



Capitalization Rate Study

April 2012

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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 2012. 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

Mike Isbell, Administrator
Public Service Section



MEMBER

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 December 2011 through January 2012.

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 of valuing all 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>	13.20%	10.00%	86.68%	13.32%	12.77%
<i>Passenger</i>	13.50%	10.00%	39.80%	60.20%	11.39%
<i>Electric</i>	10.25%	5.57%	55.50%	44.50%	8.17%
<i>Fluid Pipeline (Petroleum Integrated)</i>	11.75%	5.76%	92.09%	7.91%	11.28%
<i>Gas Distribution (Natural Gas Utility)</i>	9.75%	5.57%	56.13%	43.87%	7.91%
<i>Gas Transmission (Natural Gas Diversified)</i>	12.50%	5.76%	82.41%	17.59%	11.31%
<i>Oil/Gas Distribution</i>	11.40%	5.76%	64.38%	35.62%	9.39%
<i>Pipeline MLPs</i>	12.25%	5.76%	71.62%	28.38%	10.41%
<i>Railroad</i>	13.50%	5.76%	82.02%	17.98%	12.11%
<i>Telecommunications Services</i>	12.50%	5.76%	72.27%	27.73%	10.63%
<i>Telecommunications Utility</i>	13.00%	5.57%	49.81%	50.19%	9.27%
<i>Water</i>	10.50%	5.13%	53.68%	46.32%	8.01%

Airline Industry

2012 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. Also excluded were Copa Holdings, S.A., a leading Latin American provider of passenger and cargo service; and AMR Corporation who filed Chapter 11 Bankruptcy protection November 29, 2011.
- Staff considered capitalization studies gathered and submitted by:

Duff & Phelps for Airlines for America

- 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>	13.20%	86.68%	13.32%	12.77%
<i>Passenger</i>	13.50%	39.80%	60.20%	11.39%

Industry Equity Rate Summary

Airline

Cargo

CapM Ex Post Equity Rate	10.20%
CapM Ex Ante Equity Rate	15.75%
DCF (Dividend) Equity Rate	7.10%
DCF (Earnings) Equity Rate	17.85%
Earnings Price Ratio	13.29%

Passenger

CapM Ex Post Equity Rate	10.68%
CapM Ex Ante Equity Rate	16.57%
DCF (Dividend) Equity Rate	4.10%
DCF (Earnings) Equity Rate	20.85%
Earnings Price Ratio	34.20%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>	
<i>Airline</i>						
	<i>Cargo</i>	9.10%	13.85%	1.17	10.20%	15.75%
	<i>Passenger</i>	9.10%	13.85%	1.24	10.68%	16.57%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

Value Line Investment Survey, December 2011 through January 2012

Morningstar 2012 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%	11.50%		
	FedEx Corp.	B++	25,200,000,000	0.70%	7.00%	21.00%	7.70%	21.70%
	United Parcel Service, Inc.	A	66,000,000,000	3.00%	3.50%	11.00%	6.50%	14.00%
Median			25,200,000,000				7.10%	17.85%
Arithmetic Mean			30,733,333,333				7.10%	17.85%
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Passenger								
	Alaska Air Group, Inc.	C++	2,300,000,000	0.00%	0.00%	23.00%		
	Allegiant Travel Company	B+	950,000,000	0.00%	0.00%	10.00%		
	Delta Air Lines, Inc.	C++	6,100,000,000	0.00%	0.00%	0.00%		
	Hawaiian Holdings, Inc.	C++	275,000,000	0.00%	0.00%	22.00%		
	JetBlue Airways Corp.	C++	1,100,000,000	0.00%	0.00%	45.00%		
	SkyWest, Inc.	B	600,000,000	1.40%	5.50%	12.00%	6.90%	13.40%
	Southwest Airlines	B+	6,000,000,000	0.30%	1.00%	28.00%	1.30%	28.30%
	Spirit Airlines, Inc.	B+	1,200,000,000	0.00%	0.00%	0.00%		
	United Continental Holdings, Inc.	C++	5,400,000,000	0.00%	0.00%	0.00%		
US Airways Group, Inc.	C+	700,000,000	0.00%	0.00%	0.00%			
Median			1,150,000,000				4.10%	20.85%
Arithmetic Mean			2,462,500,000				4.10%	20.85%

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	38.16	6.8	17.82%
	FedEx Corp.	B++	25,200,000,000	79.38	10.65	13.42%
	United Parcel Service, Inc.	A	66,000,000,000	68.22	5.9	8.65%
Median			25,200,000,000		6.80	13.42%
Arithmetic Mean			30,733,333,333		7.78	13.29%
Passenger						
	Alaska Air Group, Inc.	C++	2,300,000,000	63.78	11.20	17.56%
	Allegiant Travel Company	B+	950,000,000	49.98	5.25	10.50%
	Delta Air Lines, Inc.	C++	6,100,000,000	7.21	2.80	38.83%
	Hawaiian Holdings, Inc.	C++	275,000,000	5.46	3.45	63.19%
	JetBlue Airways Corp.	C++	1,100,000,000	3.59	1.25	34.82%
	SkyWest, Inc.	B	600,000,000	11.70	3.20	27.35%
	Southwest Airlines	B+	6,000,000,000	7.73	1.95	25.23%
	Spirit Airlines, Inc.	B+	1,200,000,000	16.49	2.50	15.16%
	United Continental Holdings, Inc.	C++	5,400,000,000	16.19	5.90	36.44%
	US Airways Group, Inc.	C+	700,000,000	4.25	3.10	72.94%
Median			1,150,000,000		3.15	31.08%
Arithmetic Mean			2,462,500,000		4.06	34.20%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Airline, Selected Comparables</i>						
<i>Cargo</i>	Atlas Air Worldwide Holdings, Inc.	1.00	1.40	1.60	1.60	1.65
	FedEx Corp.	1.05	0.95	0.95	1.00	1.00
	United Parcel Service, Inc.	0.80	0.80	0.85	0.85	0.85
<i>Median</i>		1.00	0.95	0.95	1.00	1.00
<i>Arithmetic Mean</i>		0.95	1.05	1.13	1.15	1.17
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<i>Passenger</i>	Alaska Air Group, Inc.	1.35	1.45	1.20	1.15	1.15
	Allegiant Travel Co.			0.85	0.80	0.80
	Delta Air Lines, Inc.			1.55	1.50	1.40
	Hawaiian Holdings, Inc.					1.10
	JetBlue Airways Corp.	0.95	1.20	1.25	1.25	1.25
	Skywest, Inc.			1.25	1.20	1.10
	Southwest Air	0.95	0.90	0.95	0.95	1.00
	Spirit Airlines, Inc.					
	United Continental Holdings, Inc.				1.80	1.70
US Airways Group, Inc.			1.80	1.75	1.65	
<i>Median</i>		0.95	1.20	1.25	1.23	1.15
<i>Arithmetic Mean</i>		1.08	1.18	1.26	1.30	1.24

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Airline, Value Line</i>						
	Alaska Air Group, Inc.	1.35	1.45	1.20	1.15	1.15
	Allegiant Travel Co.			0.85	0.80	0.80
	AMR Corp.	2.55	1.95	1.65	1.65	1.55
	Atlas Air Worldwide	1.00	1.40	1.60	1.60	1.65
	Bristow Group, Inc.		1.30	1.35	1.35	1.30
	Copa Holdings S.A.					1.00
	Delta Air Lines, Inc.			1.55	1.50	1.40
	FEDEX Corporation	1.05	0.95	0.95	1.00	1.00
	Hawaiian Holdings, Inc.					1.10
	JetBlue Airways Corp.	0.95	1.20	1.25	1.25	1.25
	Skywest, Inc.			1.25	1.20	1.10
	Southwest Airlines	0.95	0.90	0.95	0.95	1.00
	Spirit Airlines, Inc.					
	United Continental Holdings				1.80	1.70
	United Parcel Svc	0.80	0.80	0.85	0.85	0.85
	US Airways Group			1.80	1.75	1.65
<i>Median</i>		1.00	1.25	1.25	1.25	1.15
<i>Arithmetic Mean</i>		1.24	1.24	1.27	1.30	1.23

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	466,200,000	0.47	68.20%	31.80%
	FedEx Corp.	B++	25,200,000,000	1,367,000,000	0.05	94.85%	5.15%
	United Parcel Service, Inc.	A	66,000,000,000	11,092,000,000	0.17	85.61%	14.39%
Median			25,200,000,000	1,367,000,000	0.17	85.61%	14.39%
Arithmetic Mean			30,733,333,333	4,308,400,000	0.23	82.89%	17.11%
Weighted Average			54,143,600,868	8,318,726,681		86.68%	13.32%
Passenger							
Passenger	Alaska Air Group, Inc.	C++	2,300,000,000	1,178,800,000	0.51	66.11%	33.89%
	Allegiant Travel Company	B+	950,000,000	140,000,000	0.15	87.16%	12.84%
	Delta Air Lines, Inc.	C++	6,100,000,000	12,557,000,000	2.06	32.70%	67.30%
	Hawaiian Holdings, Inc.	C++	275,000,000	369,600,000	1.34	42.66%	57.34%
	JetBlue Airways Corp.	C++	1,100,000,000	2,864,000,000	2.60	27.75%	72.25%
	SkyWest, Inc.	B	600,000,000	1,626,300,000	2.71	26.95%	73.05%
	Southwest Airlines	B+	6,000,000,000	3,220,000,000	0.54	65.08%	34.92%
	Spirit Airlines, Inc.	B+	1,200,000,000	0	0.00	100.00%	0.00%
	United Continental Holdings, Inc.	C++	5,400,000,000	11,818,000,000	2.19	31.36%	68.64%
US Airways Group, Inc.	C+	700,000,000	3,987,000,000	5.70	14.93%	85.07%	
Median			1,150,000,000	2,245,150,000	1.70	37.68%	62.32%
Arithmetic Mean			2,462,500,000	3,776,070,000	1.78	49.47%	50.53%
Weighted Average			4,553,832,487	6,887,222,741		39.80%	60.20%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Electric Industry

2012 Capitalization Rate Study Electric Industry Notes

- From the Electric Industry segment, The Value Line Investment Survey list of companies was left intact. DPL, Inc. has been acquired by AES Corporation.
- Staff considered capitalization studies gathered and submitted by:
 - Duff & Phelps for Public Service Company of Oklahoma
 - Tegarden & Associates for Oklahoma Gas & Electric
- 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>	10.25%	55.50%	44.50%	8.17%

Industry Equity Rate Summary

Electric

CapM Ex Post Equity Rate	7.43%
CapM Ex Ante Equity Rate	10.98%
DCF (Dividend) Equity Rate	8.81%
DCF (Earnings) Equity Rate	10.52%
Earnings Price Ratio	8.09%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Electric</i>	9.10%	13.85%	0.75	7.43%	10.98%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

Value Line Investment Survey, December 2011 through January 2012

Morningstar 2012 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		
<i>Electric</i>								
	Allete, Inc.	A	1,500,000,000	4.50%	2.00%	6.00%	6.50%	10.50%
	Alliant Energy Corp.	A	4,600,000,000	4.30%	6.00%	6.50%	10.30%	10.80%
	Ameren Corp.	B++	7,800,000,000	5.00%	-1.00%	-2.00%	4.00%	3.00%
	American Electric Power Company, Inc.	B++	19,000,000,000	4.80%	4.00%	4.50%	8.80%	9.30%
	CenterPoint Energy, Inc.	B	8,200,000,000	4.20%	3.00%	3.00%	7.20%	7.20%
	Cleco Corporation	B++	2,200,000,000	3.50%	9.50%	6.00%	13.00%	9.50%
	CMS Energy Corporation	B+	5,200,000,000	4.40%	14.00%	7.00%	18.40%	11.40%
	DTE Energy Company	B+	8,800,000,000	4.70%	4.00%	4.50%	8.70%	9.20%
	Empire District Electric Company	B+	850,000,000	4.90%	-1.00%	7.00%	3.90%	11.90%
	Entergy Corporation	A	13,000,000,000	4.70%	2.00%	0.50%	6.70%	5.20%
	Great Plains Energy Incorporated	B+	2,900,000,000	4.10%	0.00%	6.00%		10.10%
	Integrus Energy Group, Inc.	B++	4,000,000,000	5.40%	0.00%	9.00%		14.40%
	ITC Holdings Corp.	B++	3,700,000,000	2.00%	5.50%	14.00%	7.50%	16.00%
	MGE Energy Inc.	A	1,000,000,000	3.40%	2.00%	4.00%	5.40%	7.40%
	OGE Energy Corp.	A	5,200,000,000	3.00%	4.00%	6.50%	7.00%	9.50%
	Otter Tail Corporation	B+	775,000,000	5.60%	1.50%	13.00%	7.10%	18.60%
	Vectren Corp.	A	2,300,000,000	4.90%	3.00%	5.50%	7.90%	10.40%
	Westar Energy, Inc.	B++	3,200,000,000	4.80%	3.00%	8.50%	7.80%	13.30%
	Wisconsin Energy Corporation	B++	7,600,000,000	3.60%	16.00%	8.50%	19.60%	12.10%
<i>Median</i>			4,000,000,000				7.50%	10.40%
<i>Arithmetic Mean</i>			5,359,210,526				8.81%	10.52%

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>						
	Allele, Inc.	A	1,500,000,000	40.09	3.25	8.11%
	Alliant Energy Corp.	A	4,600,000,000	41.86	3.50	8.36%
	Ameren Corp.	B++	7,800,000,000	32.18	2.50	7.77%
	American Electric Power Company, Inc.	B++	19,000,000,000	39.46	3.75	9.50%
	CenterPoint Energy, Inc.	B	8,200,000,000	19.20	1.35	7.03%
	Cleco Corporation	B++	2,200,000,000	35.95	2.75	7.65%
	CMS Energy Corporation	B+	5,200,000,000	20.71	1.75	8.45%
	DTE Energy Company	B+	8,800,000,000	51.99	4.25	8.17%
	Empire District Electric Company	B+	850,000,000	20.30	1.75	8.62%
	Entergy Corporation	A	13,000,000,000	71.01	6.50	9.15%
	Great Plains Energy Incorporated	B+	2,900,000,000	21.03	1.75	8.32%
	Integrus Energy Group, Inc.	B++	4,000,000,000	50.65	4.00	7.90%
	ITC Holdings Corp.	B++	3,700,000,000	71.68	5.75	8.02%
	MGE Energy Inc.	A	1,000,000,000	44.67	3.00	6.72%
	OGE Energy Corp.	A	5,200,000,000	52.92	4.00	7.56%
	Otter Tail Corporation	B+	775,000,000	21.30	1.50	7.04%
	Vectren Corp.	A	2,300,000,000	28.51	2.30	8.07%
	Westar Energy, Inc.	B++	3,200,000,000	27.12	2.40	8.85%
	Wisconsin Energy Corporation	B++	7,600,000,000	32.92	2.75	8.35%
<i>Median</i>			4,000,000,000		2.75	8.11%
<i>Arithmetic Mean</i>			5,359,210,526		3.09	8.09%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Electric, Selected Comparables</i>						
	Allete, Inc.	0.95	0.75	0.70	0.70	0.70
	Alliant Energy Corp.	0.80	0.70	0.70	0.70	0.75
	Ameren Corp.	0.80	0.80	0.80	0.80	0.80
	American Electric Power, Inc.	0.95	0.75	0.70	0.70	0.70
	CenterPoint Energy, Inc.	0.95	0.90	0.80	0.80	0.80
	Cleco Corporation	1.15	0.80	0.65	0.65	0.70
	CMS Energy Corporation	1.35	0.95	0.80	0.75	0.75
	DTE Energy Co.	0.80	0.70	0.75	0.75	0.75
	Empire District Electric Co.	0.85	0.75	0.75	0.70	0.70
	Entergy Corporation	0.85	0.75	0.70	0.70	0.70
	Great Plains Energy, Inc.	0.80	0.65	0.75	0.75	0.75
	Integrus Energy Group, Inc.	0.80	0.70	0.95	0.90	0.90
	ITC Holdings Corp.		0.95	0.85	0.80	0.80
	MGE Energy Inc.	0.95	0.70	0.65	0.65	0.60
	OGE Energy Corporation	0.85	0.75	0.75	0.75	0.80
	Otter Tail Corporation	0.95	0.90	0.95	0.95	0.90
	Vectren, Corporation	0.90	0.85	0.75	0.70	0.70
	Westar Energy, Inc.	0.85	0.80	0.75	0.75	0.75
	Wisconsin Energy Corporation	0.85	0.65	0.65	0.65	0.65
<i>Median</i>		0.85	0.75	0.75	0.75	0.75
<i>Arithmetic Mean</i>		0.91	0.78	0.76	0.74	0.75

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Electric, Value Line</i>						
	Allete, Inc.	0.95	0.75	0.70	0.70	0.70
	Alliant Energy Corp.	0.80	0.70	0.70	0.70	0.75
	Ameren Corp.	0.80	0.80	0.80	0.80	0.80
	American Electric Power, Inc.	0.95	0.75	0.70	0.70	0.70
	CenterPoint Energy, Inc.	0.95	0.90	0.80	0.80	0.80
	Cleco Corporation	1.15	0.80	0.65	0.65	0.70
	CMS Energy Corporation	1.35	0.95	0.80	0.75	0.75
	DTE Energy Co.	0.80	0.70	0.75	0.75	0.75
	Empire District Electric Co.	0.85	0.75	0.75	0.70	0.70
	Entergy Corporation	0.85	0.75	0.70	0.70	0.70
	Great Plains Energy, Inc.	0.80	0.65	0.75	0.75	0.75
	Integrus Energy Group, Inc.	0.80	0.70	0.95	0.90	0.90
	ITC Holdings Corp.		0.95	0.85	0.80	0.80
	MGE Energy Inc.	0.95	0.70	0.65	0.65	0.60
	OGE Energy Corporation	0.85	0.75	0.75	0.75	0.80
	Otter Tail Corporation	0.95	0.90	0.95	0.95	0.90
	Vectren, Corporation	0.90	0.85	0.75	0.70	0.70
	Westar Energy, Inc.	0.85	0.80	0.75	0.75	0.75
	Wisconsin Energy Corporation	0.85	0.65	0.65	0.65	0.65
<i>Median</i>		0.85	0.75	0.75	0.75	0.75
<i>Arithmetic Mean</i>		0.91	0.78	0.76	0.74	0.75

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	1,500,000,000	844,400,000	0.56	63.98%	36.02%
	Alliant Energy Corp.	A	4,600,000,000	2,703,600,000	0.59	62.98%	37.02%
	Ameren Corp.	B++	7,800,000,000	6,682,000,000	0.86	53.86%	46.14%
	American Electric Power Company, Inc.	B++	19,000,000,000	15,183,000,000	0.80	55.58%	44.42%
	CenterPoint Energy, Inc.	B	8,200,000,000	8,497,000,000	1.04	49.11%	50.89%
	Cleco Corporation	B++	2,200,000,000	1,370,600,000	0.62	61.61%	38.39%
	CMS Energy Corporation	B+	5,200,000,000	6,208,000,000	1.19	45.58%	54.42%
	DTE Energy Company	B+	8,800,000,000	7,497,000,000	0.85	54.00%	46.00%
	Empire District Electric Company	B+	850,000,000	692,500,000	0.81	55.11%	44.89%
	Entergy Corporation	A	13,000,000,000	10,281,000,000	0.79	55.84%	44.16%
	Great Plains Energy Incorporated	B+	2,900,000,000	2,750,100,000	0.95	51.33%	48.67%
	Integrus Energy Group, Inc.	B++	4,000,000,000	2,080,700,000	0.52	65.78%	34.22%
	ITC Holdings Corp.	B++	3,700,000,000	2,577,400,000	0.70	58.94%	41.06%
	MGE Energy Inc.	A	1,000,000,000	361,600,000	0.36	73.44%	26.56%
	OGE Energy Corp.	A	5,200,000,000	2,586,900,000	0.50	66.78%	33.22%
	Otter Tail Corporation	B+	775,000,000	433,500,000	0.56	64.13%	35.87%
	Vectren Corp.	A	2,300,000,000	1,581,100,000	0.69	59.26%	40.74%
	Westar Energy, Inc.	B++	3,200,000,000	2,741,600,000	0.86	53.86%	46.14%
	Wisconsin Energy Corporation	B++	7,600,000,000	4,618,900,000	0.61	62.20%	37.80%
<i>Median</i>			4,000,000,000	2,703,600,000	0.70	58.94%	41.06%
<i>Arithmetic Mean</i>			5,359,210,526	4,194,257,895	0.73	58.60%	41.40%
<i>Weighted Average</i>			9,148,668,058	7,335,963,737		55.50%	44.50%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Fluid Pipeline Industry (Petroleum Integrated)

2012 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:

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>Fluid Pipeline (Petroleum Integrated)</i>	11.75%	92.09%	7.91%	11.28%

Industry Equity Rate Summary

Fluid Pipeline (Petroleum Integrated)

CapM Ex Post Equity Rate	9.88%
CapM Ex Ante Equity Rate	15.19%
DCF (Dividend) Equity Rate	8.92%
DCF (Earnings) Equity Rate	12.46%
Earnings Price Ratio	17.72%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Fluid Pipeline (Petroleum Integrated)</i>	9.10%	13.85%	1.12	9.88%	15.19%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

Value Line Investment Survey, December 2011 through January 2012

Morningstar 2012 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+	130,000,000,000	4.10%	1.50%	13.00%	5.60%	17.10%
	Chevron Corp	A++	194,000,000,000	3.30%	7.50%	10.00%	10.80%	13.30%
	ConocoPhillips	A++	90,500,000,000	4.10%	9.50%	6.00%	13.60%	10.10%
	Exxon Mobil Corp.	A++	369,000,000,000	2.40%	7.00%	9.50%	9.40%	11.90%
	Hess Corporation	A	19,500,000,000	0.70%	4.00%	8.50%	4.70%	9.20%
	HollyFrontier Corporation	B++	4,700,000,000	1.80%	0.00%	0.00%		
	Imperial Oil	A+	34,600,000,000	1.10%	5.00%	10.50%	6.10%	11.60%
	Marathon Petroleum Corp	A	11,800,000,000	3.00%	0.00%	0.00%		
	Murphy Oil Corporation	A+	10,200,000,000	2.10%	4.00%	8.50%	6.10%	10.60%
	Occidental Petroleum	A++	74,800,000,000	2.10%	11.00%	10.00%	13.10%	12.10%
	Royal Dutch Shell (ADR)	A++	208,000,000,000	5.00%	3.50%	6.50%	8.50%	11.50%
	Suncor Energy, Inc.	A	46,200,000,000	1.50%	10.50%	17.00%	12.00%	18.50%
	Sunoco, Inc.	B++	4,100,000,000	2.10%	2.00%	0.00%	4.10%	
	Tesoro Corporation	B+	3,300,000,000	0.00%	0.00%	0.00%		
	Total S.A. (ADR)	A++	111,000,000,000	6.20%	4.50%	5.00%	10.70%	11.20%
	Valero Energy Corp.	B++	12,000,000,000	2.80%	8.50%	0.00%	11.30%	
Median			40,400,000,000				9.40%	11.60%
Arithmetic Mean			82,731,250,000				8.92%	12.46%

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+	130,000,000,000	41.00	8.05	19.63%
	Chevron Corp	A++	194,000,000,000	97.39	15.55	15.97%
	ConocoPhillips	A++	90,500,000,000	68.14	9.30	13.65%
	Exxon Mobil Corp.	A++	369,000,000,000	76.93	10.75	13.97%
	Hess Corporation	A	19,500,000,000	57.39	8.00	13.94%
	HollyFrontier Corporation	B++	4,700,000,000	22.63	7.60	33.58%
	Imperial Oil	A+	34,600,000,000	40.77	4.80	11.77%
	Marathon Petroleum Corp	A	11,800,000,000	33.17	9.00	27.13%
	Murphy Oil Corporation	A+	10,200,000,000	52.95	9.25	17.47%
	Occidental Petroleum	A++	74,800,000,000	92.19	10.80	11.71%
	Royal Dutch Shell (ADR)	A++	208,000,000,000	66.85	10.00	14.96%
	Suncor Energy, Inc.	A	46,200,000,000	29.35	4.25	14.48%
	Sunoco, Inc.	B++	4,100,000,000	38.45	3.00	7.80%
	Tesoro Corporation	B+	3,300,000,000	23.27	5.00	21.49%
	Total S.A. (ADR)	A++	111,000,000,000	49.47	9.00	18.19%
	Valero Energy Corp.	B++	12,000,000,000	21.39	5.95	27.82%
Median			40,400,000,000		8.53	15.46%
Arithmetic Mean			82,731,250,000		8.14	17.72%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Fluid Pipeline (Petroleum Integrated), Selected Comparables</i>						
	BP P.L.C. (ADR)	0.90	0.95	1.00	1.00	1.05
	Chevron Corp.	0.90	0.90	0.90	0.90	0.95
	ConocoPhillips	0.90	1.10	1.10	1.10	1.10
	Exxon Mobil Corp.	0.90	0.80	0.75	0.75	0.80
	Hess Corporation	0.95	1.30	1.20	1.20	1.25
	HollyFrontier Corporation	1.00	1.45	1.25	1.20	
	Imperial Oil					1.15
	Marathon Oil Corp.	1.05	1.35	1.30	1.25	
	Murphy Oil Corporation	0.90	1.20	1.20	1.20	1.20
	Occidental Petroleum	1.05	1.25	1.20	1.15	1.15
	Royal Dutch Shell (ADR)	1.00	1.00	1.05	1.05	1.05
	Suncor Energy, Inc.					1.25
	Sunoco, Inc.	1.05	1.35	1.05	1.05	1.05
	Tesoro Corporation	1.10	1.60	1.30	1.25	1.25
	Total S.A. (ADR)	1.10	1.05	1.05	1.10	1.10
	Valero Energy Corp.	1.00	1.50	1.30	1.25	1.30
<i>Median</i>		1.00	1.23	1.15	1.13	1.13
<i>Arithmetic Mean</i>		0.99	1.20	1.12	1.10	1.12

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Fluid Pipeline (Petroleum Integrated), Value Line</i>						
	BP P.L.C. (ADR)	0.90	0.95	1.00	1.00	1.05
	Chevron Corp	0.90	0.90	0.90	0.90	0.95
	ConocoPhillips	0.90	1.10	1.10	1.10	1.10
	Exxon Mobil Corp.	0.90	0.80	0.75	0.75	0.80
	Hess Corporation	0.95	1.30	1.20	1.20	1.25
	HollyFrontier Corporation	1.00	1.45	1.25	1.20	
	Imperial Oil					1.15
	Marathon Petroleum Corp.	1.05	1.35	1.30	1.25	
	Murphy Oil Corporation	0.90	1.20	1.20	1.20	1.20
	Occidental Petroleum	1.05	1.25	1.20	1.15	1.15
	Petrobras (ADR)	1.45	1.75	1.65	1.60	1.55
	Royal Dutch Shell (ADR)	1.00	1.00	1.05	1.05	1.05
	Suncor Energy, Inc.					1.25
	Sunoco, Inc.	1.05	1.35	1.05	1.05	1.05
	Tesoro Corporation	1.10	1.60	1.30	1.25	1.25
	Total S.A. (ADR)	1.10	1.05	1.05	1.10	1.10
	Valero Energy Corp.	1.00	1.50	1.30	1.25	1.30
<i>Median</i>		1.00	1.25	1.20	1.15	1.15
<i>Arithmetic Mean</i>		1.02	1.24	1.15	1.14	1.15

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>Fluid Pipeline (Petroleum Integrated)</i>							
	BP P.L.C. (ADR)	B+	130,000,000,000	33,800,000,000	0.26	79.37%	20.63%
	Chevron Corp	A++	194,000,000,000	9,384,000,000	0.05	95.39%	4.61%
	ConocoPhillips	A++	90,500,000,000	22,500,000,000	0.25	80.09%	19.91%
	Exxon Mobil Corp.	A++	369,000,000,000	9,331,000,000	0.03	97.53%	2.47%
	Hess Corporation	A	19,500,000,000	5,548,000,000	0.28	77.85%	22.15%
	HollyFrontier Corporation	B++	4,700,000,000	1,225,000,000	0.26	79.32%	20.68%
	Imperial Oil	A+	34,600,000,000	844,000,000	0.02	97.62%	2.38%
	Marathon Petroleum Corp	A	11,800,000,000	3,285,000,000	0.28	78.22%	21.78%
	Murphy Oil Corporation	A+	10,200,000,000	1,230,200,000	0.12	89.24%	10.76%
	Occidental Petroleum	A++	74,800,000,000	5,870,000,000	0.08	92.72%	7.28%
	Royal Dutch Shell (ADR)	A++	208,000,000,000	31,092,000,000	0.15	87.00%	13.00%
	Suncor Energy, Inc.	A	46,200,000,000	10,175,000,000	0.22	81.95%	18.05%
	Sunoco, Inc.	B++	4,100,000,000	3,377,000,000	0.82	54.83%	45.17%
	Tesoro Corporation	B+	3,300,000,000	1,587,000,000	0.48	67.53%	32.47%
	Total S.A. (ADR)	A++	111,000,000,000	30,036,000,000	0.27	78.70%	21.30%
	Valero Energy Corp.	B++	12,000,000,000	6,781,000,000	0.57	63.89%	36.11%
<i>Median</i>			40,400,000,000	6,325,500,000	0.25	79.73%	20.27%
<i>Arithmetic Mean</i>			82,731,250,000	11,004,075,000	0.26	81.33%	18.67%
<i>Weighted Average</i>			199,604,298,557	17,148,213,145		92.09%	7.91%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Gas Distribution Industry (Natural Gas Utility)

2012 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. Nicor, Inc. has been acquired by AGL Resources, Incorporated.
- 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>Gas Distribution (Natural Gas Utility)</i>	9.75%	56.13%	43.87%	7.91%

Industry Equity Rate Summary

Gas Distribution (Natural Gas Utility)

CapM Ex Post Equity Rate	7.05%
CapM Ex Ante Equity Rate	10.33%
DCF (Dividend) Equity Rate	7.70%
DCF (Earnings) Equity Rate	9.10%
Earnings Price Ratio	7.61%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Gas Distribution (Natural Gas Utility)</i>	9.10%	13.85%	0.69	7.05%	10.33%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

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Discounted Cash Flow (Gordon Growth)

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization d</i>	<i>Dividend Yield e</i>	<i>Growth Estimate</i>		<i>Equity Rate Dividend (e+f)</i>	<i>Equity Rate Earnings (e+g)</i>
					<i>Dividends f</i>	<i>Earnings g</i>		
Gas Distribution (Natural Gas Utility)								
	AGL Resources, Inc.	A	3,100,000,000	4.50%	3.00%	5.00%	7.50%	9.50%
	Atmos Energy Corporation	B+	3,000,000,000	4.20%	2.00%	5.00%	6.20%	9.20%
	Laclede Group, Inc.	B++	875,000,000	4.20%	2.50%	2.50%	6.70%	6.70%
	New Jersey Resources Corp.	A	1,900,000,000	3.30%	5.00%	5.00%	8.30%	8.30%
	Nisource Inc.	B	6,200,000,000	4.20%	0.00%	9.00%		13.20%
	Northwest Natural Gas Co.	A	1,200,000,000	3.90%	3.50%	4.50%	7.40%	8.40%
	Piedmont Natural Gas Co.	B++	2,300,000,000	3.70%	3.50%	2.50%	7.20%	6.20%
	South Jersey Industries, Inc.	B++	1,600,000,000	3.00%	9.50%	9.00%	12.50%	12.00%
	Southwest Gas	B	1,800,000,000	2.80%	4.50%	9.00%	7.30%	11.80%
	WGL Holdings, Inc.	A	2,100,000,000	3.70%	2.50%	2.00%	6.20%	5.70%
Median			2,000,000,000				7.30%	8.80%
Arithmetic Mean			2,407,500,000				7.70%	9.10%

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	3,100,000,000	39.71	3.75	9.44%
	Atmos Energy Corporation	B+	3,000,000,000	33.30	2.70	8.11%
	Laclede Group, Inc.	B++	875,000,000	39.29	3.05	7.76%
	New Jersey Resources Corp.	A	1,900,000,000	46.16	3.35	7.26%
	Nisource Inc.	B	6,200,000,000	22.10	1.85	8.37%
	Northwest Natural Gas Co.	A	1,200,000,000	46.16	3.40	7.37%
	Piedmont Natural Gas Co.	B++	2,300,000,000	31.60	1.80	5.70%
	South Jersey Industries, Inc.	B++	1,600,000,000	54.37	4.10	7.54%
	Southwest Gas	B	1,800,000,000	38.81	3.10	7.99%
	WGL Holdings, Inc.	A	2,100,000,000	41.80	2.75	6.58%
Median			2,000,000,000		3.08	7.65%
Arithmetic Mean			2,407,500,000		2.99	7.61%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Gas Distribution (Natural Gas Utility), Selected Comparables</i>						
	AGL Resources, Inc.	0.85	0.75	0.75	0.75	0.75
	Atmos Energy Corporation	0.85	0.65	0.65	0.65	0.70
	Laclede Group, Inc.	0.95	0.65	0.60	0.60	0.60
	New Jersey Resources Corp.	0.85	0.70	0.65	0.65	0.65
	Nisource, Inc.		0.75	0.85	0.85	0.85
	Northwest Natural Gas Co.	0.90	0.60	0.60	0.60	0.60
	Piedmont Natural Gas Co.	0.85	0.70	0.65	0.65	0.70
	South Jersey Industries, Inc.	0.85	0.75	0.65	0.65	0.65
	Southwest Gas Corp.	0.90	0.75	0.75	0.75	0.75
	WGL Holdings, Inc.	0.85	0.75	0.65	0.65	0.65
<i>Median</i>		0.85	0.73	0.65	0.65	0.68
<i>Arithmetic Mean</i>		0.87	0.71	0.68	0.68	0.69

Gas Distribution (Natural Gas Utility), Value Line

	AGL Resources, Inc.	0.85	0.75	0.75	0.75	0.75
	Atmos Energy Corporation	0.85	0.65	0.65	0.65	0.70
	Laclede Group, Inc.	0.95	0.65	0.60	0.60	0.60
	New Jersey Resources Corp.	0.85	0.70	0.65	0.65	0.65
	Nisource, Inc.		0.75	0.85	0.85	0.85
	Northwest Natural Gas Co.	0.90	0.60	0.60	0.60	0.60
	Piedmont Natural Gas Co.	0.85	0.70	0.65	0.65	0.70
	South Jersey Industries, Inc.	0.85	0.75	0.65	0.65	0.65
	Southwest Gas Corp.	0.90	0.75	0.75	0.75	0.75
	UGI Corp.	0.85	0.75	0.70	0.65	0.70
	WGL Holdings, Inc.	0.85	0.75	0.65	0.65	0.65
<i>Median</i>		0.85	0.75	0.65	0.65	0.70
<i>Arithmetic Mean</i>		0.87	0.71	0.68	0.68	0.69

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	3,100,000,000	2,687,000,000	0.87	53.57%	46.43%
	Atmos Energy Corporation	B+	3,000,000,000	2,206,100,000	0.74	57.62%	42.38%
	Laclede Group, Inc.	B++	875,000,000	364,300,000	0.42	70.60%	29.40%
	New Jersey Resources Corp.	A	1,900,000,000	426,800,000	0.22	81.66%	18.34%
	Nisource Inc.	B	6,200,000,000	6,337,300,000	1.02	49.45%	50.55%
	Northwest Natural Gas Co.	A	1,200,000,000	601,700,000	0.50	66.60%	33.40%
	Piedmont Natural Gas Co.	B++	2,300,000,000	675,000,000	0.29	77.31%	22.69%
	South Jersey Industries, Inc.	B++	1,600,000,000	424,200,000	0.27	79.04%	20.96%
	Southwest Gas	B	1,800,000,000	936,900,000	0.52	65.77%	34.23%
	WGL Holdings, Inc.	A	2,100,000,000	587,200,000	0.28	78.15%	21.85%
Median			2,000,000,000	638,350,000	0.46	68.60%	31.40%
Arithmetic Mean			2,407,500,000	1,524,650,000	0.51	67.98%	32.02%
Weighted Average			3,255,062,305	2,543,789,927		56.13%	43.87%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Gas Transmission Industry (Natural Gas Diversified)

2012 Capitalization Rate Study

Gas Transmission (Natural Gas Diversified) Industry Notes

- From the Gas Transmission Industry segment, Chesapeake Energy Corp., Cimarex Energy Company, Devon Energy, Encana Corporation, EOG Resources, Linn Energy, LLC, Newfield Exploration, Pengrowth Energy, QEP Resources, Inc., Southwestern Energy Company and Talisman Energy were excluded as they are presented to be primarily engaged in the exploration and production of oil and natural gas. Dynegy, Inc. being excluded as they are represented as a pure play power generator.
- Staff considered capitalization studies gathered and submitted by:

Tegarden & Associates for Northern Natural Gas
- 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>	12.50%	82.41%	17.59%	11.31%

Industry Equity Rate Summary

Gas Transmission (Natural Gas Diversified)

CapM Ex Post Equity Rate	11.54%
CapM Ex Ante Equity Rate	18.04%
DCF (Dividend) Equity Rate	7.80%
DCF (Earnings) Equity Rate	11.70%
Earnings Price Ratio	9.73%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Gas Transmission (Natural Gas Diversified)</i>	9.10%	13.85%	1.37	11.54%	18.04%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

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Discounted Cash Flow (Gordon Growth)

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization d</i>	<i>Dividend Yield e</i>	<i>Growth Estimate</i>		<i>Equity Rate Dividend (e+f)</i>	<i>Equity Rate Earnings (e+g)</i>
					<i>Dividends f</i>	<i>Earnings g</i>		
Gas Transmission (Natural Gas Diversified)								
	Cabot Oil & Gas	B++	8,700,000,000	0.10%	0.00%	14.00%		14.10%
	Crosstex Energy, Inc.	C++	550,000,000	3.40%	8.50%	0.00%	11.90%	
	Energen Corporation	A	3,500,000,000	1.10%	4.50%	6.00%	5.60%	7.10%
	EQT Corporation, Inc.	B++	8,800,000,000	1.50%	2.00%	19.00%	3.50%	20.50%
	MDU Resources Group, Inc.	A+	3,900,000,000	3.30%	3.50%	4.50%	6.80%	7.80%
	National Fuel Gas Company	B++	4,700,000,000	2.50%	5.50%	6.50%	8.00%	9.00%
	Provident Energy	B	2,500,000,000	5.90%	0.00%	0.00%		
	Questar Corp.	B++	3,300,000,000	3.50%	7.50%	0.00%	11.00%	
	Quicksilver Resources, Inc.	B	1,300,000,000	0.00%	0.00%	11.00%		
Median			3,500,000,000				7.40%	9.00%
Arithmetic Mean			4,138,888,889				7.80%	11.70%

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 Transmission (Natural Gas Diversified)						
	Cabot Oil & Gas	B++	8,700,000,000	83.09	3.40	4.09%
	Crosstex Energy, Inc.	C++	550,000,000	11.85	0.40	3.38%
	Energen Corporation	A	3,500,000,000	48.81	5.65	11.58%
	EQT Corporation, Inc.	B++	8,800,000,000	58.73	4.55	7.75%
	MDU Resources Group, Inc.	A+	3,900,000,000	20.58	2.10	10.20%
	National Fuel Gas Company	B++	4,700,000,000	56.21	4.50	8.01%
	Provident Energy	B	2,500,000,000	9.15	1.00	10.93%
	Questar Corp.	B++	3,300,000,000	18.84	1.60	8.49%
	Quicksilver Resources, Inc.	B	1,300,000,000	7.79	1.80	23.11%
Median			3,500,000,000		2.10	8.49%
Arithmetic Mean			4,138,888,889		2.78	9.73%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Gas Transmission (Natural Gas Diversified), Selected Comparables</i>						
	Cabot Oil & Gas	1.10	1.25	1.35	1.30	1.25
	Crosstex Energy, Inc.		1.15	2.30	2.30	2.25
	Energen Corporation	0.90	1.15	1.15	1.10	1.15
	EQT Corporation, Inc.				1.15	1.20
	MDU Resources Group, Inc.		1.05	1.05	1.05	1.00
	National Fuel Gas Company	0.85	0.90	0.95	0.95	1.05
	Provident Energy					1.40
	Questar Corp.	0.90	1.25	1.20		
	Quicksilver Resources, Inc.		1.60	1.70	1.70	1.65
<i>Median</i>		0.90	1.15	1.20	1.15	1.23
<i>Arithmetic Mean</i>		0.94	1.19	1.39	1.36	1.37

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Gas Transmission (Natural Gas Diversified), Value Line</i>						
	Cabot Oil & Gas	1.10	1.25	1.35	1.30	1.25
	Chesapeake Energy Corp.	1.05	1.40	1.40	1.35	1.35
	Cimarex Energy Co.				1.25	1.25
	Crosstex Energy		1.15	2.30	2.30	2.25
	Devon Energy	0.95	1.15	1.25	1.20	1.20
	Dynegy, Inc.	1.45	1.60	1.55	1.45	1.40
	Encana Corporation					
	Energen Corp	0.90	1.15	1.15	1.10	1.15
	EOG Resources	0.95	1.15	1.20	1.15	1.15
	EQT Corporation, Inc.				1.15	1.20
	Linn Energy, LLC					0.90
	MDU Resources		1.05	1.05	1.05	1.00
	National Fuel Gas	0.85	0.90	0.95	0.95	1.05
	Newfield Explor.	1.00	1.35	1.35	1.35	1.35
	Pengrowth Energy					1.25
	Provident Energy					1.40
	QEP Resources, Inc.					
	Questar Corp.	0.90	1.25	1.20		
	Quicksilver Resources		1.60	1.70	1.70	1.65
	Southwestern Energy Company	1.25	1.30	1.20	1.15	1.15
	Talisman Energy					1.45
<i>Median</i>		0.98	1.25	1.25	1.23	1.25
<i>Arithmetic Mean</i>		1.04	1.25	1.36	1.32	1.30

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>							
	Cabot Oil & Gas	B++	8,700,000,000	1,205,000,000	0.14	87.83%	12.17%
	Crosstex Energy, Inc.	C++	550,000,000	787,900,000	1.43	41.11%	58.89%
	Energen Corporation	A	3,500,000,000	803,800,000	0.23	81.32%	18.68%
	EQT Corporation, Inc.	B++	8,800,000,000	1,978,500,000	0.22	81.64%	18.36%
	MDU Resources Group, Inc.	A+	3,900,000,000	1,347,000,000	0.35	74.33%	25.67%
	National Fuel Gas Company	B++	4,700,000,000	899,000,000	0.19	83.94%	16.06%
	Provident Energy	B	2,500,000,000	521,100,000	0.21	82.75%	17.25%
	Questar Corp.	B++	3,300,000,000	881,400,000	0.27	78.92%	21.08%
	Quicksilver Resources, Inc.	B	1,300,000,000	1,931,000,000	1.49	40.24%	59.76%
<i>Median</i>			3,500,000,000	899,000,000	0.23	81.32%	18.68%
<i>Arithmetic Mean</i>			4,138,888,889	1,150,522,222	0.50	72.45%	27.55%
<i>Weighted Average</i>			5,954,697,987	1,270,905,101		82.41%	17.59%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Oil/Gas Distribution Industry

2012 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.
- Staff considered capitalization studies gathered and submitted by:

Tegarden & Associates for Northern Natural Gas

- 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>	11.40%	64.38%	35.62%	9.39%

Industry Equity Rate Summary

Oil/Gas Distribution

CapM Ex Post Equity Rate	8.93%
CapM Ex Ante Equity Rate	13.57%
DCF (Dividend) Equity Rate	10.80%
DCF (Earnings) Equity Rate	11.29%
Earnings Price Ratio	6.32%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Oil/Gas Distribution</i>	9.10%	13.85%	0.98	8.93%	13.57%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

Value Line Investment Survey, December 2011 through January 2012

Morningstar 2012 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization d</i>	<i>Dividend Yield e</i>	<i>Growth Estimate</i>		<i>Equity Rate Dividend (e+f)</i>	<i>Equity Rate Earnings (e+g)</i>
					<i>Dividends f</i>	<i>Earnings g</i>		
<i>Oil/Gas Distribution</i>								
	Copano Energy	B	2,200,000,000	7.00%	2.50%	6.50%	9.50%	13.50%
	El Paso Corp.	B	19,400,000,000	0.20%	-7.50%	6.00%		6.20%
	Enbridge, Inc. (TSE)	B++	27,800,000,000	2.70%	6.50%	8.00%	9.20%	10.70%
	ONEOK, Inc.	B+	8,300,000,000	3.00%	10.00%	8.50%	13.00%	11.50%
	Pembina Pipeline	B+	4,900,000,000	5.30%	2.00%	6.00%	7.30%	11.30%
	Southern Union Co.	B+	5,100,000,000	1.50%	3.00%	7.50%	4.50%	9.00%
	Spectra Energy Corp.	B	18,700,000,000	4.00%	5.50%	7.00%	9.50%	11.00%
	TransCanada Corp.	B++	28,300,000,000	4.20%	4.00%	10.50%	8.20%	14.70%
	Williams Companies, Inc..	B+	18,300,000,000	3.20%	22.00%	10.50%	25.20%	13.70%
<i>Median</i>			18,300,000,000				9.35%	11.30%
<i>Arithmetic Mean</i>			14,777,777,778				10.80%	11.29%

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>						
	Copano Energy	B	2,200,000,000	32.92	0.60	1.82%
	El Paso Corp.	B	19,400,000,000	25.21	1.65	6.55%
	Enbridge, Inc. (TSE)	B++	27,800,000,000	35.64	1.90	5.33%
	ONEOK, Inc.	B+	8,300,000,000	80.56	4.80	5.96%
	Pembina Pipeline	B+	4,900,000,000	29.32	1.50	5.12%
	Southern Union Co.	B+	5,100,000,000	40.80	2.80	6.86%
	Spectra Energy Corp.	B	18,700,000,000	28.83	2.35	8.15%
	TransCanada Corp.	B++	28,300,000,000	40.27	3.50	8.69%
	Williams Companies, Inc..	B+	18,300,000,000	31.10	2.60	8.36%
<i>Median</i>			18,300,000,000		2.35	6.55%
<i>Arithmetic Mean</i>			14,777,777,778		2.41	6.32%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Oil/Gas Distribution, Selected Comparables</i>						
	Copano Energy					1.15
	El Paso Corp.			0.75	1.40	1.35
	Enbridge, Inc. (TSE)	0.60	0.65	0.65	0.65	0.60
	ONEOK, Inc.	0.90	0.90	0.95	0.95	1.00
	Pembina Pipeline					0.65
	Southern Union Co.	1.00	1.10	1.05	1.05	1.00
	Spectra Energy Corp.		0.95	1.00	1.00	1.00
	TransCanada Corp.					0.90
	Williams Companies, Inc.	1.25	1.25	1.30	1.30	1.30
<i>Median</i>		0.95	0.95	0.98	1.03	1.00
<i>Arithmetic Mean</i>		0.94	0.97	0.95	1.06	0.98

Oil/Gas Distribution, Value Line

	Clean Energy Fuels Corp.			1.35	1.35	1.40
	Copano Energy					1.15
	El Paso Corp.			0.75	1.40	1.35
	Enbridge, Inc. (TSE)	0.60	0.65	0.65	0.65	0.60
	ONEOK, Inc.	0.90	0.90	0.95	0.95	1.00
	Pembina Pipeline					0.65
	Southern Union Co.	1.00	1.10	1.05	1.05	1.00
	Spectra Energy Corp.		0.95	1.00	1.00	1.00
	TransCanada Corp.					0.90
	Williams Companies, Inc.	1.25	1.25	1.30	1.30	1.30
<i>Median</i>		0.95	0.95	1.00	1.05	1.00
<i>Arithmetic Mean</i>		0.94	0.97	1.01	1.10	1.04

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>							
	Copano Energy	B	2,200,000,000	904,500,000	0.41	70.86%	29.14%
	El Paso Corp.	B	19,400,000,000	12,500,000,000	0.64	60.82%	39.18%
	Enbridge, Inc. (TSE)	B++	27,800,000,000	14,566,000,000	0.52	65.62%	34.38%
	ONEOK, Inc.	B+	8,300,000,000	4,532,000,000	0.55	64.68%	35.32%
	Pembina Pipeline	B+	4,900,000,000	1,303,000,000	0.27	78.99%	21.01%
	Southern Union Co.	B+	5,100,000,000	2,705,500,000	0.53	65.34%	34.66%
	Spectra Energy Corp.	B	18,700,000,000	10,234,000,000	0.55	64.63%	35.37%
	TransCanada Corp.	B++	28,300,000,000	16,345,900,000	0.58	63.39%	36.61%
	Williams Companies, Inc..	B+	18,300,000,000	9,024,000,000	0.49	66.97%	33.03%
<i>Median</i>			18,300,000,000	9,024,000,000	0.53	65.34%	34.66%
<i>Arithmetic Mean</i>			14,777,777,778	8,012,766,667	0.50	66.81%	33.19%
<i>Weighted Average</i>			20,740,000,000	11,476,143,008		64.38%	35.62%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Pipeline MLPs Industry

2012 Capitalization Rate Study Pipeline MLPs Industry Notes

- From the Pipeline MLP Industry segment, Inergy, LP and Suburban Propane removed as primarily involved in the marketing and distribution of propane gas.
- Staff considered capitalization studies gathered and submitted by:

Tegarden & Associates for Northern Natural Gas

- 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>	12.25%	71.62%	28.38%	10.41%

Industry Equity Rate Summary

Pipeline MLPs

CapM Ex Post Equity Rate	8.03%
CapM Ex Ante Equity Rate	12.02%
DCF (Dividend) Equity Rate	12.58%
DCF (Earnings) Equity Rate	12.91%
Earnings Price Ratio	7.02%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Pipeline MLPs</i>	9.10%	13.85%	0.84	8.03%	12.02%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

Value Line Investment Survey, December 2011 through January 2012

Morningstar 2012 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.	B+	5,200,000,000	8.10%	5.00%	6.00%	13.10%	14.10%
	Buckeye Partners, L.P.	B+	6,000,000,000	6.40%	4.00%	6.50%	10.40%	12.90%
	El Paso Pipeline Partners	B	6,700,000,000	6.00%	12.00%	13.50%	18.00%	19.50%
	Energy Transfer Partners, L.P.	B++	9,200,000,000	8.30%	3.00%	-0.50%	11.30%	7.80%
	Enterprise Products Partners, L.P.	B+	39,700,000,000	5.40%	8.00%	9.50%	13.40%	14.90%
	Kinder Morgan Energy Partners, L.P.	B+	25,900,000,000	6.40%	6.00%	7.50%	12.40%	13.90%
	Magellan Midstream Partners, L.P.	B++	7,200,000,000	5.00%	5.50%	6.00%	10.50%	11.00%
	Plains All American Pipeline, L.P.	B+	9,700,000,000	6.10%	4.00%	1.00%	10.10%	7.10%
	Williams Partners, L.P.	B+	16,700,000,000	5.50%	8.50%	9.50%	14.00%	15.00%
Median			9,200,000,000				12.40%	13.90%
Arithmetic Mean			14,033,333,333				12.58%	12.91%

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.	B+	5,200,000,000	26.02	2.05	7.88%
	Buckeye Partners, L.P.	B+	6,000,000,000	63.91	4.70	7.35%
	El Paso Pipeline Partners	B	6,700,000,000	32.76	3.40	10.38%
	Energy Transfer Partners, L.P.	B++	9,200,000,000	43.81	2.65	6.05%
	Enterprise Products Partners, L.P.	B+	39,700,000,000	45.61	3.05	6.69%
	Kinder Morgan Energy Partners, L.P.	B+	25,900,000,000	77.88	2.50	3.21%
	Magellan Midstream Partners, L.P.	B++	7,200,000,000	63.96	4.00	6.25%
	Plains All American Pipeline, L.P.	B+	9,700,000,000	64.87	4.70	7.25%
	Williams Partners, L.P.	B+	16,700,000,000	57.49	4.65	8.09%
Median			9,200,000,000		3.40	7.25%
Arithmetic Mean			14,033,333,333		3.52	7.02%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Pipeline MLPs, Selected Comparables</i>						
	Boardwalk Pipeline Partners, L.P.	0.60	0.95	0.85	0.85	0.85
	Buckeye Partners, L.P.	0.70	0.90	0.85	0.85	0.80
	El Paso Pipeline Partners				0.75	0.75
	Energy Transfer Partners, L.P.			0.85	0.80	0.80
	Enterprise Products Partners, L.P.			0.85	0.85	0.85
	Kinder Morgan Energy Partners, L.P.	0.60	0.75	0.75	0.75	0.75
	Magellan Midstream Partners, L.P.	0.60	0.85	0.90	0.90	0.85
	Plains All American Pipeline, L.P.	0.70	0.95	0.90	0.85	0.85
	Williams Partners, L.P.				1.05	1.05
<i>Median</i>		0.60	0.90	0.85	0.85	0.85
<i>Arithmetic Mean</i>		0.64	0.88	0.85	0.85	0.84

Pipeline MLPs, Value Line

	Boardwalk Pipeline Partners, L.P.	0.60	0.95	0.85	0.85	0.85
	Buckeye Partners, L.P.	0.70	0.90	0.85	0.85	0.80
	El Paso Pipeline Partners				0.75	0.75
	Energy Transfer Partners, L.P.			0.85	0.80	0.80
	Enterprise Products Partners, L.P.			0.85	0.85	0.85
	Inergy, L.P.			1.00	1.00	1.00
	Kinder Morgan Energy Partners, L.P.	0.60	0.75	0.75	0.75	0.75
	Magellan Midstream Partners, L.P.	0.60	0.85	0.90	0.90	0.85
	Plains All American Pipeline, L.P.	0.70	0.95	0.90	0.85	0.85
	Suburban Propane Partners, L.P.	0.65	0.80	0.75	0.75	0.75
	Williams Partners, L.P.				1.05	1.05
<i>Median</i>		0.63	0.88	0.85	0.85	0.85
<i>Arithmetic Mean</i>		0.64	0.87	0.86	0.85	0.85

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>
Pipeline MLPs							
	Boardwalk Pipeline Partners, L.P.	B+	5,200,000,000	3,198,200,000	0.62	61.92%	38.08%
	Buckeye Partners, L.P.	B+	6,000,000,000	2,315,100,000	0.39	72.16%	27.84%
	El Paso Pipeline Partners	B	6,700,000,000	3,865,000,000	0.58	63.42%	36.58%
	Energy Transfer Partners, L.P.	B++	9,200,000,000	7,652,300,000	0.83	54.59%	45.41%
	Enterprise Products Partners, L.P.	B+	39,700,000,000	14,108,700,000	0.36	73.78%	26.22%
	Kinder Morgan Energy Partners, L.P.	B+	25,900,000,000	10,662,200,000	0.41	70.84%	29.16%
	Magellan Midstream Partners, L.P.	B++	7,200,000,000	2,042,200,000	0.28	77.90%	22.10%
	Plains All American Pipeline, L.P.	B+	9,700,000,000	4,500,000,000	0.46	68.31%	31.69%
	Williams Partners, L.P.	B+	16,700,000,000	6,815,000,000	0.41	71.02%	28.98%
Median			9,200,000,000	4,500,000,000	0.41	70.84%	29.16%
Arithmetic Mean			14,033,333,333	6,128,744,444	0.48	68.21%	31.79%
Weighted Average			22,678,463,975	8,988,508,393		71.62%	28.38%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Railroad Industry

2012 Capitalization Rate Study Railroad Industry Notes

- For the Railroad Industry segment, The Value Line Investment Survey list of companies was left intact.
- 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>	13.50%	82.02%	17.98%	12.11%

Industry Equity Rate Summary

Railroad

CapM Ex Post Equity Rate	10.42%
CapM Ex Ante Equity Rate	16.12%
DCF (Dividend) Equity Rate	16.98%
DCF (Earnings) Equity Rate	18.88%
Earnings Price Ratio	10.96%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Railroad</i>	9.10%	13.85%	1.20	10.42%	16.12%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

Value Line Investment Survey, December 2011 through January 2012

Morningstar 2012 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization d</i>	<i>Dividend Yield e</i>	<i>Growth Estimate</i>		<i>Equity Rate Dividend (e+f)</i>	<i>Equity Rate Earnings (e+g)</i>
					<i>Dividends f</i>	<i>Earnings g</i>		
Railroad								
	Canadian National Railway	A	33,700,000,000	1.70%	15.50%	16.00%	17.20%	17.70%
	Canadian Pacific Railway Limited	B+	9,800,000,000	2.10%	10.50%	16.50%	12.60%	18.60%
	CSX Corp.	B++	22,000,000,000	2.30%	25.50%	21.50%	27.80%	23.80%
	Genesee & Wyoming	B+	2,400,000,000	0.00%	0.00%	18.00%		
	Kansas City Southern, Inc.	B+	7,300,000,000	0.00%	0.00%	23.00%		
	Norfolk Southern Corp.	B++	24,100,000,000	2.40%	10.50%	13.50%	12.90%	15.90%
	RailAmerica, Inc.	B	725,000,000	0.00%	0.00%	28.00%		
	Union Pacific Corp	A	47,500,000,000	2.40%	12.00%	16.00%	14.40%	18.40%
Median			15,900,000,000				14.40%	18.40%
Arithmetic Mean			18,440,625,000				16.98%	18.88%

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	33,700,000,000	75.76	7.20	9.50%
	Canadian Pacific Railway Limited	B+	9,800,000,000	57.53	7.05	12.25%
	CSX Corp.	B++	22,000,000,000	20.94	3.10	14.80%
	Genesee & Wyoming	B+	2,400,000,000	57.40	5.10	8.89%
	Kansas City Southern, Inc.	B+	7,300,000,000	66.03	5.30	8.03%
	Norfolk Southern Corp.	B++	24,100,000,000	71.71	8.05	11.23%
	RailAmerica, Inc.	B	725,000,000	14.08	1.65	11.72%
	Union Pacific Corp	A	47,500,000,000	98.41	11.10	11.28%
Median			15,900,000,000		6.18	11.25%
Arithmetic Mean			18,440,625,000		6.07	10.96%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Railroad, Selected Comparables</i>						
	Canadian National Railway	1.05	1.10	1.20	1.15	1.15
	Canadian Pacific Railway Limited	1.05	1.25	1.35	1.35	1.30
	CSX Corp.	1.15	1.15	1.25	1.25	1.20
	Genesee & Wyoming	1.35	1.35	1.35	1.30	1.25
	Kansas City Southern, Inc.	1.25	1.40	1.40	1.35	1.35
	Norfolk Southern Corp.	1.10	1.05	1.15	1.15	1.10
	RailAmerica, Inc.					1.10
	Union Pacific Corp	1.00	1.05	1.20	1.15	1.15
<i>Median</i>		1.10	1.15	1.25	1.25	1.18
<i>Arithmetic Mean</i>		1.14	1.19	1.27	1.24	1.20

Railroad, Value Line

	Canadian National Railway	1.05	1.10	1.20	1.15	1.15
	Canadian Pacific Railway Limited	1.05	1.25	1.35	1.35	1.30
	CSX Corp.	1.15	1.15	1.25	1.25	1.20
	Genesee & Wyoming	1.35	1.35	1.35	1.30	1.25
	Kansas City Southern, Inc.	1.25	1.40	1.40	1.35	1.35
	Norfolk Southern Corp.	1.10	1.05	1.15	1.15	1.10
	RailAmerica, Inc.					1.10
	Union Pacific Corp	1.00	1.05	1.20	1.15	1.15
<i>Median</i>		1.10	1.15	1.25	1.25	1.18
<i>Arithmetic Mean</i>		1.14	1.19	1.27	1.24	1.20

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	33,700,000,000	5,878,000,000	0.17	85.15%	14.85%
	Canadian Pacific Railway Limited	B+	9,800,000,000	4,042,500,000	0.41	70.80%	29.20%
	CSX Corp.	B++	22,000,000,000	8,160,000,000	0.37	72.94%	27.06%
	Genesee & Wyoming	B+	2,400,000,000	532,600,000	0.22	81.84%	18.16%
	Kansas City Southern, Inc.	B+	7,300,000,000	1,676,200,000	0.23	81.33%	18.67%
	Norfolk Southern Corp.	B++	24,100,000,000	6,782,000,000	0.28	78.04%	21.96%
	RailAmerica, Inc.	B	725,000,000	574,900,000	0.79	55.77%	44.23%
	Union Pacific Corp	A	47,500,000,000	8,765,000,000	0.18	84.42%	15.58%
Median			15,900,000,000	4,960,250,000	0.26	79.68%	20.32%
Arithmetic Mean			18,440,625,000	4,551,400,000	0.33	76.29%	23.71%
Weighted Average			31,264,976,275	6,852,669,734		82.02%	17.98%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Telecommunication Services Industry

2012 Capitalization Rate Study Telecommunication Services Industry Notes

- From the Telecommunication Services segment, America Movil, J2 Global Communications, Millicom International Cellular, S.A., NII Holdings, Tel New Zealand, Telus Corporation, and Vodafone Group excluded as being principally and primarily involved in non-domestic operations. Neutral Tandem, 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.
- Staff considered capitalization studies gathered and submitted by:
 - Duff & Phelps – Small Cap Wireline for Cox Communication, Windstream and CenturyTel
 - AUS Consultants for Level 3 Communications
 - Duff & Phelps – Mid Cap Wireline for Southwestern Bell Telephone
 - Hal Heaton for Southwestern Bell Telephone
- 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>	12.50%	72.27%	27.73%	10.63%

Industry Equity Rate Summary

Telecommunications Services

CapM Ex Post Equity Rate	9.43%
CapM Ex Ante Equity Rate	14.42%
DCF (Dividend) Equity Rate	9.45%
DCF (Earnings) Equity Rate	12.45%
Earnings Price Ratio	18.02%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Telecommunications Services</i>	9.10%	13.85%	1.05	9.43%	14.42%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)
c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)
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Discounted Cash Flow (Gordon Growth)

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization d</i>	<i>Dividend Yield e</i>	<i>Growth Estimate</i>		<i>Equity Rate Dividend (e+f)</i>	<i>Equity Rate Earnings (e+g)</i>
					<i>Dividends f</i>	<i>Earnings g</i>		
Telecommunications Services								
	AT&T Inc.	A+	172,100,000,000	6.10%	3.50%	7.50%	9.60%	13.60%
	Atlantic Tele-Network, Inc.	B++	625,000,000	2.40%	8.50%	9.50%	10.90%	11.90%
	Cbeyond, Inc.	B+	225,000,000	0.00%	0.00%	0.00%		
	Clearwire Corp.	C	550,000,000	0.00%	0.00%	0.00%		
	General Communication, Inc.	C++	425,000,000	0.00%	0.00%	55.50%		
	Leap Wireless International, Inc.	C	625,000,000	0.00%	0.00%	0.00%		
	MetroPCS Communication, Inc	B	3,100,000,000	0.00%	0.00%	17.00%		
	NTELOS Holdings Corp.	B	450,000,000	8.00%	6.00%	8.50%	14.00%	16.50%
	Shenandoah Telecommunications Comp	B++	250,000,000	3.10%	6.00%	7.00%	9.10%	10.10%
	Sprint Nextel Corp	C++	7,200,000,000	0.00%	0.00%	0.00%		
	Telephone & Data Systems, Inc.	B	2,600,000,000	1.90%	4.00%	10.00%	5.90%	11.90%
	U.S. Cellular	B+	3,500,000,000	0.00%	0.00%	11.00%		
	Verizon Communications	A+	108,000,000,000	5.20%	2.00%	5.50%	7.20%	10.70%
	Vonage Holdings Corp.	C++	525,000,000	0.00%	0.00%	0.00%		
Median			625,000,000				9.35%	11.90%
Arithmetic Mean			21,441,071,429				9.45%	12.45%

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+	172,100,000,000	29.04	3.35	11.54%
	Atlantic Tele-Network, Inc.	B++	625,000,000	39.94	3.30	8.26%
	Cbeyond, Inc.	B+	225,000,000	7.52	0.70	9.31%
	Clearwire Corp.	C	550,000,000	2.15	1.55	72.09%
	General Communication, Inc.	C++	425,000,000	9.65	0.90	9.33%
	Leap Wireless International, Inc.	C	625,000,000	8.04	0.80	9.95%
	MetroPCS Communication, Inc	B	3,100,000,000	8.53	1.45	17.00%
	NTELOS Holdings Corp.	B	450,000,000	21.02	2.25	10.70%
	Shenandoah Telecommunications Company	B++	250,000,000	10.66	1.50	14.07%
	Sprint Nextel Corp	C++	7,200,000,000	2.39	1.00	41.84%
	Telephone & Data Systems, Inc.	B	2,600,000,000	24.78	2.35	9.48%
	U.S. Cellular	B+	3,500,000,000	41.80	2.70	6.46%
	Verizon Communications	A+	108,000,000,000	38.26	3.40	8.89%
	Vonage Holdings Corp.	C++	525,000,000	2.36	0.55	23.31%
Median			625,000,000		1.53	10.33%
Arithmetic Mean			21,441,071,429		1.84	18.02%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Telecommunications Services, Selected Comparables</i>						
	AT&T Inc.	1.00	0.80	0.75	0.75	0.75
	Atlantic Tele-Network, Inc.			0.95	1.00	0.95
	Cbeyond, Inc.			1.10	1.10	1.10
	Clearwire Corp.			1.50	1.40	1.30
	General Communication, Inc.				1.10	1.15
	Leap Wireless International, Inc.		1.30	1.30	1.30	1.45
	MetroPCS Communication, Inc			0.85	0.85	1.00
	NTELOS Holdings Corp.		0.95	0.85	0.85	
	Shenandoah Telecom. Company			0.80	0.80	0.80
	Sprint Nextel Corp	1.10	1.45	1.35	1.30	1.30
	Telephone & Data Systems, Inc.	1.05	0.95	0.80	0.85	0.90
	U.S. Cellular	0.90	1.15	1.10	1.10	1.10
	Verizon Communications	0.95	0.75	0.70	0.70	0.70
	Vonage Holdings Corp.		1.05	1.05	1.10	1.15
<i>Median</i>		1.00	1.00	0.95	1.05	1.10
<i>Arithmetic Mean</i>		1.00	1.05	1.01	1.01	1.05

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Telecommunications Services, Value Line</i>						
	America Movil (ADR)			1.30	1.25	1.15
	AT&T Inc.	1.00	0.80	0.75	0.75	0.75
	Atlantic Tele-Network, Inc.			0.95	1.00	0.95
	Cbeyond, Inc.			1.10	1.10	1.10
	Clearwire Corp.			1.50	1.40	1.30
	Dycom Inds.	1.30	1.25	1.35	1.35	1.40
	General Communications, Inc.				1.10	1.15
	J2 Global Communications			1.05	1.00	1.00
	Leap Wireless International, Inc.		1.30	1.30	1.30	1.45
	MetroPCS Communication, Inc			0.85	0.85	1.00
	Millicom International Cellular, S.A.					1.45
	Neutral Tandem, Inc.				1.00	1.00
	NTELOS Holdings Corp.		0.95	0.85	0.85	
	NII Holdings, Inc	1.30	1.70	1.80	1.75	1.65
	Shenandoah Telecom Company			0.80	0.80	0.80
	Sprint Nextel.	1.10	1.45	1.35	1.30	1.30
	Tele. Corp. of New Zealand Ltd. (ADR)	0.70	0.85	0.95	1.00	1.00
	Telephone & Data Systems	1.05	0.95	0.80	0.85	0.90
	Telus Corp	0.80	0.65	0.60	0.60	0.60
	U.S. Cellular	0.90	1.15	1.10	1.10	1.10
	Verizon Communications	0.95	0.75	0.70	0.70	0.70
	Vodafone GRP (ADR)	1.05	0.80	0.80	0.80	0.80
	Vonage Holdings Corp.		1.05	1.05	1.10	1.15
Median		1.03	0.95	1.00	1.00	1.05
Arithmetic Mean		1.02	1.05	1.05	1.04	1.08

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+	172,100,000,000	62,326,000,000	0.36	73.41%	26.59%
	Atlantic Tele-Network, Inc.	B++	625,000,000	274,100,000	0.44	69.51%	30.49%
	Cbeyond, Inc.	B+	225,000,000	0	0.00	100.00%	0.00%
	Clearwire Corp.	C	550,000,000	4,019,300,000	7.31	12.04%	87.96%
	General Communication, Inc.	C++	425,000,000	934,300,000	2.20	31.27%	68.73%
	Leap Wireless International, Inc.	C	625,000,000	3,218,900,000	5.15	16.26%	83.74%
	MetroPCS Communication, Inc	B	3,100,000,000	4,711,000,000	1.52	39.69%	60.31%
	NTELOS Holdings Corp.	B	450,000,000	736,100,000	1.64	37.94%	62.06%
	Shenandoah Telecommunications Company	B++	250,000,000	164,100,000	0.66	60.37%	39.63%
	Sprint Nextel Corp	C++	7,200,000,000	16,272,000,000	2.26	30.67%	69.33%
	Telephone & Data Systems, Inc.	B	2,600,000,000	1,528,400,000	0.59	62.98%	37.02%
	U.S. Cellular	B+	3,500,000,000	880,400,000	0.25	79.90%	20.10%
	Verizon Communications	A+	108,000,000,000	46,285,000,000	0.43	70.00%	30.00%
	Vonage Holdings Corp.	C++	525,000,000	65,700,000	0.13	88.88%	11.12%
Median			625,000,000	1,231,350,000	0.62	61.68%	38.32%
Arithmetic Mean			21,441,071,429	10,101,092,857	1.64	55.21%	44.79%
Weighted Average			137,802,034,230	52,866,161,139		72.27%	27.73%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Telecommunications Utility Industry

2012 Capitalization Rate Study Telecommunications Utility Industry Notes

- From the Telecommunication Utility segment, BCE INC., BT Group, Deutsche Tele., Telefonica, S.A., Telefonos Mexico excluded as being principally and primarily involved in non-domestic operations.
- Staff considered capitalization studies gathered and submitted by:

Duff & Phelps – Small Cap Wireline for Cox Communication, Windstream and CenturyTel
AUS Consultants for Level 3 Communications
Duff & Phelps – Mid Cap Wireline for Southwestern Bell Telephone
Hal Heaton for Southwestern Bell Telephone

- 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>	13.00%	49.81%	50.19%	9.27%

Industry Equity Rate Summary

Telecommunications Utility

CapM Ex Post Equity Rate	8.77%
CapM Ex Ante Equity Rate	13.28%
DCF (Dividend) Equity Rate	11.10%
DCF (Earnings) Equity Rate	15.70%
Earnings Price Ratio	10.48%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Telecommunications Utility</i>	9.10%	13.85%	0.95	8.77%	13.28%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

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Discounted Cash Flow (Gordon Growth)

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization d</i>	<i>Dividend Yield e</i>	<i>Growth Estimate</i>		<i>Equity Rate Dividend (e+f)</i>	<i>Equity Rate Earnings (e+g)</i>
					<i>Dividends f</i>	<i>Earnings g</i>		
Telecommunications Utility								
	Alaska Communications Systems Group,	C+	225,000,000	1.02%	0.00%	0.00%		
	CenturyLink, Inc.	B++	21,900,000,000	8.20%	3.00%	-2.00%	11.20%	6.20%
	Cincinnati Bell	C+	575,000,000	0.00%	0.00%	11.50%		
	Consolidated Communication Holdings, I	C++	550,000,000	8.40%	0.00%	11.50%		19.90%
	Frontier Communications Corporation	B	5,000,000,000	15.00%	-4.00%	4.00%	11.00%	19.00%
	TW Telecom Inc.	B	2,800,000,000	0.00%	0.00%	0.00%		
	Windstream Corp.	B	6,000,000,000	8.70%	0.00%	9.00%		17.70%
Median			2,800,000,000				11.10%	18.35%
Arithmetic Mean			5,292,857,143				11.10%	15.70%

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						
	Alaska Communications Systems Group, Inc.	C+	225,000,000	4.86	0.55	11.32%
	CenturyLink, Inc.	B++	21,900,000,000	35.46	3.00	8.46%
	Cincinnati Bell	C+	575,000,000	2.93	0.55	18.77%
	Consolidated Communication Holdings, Inc	C++	550,000,000	18.53	1.25	6.75%
	Frontier Communications Corporation	B	5,000,000,000	4.99	0.50	10.02%
	TW Telecom Inc.	B	2,800,000,000	19.03	1.20	6.31%
	Windstream Corp.	B	6,000,000,000	11.53	1.35	11.71%
Median			2,800,000,000		1.20	10.02%
Arithmetic Mean			5,292,857,143		1.20	10.48%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Telecommunications Utility, Selected Comparables</i>						
	Alaska Comm. Systems Group, Inc.	0.85	0.85	0.80	0.80	0.80
	CenturyLink, Inc.	0.85	0.75	0.75	0.70	0.75
	Cincinnati Bell	1.40	1.10	1.05	1.10	1.05
	Consolidated Comm. Holdings, Inc		1.00	0.95	0.95	0.90
	Frontier Communications Corp.		0.90	0.95	0.90	0.90
	TW Telecom Inc.			1.45	1.40	1.35
	Windstream Corp.				0.95	0.90
<i>Median</i>		0.85	0.90	0.95	0.95	0.90
<i>Arithmetic Mean</i>		1.03	0.92	0.99	0.97	0.95

Telecommunications Utility, Value Line

	Alaska Comm. Systems Group, Inc.	0.85	0.85	0.80	0.80	0.80
	BCE Inc	0.75	0.85	0.75	0.75	0.75
	BT Group PLC	1.00	0.85	0.90	0.95	1.00
	CenturyLink, Inc.	0.85	0.75	0.75	0.70	0.75
	Cincinnati Bell	1.40	1.10	1.05	1.10	1.05
	Consolidated Comm. Holdings, Inc		1.00	0.95	0.95	0.90
	Deutsche Telekom	1.00	0.75	0.75	0.75	0.80
	Frontier Communications Corp.		0.90	0.95	0.90	0.90
	Telefonica, S.A.	1.10	1.00	0.85	0.90	0.90
	Telefonos de Mexico	1.05			0.90	0.85
	TW Telecom Inc.			1.45	1.40	1.35
	Windstream Corp.				0.95	0.90
<i>Median</i>		1.00	0.85	0.88	0.90	0.90
<i>Arithmetic Mean</i>		1.00	0.89	0.92	0.92	0.91

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							
	Alaska Communications Systems Group, Inc.	C+	225,000,000	564,200,000	2.51	28.51%	71.49%
	CenturyLink, Inc.	B++	21,900,000,000	21,142,000,000	0.97	50.88%	49.12%
	Cincinnati Bell	C+	575,000,000	2,508,800,000	4.36	18.65%	81.35%
	Consolidated Communication Holdings, Inc	C++	550,000,000	878,000,000	1.60	38.52%	61.48%
	Frontier Communications Corporation	B	5,000,000,000	8,151,100,000	1.63	38.02%	61.98%
	TW Telecom Inc.	B	2,800,000,000	1,349,500,000	0.48	67.48%	32.52%
	Windstream Corp.	B	6,000,000,000	7,296,600,000	1.22	45.12%	54.88%
Median			2,800,000,000	2,508,800,000	1.60	38.52%	61.48%
Arithmetic Mean			5,292,857,143	5,984,314,286	1.82	41.02%	58.98%
Weighted Average			14,821,423,752	14,935,921,862		49.81%	50.19%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
February	5.73%	5.58%	5.42%	5.68%	6.10%	5.22%	5.31%	5.59%	6.19%
March	5.62%	5.48%	5.33%	5.56%	5.97%	5.13%	5.22%	5.48%	6.09%
April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
October	4.66%	4.54%	4.21%	4.52%	5.24%	3.98%	4.11%	4.56%	5.50%
November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%

Water Industry

2012 Capitalization Rate Study Water Industry Notes

- From the Water 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>Water</i>	10.50%	53.68%	46.32%	8.01%

Industry Equity Rate Summary

Water

CapM Ex Post Equity Rate	7.11%
CapM Ex Ante Equity Rate	10.44%
DCF (Dividend) Equity Rate	8.37%
DCF (Earnings) Equity Rate	10.62%
Earnings Price Ratio	6.80%

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-2.48%)*d)+2.48%)</i>	<i>Ex Ante CapM EquityRate (((c-2.48%)*d)+2.48%)</i>
<i>Water</i>	9.10%	13.85%	0.70	7.11%	10.44%

b* Risk Free Rate (2.48%) plus Risk Premium Rate (6.62%)

c* Risk Free Rate (2.48%) plus Risk Premium Rate (11.37%)

Value Line Investment Survey, December 2011 through January 2012

Morningstar 2012 Valuation Yearbook

Discounted Cash Flow (Gordon Growth)

<i>Industry</i>	<i>Company</i>	<i>Value Line Strength</i>	<i>Market Capitalization d</i>	<i>Dividend Yield e</i>	<i>Growth Estimate</i>		<i>Equity Rate Dividend (e+f)</i>	<i>Equity Rate Earnings (e+g)</i>
					<i>Dividends f</i>	<i>Earnings g</i>		
Water	American States Water Co.	B++	650,000,000	3.30%	4.50%	6.50%	7.80%	9.80%
	American Water Works Company, Inc.	B	5,500,000,000	2.90%	10.00%	10.00%	12.90%	12.90%
	Aqua America, Inc.	B+	2,900,000,000	3.10%	6.00%	10.00%	9.10%	13.10%
	California Water Service Group	B+	750,000,000	3.50%	3.50%	5.50%	7.00%	9.00%
	Middlesex Water Company	B+	300,000,000	4.00%	2.00%	6.00%	6.00%	10.00%
	SJW Corporation	B+	425,000,000	2.90%	4.50%	6.00%	7.40%	8.90%
Median			700,000,000				7.60%	9.90%
Arithmetic Mean			1,754,166,667				8.37%	10.62%

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.	B++	650,000,000	34.29	2.60	7.58%
	American Water Works Company, Inc.	B	5,500,000,000	31.39	2.30	7.33%
	Aqua America, Inc.	B+	2,900,000,000	21.18	1.40	6.61%
	California Water Service Group	B+	750,000,000	17.81	1.30	7.30%
	Middlesex Water Company	B+	300,000,000	18.69	1.20	6.42%
	SJW Corporation	B+	425,000,000	23.50	1.30	5.53%
Median			700,000,000		1.35	6.95%
Arithmetic Mean			1,754,166,667		1.68	6.80%

Five Year Historical Beta

<i>Industry</i>	<i>Company</i>	<i>2008 Value Line Levered Beta</i>	<i>2009 Value Line Levered Beta</i>	<i>2010 Value Line Levered Beta</i>	<i>2011 Value Line Levered Beta</i>	<i>2012 Value Line Levered Beta</i>
<i>Water, Selected Comparables</i>						
	American States Water Co.	1.00	0.95	0.80	0.80	0.70
	American Water Works Co., Inc.				0.65	0.65
	Aqua America, Inc.	0.90	0.90	0.65	0.65	0.65
	California Water Service Group	1.15	1.05	0.75	0.70	0.65
	Middlesex Water Company					0.70
	SJW Corporation					0.85
<i>Median</i>		1.00	0.95	0.75	0.68	0.68
<i>Arithmetic Mean</i>		1.02	0.97	0.73	0.70	0.70
<i>Water, Value Line</i>						
	American States Water Co.	1.00	0.95	0.80	0.80	0.70
	American Water Works Co., Inc.				0.65	0.65
	Aqua America, Inc.	0.90	0.90	0.65	0.65	0.65
	California Water Service Group	1.15	1.05	0.75	0.70	0.65
	Middlesex Water Company					0.70
	SJW Corporation					0.85
<i>Median</i>		1.00	0.95	0.75	0.68	0.68
<i>Arithmetic Mean</i>		1.02	0.97	0.73	0.70	0.70

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.	B++	650,000,000	340,400,000	0.52	65.63%	34.37%
	American Water Works Company, Inc.	B	5,500,000,000	5,383,500,000	0.98	50.54%	49.46%
	Aqua America, Inc.	B+	2,900,000,000	1,402,500,000	0.48	67.40%	32.60%
	California Water Service Group	B+	750,000,000	477,600,000	0.64	61.09%	38.91%
	Middlesex Water Company	B+	300,000,000	132,600,000	0.44	69.35%	30.65%
	SJW Corporation	B+	425,000,000	344,500,000	0.81	55.23%	44.77%
Median			700,000,000	411,050,000	0.58	63.36%	36.64%
Arithmetic Mean			1,754,166,667	1,346,850,000	0.65	61.54%	38.46%
Weighted Average			3,792,458,432	3,272,413,539		53.68%	46.32%

Mergents 2011 Corporate Bond Yield Averages

Month	Corporate by Groups		Public Utility Bonds			Industrial Bonds			
	Public Utility	Industrial	Aa	A	Baa	Aaa	Aa	A	Baa
January	5.64%	5.46%	5.29%	5.57%	6.06%	5.04%	5.22%	5.48%	6.11%
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April	5.62%	5.49%	5.32%	5.55%	5.98%	5.16%	5.25%	5.48%	6.06%
May	5.38%	5.27%	5.08%	5.32%	5.74%	4.96%	5.04%	5.26%	5.81%
June	5.33%	5.27%	5.04%	5.26%	5.67%	4.99%	5.02%	5.25%	5.82%
July	5.34%	5.25%	5.05%	5.27%	5.70%	4.93%	4.99%	5.25%	5.81%
August	4.78%	4.79%	4.44%	4.69%	5.22%	4.37%	4.50%	4.79%	5.49%
September	4.61%	4.58%	4.24%	4.48%	5.11%	4.09%	4.21%	4.59%	5.42%
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November	4.37%	4.41%	3.92%	4.25%	4.93%	3.87%	4.01%	4.43%	5.34%
December	4.47%	4.47%	4.00%	4.33%	5.07%	3.93%	4.06%	4.46%	5.43%
	5.13%	5.05%	4.78%	5.04%	5.57%	4.64%	4.75%	5.05%	5.76%