Utility</i>	<i>Industrial</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>	<i>Aaa</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Electric Industry

2015 Capitalization Rate Study Electric Industry Notes

- From the Electric Industry segment, The Value Line Investment Survey list of companies was left intact.
- Staff considered capitalization studies gathered and submitted by:

No Submissions

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Electric</i>	10.10%	63.54%	36.46%	8.17%

Industry Equity Rate Summary

Electric

CapM Ex Post Equity Rate	8.31%
CapM Ex Ante Equity Rate	10.92%
DCF (Dividend) Equity Rate	8.83%
DCF (Earnings) Equity Rate	9.63%
Earnings Price Ratio	6.79%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Electric</i>	9.99%	13.42%	0.76	8.31%	10.92%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Electric								
	Allete, Inc.	A	2,400,000,000	3.80%	4.00%	6.00%	7.80%	9.80%
	Alliant Energy Corp.	A	7,200,000,000	3.20%	4.50%	6.00%	7.70%	9.20%
	Ameren Corp.	B++	11,000,000,000	3.80%	2.00%	4.50%	5.80%	8.30%
	American Electric Power Company, Inc.	A	29,000,000,000	3.70%	4.50%	4.50%	8.20%	8.20%
	CenterPoint Energy, Inc.	B++	10,000,000,000	4.40%	8.00%	5.00%	12.40%	9.40%
	Cleco Corporation	A	3,300,000,000	3.00%	7.50%	2.00%	10.50%	5.00%
	CMS Energy Corporation	B++	9,400,000,000	3.40%	6.00%	6.50%	9.40%	9.90%
	DTE Energy Company	B++	15,000,000,000	3.40%	5.00%	5.50%	8.40%	8.90%
	Empire District Electric Company	B++	1,200,000,000	3.70%	4.50%	4.00%	8.20%	7.70%
	Entergy Corporation	B++	15,000,000,000	4.00%	2.50%	1.50%	6.50%	5.50%
	Great Plains Energy Incorporated	B+	4,200,000,000	3.70%	5.50%	6.00%	9.20%	9.70%
	Integrus Energy Group, Inc.	A	6,100,000,000	3.60%	0.00%	0.50%		4.10%
	ITC Holdings Corp.	B++	6,100,000,000	1.80%	12.50%	15.50%	14.30%	17.30%
	MGE Energy Inc.	A	1,600,000,000	2.40%	4.00%	9.00%	6.40%	11.40%
	OGE Energy Corp.	A+	7,100,000,000	2.90%	9.50%	5.50%	12.40%	8.40%
	Otter Tail Corporation	B+	1,100,000,000	4.10%	1.50%	15.50%	5.60%	19.60%
	Vectren Corp.	A	3,800,000,000	3.30%	3.50%	9.00%	6.80%	12.30%
	Westar Energy, Inc.	B++	5,200,000,000	3.50%	3.00%	6.00%	6.50%	9.50%
	Wisconsin Energy Corporation	A+	11,000,000,000	3.30%	9.50%	5.50%	12.80%	8.80%
Median			6,100,000,000				8.20%	9.20%
Arithmetic Mean			7,878,947,368				8.83%	9.63%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
<i>Electric</i>						
	Allete, Inc.	A	2,400,000,000	53.22	3.75	7.05%
	Alliant Energy Corp.	A	7,200,000,000	64.63	4.10	6.34%
	Ameren Corp.	B++	11,000,000,000	43.87	3.00	6.84%
	American Electric Power Company, Inc.	A	29,000,000,000	58.87	4.00	6.79%
	CenterPoint Energy, Inc.	B++	10,000,000,000	23.45	1.75	7.46%
	Cleco Corporation	A	3,300,000,000	53.86	3.00	5.57%
	CMS Energy Corporation	B++	9,400,000,000	34.01	2.25	6.62%
	DTE Energy Company	B++	15,000,000,000	83.31	5.25	6.30%
	Empire District Electric Company	B++	1,200,000,000	28.73	1.75	6.09%
	Entergy Corporation	B++	15,000,000,000	83.98	6.75	8.04%
	Great Plains Energy Incorporated	B+	4,200,000,000	26.95	2.00	7.42%
	Integrus Energy Group, Inc.	A	6,100,000,000	76.03	3.75	4.93%
	ITC Holdings Corp.	B++	6,100,000,000	39.12	3.00	7.67%
	MGE Energy Inc.	A	1,600,000,000	46.25	3.20	6.92%
	OGE Energy Corp.	A+	7,100,000,000	35.82	2.50	6.98%
	Otter Tail Corporation	B+	1,100,000,000	29.90	2.30	7.69%
	Vectren Corp.	A	3,800,000,000	45.46	3.00	6.60%
	Westar Energy, Inc.	B++	5,200,000,000	39.79	2.90	7.29%
	Wisconsin Energy Corporation	A+	11,000,000,000	50.95	3.25	6.38%
<i>Median</i>			6,100,000,000			6.84%
<i>Arithmetic Mean</i>			7,878,947,368			6.79%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
<i>Electric</i>							
	Allete, Inc.	A	2,400,000,000	1,289,200,000	0.54	65.05%	34.95%
	Alliant Energy Corp.	A	7,200,000,000	1,796,000,000	0.25	80.04%	19.96%
	Ameren Corp.	B++	11,000,000,000	5,825,000,000	0.53	65.38%	34.62%
	American Electric Power Company, Inc.	A	29,000,000,000	15,677,000,000	0.54	64.91%	35.09%
	CenterPoint Energy, Inc.	B++	10,000,000,000	7,797,000,000	0.78	56.19%	43.81%
	Cleco Corporation	A	3,300,000,000	1,320,200,000	0.40	71.43%	28.57%
	CMS Energy Corporation	B++	9,400,000,000	8,171,000,000	0.87	53.50%	46.50%
	DTE Energy Company	B++	15,000,000,000	7,909,000,000	0.53	65.48%	34.52%
	Empire District Electric Company	B++	1,200,000,000	743,300,000	0.62	61.75%	38.25%
	Entergy Corporation	B++	15,000,000,000	11,635,000,000	0.78	56.32%	43.68%
	Great Plains Energy Incorporated	B+	4,200,000,000	3,488,100,000	0.83	54.63%	45.37%
	Integrus Energy Group, Inc.	A	6,100,000,000	2,956,300,000	0.48	67.36%	32.64%
	ITC Holdings Corp.	B++	6,100,000,000	3,755,500,000	0.62	61.89%	38.11%
	MGE Energy Inc.	A	1,600,000,000	396,300,000	0.25	80.15%	19.85%
	OGE Energy Corp.	A+	7,100,000,000	2,509,700,000	0.35	73.88%	26.12%
	Otter Tail Corporation	B+	1,100,000,000	498,500,000	0.45	68.81%	31.19%
	Vectren Corp.	A	3,800,000,000	1,572,300,000	0.41	70.73%	29.27%
	Westar Energy, Inc.	B++	5,200,000,000	3,215,400,000	0.62	61.79%	38.21%
	Wisconsin Energy Corporation	A+	11,000,000,000	4,569,600,000	0.42	70.65%	29.35%
<i>Median</i>			6,100,000,000	3,215,400,000	0.53	65.38%	34.62%
<i>Arithmetic Mean</i>			7,878,947,368	4,480,231,579	0.54	65.79%	34.21%
<i>Weighted Average</i>			13,219,839,679	7,584,990,114		63.54%	36.46%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Electric, Selected Comparables</i>						
	Allete, Inc.	0.70	0.70	0.70	0.75	0.80
	Alliant Energy Corp.	0.70	0.75	0.70	0.75	0.80
	Ameren Corp.	0.80	0.80	0.80	0.80	0.75
	American Electric Power, Inc.	0.70	0.70	0.65	0.70	0.70
	CenterPoint Energy, Inc.	0.80	0.80	0.75	0.80	0.75
	Cleco Corporation	0.65	0.70	0.65	0.70	0.80
	CMS Energy Corporation	0.75	0.75	0.75	0.70	0.70
	DTE Energy Company	0.75	0.75	0.75	0.80	0.75
	Empire District Electric Co.	0.70	0.70	0.65	0.70	0.70
	Energy Corporation	0.70	0.70	0.70	0.70	0.70
	Great Plains Energy, Inc.	0.75	0.75	0.75	0.85	0.85
	Integrus Energy Group, Inc.	0.90	0.90	0.90	1.00	0.80
	ITC Holdings Corp.	0.80	0.80	0.75	0.75	0.65
	MGE Energy Inc.	0.65	0.60	0.60	0.65	0.70
	OGE Energy Corporation	0.75	0.80	0.75	0.85	0.90
	Otter Tail Corporation	0.95	0.90	0.90	0.95	0.90
	Vectren, Corporation	0.70	0.70	0.70	0.70	0.80
	Westar Energy, Inc.	0.75	0.75	0.70	0.75	0.75
	Wisconsin Energy Corporation	0.65	0.65	0.60	0.65	0.65
<i>Median</i>		0.75	0.75	0.70	0.75	0.75
<i>Arithmetic Mean</i>		0.74	0.75	0.72	0.77	0.76

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	2011 <i>Value Line</i> <i>Levered Beta</i>	2012 <i>Value Line</i> <i>Levered Beta</i>	2013 <i>Value Line</i> <i>Levered Beta</i>	2014 <i>Value Line</i> <i>Levered Beta</i>	2015 <i>Value Line</i> <i>Levered Beta</i>
<i>Electric, Value Line</i>						
	Allete, Inc.	0.70	0.70	0.70	0.75	0.80
	Alliant Energy Corp.	0.70	0.75	0.70	0.75	0.80
	Ameren Corp.	0.80	0.80	0.80	0.80	0.75
	American Electric Power, Inc.	0.70	0.70	0.65	0.70	0.70
	CenterPoint Energy, Inc.	0.80	0.80	0.75	0.80	0.75
	Cleco Corporation	0.65	0.70	0.65	0.70	0.80
	CMS Energy Corporation	0.75	0.75	0.75	0.70	0.70
	DTE Energy Company	0.75	0.75	0.75	0.80	0.75
	Empire District Electric Co.	0.70	0.70	0.65	0.70	0.70
	Energy Corporation	0.70	0.70	0.70	0.70	0.70
	Great Plains Energy, Inc.	0.75	0.75	0.75	0.85	0.85
	Integrus Energy Group, Inc.	0.90	0.90	0.90	1.00	0.80
	ITC Holdings Corp.	0.80	0.80	0.75	0.75	0.65
	MGE Energy Inc.	0.65	0.60	0.60	0.65	0.70
	OGE Energy Corporation	0.75	0.80	0.75	0.85	0.90
	Otter Tail Corporation	0.95	0.90	0.90	0.95	0.90
	Vectren, Corporation	0.70	0.70	0.70	0.70	0.80
	Westar Energy, Inc.	0.75	0.75	0.70	0.75	0.75
	Wisconsin Energy Corporation	0.65	0.65	0.60	0.65	0.65
	Median	0.75	0.75	0.70	0.75	0.75
	Arithmetic Mean	0.74	0.75	0.72	0.77	0.76

Mergents 2014 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Fluid Pipeline

2015 Capitalization Rate Study Fluid Pipeline (Petroleum Integrated) Industry Notes

- From the Fluid Pipeline (Petroleum Integrated) Industry segment, Petrobras (ADR) was excluded. While traded, the Brazilian Government is a majority holder of the common (voting) stock for this company.
- Staff considered capitalization studies gathered and submitted by:

Enterprise Products Company

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Fluid Pipeline (Petroleum Integrated)</i>	12.20%	90.65%	9.35%	11.52%

Industry Equity Rate Summary

Fluid Pipeline (Petroleum Integrated)

CapM Ex Post Equity Rate	11.18%
CapM Ex Ante Equity Rate	15.20%
DCF (Dividend) Equity Rate	14.37%
DCF (Earnings) Equity Rate	10.69%
Earnings Price Ratio	12.53%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Fluid Pipeline (Petroleum Integrated)</i>	9.99%	13.42%	1.17	11.18%	15.20%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Fluid Pipeline (Petroleum Integrated)								
	BP P.L.C. (ADR)	B+	128,000,000,000	5.80%	6.00%	4.00%	11.80%	9.80%
	Cenovus Energy Inc.	B++	21,300,000,000	4.00%	8.00%	10.00%	12.00%	14.00%
	Chevron Corp	A++	222,000,000,000	3.60%	7.00%	2.50%	10.60%	6.10%
	Exxon Mobil Corp.	A++	405,000,000,000	3.00%	7.50%	6.50%	10.50%	9.50%
	Hess Corporation	A	25,300,000,000	1.30%	20.00%	0.00%	21.30%	
	HollyFrontier Corporation	B++	8,700,000,000	3.00%	18.50%	2.00%	21.50%	5.00%
	Husky Energy, Inc.	A	26,300,000,000	4.50%	0.00%	9.50%		14.00%
	Imperial Oil	A+	41,300,000,000	1.00%	4.00%	6.50%	5.00%	7.50%
	Marathon Petroleum Corp	A+	26,900,000,000	2.10%	18.00%	12.50%	20.10%	14.60%
	Murphy Oil Corporation	A	9,400,000,000	2.60%	7.00%	7.50%	9.60%	10.10%
	Occidental Petroleum	A++	68,400,000,000	3.30%	9.00%	3.00%	12.30%	6.30%
	Phillips 66	A	44,000,000,000	2.80%	0.00%	0.00%		
	Royal Dutch Shell (ADR)	A++	236,000,000,000	5.10%	3.00%	5.50%	8.10%	10.60%
	Suncor Energy Inc	A	58,600,000,000	2.80%	16.50%	11.50%	19.30%	14.30%
	Tesoro Corporation	B+	10,100,000,000	1.50%	26.00%	12.50%	27.50%	14.00%
	Total S.A. (ADR)	A++	137,000,000,000	5.30%	4.00%	4.00%	9.30%	9.30%
	Valero Energy Corp.	A	26,500,000,000	2.20%	14.50%	13.00%	16.70%	15.20%
Median			41,300,000,000				12.00%	10.10%
Arithmetic Mean			87,929,411,765				14.37%	10.69%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Fluid Pipeline (Petroleum Integrated)						
	BP P.L.C. (ADR)	B+	128,000,000,000	42.04	7.50	17.84%
	Cenovus Energy Inc.	B++	21,300,000,000	28.07	2.45	8.73%
	Chevron Corp	A++	222,000,000,000	117.59	14.50	12.33%
	Exxon Mobil Corp.	A++	405,000,000,000	95.72	11.50	12.01%
	Hess Corporation	A	25,300,000,000	84.67	5.30	6.26%
	HollyFrontier Corporation	B++	8,700,000,000	44.42	7.00	15.76%
	Husky Energy, Inc.	A	26,300,000,000	26.76	3.65	13.64%
	Imperial Oil	A+	41,300,000,000	48.78	5.25	10.76%
	Marathon Petroleum Corp	A+	26,900,000,000	96.12	15.50	16.13%
	Murphy Oil Corporation	A	9,400,000,000	52.99	7.00	13.21%
	Occidental Petroleum	A++	68,400,000,000	88.26	9.00	10.20%
	Phillips 66	A	44,000,000,000	79.42	8.40	10.58%
	Royal Dutch Shell (ADR)	A++	236,000,000,000	74.78	10.25	13.71%
	Suncor Energy Inc	A	58,600,000,000	40.32	4.50	11.16%
	Tesoro Corporation	B+	10,100,000,000	77.84	8.10	10.41%
	Total S.A. (ADR)	A++	137,000,000,000	60.43	8.50	14.07%
	Valero Energy Corp.	A	26,500,000,000	50.81	8.25	16.24%
Median			41,300,000,000			12.33%
Arithmetic Mean			87,929,411,765			12.53%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
Fluid Pipeline (Petroleum Integrated)							
	BP P.L.C. (ADR)	B+	128,000,000,000	47,200,000,000	0.37	73.06%	26.94%
	Cenovus Energy Inc.	B++	21,300,000,000	5,271,000,000	0.25	80.16%	19.84%
	Chevron Corp	A++	222,000,000,000	23,601,000,000	0.11	90.39%	9.61%
	Exxon Mobil Corp.	A++	405,000,000,000	11,591,000,000	0.03	97.22%	2.78%
	Hess Corporation	A	25,300,000,000	5,929,000,000	0.23	81.01%	18.99%
	HollyFrontier Corporation	B++	8,700,000,000	1,039,400,000	0.12	89.33%	10.67%
	Husky Energy, Inc.	A	26,300,000,000	3,977,000,000	0.15	86.86%	13.14%
	Imperial Oil	A+	41,300,000,000	3,999,000,000	0.10	91.17%	8.83%
	Marathon Petroleum Corp	A+	26,900,000,000	6,238,000,000	0.23	81.18%	18.82%
	Murphy Oil Corporation	A	9,400,000,000	3,986,300,000	0.42	70.22%	29.78%
	Occidental Petroleum	A++	68,400,000,000	6,837,000,000	0.10	90.91%	9.09%
	Phillips 66	A	44,000,000,000	6,178,000,000	0.14	87.69%	12.31%
	Royal Dutch Shell (ADR)	A++	236,000,000,000	37,065,000,000	0.16	86.43%	13.57%
	Suncor Energy Inc	A	58,600,000,000	10,603,000,000	0.18	84.68%	15.32%
	Tesoro Corporation	B+	10,100,000,000	2,938,000,000	0.29	77.47%	22.53%
	Total S.A. (ADR)	A++	137,000,000,000	43,242,000,000	0.32	76.01%	23.99%
	Valero Energy Corp.	A	26,500,000,000	5,783,000,000	0.22	82.09%	17.91%
Median			41,300,000,000	6,178,000,000	0.18	84.68%	15.32%
Arithmetic Mean			87,929,411,765	13,263,394,118	0.20	83.87%	16.13%
Weighted Average			213,667,112,657	22,034,358,376		90.65%	9.35%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Fluid Pipeline (Petroleum Integrated), Selected Comparables</i>						
	BP P.L.C. (ADR)	1.00	1.05	1.05	1.10	1.15
	Cenovus Energy Inc.					1.05
	Chevron Corp	0.90	0.95	0.95	1.00	1.10
	Exxon Mobil Corp.	0.75	0.80	0.80	0.85	0.95
	Hess Corporation	1.20	1.25	1.30	1.25	1.40
	HollyFrontier Corporation	1.20			1.25	1.20
	Husky Energy, Inc.					0.90
	Imperial Oil		1.15	1.15	1.10	1.15
	Marathon Petroleum Corp	1.25			1.30	1.20
	Murphy Oil Corporation	1.20	1.20	1.25	1.20	1.25
	Occidental Petroleum	1.15	1.15	1.20	1.15	1.15
	Phillips 66					1.25
	Royal Dutch Shell (ADR)	1.05	1.05	1.05	1.05	1.05
	Suncor Energy Inc		1.25	1.30	1.25	1.25
	Tesoro Corporation	1.25	1.25	1.30	1.20	1.35
	Total S.A. (ADR)	1.10	1.10	1.10	1.15	1.20
	Valero Energy Corp.	1.25	1.30	1.35	1.25	1.30
Median		1.18	1.15	1.18	1.18	1.20
Arithmetic Mean		1.11	1.13	1.15	1.15	1.17

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Fluid Pipeline (Petroleum Integrated), Value Line</i>						
	BP P.L.C. (ADR)	1.00	1.05	1.05	1.10	1.15
	Cenovus Energy Inc.					1.05
	Chevron Corp	0.90	0.95	0.95	1.00	1.10
	Exxon Mobil Corp.	0.75	0.80	0.80	0.85	0.95
	Hess Corporation	1.20	1.25	1.30	1.25	1.40
	HollyFrontier Corporation	1.20			1.25	1.20
	Husky Energy, Inc.					0.90
	Imperial Oil		1.15	1.15	1.10	1.15
	Marathon Petroleum Corp.	1.25			1.30	1.20
	Murphy Oil Corporation	1.20	1.20	1.25	1.20	1.25
	Occidental Petroleum	1.15	1.15	1.20	1.15	1.15
	Petrobras (ADR)	1.60	1.55	1.55	1.45	1.35
	Phillips 66					1.25
	Royal Dutch Shell (ADR)	1.05	1.05	1.05	1.05	1.05
	Suncor Energy, Inc.		1.25	1.30	1.25	1.25
	Tesoro Corporation	1.25	1.25	1.30	1.20	1.35
	Total S.A. (ADR)	1.10	1.10	1.10	1.15	1.20
	Valero Energy Corp.	1.25	1.30	1.35	1.25	1.30
<i>Median</i>		1.20	1.15	1.20	1.20	1.20
<i>Arithmetic Mean</i>		1.15	1.16	1.18	1.17	1.18

Mergents 2014 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Gas Distribution

2015 Capitalization Rate Study Gas Distribution (Natural Gas Utility) Industry Notes

- From the Natural Gas Utility Industry segment, UGI Corp. was excluded as their primary business is the marketing and delivery of propane gas.
- Staff considered capitalization studies gathered and submitted by:

K.E. Andrews & Company for Southern Star Central Gas Pipeline

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Gas Distribution (Natural Gas Utility)</i>	10.10%	63.39%	36.61%	8.16%

Industry Equity Rate Summary

Gas Distribution (Natural Gas Utility)

CapM Ex Post Equity Rate	8.49%
CapM Ex Ante Equity Rate	11.18%
DCF (Dividend) Equity Rate	7.73%
DCF (Earnings) Equity Rate	10.63%
Earnings Price Ratio	7.03%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Gas Distribution (Natural Gas Utility)</i>	9.99%	13.42%	0.79	8.49%	11.18%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Gas Distribution (Natural Gas Utility)								
	AGL Resources, Inc.	A	6,200,000,000	3.80%	4.50%	10.50%	8.30%	14.30%
	Atmos Energy Corporation	A	5,400,000,000	2.90%	3.50%	7.50%	6.40%	10.40%
	Laclede Group, Inc.	B++	2,200,000,000	3.60%	5.00%	8.00%	8.60%	11.60%
	New Jersey Resources Corp.	A+	2,400,000,000	3.10%	4.00%	6.00%	7.10%	9.10%
	Nisource Inc.	B+	13,100,000,000	2.50%	4.00%	10.50%	6.50%	13.00%
	Northwest Natural Gas Co.	A	1,300,000,000	4.00%	2.50%	6.50%	6.50%	10.50%
	Piedmont Natural Gas Co.	B++	2,900,000,000	3.40%	3.00%	5.00%	6.40%	8.40%
	South Jersey Industries, Inc.	A	1,900,000,000	3.60%	8.00%	8.00%	11.60%	11.60%
	Southwest Gas	B++	2,700,000,000	2.70%	7.00%	6.00%	9.70%	8.70%
	WGL Holdings, Inc.	A	2,500,000,000	3.70%	2.50%	5.00%	6.20%	8.70%
Median			2,600,000,000				6.80%	10.45%
Arithmetic Mean			4,060,000,000				7.73%	10.63%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Gas Distribution (Natural Gas Utility)						
	AGL Resources, Inc.	A	6,200,000,000	51.57	4.30	8.34%
	Atmos Energy Corporation	A	5,400,000,000	53.61	3.50	6.53%
	Laclede Group, Inc.	B++	2,200,000,000	51.18	4.05	7.91%
	New Jersey Resources Corp.	A+	2,400,000,000	57.53	3.80	6.61%
	Nisource Inc.	B+	13,100,000,000	41.37	2.40	5.80%
	Northwest Natural Gas Co.	A	1,300,000,000	46.40	3.30	7.11%
	Piedmont Natural Gas Co.	B++	2,900,000,000	37.35	2.25	6.02%
	South Jersey Industries, Inc.	A	1,900,000,000	57.10	4.80	8.41%
	Southwest Gas	B++	2,700,000,000	57.73	4.00	6.93%
	WGL Holdings, Inc.	A	2,500,000,000	47.96	3.20	6.67%
Median			2,600,000,000			6.80%
Arithmetic Mean			4,060,000,000			7.03%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
Gas Distribution (Natural Gas Utility)							
	AGL Resources, Inc.	A	6,200,000,000	3,605,000,000	0.58	63.23%	36.77%
	Atmos Energy Corporation	A	5,400,000,000	1,955,900,000	0.36	73.41%	26.59%
	Laclede Group, Inc.	B++	2,200,000,000	1,851,000,000	0.84	54.31%	45.69%
	New Jersey Resources Corp.	A+	2,400,000,000	598,200,000	0.25	80.05%	19.95%
	Nisource Inc.	B+	13,100,000,000	8,397,400,000	0.64	60.94%	39.06%
	Northwest Natural Gas Co.	A	1,300,000,000	621,700,000	0.48	67.65%	32.35%
	Piedmont Natural Gas Co.	B++	2,900,000,000	1,174,900,000	0.41	71.17%	28.83%
	South Jersey Industries, Inc.	A	1,900,000,000	935,400,000	0.49	67.01%	32.99%
	Southwest Gas	B++	2,700,000,000	1,437,700,000	0.53	65.25%	34.75%
	WGL Holdings, Inc.	A	2,500,000,000	679,200,000	0.27	78.64%	21.36%
Median			2,600,000,000	1,306,300,000	0.49	67.33%	32.67%
Arithmetic Mean			4,060,000,000	2,125,640,000	0.49	68.17%	31.83%
Weighted Average			6,824,137,931	3,940,865,764		63.39%	36.61%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Gas Distribution (Natural Gas Utility), Selected Comparables</i>						
	AGL Resources, Inc.	0.75	0.75	0.75	0.75	0.80
	Atmos Energy Corporation	0.65	0.70	0.70	0.80	0.80
	Laclede Group, Inc.	0.60	0.60	0.55	0.65	0.70
	New Jersey Resources Corp.	0.65	0.65	0.65	0.70	0.80
	Nisource, Inc.	0.85	0.85	0.80	0.85	0.85
	Northwest Natural Gas Co.	0.60	0.60	0.55	0.65	0.70
	Piedmont Natural Gas Co.	0.65	0.70	0.65	0.75	0.80
	South Jersey Industries, Inc.	0.65	0.65	0.65	0.70	0.80
	Southwest Gas Corp.	0.75	0.75	0.75	0.80	0.85
	WGL Holdings, Inc.	0.65	0.65	0.65	0.65	0.75
<i>Median</i>		0.65	0.68	0.65	0.73	0.80
<i>Arithmetic Mean</i>		0.68	0.69	0.67	0.73	0.79

Gas Distribution (Natural Gas Utility), Value Line

	AGL Resources, Inc.	0.75	0.75	0.75	0.75	0.80
	Atmos Energy Corporation	0.65	0.70	0.70	0.80	0.80
	Laclede Group, Inc.	0.60	0.60	0.55	0.65	0.70
	New Jersey Resources Corp.	0.65	0.65	0.65	0.70	0.80
	Nisource, Inc.	0.85	0.85	0.80	0.85	0.85
	Northwest Natural Gas Co.	0.60	0.60	0.55	0.65	0.70
	Piedmont Natural Gas Co.	0.65	0.70	0.65	0.75	0.80
	South Jersey Industries, Inc.	0.65	0.65	0.65	0.70	0.80
	Southwest Gas Corp.	0.75	0.75	0.75	0.80	0.85
	UGI Corp.	0.65	0.70	0.70	0.75	0.85
	WGL Holdings, Inc.	0.65	0.65	0.65	0.65	0.75
<i>Median</i>		0.65	0.70	0.65	0.75	0.80
<i>Arithmetic Mean</i>		0.68	0.69	0.67	0.73	0.79

Mergents 2014 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Gas Transmission

2015 Capitalization Rate Study Gas Transmission (Natural Gas Diversified) Industry Notes

- From the Gas Transmission Industry segment, Cabot Oil & Gas, Chesapeake Energy Corp., Cimarex Energy Company, Concho Resources, Devon Energy, Encana Corporation, Energen Corporation, Enerplus Corporation, EOG Resources, Linn Energy, LLC, Newfield Exploration, Pengrowth Energy, QEP Resources, Inc., Southwestern Energy Company, Talisman Energy and WPX Energy were excluded as they are presented to be primarily engaged in the exploration and production of oil and natural gas. Quicksilver Resources, Inc. has been excluded by Value Line Investment Survey from this Industry Segment. Crosstex Energy has merged assets with Devon Energy, forming the new company Enlink Midstream, LLC which is not included in this industry segment.
- Staff considered capitalization studies gathered and submitted by:
 - K.E. Andrews & Company for Southern Star Central Gas Pipeline
 - Tegarden & Associates for the Interstate Natural Gas Pipeline Industry
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Gas Transmission (Natural Gas Diversified)</i>	12.00%	80.55%	19.45%	10.62%

Industry Equity Rate Summary

Gas Transmission (Natural Gas Diversified)

CapM Ex Post Equity Rate	10.08%
CapM Ex Ante Equity Rate	13.55%
DCF (Dividend) Equity Rate	7.90%
DCF (Earnings) Equity Rate	12.83%
Earnings Price Ratio	7.36%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Gas Transmission (Natural Gas Diversified)</i>	9.99%	13.42%	1.01	10.08%	13.55%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Gas Transmission (Natural Gas Diversified)								
	EQT Corporation, Inc.	B++	14,300,000,000	0.10%	-22.00%	17.00%		17.10%
	MDU Resources Group, Inc.	A+	5,000,000,000	2.80%	4.00%	9.50%	6.80%	12.30%
	National Fuel Gas Company	B++	5,900,000,000	2.20%	5.50%	10.00%	7.70%	12.20%
	Questar Corp.	A	4,200,000,000	3.20%	6.00%	6.50%	9.20%	9.70%
Median			5,450,000,000				7.70%	12.25%
Arithmetic Mean			7,350,000,000				7.90%	12.83%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
<i>Gas Transmission (Natural Gas Diversified)</i>						
	EQT Corporation, Inc.	B++	14,300,000,000	94.54	5.80	6.13%
	MDU Resources Group, Inc.	A+	5,000,000,000	25.89	2.20	8.50%
	National Fuel Gas Company	B++	5,900,000,000	69.60	5.25	7.54%
	Questar Corp.	A	4,200,000,000	24.04	1.75	7.28%
<i>Median</i>			5,450,000,000			7.41%
<i>Arithmetic Mean</i>			7,350,000,000			7.36%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
<i>Gas Transmission (Natural Gas Diversified)</i>							
	EQT Corporation, Inc.	B++	14,300,000,000	2,983,200,000	0.21	82.74%	17.26%
	MDU Resources Group, Inc.	A+	5,000,000,000	2,061,400,000	0.41	70.81%	29.19%
	National Fuel Gas Company	B++	5,900,000,000	1,649,000,000	0.28	78.16%	21.84%
	Questar Corp.	A	4,200,000,000	1,283,300,000	0.31	76.60%	23.40%
<i>Median</i>			5,450,000,000	1,855,200,000	0.29	77.38%	22.62%
<i>Arithmetic Mean</i>			7,350,000,000	1,994,225,000	0.30	77.07%	22.93%
<i>Weighted Average</i>			9,589,795,918	2,315,840,816		80.55%	19.45%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
Gas Transmission (Natural Gas Diversified), Selected Comparables						
	EQT Corporation, Inc.	1.15	1.20	1.20	1.15	1.15
	MDU Resources Group, Inc.	1.05	1.00	1.00	1.00	0.95
	National Fuel Gas Company	0.95	1.05	1.00	1.05	1.15
	Questar Corp.			0.75	0.80	0.80
Median		1.05	1.05	1.00	1.03	1.05
Arithmetic Mean		1.05	1.08	0.99	1.00	1.01
Gas Transmission (Natural Gas Diversified), Value Line						
	Cabot Oil & Gas	1.30	1.25	1.25	1.30	1.05
	Chesapeake Energy	1.35	1.35	1.35	1.40	1.30
	Cimarex Energy Co.	1.25	1.25	1.35	1.40	1.35
	Concho Resources, Inc.					1.30
	Devon Energy	1.20	1.20	1.20	1.25	1.20
	Encana Corporation			1.20	1.15	1.15
	Energen Corporation	1.10	1.15	1.20	1.20	1.30
	Enerplus Corporation					1.05
	EOG Resources	1.15	1.15	1.20	1.25	1.25
	EQT Corporation, Inc.	1.15	1.20	1.20	1.15	1.15
	Linn Energy, LLC		0.90	0.85	0.85	0.90
	MDU Resources Group, Inc.	1.05	1.00	1.00	1.00	0.95
	National Fuel Gas Company	0.95	1.05	1.00	1.05	1.15
	Newfield Explor.	1.35	1.35	1.40	1.40	1.45
	Pengrowth Energy		1.25	1.30	1.35	1.30
	QEP Resources, Inc.			1.35	1.30	1.35
	Questar Corp.			0.75	0.80	0.80
	Southwestern Energy Company	1.15	1.15	1.15	1.10	1.05
	Talisman Energy		1.45	1.50	1.35	1.35
	WPX Energy, Inc.				1.30	1.35
Median		1.15	1.20	1.20	1.25	1.23
Arithmetic Mean		1.18	1.19	1.19	1.20	1.19

Mergents 2014 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Oil/Gas Distribution

2015 Capitalization Rate Study Oil/Gas Distribution Industry Notes

- From the Oil/Gas Distribution Industry, Clean Energy Fuels a provider of natural gas for vehicle fleet, develops and operates fueling stations, and supplies compressed natural gas and liquid natural gas was excluded from the sample, as was World Fuel Services, a global fuel logistics company engaged in the marketing and sale of fuel products and related products.
- Staff considered capitalization studies gathered and submitted by:

K.E. Andrews & Company for Southern Star Central Gas Pipeline

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Oil/Gas Distribution</i>	11.70%	61.62%	38.38%	9.09%

Industry Equity Rate Summary

Oil/Gas Distribution

CapM Ex Post Equity Rate	8.99%
CapM Ex Ante Equity Rate	11.93%
DCF (Dividend) Equity Rate	15.21%
DCF (Earnings) Equity Rate	14.93%
Earnings Price Ratio	5.47%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Oil/Gas Distribution</i>	9.99%	13.42%	0.86	8.99%	11.93%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Oil/Gas Distribution								
	Enbridge, Inc TSE	B++	44,400,000,000	2.70%	6.50%	10.50%	9.20%	13.20%
	Kinder Morgan, Inc	B++	41,900,000,000	4.30%	16.50%	16.00%	20.80%	20.30%
	ONEOK, Inc.	B+	12,100,000,000	4.10%	16.50%	11.00%	20.60%	15.10%
	Pembina Pipeline	B++	13,900,000,000	4.20%	4.00%	11.00%	8.20%	15.20%
	Spectra Energy Corp.	B	26,300,000,000	3.80%	10.00%	5.00%	13.80%	8.80%
	Transcanada Corp	A	35,100,000,000	3.90%	4.50%	11.50%	8.40%	15.40%
	Williams Companies, Inc..	B+	40,900,000,000	4.50%	21.00%	12.00%	25.50%	16.50%
Median			35,100,000,000				13.80%	15.20%
Arithmetic Mean			30,657,142,857				15.21%	14.93%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
<i>Oil/Gas Distribution</i>						
	Enbridge, Inc TSE	B++	44,400,000,000	52.45	2.95	5.62%
	Kinder Morgan, Inc	B++	41,900,000,000	40.79	2.00	4.90%
	ONEOK, Inc.	B+	12,100,000,000	58.04	3.20	5.51%
	Pembina Pipeline	B++	13,900,000,000	42.18	1.90	4.50%
	Spectra Energy Corp.	B	26,300,000,000	39.21	2.15	5.48%
	Transcanada Corp	A	35,100,000,000	49.55	4.00	8.07%
	Williams Companies, Inc..	B+	40,900,000,000	54.77	2.30	4.20%
<i>Median</i>			35,100,000,000			5.48%
<i>Arithmetic Mean</i>			30,657,142,857			5.47%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
<i>Oil/Gas Distribution</i>							
	Enbridge, Inc TSE	B++	44,400,000,000	29,354,000,000	0.66	60.20%	39.80%
	Kinder Morgan, Inc	B++	41,900,000,000	35,600,000,000	0.85	54.06%	45.94%
	ONEOK, Inc.	B+	12,100,000,000	7,194,000,000	0.59	62.71%	37.29%
	Pembina Pipeline	B++	13,900,000,000	2,367,000,000	0.17	85.45%	14.55%
	Spectra Energy Corp.	B	26,300,000,000	13,072,000,000	0.50	66.80%	33.20%
	Transcanada Corp	A	35,100,000,000	19,928,000,000	0.57	63.79%	36.21%
	Williams Companies, Inc..	B+	40,900,000,000	19,922,000,000	0.49	67.25%	32.75%
<i>Median</i>			35,100,000,000	19,922,000,000	0.57	63.79%	36.21%
<i>Arithmetic Mean</i>			30,657,142,857	18,205,285,714	0.55	65.75%	34.25%
<i>Weighted Average</i>			35,708,760,485	22,241,297,763		61.62%	38.38%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Oil/Gas Distribution, Selected Comparables</i>						
	Enbridge, Inc. (TSE)	0.65	0.60	0.60	0.60	0.60
	Kinder Morgan, Inc				0.80	0.90
	ONEOK, Inc.	0.95	1.00	0.95	1.05	1.05
	Pembina Pipeline		0.65	0.60	0.55	0.65
	Spectra Energy Corp.	1.00	1.00	1.00	1.00	0.95
	TransCanada Corp.		0.90	0.85	0.85	0.85
	Williams Companies, Inc.	1.30	1.30			1.00
<i>Median</i>		0.98	0.95	0.85	0.83	0.90
<i>Arithmetic Mean</i>		0.98	0.91	0.80	0.81	0.86

Oil/Gas Distribution, Value Line

	Clean Energy Fuels Corp.	1.35	1.40	1.40	1.25	1.50
	Enbridge, Inc. (TSE)	0.65	0.60	0.60	0.60	0.60
	Kinder Morgan, Inc				0.80	0.90
	ONEOK, Inc.	0.95	1.00	0.95	1.05	1.05
	Pembina Pipeline		0.65	0.60	0.55	0.65
	Spectra Energy Corp.	1.00	1.00	1.00	1.00	0.95
	TransCanada Corp.		0.90	0.85	0.85	0.85
	Williams Companies, Inc.	1.30	1.30			1.00
	World Fuel Services Corp.				1.00	1.05
<i>Median</i>		1.00	1.00	0.90	0.93	0.95
<i>Arithmetic Mean</i>		1.05	0.98	0.90	0.89	0.95

Mergents 2014 Corporate Bond Yield Averages

<i>Month</i>	<i>Corporate by Groups</i>		<i>Public Utility Bonds</i>			<i>Industrial Bonds</i>			
	<i>Public Utility</i>	<i>Industrial</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>	<i>Aaa</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Pipeline MLPs Industry

2015 Capitalization Rate Study Pipeline MLPs Industry Notes

- From the Pipeline MLP Industry segment, Suburban Propane was removed from the sample as being primarily involved in the marketing and distribution of propane gas. El Paso Pipeline Partners and Kinder Morgan Energy Partners LP have merged into Kinder Morgan Inc., Oil/Gas Industry Segment.
- Staff considered capitalization studies gathered and submitted by:
 - K.E. Andrews & Company for Southern Star Central Gas Pipeline
 - Enterprise Products Company
 - Tegarden & Associates for the Interstate Natural Gas Pipeline Industry
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Pipeline MLPs</i>	12.50%	77.31%	22.69%	10.78%

Industry Equity Rate Summary

Pipeline MLPs

CapM Ex Post Equity Rate	8.14%
CapM Ex Ante Equity Rate	10.66%
DCF (Dividend) Equity Rate	12.47%
DCF (Earnings) Equity Rate	13.60%
Earnings Price Ratio	6.47%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Pipeline MLPs</i>	9.99%	13.42%	0.74	8.14%	10.66%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Pipeline MLPs								
	Boardwalk Pipeline Partners, L.P.	C++	4,100,000,000	2.40%	-12.00%	9.00%		11.40%
	Buckeye Partners, L.P.	B+	10,200,000,000	5.60%	1.50%	5.50%	7.10%	11.10%
	Energy Transfer Partners, L.P.	B++	23,500,000,000	5.90%	2.00%	11.50%	7.90%	17.40%
	Enterprise Products Partners, L.P.	B+	75,800,000,000	3.90%	9.50%	10.50%	13.40%	14.40%
	Magellan Midstream Partners, L.P.	B++	19,200,000,000	3.40%	13.50%	13.50%	16.90%	16.90%
	Plains All American Pipeline, L.P.	B+	19,800,000,000	5.30%	10.50%	9.00%	15.80%	14.30%
	Williams Partners, L.P.	B++	23,500,000,000	7.20%	6.50%	2.50%	13.70%	9.70%
Median			19,800,000,000				13.55%	14.30%
Arithmetic Mean			25,157,142,857				12.47%	13.60%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Pipeline MLPs						
	Boardwalk Pipeline Partners, L.P.	C++	4,100,000,000	17.01	1.90	11.17%
	Buckeye Partners, L.P.	B+	10,200,000,000	80.38	4.10	5.10%
	Energy Transfer Partners, L.P.	B++	23,500,000,000	66.52	2.95	4.43%
	Enterprise Products Partners, L.P.	B+	75,800,000,000	39.19	2.40	6.12%
	Magellan Midstream Partners, L.P.	B++	19,200,000,000	84.55	4.50	5.32%
	Plains All American Pipeline, L.P.	B+	19,800,000,000	53.32	4.25	7.97%
	Williams Partners, L.P.	B++	23,500,000,000	53.49	2.75	5.14%
Median			19,800,000,000			5.32%
Arithmetic Mean			25,157,142,857			6.47%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
<i>Pipeline MLPs</i>							
	Boardwalk Pipeline Partners, L.P.	C++	4,100,000,000	3,410,600,000	0.83	54.59%	45.41%
	Buckeye Partners, L.P.	B+	10,200,000,000	3,663,900,000	0.36	73.57%	26.43%
	Energy Transfer Partners, L.P.	B++	23,500,000,000	17,540,000,000	0.75	57.26%	42.74%
	Enterprise Products Partners, L.P.	B+	75,800,000,000	17,706,500,000	0.23	81.06%	18.94%
	Magellan Midstream Partners, L.P.	B++	19,200,000,000	3,003,700,000	0.16	86.47%	13.53%
	Plains All American Pipeline, L.P.	B+	19,800,000,000	7,414,000,000	0.37	72.76%	27.24%
	Williams Partners, L.P.	B++	23,500,000,000	11,048,000,000	0.47	68.02%	31.98%
<i>Median</i>			19,800,000,000	7,414,000,000	0.37	72.76%	27.24%
<i>Arithmetic Mean</i>			25,157,142,857	9,112,385,714	0.45	70.53%	29.47%
<i>Weighted Average</i>			43,904,997,161	12,889,234,412		77.31%	22.69%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Pipeline MLPs, Selected Comparables</i>						
	Boardwalk Pipeline Partners, L.P.	0.85	0.85	0.80	0.70	0.60
	Buckeye Partners, L.P.	0.85	0.80	0.80	0.75	0.70
	Energy Transfer Partners, L.P.	0.80	0.80	0.80	0.75	0.70
	Enterprise Products Partners, L.P.	0.85	0.85	0.85	0.80	0.85
	Magellan Midstream Partners, L.P.	0.90	0.85	0.85	0.80	0.75
	Plains All American Pipeline, L.P.	0.85	0.85	0.80	0.75	0.75
	Williams Partners, L.P.	1.05	1.05	1.05	1.05	0.80
<i>Median</i>		0.85	0.85	0.80	0.75	0.75
<i>Arithmetic Mean</i>		0.88	0.86	0.85	0.80	0.74

Pipeline MLPs, Value Line

	Boardwalk Pipeline Partners, L.P.	0.85	0.85	0.80	0.70	0.60
	Buckeye Partners, L.P.	0.85	0.80	0.80	0.75	0.70
	Energy Transfer Partners, L.P.	0.80	0.80	0.80	0.75	0.70
	Enterprise Products Partners, L.P.	0.85	0.85	0.85	0.80	0.85
	Magellan Midstream Partners, L.P.	0.90	0.85	0.85	0.80	0.75
	Plains All American Pipeline, L.P.	0.85	0.85	0.80	0.75	0.75
	Suburban Propane Partners, L.P.	0.75	0.75	0.70	0.70	0.65
	Williams Partners, L.P.	1.05	1.05	1.05	1.05	0.80
<i>Median</i>		0.85	0.85	0.80	0.75	0.73
<i>Arithmetic Mean</i>		0.86	0.85	0.83	0.79	0.73

Mergents 2014 Corporate Bond Yield Averages

<i>Month</i>	<i>Corporate by Groups</i>		<i>Public Utility Bonds</i>			<i>Industrial Bonds</i>			
	<i>Public Utility</i>	<i>Industrial</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>	<i>Aaa</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Railroad

2015 Capitalization Rate Study Railroad Industry Notes

- From the Railroad Industry segment; American Railcar and Trinity Industries being primarily engaged in the design and manufacture of railcars and component parts; GATX, specializing in tank car, freight car, and locomotive leasing; and Greenbriar Companies, who design, manufacture, repair and market railroad freight cars and related equipment were all excluded from the sample.
- Staff considered capitalization studies gathered and submitted by:

Union Pacific Railroad

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Railroad</i>	13.10%	88.65%	11.35%	12.17%

Industry Equity Rate Summary

Railroad

CapM Ex Post Equity Rate	10.54%
CapM Ex Ante Equity Rate	14.24%
DCF (Dividend) Equity Rate	15.20%
DCF (Earnings) Equity Rate	15.53%
Earnings Price Ratio	7.12%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Railroad</i>	9.99%	13.42%	1.08	10.54%	14.24%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

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Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Railroad								
	Canadian National Railway	A	57,800,000,000	1.30%	15.00%	13.00%	16.30%	14.30%
	Canadian Pacific Railway Limited	B++	34,600,000,000	0.60%	17.00%	27.00%	17.60%	27.60%
	CSX Corp.	B++	36,500,000,000	1.70%	12.50%	11.50%	14.20%	13.20%
	Genesee & Wyoming	B+	5,300,000,000	0.00%	0.00%	15.00%		
	Kansas City Southern, Inc.	A	13,700,000,000	0.90%	19.50%	14.00%	20.40%	14.90%
	Norfolk Southern Corp.	A	35,700,000,000	2.00%	7.50%	8.50%	9.50%	10.50%
	Union Pacific Corp	A++	107,000,000,000	1.70%	11.50%	11.00%	13.20%	12.70%
Median			35,700,000,000				15.25%	13.75%
Arithmetic Mean			41,514,285,714				15.20%	15.53%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Railroad						
	Canadian National Railway	A	57,800,000,000	70.94	5.00	7.05%
	Canadian Pacific Railway Limited	B++	34,600,000,000	202.55	14.40	7.11%
	CSX Corp.	B++	36,500,000,000	36.67	3.00	8.18%
	Genesee & Wyoming	B+	5,300,000,000	98.83	7.35	7.44%
	Kansas City Southern, Inc.	A	13,700,000,000	123.72	7.30	5.90%
	Norfolk Southern Corp.	A	35,700,000,000	115.38	9.00	7.80%
	Union Pacific Corp	A++	107,000,000,000	120.62	7.65	6.34%
Median			35,700,000,000			7.11%
Arithmetic Mean			41,514,285,714			7.12%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
Railroad							
	Canadian National Railway	A	57,800,000,000	6,620,000,000	0.11	89.72%	10.28%
	Canadian Pacific Railway Limited	B++	34,600,000,000	4,277,000,000	0.12	89.00%	11.00%
	CSX Corp.	B++	36,500,000,000	9,387,000,000	0.26	79.54%	20.46%
	Genesee & Wyoming	B+	5,300,000,000	1,601,300,000	0.30	76.80%	23.20%
	Kansas City Southern, Inc.	A	13,700,000,000	1,846,400,000	0.13	88.12%	11.88%
	Norfolk Southern Corp.	A	35,700,000,000	8,919,000,000	0.25	80.01%	19.99%
	Union Pacific Corp	A++	107,000,000,000	11,045,000,000	0.10	90.64%	9.36%
Median			35,700,000,000	6,620,000,000	0.13	88.12%	11.88%
Arithmetic Mean			41,514,285,714	6,242,242,857	0.18	84.83%	15.17%
Weighted Average			64,726,496,903	8,283,728,734		88.65%	11.35%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Railroad, Selected Comparables</i>						
	Canadian National Railway	1.15	1.15	1.10	1.10	0.95
	Canadian Pacific Railway Limited	1.35	1.30	1.30	1.25	1.05
	CSX Corp.	1.25	1.20	1.20	1.25	1.15
	Genesee & Wyoming	1.30	1.25	1.25	1.30	1.20
	Kansas City Southern, Inc.	1.35	1.35	1.30	1.25	1.15
	Norfolk Southern Corp.	1.15	1.10	1.10	1.15	1.05
	Union Pacific Corp	1.15	1.15	1.15	1.15	1.00
<i>Median</i>		1.25	1.20	1.20	1.25	1.05
<i>Arithmetic Mean</i>		1.24	1.21	1.20	1.21	1.08

Railroad, Value Line

	American Railcar				1.60	1.60
	Canadian National Railway	1.15	1.15	1.10	1.10	0.95
	Canadian Pacific Railway Limited	1.35	1.30	1.30	1.25	1.05
	CSX Corp.	1.25	1.20	1.20	1.25	1.15
	GATX Corp				1.15	1.15
	Genesee & Wyoming	1.30	1.25	1.25	1.30	1.20
	Greenbrier Companies Inc.				2.05	2.05
	Kansas City Southern, Inc.	1.35	1.35	1.30	1.25	1.15
	Norfolk Southern Corp.	1.15	1.10	1.10	1.15	1.05
	Trinity Industries					1.65
	Union Pacific Corp	1.15	1.15	1.15	1.15	1.00
<i>Median</i>		1.25	1.20	1.20	1.25	1.15
<i>Arithmetic Mean</i>		1.24	1.21	1.20	1.33	1.27

Mergents 2014 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Telecommunication Services

2015 Capitalization Rate Study Telecommunication Services Industry Notes

- From the Telecommunication Services segment, America Movil, J2 Global Communications, Manitoba Telecom Services, Telus Corporation, and Vodafone Group excluded as being principally and primarily involved in non-domestic operations. Inteliquent, Inc. omitted as they principally offer tandem interconnection services to competitive carriers. Dycom, Inc. omitted as they are engaged in the telecommunications and electrical services business providing engineering, construction, maintenance and installation to telecommunication providers. NII Holdings is still traded but is no longer included by Value Line Investment Survey in this industry segment. Tel New Zealand name changed to Spark New Zealand and is no longer included by Value Line Investment Survey in this industry segment. Leap Wireless and Cbeyond were respectively acquired by AT&T and Birch Communications.
- Staff considered capitalization studies gathered and submitted by:
 - Duff & Phelps – Small Cap Wireline
 - Duff & Phelps – Mid Cap Wireline
 - Hal Heaton, PhD for Sprint Operating Property
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Telecommunications Services</i>	12.65%	66.60%	33.40%	10.06%

Industry Equity Rate Summary

Telecommunications Services

CapM Ex Post Equity Rate	10.06%
CapM Ex Ante Equity Rate	13.52%
DCF (Dividend) Equity Rate	7.16%
DCF (Earnings) Equity Rate	12.36%
Earnings Price Ratio	7.63%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Telecommunications Services</i>	9.99%	13.42%	1.01	10.06%	13.52%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Telecommunications Services								
	AT&T Inc.	A++	171,000,000,000	5.70%	4.00%	7.00%	9.70%	12.70%
	Atlantic Tele-Network, Inc.	B++	1,100,000,000	1.70%	6.50%	10.50%	8.20%	12.20%
	General Communication, Inc.	C++	500,000,000	0.00%	0.00%	0.00%		
	NTELOS Holdings Corp.	B	100,000,000	0.00%	0.00%	0.00%		
	Shenandoah Telecommunications Company	B	750,000,000	1.50%	3.50%	16.50%	5.00%	18.00%
	Sprint Corporation	C++	18,100,000,000	0.00%	0.00%	0.00%		
	Telephone & Data Systems, Inc.	B	2,700,000,000	2.20%	4.00%	4.00%	6.20%	6.20%
	T-Mobile US, Inc.	B	20,900,000,000	0.00%	0.00%	0.00%		
	U.S. Cellular	B+	3,200,000,000	0.00%	0.00%	4.50%		
	Verizon Communications	A++	195,000,000,000	4.70%	2.00%	8.00%	6.70%	12.70%
	Vonage Holdings Corp	C++	675,000,000	0.00%	0.00%	1.00%		
Median			2,700,000,000				6.70%	12.70%
Arithmetic Mean			37,638,636,364				7.16%	12.36%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Telecommunications Services						
	AT&T Inc.	A++	171,000,000,000	32.89	3.55	10.79%
	Atlantic Tele-Network, Inc.	B++	1,100,000,000	68.50	3.65	5.33%
	General Communication, Inc.	C++	500,000,000	12.31	1.30	10.56%
	NTELOS Holdings Corp.	B	100,000,000	4.11	0.45	10.95%
	Shenandoah Telecommunications Company	B	750,000,000	31.07	2.10	6.76%
	Sprint Corporation	C++	18,100,000,000	4.57	0.25	5.47%
	Telephone & Data Systems, Inc.	B	2,700,000,000	24.80	1.00	4.03%
	T-Mobile US, Inc.	B	20,900,000,000	25.85	1.50	5.80%
	U.S. Cellular	B+	3,200,000,000	37.96	1.50	3.95%
	Verizon Communications	A++	195,000,000,000	46.92	4.50	9.59%
	Vonage Holdings Corp	C++	675,000,000	3.28	0.35	10.67%
Median			2,700,000,000			6.76%
Arithmetic Mean			37,638,636,364			7.63%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
Telecommunications Services							
	AT&T Inc.	A++	171,000,000,000	70,516,000,000	0.41	70.80%	29.20%
	Atlantic Tele-Network, Inc.	B++	1,100,000,000	0	0.00	100.00%	0.00%
	General Communication, Inc.	C++	500,000,000	1,089,700,000	2.18	31.45%	68.55%
	NTELOS Holdings Corp.	B	100,000,000	520,800,000	5.21	16.11%	83.89%
	Shenandoah Telecommunications Company	B	750,000,000	207,000,000	0.28	78.37%	21.63%
	Sprint Corporation	C++	18,100,000,000	31,458,000,000	1.74	36.52%	63.48%
	Telephone & Data Systems, Inc.	B	2,700,000,000	1,718,700,000	0.64	61.10%	38.90%
	T-Mobile US, Inc.	B	20,900,000,000	24,394,000,000	1.17	46.14%	53.86%
	U.S. Cellular	B+	3,200,000,000	876,800,000	0.27	78.49%	21.51%
	Verizon Communications	A++	195,000,000,000	107,627,000,000	0.55	64.44%	35.56%
	Vonage Holdings Corp	C++	675,000,000	82,700,000	0.12	89.09%	10.91%
Median			2,700,000,000	1,089,700,000	0.55	64.44%	35.56%
Arithmetic Mean			37,638,636,364	21,680,972,727	1.14	61.14%	38.86%
Weighted Average			164,363,113,640	82,441,832,383		66.60%	33.40%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Telecommunications Services, Selected Comparables</i>						
	AT&T Inc.	0.75	0.75	0.70	0.70	0.75
	Atlantic Tele-Network, Inc.	1.00	0.95	1.00	1.00	1.00
	General Communication, Inc.	1.10	1.15	1.20	1.15	1.10
	NTELOS Holdings Corp.	0.85			0.75	0.95
	Shenandoah Telecom. Company	0.80	0.80	0.85	0.90	1.05
	Sprint Corporation	1.30	1.30	1.35	1.05	1.15
	Telephone & Data Systems, Inc.	0.85	0.90	0.90	1.05	1.20
	T-Mobile US, Inc.					
	U.S. Cellular	1.10	1.10	1.10	1.00	1.00
	Verizon Communications	0.70	0.70	0.70	0.65	0.70
	Vonage Holdings Corp.	1.10	1.15	1.20	1.20	1.20
<i>Median</i>		0.93	0.95	1.00	1.00	1.03
<i>Arithmetic Mean</i>		0.96	0.98	1.00	0.95	1.01

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Telecommunications Services, Value Line</i>						
	America Movil (ADR)	1.25	1.15	1.15	1.10	1.00
	AT&T Inc.	0.75	0.75	0.70	0.70	0.75
	Atlantic Tele-Network, Inc.	1.00	0.95	1.00	1.00	1.00
	Dycom Industries, Inc.	1.35	1.40	1.40	1.40	1.35
	General Communications, Inc.	1.10	1.15	1.20	1.15	1.10
	Inteliquent, Inc. (Neutral Tandem)	1.00	1.00	0.95		2.05
	J2 Global Communications	1.00	1.00	0.95	0.90	0.85
	Manitoba Telecom Services Inc					0.55
	NTELOS Holdings Corp.	0.85			0.75	0.95
	Shenandoah Telecom Company	0.80	0.80	0.85	0.90	1.05
	Sprint Corporation	1.30	1.30	1.35	1.05	1.15
	Telephone & Data Systems, Inc.	0.85	0.90	0.90	1.05	1.20
	Telus Corp.	0.60	0.60	0.55	0.50	0.50
	T-Mobile US, Inc.					
	U.S. Cellular	1.10	1.10	1.10	1.00	1.00
	Verizon Communications	0.70	0.70	0.70	0.65	0.70
	Vodafone GRP (ADR)	0.80	0.80	0.75	0.85	
	Vonage Holdings Corp.	1.10	1.15	1.20	1.20	1.20
<i>Median</i>		1.00	1.00	0.95	1.00	1.00
<i>Arithmetic Mean</i>		0.97	0.98	0.98	0.95	1.03

Mergents 2014 Corporate Bond Yield Averages

<i>Month</i>	<i>Corporate by Groups</i>		<i>Public Utility Bonds</i>			<i>Industrial Bonds</i>			
	<i>Public Utility</i>	<i>Industrial</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>	<i>Aaa</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Telecommunications Utility

2015 Capitalization Rate Study Telecommunications Utility Industry Notes

- From the Telecommunication Utility segment, BCE INC., BT Group, Deutsche Tele., Telefonica, S.A. excluded as being principally and primarily involved in non-domestic operations. TW Telecom was acquired by wireless networking company Level 3 Communications. Alaska Communication Systems Group has been excluded by Value Line Investment Survey from this Industry Segment.
- Staff considered capitalization studies gathered and submitted by:
 - Duff & Phelps – Small Cap Wireline
 - Duff & Phelps – Mid Cap Wireline
 - Hal Heaton, PhD for Sprint Operating Property
- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Telecommunications Utility</i>	13.20%	50.77%	49.23%	9.06%

Industry Equity Rate Summary

Telecommunications Utility

CapM Ex Post Equity Rate	9.22%
CapM Ex Ante Equity Rate	12.27%
DCF (Dividend) Equity Rate	2.05%
DCF (Earnings) Equity Rate	23.25%
Earnings Price Ratio	8.18%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Telecommunications Utility</i>	9.99%	13.42%	0.89	9.22%	12.27%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Telecommunications Utility								
	CenturyLink, Inc.	B++	22,300,000,000	5.50%	-3.50%	19.50%	2.00%	25.00%
	Cincinnati Bell	C+	700,000,000	0.00%	0.00%	28.50%		
	Consolidated Communication Holdings, Inc	C++	1,400,000,000	5.80%	0.00%	18.00%		23.80%
	Frontier Communications Corporation	B	6,600,000,000	6.10%	-4.00%	21.00%	2.10%	27.10%
	Windstream Corp	B	5,700,000,000	10.60%	0.00%	6.50%		17.10%
Median			5,700,000,000				2.05%	24.40%
Arithmetic Mean			7,340,000,000				2.05%	23.25%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Telecommunications Utility						
	CenturyLink, Inc.	B++	22,300,000,000	39.10	3.80	9.72%
	Cincinnati Bell	C+	700,000,000	3.36	0.25	7.44%
	Consolidated Communication Holdings, Inc	C++	1,400,000,000	26.77	1.60	5.98%
	Frontier Communications Corporation	B	6,600,000,000	6.60	0.65	9.85%
	Windstream Corp	B	5,700,000,000	9.45	0.75	7.94%
Median			5,700,000,000			7.94%
Arithmetic Mean			7,340,000,000			8.18%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
Telecommunications Utility							
	CenturyLink, Inc.	B++	22,300,000,000	19,982,000,000	0.90	52.74%	47.26%
	Cincinnati Bell	C+	700,000,000	1,887,000,000	2.70	27.06%	72.94%
	Consolidated Communication Holdings, Inc	C++	1,400,000,000	1,407,400,000	1.01	49.87%	50.13%
	Frontier Communications Corporation	B	6,600,000,000	9,185,600,000	1.39	41.81%	58.19%
	Windstream Corp	B	5,700,000,000	8,568,600,000	1.50	39.95%	60.05%
Median			5,700,000,000	8,568,600,000	1.39	41.81%	58.19%
Arithmetic Mean			7,340,000,000	8,206,120,000	1.50	42.29%	57.71%
Weighted Average			15,689,100,817	15,214,055,586		50.77%	49.23%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Telecommunications Utility, Selected Comparables</i>						
	CenturyLink, Inc.	0.70	0.75	0.75	0.75	0.75
	Cincinnati Bell	1.10	1.05	1.05	1.05	1.15
	Consolidated Comm. Holdings, Inc	0.95	0.90	0.85	0.80	0.75
	Frontier Communications Corp.	0.90	0.90	0.95	0.90	0.90
	Windstream Corp.	0.95	0.90	0.90	0.90	0.90
<i>Median</i>		0.95	0.90	0.90	0.90	0.90
<i>Arithmetic Mean</i>		0.92	0.90	0.90	0.88	0.89
<i>Telecommunications Utility, Value Line</i>						
	BCE Inc	0.75	0.75	0.70	0.70	0.70
	BT Group PLC	0.95	1.00	1.00	1.05	1.10
	CenturyLink, Inc.	0.70	0.75	0.75	0.75	0.75
	Cincinnati Bell	1.10	1.05	1.05	1.05	1.15
	Consolidated Comm. Holdings, Inc	0.95	0.90	0.85	0.80	0.75
	Deutsche Telekom AG (ADR)	0.75	0.80	0.80	0.90	1.00
	Frontier Communications Corp.	0.90	0.90	0.95	0.90	0.90
	Telefonica, S.A. (ADR)	0.90	0.90	0.95	1.00	1.15
	Windstream Corp.	0.95	0.90	0.90	0.90	0.90
<i>Median</i>		0.90	0.90	0.90	0.90	0.90
<i>Arithmetic Mean</i>		0.88	0.88	0.88	0.89	0.93

Mergents 2014 Corporate Bond Yield Averages

<i>Month</i>	<i>Corporate by Groups</i>		<i>Public Utility Bonds</i>			<i>Industrial Bonds</i>			
	<i>Public Utility</i>	<i>Industrial</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>	<i>Aaa</i>	<i>Aa</i>	<i>A</i>	<i>Baa</i>
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%

Water

2015 Capitalization Rate Study Water Industry Notes

- From the Water Industry segment, Consolidated Water Company excluded as being principally and primarily involved in non-domestic operations.
- Staff considered capitalization studies gathered and submitted by:

No Submissions

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:
 1. Discounted Cash Flow
 2. Capital Asset Pricing Model, Ex-Post and Ex Ante
 3. Earnings/Price Ratio

Industry Capitalization Rate

<i>Industry</i>	<i>Equity Rate</i>	<i>Market Capitalization</i>	<i>Long Term Debt</i>	<i>Capitalization Rate</i>
<i>Water</i>	10.00%	65.53%	34.47%	8.08%

Industry Equity Rate Summary

Water

CapM Ex Post Equity Rate	7.93%
CapM Ex Ante Equity Rate	10.36%
DCF (Dividend) Equity Rate	9.18%
DCF (Earnings) Equity Rate	9.74%
Earnings Price Ratio	5.66%

CapM Equity Rates

<i>Industry</i>	<i>Ex Post Risk Premium b*</i>	<i>Ex Ante Risk Premium c*</i>	<i>Value Line Beta d</i>	<i>Ex Post CapM EquityRate (((b-2.99%)*d)+2.99%)</i>	<i>Ex Ante CapM EquityRate (((c-2.99%)*d)+2.99%)</i>
<i>Water</i>	9.99%	13.42%	0.71	7.93%	10.36%

b* Risk Free Rate (2.99%) plus Risk Premium Rate (7.00%)

c* Risk Free Rate (2.99%) plus Risk Premium Rate (10.43%)

Value Line Investment Survey, November 2014 through January 2015, Morningstar 2015 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

Industry	Company	Value Line Strength	Market Capitalization d	Dividend Yield e	Growth Estimate		Equity Rate Dividend (e+f)	Equity Rate Earnings (e+g)
					Dividends f	Earnings g		
Water								
	American States Water Co.	A	1,400,000,000	2.40%	10.00%	6.50%	12.40%	8.90%
	American Water Works Company, Inc.	B+	9,500,000,000	2.40%	8.00%	7.50%	10.40%	9.90%
	Aqua America, Inc.	A	4,700,000,000	2.60%	9.00%	8.50%	11.60%	11.10%
	California Water Service Group	B++	1,200,000,000	2.80%	7.00%	7.50%	9.80%	10.30%
	Connecticut Water	B+	400,000,000	3.00%	4.00%	7.00%	7.00%	10.00%
	Middlesex Water Company	B++	350,000,000	3.50%	2.00%	5.00%	5.50%	8.50%
	SJW Corporation	B+	650,000,000	2.50%	6.00%	7.00%	8.50%	9.50%
	York Water Company	B+	275,000,000	2.70%	5.50%	7.00%	8.20%	9.70%
Median			925,000,000				9.15%	9.80%
Arithmetic Mean			2,309,375,000				9.18%	9.74%

E/P Ratio

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Recent Price d</i>	<i>Projected Earnings e</i>	<i>E/P Ratio (e/d)</i>
Water						
	American States Water Co.	A	1,400,000,000	36.97	2.00	5.41%
	American Water Works Company, Inc.	B+	9,500,000,000	53.25	3.05	5.73%
	Aqua America, Inc.	A	4,700,000,000	26.35	1.55	5.88%
	California Water Service Group	B++	1,200,000,000	24.08	1.50	6.23%
	Connecticut Water	B+	400,000,000	35.18	2.15	6.11%
	Middlesex Water Company	B++	350,000,000	22.07	1.25	5.66%
	SJW Corporation	B+	650,000,000	32.02	1.70	5.31%
	York Water Company	B+	275,000,000	22.35	1.10	4.92%
Median			925,000,000			5.70%
Arithmetic Mean			2,309,375,000			5.66%

Capital Structure

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization c</i>	<i>Long Term Debt d</i>	<i>Debt/Equity Ratio (d/c)</i>	<i>Percentage Equity (c/(c+d))</i>	<i>Percentage Debt (d/(c+d))</i>
Water							
	American States Water Co.	A	1,400,000,000	310,800,000	0.22	81.83%	18.17%
	American Water Works Company, Inc.	B+	9,500,000,000	5,540,600,000	0.58	63.16%	36.84%
	Aqua America, Inc.	A	4,700,000,000	1,560,000,000	0.33	75.08%	24.92%
	California Water Service Group	B++	1,200,000,000	422,800,000	0.35	73.95%	26.05%
	Connecticut Water	B+	400,000,000	173,400,000	0.43	69.76%	30.24%
	Middlesex Water Company	B++	350,000,000	129,200,000	0.37	73.04%	26.96%
	SJW Corporation	B+	650,000,000	384,500,000	0.59	62.83%	37.17%
	York Water Company	B+	275,000,000	84,900,000	0.31	76.41%	23.59%
Median			925,000,000	347,650,000	0.36	73.49%	26.51%
Arithmetic Mean			2,309,375,000	1,075,775,000	0.40	72.01%	27.99%
Weighted Average			6,306,935,047	3,317,890,798		65.53%	34.47%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>	<i>2013 Value Line Levered Beta</i>	<i>2014 Value Line Levered Beta</i>	<i>2015 Value Line Levered Beta</i>
<i>Water, Selected Comparables</i>						
	American States Water Co.	0.80	0.70	0.70	0.65	0.70
	American Water Works Co., Inc.	0.65	0.65	0.65	0.65	0.70
	Aqua America, Inc.	0.65	0.65	0.60	0.60	0.70
	California Water Service Group	0.70	0.65	0.65	0.60	0.70
	Connecticut Water			0.75	0.75	0.65
	Middlesex Water Company		0.70	0.70	0.75	0.70
	SJW Corporation		0.85	0.85	0.85	0.85
	York Water Company				0.70	0.65
<i>Median</i>		0.68	0.68	0.70	0.68	0.70
<i>Arithmetic Mean</i>		0.70	0.70	0.70	0.69	0.71
<i>Water, Value Line</i>						
	American States Water Co.	0.80	0.70	0.70	0.65	0.70
	American Water Works Co., Inc.	0.65	0.65	0.65	0.65	0.70
	Aqua America, Inc.	0.65	0.65	0.60	0.60	0.70
	California Water Service Group	0.70	0.65	0.65	0.60	0.70
	Connecticut Water			0.75	0.75	0.65
	Consolidated Water Co. Ltd				1.00	0.90
	Middlesex Water Company		0.70	0.70	0.75	0.70
	SJW Corporation		0.85	0.85	0.85	0.85
	York Water Company				0.70	0.65
<i>Median</i>		0.68	0.68	0.70	0.70	0.70
<i>Arithmetic Mean</i>		0.70	0.70	0.70	0.73	0.73

Mergents 2014 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	4.72%	4.78%	4.44%	4.63%	5.09%	4.49%	4.62%	4.74%	5.29%
February	4.64%	4.71%	4.38%	4.53%	5.01%	4.45%	4.54%	4.66%	5.19%
March	4.63%	4.65%	4.40%	4.51%	5.00%	4.38%	4.49%	4.60%	5.13%
April	4.52%	4.51%	4.30%	4.41%	4.85%	4.24%	4.36%	4.48%	4.96%
May	4.37%	4.40%	4.16%	4.26%	4.69%	4.16%	4.24%	4.35%	4.83%
June	4.42%	4.45%	4.23%	4.29%	4.73%	4.25%	4.29%	4.41%	4.86%
July	4.35%	4.39%	4.16%	4.23%	4.66%	4.16%	4.23%	4.34%	4.80%
August	4.29%	4.30%	4.07%	4.13%	4.65%	4.08%	4.13%	4.26%	4.72%
September	4.40%	4.37%	4.18%	4.24%	4.79%	4.11%	4.19%	4.35%	4.82%
October	4.24%	4.20%	3.98%	4.06%	4.67%	3.92%	4.00%	4.20%	4.70%
November	4.29%	4.26%	4.03%	4.09%	4.75%	3.92%	4.04%	4.27%	4.82%
December	4.18%	4.15%	3.90%	3.95%	4.70%	3.79%	3.89%	4.15%	4.77%
	4.42%	4.43%	4.19%	4.28%	4.80%	4.16%	4.25%	4.40%	4.91%