COST OF CAPITAL STUDY

YIELD CAPITALIZATION

2015 ASSESSMENT YEAR

APPENDIX C

PIPELINES

EQUITY RATE						**11.50%**	
CAPITAL ASSET PRICING MODEL							PAGE
CAPM Ex Ante			7.11%				4
DIVIDEND GROWTH MODELS							
Value Line, based on Dividends Growth			12.00%				6
Value Line, based on Earnings Growth			12.40%				7
Value Line, based on ROE Growth			6.50%				8
				RANGE		6.5-12.40%	
DEBT RATE						**4.75%**	9
MARKET CAPITAL STRUCTURE							
Equity	65%	x	11.50%	=		7.48%	3
Debt	35%	x	4.75%	=	1.66%		3
Marginal Tax Rate	38%	=	(1-.38)	x	1.66%	1.03%	
WEIGHTED AVERAGE COST OF CAPITAL						**8.51%**	

SUPPORT FOR GUIDELINE COMPANIES

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Capital Structure at Book Value

Company	Ticker	Beta	P/E Ratio	Div'd Yield	Gross Revenues (Millions)	Pipe Miles	Units / Common Stock	%	Preferred Stock	%	Long Term Debt	%	Total Debt & Equity
Buckeye Partners	bpl	0.70	22.6	5.6%	215,830	6,000	3,823,381,464	51.1%		0.0%	3,663,900,000	48.9%	7,487,281,464
DCP Midstream Ptnrs	dpm	0.90	12.6	8.2%	92,318	11,500	2,862,585,755	55.3%		0.0%	2,311,000,000	44.7%	5,173,585,755
Enbridge Energy Ptnrs	eep	0.80	nmf	5.9%	93,176	11,200	4,264,367,945	40.4%		0.0%	6,301,900,000	59.6%	10,566,267,945
Energy Transfer Part	etp	0.70	27.5	5.9%	1,809,499	47,000	12,119,884,655	40.9%		0.0%	17,540,000,000	59.1%	29,659,884,655
Enterprise Prod	epd	0.85	24.8	3.9%	470,744	51,000	17,898,999,204	50.3%		0.0%	17,706,500,000	49.7%	35,605,499,204
EQT Midstream Ptnrs	eqm	1.25		2.8%	4,479	700	691,226,866	52.1%		0.0%	636,500,000	47.9%	1,327,726,866
Kinder Morgan Energy	kmi	0.90	29.1	4.3%	214,705	80,000	13,675,452,363	27.8%		0.0%	35,600,000,000	72.2%	49,275,452,363
Magellan Mid Ptnrs	mmp	0.75	23.6	3.4%	18,136	10,600	1,850,606,295	38.1%		0.0%	3,003,700,000	61.9%	4,854,306,295
MarkWest Energy Ptrr	mwe	0.90		6.0%	48,505		4,601,946,250	56.5%		0.0%	3,549,500,000	43.5%	8,151,446,250
National Fuel Gas	nfg	1.15	19.2	2.2%	60,545	3,000	2,411,209,218	59.4%		0.0%	1,649,000,000	40.6%	4,060,209,218
ONEOK Ptnrs *	oks	0.80	17.6	6.4%	285,771		5,702,881,507	54.6%		0.0%	4,741,000,000	45.4%	10,443,881,507
Plains All Amer Pipe	paa	0.75	20.7	5.3%	986,671	20,000	8,184,744,282	52.5%		0.0%	7,414,000,000	47.5%	15,598,744,282
Spectra Energy Corp	se	0.95	24.4	3.8%	76,033	21,000	8,689,453,535	39.9%		0.0%	13,072,000,000	60.1%	21,761,453,535
TransCanada Corp	trp	0.85	21.0	3.9%	255,086	35,500	19,107,550,000	46.8%	1,813,000,000	4.4%	19,928,000,000	48.8%	40,848,550,000
Williams Partners LP	wpz	0.80	40.2	7.2%	156,552	13,700	10,003,314,844	47.5%		0.0%	11,048,000,000	52.5%	21,051,314,844
Mean		**0.87**	**23.6**	**5.0%**	**319,203**		**7,725,840,279**	**47.5%**		**0.3%**	**9,877,666,667**	**52.2%**	
Weighted Mean							**115,887,604,184**	**43.6%**	**1,813,000,000**	**0.7%**	**148,165,000,000**	**55.7%**	**265,865,604,184**
Median		**0.85**		**5.3%**	**156,552**			**50.3%**		**0.0%**		**48.9%**	

SUPPORT FOR CAPITAL STRUCTURE
MARKET VALUE

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Capital Structure at Market Value

Company	Ticker	Stock Price	Common Shares	Common Stock	%	Preferred Stock	%	Long Term Debt	%	Total Debt & Equity
Buckeye Partners	bpl	75.660	127,022,640	9,610,532,942	71.4%	-	0.0%	3,850,026,120	28.6%	13,460,559,062
DCP Midstream Ptnrs *	dpm	45.430	112,922,515	5,130,069,856	67.0%	-	0.0%	2,526,235,654	33.0%	7,656,305,511
Enbridge Energy Ptnrs *	eep	39.900	329,294,822	13,138,863,398	65.7%	-	0.0%	6,867,825,276	34.3%	20,006,688,673
Energy Transfer Part	etp	65.000	352,835,070	22,934,279,550	54.0%	-	0.0%	19,504,432,702	46.0%	42,438,712,252
Enterprise Prod	epd	36.120	1,935,026,941	69,893,173,109	78.3%	-	0.0%	19,355,600,004	21.7%	89,248,773,113
EQT Midstream Ptnrs *	eqm	88.000	60,687,170	5,340,470,960	88.5%	-	0.0%	695,780,612	11.5%	6,036,251,572
Kinder Morgan Energy	kmi	42.310	1,028,229,501	43,504,390,187	52.8%	-	0.0%	38,915,616,308	47.2%	82,420,006,495
Magellan Mid Ptnrs	mmp	82.660	227,068,257	18,769,462,124	84.2%	-	0.0%	3,531,750,460	15.8%	22,301,212,584
MarkWest Energy Ptrns *	mwe	67.190	178,025,000	11,961,499,750	76.8%	-	0.0%	3,605,007,831	23.2%	15,566,507,581
National Fuel Gas	nfg	69.530	84,190,266	5,853,749,195	76.5%	-	0.0%	1,802,580,092	23.5%	7,656,329,287
ONEOK Ptnrs *	oks	39.630	233,151,329	9,239,787,168	64.1%	-	0.0%	5,182,554,408	35.9%	14,422,341,576
Plains All Amer Pipe	paa	51.320	372,033,831	19,092,776,207	69.6%	-	0.0%	8,323,367,296	30.4%	27,416,143,503
Spectra Energy Corp	se	36.300	671,000,273	24,357,309,910	63.0%	-	0.0%	14,289,464,505	37.0%	38,646,774,415
TransCanada Corp	trp	49.100	709,000,000	34,811,900,000	58.2%	1,813,000,000	3.0%	23,219,686,062	38.8%	59,844,586,062
Williams Partners LP	wpz	44.750	439,706,147	19,676,850,078	63.0%	-	0.0%	11,535,462,311	37.0%	31,212,312,389
Source:			**Mean**		**68.9%**		**0.2%**		**30.9%**	
Stock Price: Yahoo			**Weighted Mean**	**313,315,114,435**	**65.5%**	**1,813,000,000**	**0.4%**	**163,205,389,642**	**34.1%**	**478,333,504,077**
Market Value Debt: Bond Analysis			**Median**		**67.0%**		**0.0%**		**33.0%**	
			Max		**88.5%**		**3.0%**		**47.2%**	
			Min		**52.8%**		**0.0%**		**11.5%**	
			Target		**65%**		**0%**		**35%**	**100%**

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

CAPITAL ASSET PRICING MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Ex Ante

Ke = Rf + B (Rp)

Ke =	**Cost of Equity**				**7.11%**
					to page 1
	Rm =	rate of return	8.00%		
	Rf =	risk free rate	2.75%		
	Rp =	risk premium	5.25%		page 7
	B =	Beta	0.83		
Rp =	**Risk Premium**				**5.25%**
					to above
	Shannon Pratt and Roger Grabowski		3.50 - 6.00%		
		Cost of Capital, Applications and Examples, 4th Ed, 2010			
	Dr. Aswath Damodaran				
		http://pages.stern.nyu.edu/~adamodar/	5.78%	chart page 16	
		2014 Implied Premium	5.13%	adjusted for Rf	
	Duff & Phelps		6.21%	arithmetic	
		2015 Valuation Handbook, page 3-28	4.19%	geometric	
		Long-horizon expected ERP (supply side)			
	John Graham & Campbell Harvey		4.90%	10 year expected return	
	Duke CFO magazine Global Business Outlook survey - U.S.		4.28-5.52%	95% Interval 10 year ex	
			4.45%	adjusted for Rf	
Rf =	**Risk Free Rate**				**2.75%**
					to above
	2015 Valuation Handbook, page 3-15				
		Long Term (20 years) US Treasury Bond Yield	2.40%		
	Value Line Investment Survey, Selected Yields January 9, 2015, page 4445				
	as of 12-31-14	US Treasury Securities year end data			
		30 year	2.76%		
		30 year Zero	2.86%		
	Federal Reserve Statistical Release (http://www.federalreserve.gov/Releases/H15/Current/)				**Imputed Inflation**
	January 5, 2015 as of 12-31-14	Treasury Constant Maturities			
		20 year	2.47%		
		30 year	2.75%		
		20 year TIPS	0.68%		1.79%
		30 year TIPS	0.83%		1.92%
Inflation					**2.00%**
	Value Line Investment Survey, Economic Series January 2, 2015, page 1300				
		Consumer Price Index Annual Rate of Change 2017-19	2.30%		
	The Livingston Survey December 12, 2014 page 3				
		Inflation median (measured by the CPI) over next 10 years	2.25%		

BETA CALCULATION FOR CAPM

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Company	Ticker	Value Line
Buckeye Partners	bpl	0.70
DCP Midstream Ptnrs *	dpm	0.90
Enbridge Energy Ptnrs *	eep	0.80
Energy Transfer Part	etp	0.70
Enterprise Prod	epd	0.85
EQT Midstream Ptnrs *	eqm	1.25
Kinder Morgan Energy	kmi	0.90
Magellan Mid Ptnrs	mmp	0.75
MarkWest Energy Ptrns *	mwe	0.90
National Fuel Gas	nfg	1.15
ONEOK Ptnrs *	oks	0.80
Plains All Amer Pipe	paa	0.75
Spectra Energy Corp	se	0.95
TransCanada Corp	trp	0.85
Williams Partners LP	wpz	0.80
	Mean	**0.87**
Source: Value Line-five year, weekly	**Median**	**0.85**
	Max	**1.25**
	Min	**0.70**
	Say	**0.83**

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Based on Dividend Growth

Ke = (D1 / Po) + G

Ke = Cost of Equity
D1 = Expected Dividends
Po = Current Price
G = Sustainable Growth

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	Dividend Growth (G)	Ke with Short Term Growth	Ke with Multi Stage Growth Adj
Buckeye Partners	bpl	75.660	4.36	5.76%	1.50%	7.26%	7.26%
DCP Midstream Ptnrs *	dpm	45.430	3.19	7.02%	4.50%	11.52%	11.52%
Enbridge Energy Ptnrs *	eep	39.900	N/A	N/A	1.00%	N/A	N/A
Energy Transfer Part	etp	65.000	3.90	6.00%	2.00%	8.00%	8.00%
Enterprise Prod	epd	36.120	1.53	4.24%	9.50%	13.74%	13.03%
EQT Midstream Ptnrs *	eqm	88.000	N/A	N/A	N/A	N/A	N/A
Kinder Morgan Energy	kmi	42.310	2.00	4.73%	16.50%	21.23%	nmf
Magellan Mid Ptnrs	mmp	82.660	2.89	3.50%	13.50%	17.00%	15.39%
MarkWest Energy Ptrns *	mwe	67.190	N/A	N/A	5.00%	N/A	N/A
National Fuel Gas	nfg	69.530	1.60	2.30%	5.50%	7.80%	7.80%
ONEOK Ptnrs *	oks	39.630	3.16	7.97%	4.00%	11.97%	11.97%
Plains All Amer Pipe	paa	51.320	2.80	5.46%	10.50%	15.96%	14.50%
Spectra Energy Corp	se	36.300	1.52	4.19%	10.00%	14.19%	13.40%
TransCanada Corp	trp	49.100	2.00	4.07%	4.50%	8.57%	8.57%
Williams Partners LP	wpz	44.750	3.83	8.56%	6.50%	15.06%	15.06%
					Mean	**12.69%**	**11.50%**
Source: Value Line Projections to 13-19					**Median**	**12.85%**	**11.97%**
					Max	**21.23%**	**15.39%**
					Min	**7.26%**	**7.26%**
					Say		**12.00%**

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Based on Earnings Growth

Ke = (D1 / Po) + G

Ke = Cost of Equity
D1 = Expected Dividends
Po = Current Price
G = Sustainable Growth

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	Earnings Growth (G)	Ke with Short Term Growth	Ke with Multi Stage Growth Adj
Buckeye Partners	bpl	75.660	4.36	5.76%	5.50%	11.26%	11.26%
DCP Midstream Ptnrs *	dpm	45.430	3.19	7.02%	8.50%	15.52%	15.52%
Enbridge Energy Ptnrs *	eep	39.900	N/A	N/A	N/A	N/A	N/A
Energy Transfer Part	etp	65.000	3.90	6.00%	11.50%	17.50%	nmf
Enterprise Prod	epd	36.120	1.53	4.24%	10.50%	14.74%	13.77%
EQT Midstream Ptnrs *	eqm	88.000	N/A	N/A	N/A	N/A	N/A
Kinder Morgan Energy	kmi	42.310	2.00	4.73%	16.00%	20.73%	nmf
Magellan Mid Ptnrs	mmp	82.660	2.89	3.50%	13.50%	17.00%	15.39%
MarkWest Energy Ptrns *	mwe	67.190	N/A	N/A	N/A	N/A	N/A
National Fuel Gas	nfg	69.530	1.60	2.30%	10.00%	12.30%	11.34%
ONEOK Ptnrs *	oks	39.630	3.16	7.97%	2.00%	9.97%	9.97%
Plains All Amer Pipe	paa	51.320	2.80	5.46%	9.00%	14.46%	13.36%
Spectra Energy Corp	se	36.300	1.52	4.19%	5.00%	9.19%	9.19%
TransCanada Corp	trp	49.100	2.00	4.07%	11.50%	15.57%	13.75%
Williams Partners LP	wpz	44.750	3.83	8.56%	2.50%	11.06%	11.06%
					Mean	**14.11%**	**12.46%**
Source: Value Line Projections to 13-19					**Median**	**14.60%**	**12.35%**
					Max	**20.73%**	**15.52%**
					Min	**9.19%**	**9.19%**
					Say		**12.40%**

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Based on Return on Equity

Ke = (D1 / Po) + G

Ke = Cost of Equity
D1 = Expected Dividends
Po = Current Price
G = Sustainable Growth
b = Retained Earnings (plowback)
ROE = Return on Equity

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	b (1-payout ratio)	ROE	Growth (b*ROE)	Ke (Value Line)	1-payout	g	Ke (calculated payout)
Buckeye Partners	bpl	75.660	4.36	5.76%	2.7%	5.53%	0.15%	5.91%	97%	0.15%	5.91%
DCP Midstream Ptnrs *	dpm	45.430	3.19	7.02%	17.8%	5.92%	1.05%	8.08%	82%	1.05%	8.08%
Enbridge Energy Ptnrs	eep	39.900	N/A	N/A	-53.9%	3.66%	NMF	NMF	154%	NMF	NMF
Energy Transfer Part	etp	65.000	3.90	6.00%	29.8%	3.13%	0.93%	6.93%	70%	0.93%	6.93%
Enterprise Prod	epd	36.120	1.53	4.24%	31.9%	4.58%	1.46%	5.70%	68%	1.46%	5.70%
EQT Midstream Ptnrs *	eqm	88.000	N/A	N/A	54.5%	3.81%	2.08%	N/A	45%	2.08%	NMF
Kinder Morgan Energy	kmi	42.310	2.00	4.73%	51.4%	2.40%	1.23%	5.96%	49%	1.23%	5.96%
Magellan Mid Ptnrs	mmp	82.660	2.89	3.50%	40.9%	4.48%	1.83%	5.33%	59%	1.83%	5.33%
MarkWest Energy Ptrns	mwe	67.190	N/A	N/A	-32.0%	2.03%	NMF	N/A	132%	NMF	NMF
National Fuel Gas	nfg	69.530	1.60	2.30%	81.3%	4.88%	3.97%	6.27%	19%	3.97%	6.27%
ONEOK Ptnrs *	oks	39.630	3.16	7.97%	14.5%	5.81%	0.84%	8.82%	86%	0.84%	8.82%
Plains All Amer Pipe	paa	51.320	2.80	5.46%	22.7%	5.21%	1.18%	6.64%	77%	1.18%	6.64%
Spectra Energy Corp	se	36.300	1.52	4.19%	50.7%	3.75%	1.90%	6.09%	49%	1.90%	6.09%
TransCanada Corp	trp	49.100	2.00	4.07%	55.9%	6.01%	3.36%	7.43%	44%	3.36%	7.43%
Williams Partners LP	wpz	44.750	3.83	8.56%	16.3%	N/A	NMF	N/A	84%	NMF	NMF
										Mean	**6.65%**
										Median	**6.27%**
										Max	**8.82%**
										Min	**5.33%**
										Say	**6.50%**

SUPPORT FOR DEBT RATING AND DEBT YIELD RATE

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Company	Ticker	Mergent's Ratings	S&P Ratings	WAYTM
Buckeye Partners	bpl	Baa3	BBB-	3.90%
DCP Midstream Ptnrs *	dpm		BBB-	
Enbridge Energy Ptnrs *	eep	Baa2	BBB+	
Energy Transfer Part	etp	Baa3	BBB-	4.15%
Enterprise Prod	epd	Baa1	BBB+	
EQT Midstream Ptnrs *	eqm	Ba1	BBB-	
Kinder Morgan Energy	kmi	Baa3	BBB-	
Magellan Mid Ptnrs	mmp	Baa1	BBB+	2.80%
MarkWest Energy Ptrns *	mwe	Ba3	BB	4.56%
National Fuel Gas	nfg	Baa2	BBB	
ONEOK Ptnrs *	oks		BBB	
Plains All Amer Pipe	paa	Baa2	BBB+	3.53%
Spectra Energy Corp	se		BBB	
TransCanada Corp	trp		A-	3.80%
Williams Partners LP	wpz	Baa2	BBB	4.09%
Overall Average Debt Rating		**Baa3**	**BBB**	**3.83%**

bond analysis, A-BBB bonds

	All issues	20+ year maturities
Guideline Companies, All Ratings	**3.99%**	**5.29%**

bond analysis page 12

Mergent's Bond Record January 2015, page 213

Corporate	**Aaa**	**Aa**	**A**	**Baa**
October	3.92%	3.99%	4.13%	4.69%
November	3.92%	4.04%	4.18%	4.79%
December	3.79%	3.89%	4.05%	4.74%
4th Qtr Average	**3.88%**	**3.97%**	**4.12%**	**4.74%**
Public Utilities	**Aaa**	**Aa**	**A**	**Baa**
October		3.98%	4.06%	4.67%
November		4.03%	4.09%	4.75%
December		3.90%	3.95%	4.70%
4th Qtr Average		**3.97%**	**4.03%**	**4.71%**
Industrials	**Aaa**	**Aa**	**A**	**Baa**
October	3.92%	4.00%	4.20%	4.70%
November	3.92%	4.04%	4.27%	4.82%
December	3.79%	3.89%	4.15%	4.77%
4th Qtr Average	**3.88%**	**3.98%**	**4.21%**	**4.76%**

Debt Yield Rate	**4.75%**

to page 1

Pipelines Bond Analysis

Company	type	Call	coupon	maturity	Price 12/14		Issued / Book	current yield	yield to maturity	WAYTM	Rating		Mkt Val	Mkt : Book		Debt Service	CO WAYTM
									2015.5								
Buckeye Ptns Lp	Nt		4.875	2021	105.08	$	650,000,000	4.64%	3.90%	0.08%	BBB-	$	683,020,000	105.08%	$	31,687,500	0.0390000
1		**100**		**sum**	**105.08**	**$**	**650,000,000**	**Percent of book**	**105.08%**	**0.08%**		**$**	**683,020,000**	**105.08%**	**$**	**31,687,500**	**3.90%**
Enbridge Energy Ptrs	Nt		4.200	2021	105.06	$	600,000,000	4.00%	3.37%	0.06%	BBB+	$	630,360,000	105.06%	$	25,200,000	0.0252750
Enbridge Energy Ptrs	Nt		9.875	2019	126.86	$	500,000,000	7.78%	2.71%	0.04%	BBB+	$	634,300,000	126.86%	$	49,375,000	0.0135500
Enbridge Energy Ptrs	Nt		5.200	2020	109.39	$	500,000,000	4.75%	3.15%	0.05%	BBB+	$	546,950,000	109.39%	$	26,000,000	0.0157500
Enbridge Energy Ptrs	Nt		5.500	2040	96.63	$	550,000,000	5.45%	5.42%	0.09%	BBB+	$	531,465,000	96.63%	$	30,250,000	0.0425857
6	**Book Val**	**600**		**sum**	**437.94**	**$**	**2,150,000,000**	**Percent of book**	**14.65%**	**0.24%**		**$**	**2,343,075,000**	**108.98%**	**$**	**130,825,000**	**9.72%**
Energy Transfer Part	Sr Nt		4.650	2021	105.2	$	800,000,000	4.42%	3.66%	0.09%	BBB-	$	841,600,000	105.20%	$	37,200,000	0.0030367
Energy Transfer Part	Sr Nt		6.500	2042	115.78	$	1,000,000,000	5.61%	5.37%	0.16%	BBB-	$	1,157,800,000	115.78%	$	65,000,000	0.0055694
Energy Transfer Part	Sr Nt		5.200	2022	107.76	$	1,000,000,000	4.83%	3.90%	0.12%	NR	$	1,077,600,000	107.76%	$	52,000,000	0.0040448
Energy Transfer Part	Sr Nt		6.050	2041	110.02	$	700,000,000	5.50%	5.32%	0.11%	BBB-	$	770,140,000	110.02%	$	42,350,000	0.0038644
Energy Transfer Part	Sr Nt		7.500	2038	125.15	$	1,500,000,000	5.99%	5.56%	0.25%	BBB-	$	1,877,250,000	125.15%	$	112,500,000	0.0086497
Energy Transfer Part	Sr Nt		9.000	2019	123.10	$	650,000,000	7.31%	2.80%	0.05%	BBB-	$	800,150,000	123.10%	$	58,500,000	0.0018876
Energy Transfer Part	Sr Nt		9.700	2019	125.87	$	600,000,000	7.71%	2.78%	0.05%	BBB-	$	755,220,000	125.87%	$	58,200,000	0.0017299
Energy Transfer Part	Sr Nt		3.600	2023	97.45	$	800,000,000	3.69%	3.98%	0.09%	BBB-	$	779,600,000	97.45%	$	28,800,000	0.0033022
Energy Transfer Part	Sr Nt		6.700	2018	112.60	$	1,500,000,000	5.95%	3.29%	0.15%	BBB-	$	1,689,000,000	112.60%	$	100,500,000	0.0051182
Energy Transfer Part	Fltg Rte		3.249	2066	88.65	$	546,000,000	3.66%	3.76%	0.06%	BB	$	484,029,000	88.65%	$	17,739,540	0.0021292
Energy Transfer Part	Jr Sub Nt		3.249	2066	89.65	$	546,000,001	3.66%	3.76%	0.06%	BB	$	489,489,001	89.65%	$	17,739,540	0.0021292
11		**1100**		**sum**	**1201.23**	**$**	**9,642,000,001**	**Percent of book**	**109.20%**	**1.19%**			**10,721,878,001**	**111.20%**	**$**	**590,529,080**	**4.15%**
Magellan Midstream F	Sr Nt		6.550	2019	117.58	$	550,000,000	5.54%	2.80%	0.05%	BBB+	$	646,690,000	117.58%	$	36,025,000	0.028000000
1	**Book Val**	**100**		**sum**	**117.58**	**$**	**550,000,000**	**Percent of book**	**2.80%**	**0.05%**		**$**	**646,690,000**	**117.58%**	**$**	**36,025,000**	**2.80%**
Markwest Energy Prtn	Sr Nt		6.750	2020	103.38	$	500,000,000	5.11%	4.56%	0.07%	Ba3	$	516,900,000	103.38%	$	33,750,000	0.007414634
Markwest Energy Prtn	Sr Nt		6.500	2021	103.25	$	325,000,000	5.11%	4.56%	0.04%	Ba3	$	335,562,500	103.25%	$	21,125,000	0.004819512
Markwest Energy Prtn	Sr Nt		5.500	2023	102.75	$	750,000,000	5.11%	4.56%	0.10%	Ba3	$	770,625,000	102.75%	$	41,250,000	0.011121951
Markwest Energy Prtn	Sr Nt		4.500	2023	100.00	$	1,000,000,000	5.11%	4.56%	0.14%	Ba3	$	1,000,000,000	100.00%	$	45,000,000	0.014829268
Markwest Energy Prtn	Sr Nt		4.875	2024	100.00	$	500,000,000	5.11%	4.56%	0.07%	Ba3	$	500,000,000	100.00%	$	24,375,000	0.007414634
5	**Book Val**	**500**		**sum**	**509.38**	**$**	**3,075,000,000**	**Percent of book**	**22.80%**	**0.42%**		**$**	**3,123,087,500**	**101.56%**	**$**	**165,500,000**	**4.56%**
Plains All American	Sr Nt		5.150	2042	107.44	$	500,000,000	4.85%	4.75%	0.07%	BBB+	$	537,200,000	107.44%	$	25,750,000	0.0057229
Plains All American	Sr Nt		3.650	2022	101.62	$	750,000,000	3.61%	3.46%	0.08%	BBB+	$	762,150,000	101.62%	$	27,375,000	0.0062530
Plains All American	Sr Nt		5.750	2020	113.55	$	500,000,000	5.06%	2.88%	0.04%	BBB+	$	567,750,000	113.55%	$	28,750,000	0.0034699
Plains All American	Sr Nt		5.000	2021	111.00	$	600,000,000	4.50%	3.05%	0.05%	BBB+	$	666,000,000	111.00%	$	30,000,000	0.0044096
Plains All American	Sr Nt		6.650	2037	126.71	$	600,000,000	5.31%	4.76%	0.09%	BBB+	$	760,260,000	126.71%	$	39,900,000	0.0068819
Plains All American	Sr Nt		6.500	2018	114.06	$	600,000,000	5.70%	4.15%	0.07%	BBB+	$	684,360,000	114.06%	$	39,000,000	0.0060000
Plains All American	Sr Nt		6.500	2018	113.55	$	600,000,000	5.72%	1.80%	0.03%	BBB+	$	681,300,000	113.55%	$	39,000,000	0.0026024
7		**700**		**sum**	**787.93**	**$**	**4,150,000,000**	**Percent of book**	**112.56%**	**0.44%**			**4,659,020,000**	**112.27%**	**$**	**229,775,000**	**3.53%**
TransCanada Corp	Sr Nt		7.625	2039	141.45	$	1,250,000,000	5.45%	4.78%	0.18%	A-	$	1,768,125,000	141.45%	$	95,312,500	0.0125789
TransCanada Corp	Sr Nt		7.125	2019	116.86	$	750,000,000	6.10%	2.71%	0.06%	A-	$	876,450,000	116.86%	$	53,437,500	0.0042789
TransCanada Corp	Sr Nt		3.800	2020	103.68	$	1,000,000,000	3.67%	3.20%	0.10%	A-	$	1,036,800,000	103.68%	$	38,000,000	0.0067368
TransCanada Corp	Sr Nt		2.500	2022	95.12	$	1,000,000,001	2.64%	3.27%	0.10%	A-	$	951,200,001	95.12%	$	25,000,000	0.0068842
TransCanada Corp	Sr Nt		6.100	2040	120.27	$	750,000,000	5.13%	4.78%	0.11%	A-	$	902,025,000	120.27%	$	45,750,000	0.0075474
5		**500**		**sum**	**577.38**	**$**	**4,750,000,001**	**Percent of book**	**115.48%**	**0.54%**			**5,534,600,001**	**116.52%**	**$**	**257,500,000**	**3.80%**
Williams Ptns LP	Sr Nt		4.500	2023	102.39	$	600,000,000	4.42%	4.24%	0.08%	BBB	$	614,340,000	102.39%	$	27,000,000	0.0029754
Williams Ptns LP	Sr Nt		4.300	2024	101.41	$	1,000,000,000	4.24%	4.20%	0.13%	BBB	$	1,014,100,000	101.41%	$	43,000,000	0.0049123
Williams Ptns LP	Sr Nt		5.400	2044	101.15	$	500,000,000	5.41%	5.42%	0.08%	BBB	$	505,750,000	101.15%	$	27,000,000	0.0031696
Williams Ptns LP	Sr Nt		4.900	2045	96.92	$	500,000,000	5.12%	5.20%	0.08%	BBB	$	484,600,000	96.92%	$	24,500,000	0.0030409
Williams Ptns LP	Sr Nt		3.900	2025	96.43	$	750,000,000	4.04%	4.37%	0.10%	BBB	$	723,225,000	96.43%	$	29,250,000	0.0038333
Williams Ptns LP	Sr Nt		3.350	2022	95.37	$	750,000,000	3.51%	3.88%	0.09%	BBB	$	715,275,000	95.37%	$	25,125,000	0.0034035
Williams Ptns LP	Sr Nt		4.000	2021	101.29	$	500,000,000	3.95%	3.85%	0.06%	BBB	$	506,450,000	101.29%	$	20,000,000	0.0022515
Williams Ptns LP	Sr Nt		4.125	2020	103.47	$	600,000,000	3.99%	3.59%	0.06%	BBB	$	620,820,000	103.47%	$	24,750,000	0.0025193
Williams Ptns LP	Sr Nt		6.300	2040	115.27	$	1,250,000,000	5.53%	5.28%	0.20%	BBB	$	1,440,875,000	115.27%	$	78,750,000	0.0077193
Williams Ptns LP	Sr Nt		5.250	2020	109.35	$	1,500,000,000	4.82%	3.27%	0.15%	BBB	$	1,640,250,000	109.35%	$	78,750,000	0.0057368
Williams Ptns LP	Sr Nt		7.250	2017	110.26	$	600,000,000	6.58%	1.96%	0.04%	BBB	$	661,560,000	110.26%	$	43,500,000	0.0013754
11		**1100**		**sum**	**1133.31**	**$**	**8,550,000,000**	**Percent of book**	**103.03%**	**1.04%**			**8,927,245,000**	**104.41%**	**$**	**421,625,000**	**4.09%**
				Total		**$**	**33,517,000,002**			**3.99%**	**Total**	**$**	**36,638,615,502**	**109.31%**	**$**	**1,863,466,580**	

Source: Standard & Poor's Bond Guide, January 2014, 2013 Yr End Prices

This includes short term. For 20+ year maturities see below

Company	type	Call	coupon	maturity	Price 12/14		Issued / Book	current yield	yield to maturity	WAYTM	Rating		Mkt Val	Mkt : Book		Debt Service
Enbridge Energy Ptrs	Nt		5.500	2040	96.63	$	550,000,000	5.45%	5.42%	0.42%	BBB+	$	531,465,000	96.63%	$	30,250,000
Energy Transfer Part	Sr Nt		6.500	2042	115.78	$	1,000,000,000	5.61%	5.37%	0.76%	BBB-	$	1,157,800,000	115.78%	$	65,000,000
Energy Transfer Part	Sr Nt		6.050	2041	110.02	$	700,000,000	5.50%	5.32%	0.52%	BBB-	$	770,140,000	110.02%	$	42,350,000
Energy Transfer Part	Sr Nt		7.500	2038	125.15	$	1,500,000,000	5.99%	5.56%	1.17%	BBB-	$	1,877,250,000	125.15%	$	112,500,000
Plains All American	Sr Nt		5.150	2042	107.44	$	500,000,000	4.85%	4.75%	0.33%	BBB+	$	537,200,000	107.44%	$	25,750,000
Plains All American	Sr Nt		6.650	2037	126.71	$	600,000,000	5.31%	4.76%	0.40%	BBB+	$	760,260,000	126.71%	$	39,900,000

Williams Ptns LP	Sr Nt	5.400	2044	101.15	$	500,000,000	5.41%	5.42%	0.38%	BBB	$	505,750,000	101.15%	$	27,000,000
Williams Ptns LP	Sr Nt	4.900	2045	96.92	$	500,000,000	5.12%	5.20%	0.37%	BBB	$	484,600,000	96.92%	$	24,500,000
Williams Ptns LP	Sr Nt	6.300	2040	115.27	$	1,250,000,000	5.53%	5.28%	0.93%	BBB	$	1,440,875,000	115.27%	$	78,750,000

DATA INPUT

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

Instructions: Data entered on this page will flow to the applicable worksheets.

Guideline Companies		Stock Price	Revenues	Cash Flow	Earnings	Dividends	Bk Value	Partners	Calculated Debt	Wtd Avg YTM
Name	Ticker	Year End	Per Unit/Sh	Per Unit/Sh	Per Unit/Sh	Per Unit/Sh	Units/Sh	Units/Sh	mk to bk	
Buckeye Partners	bpl	75.660	56.45	4.40	3.20	4.28	30.10	127,022,640	105.08%	3.90%
DCP Midstream Ptnrs *	dpm	45.430	32.25	3.65	2.84	3.00	25.35	112,922,515	109.31%	
Enbridge Energy Ptnrs *	eep	39.900	21.85	1.41	0.67	2.17	12.95	329,294,822	108.98%	
Energy Transfer Part	etp	65.000	149.30	5.40	2.30	3.79	34.35	352,835,070	111.20%	4.15%
Enterprise Prod	epd	36.120	26.30	2.10	1.50	1.43	9.25	1,935,026,941	109.31%	
EQT Midstream Ptnrs *	eqm	88.000	6.48	4.44	3.52	2.02	11.39	60,687,170	109.31%	
Kinder Morgan Energy	kmi	42.310	15.70	3.50	1.25	1.70	13.30	1,028,229,501	109.31%	
Magellan Mid Ptnrs	mmp	82.660	9.80	4.25	3.55	2.51	8.15	227,068,257	117.58%	2.80%
MarkWest Energy Ptrns *	mwe	67.190	10.54	2.56	0.92	3.38	25.85	178,025,000	101.56%	4.56%
National Fuel Gas	nfg	69.530	25.11	8.11	3.52	1.52	28.64	84,190,266	109.31%	
ONEOK Ptnrs *	oks	39.630	50.11	3.52	2.33	3.01	24.46	233,151,329	109.31%	
Plains All Amer Pipe	paa	51.320	120.55	3.30	2.30	2.55	22.00	372,033,831	112.27%	3.53%
Spectra Energy Corp	se	36.300	8.75	2.80	1.55	1.38	12.95	671,000,273	109.31%	
TransCanada Corp	trp	49.100	13.35	4.35	2.25	1.92	26.95	709,000,000	116.52%	3.80%
Williams Partners LP	wpz	44.750	15.65	4.35	0.90	3.64	22.75	439,706,147	104.41%	4.09%
Value Line December 5, 2014		Yahoo	Value Line	Value Line	Value Line	Value Line	Value Line	Value Line	Bond analysis	Bond analysis

SUPPORT FOR DIRECT CAPITALIZATION EQUITY COMPONENT

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

			2014		2015		2014		2015	
Company	**Ticker**	**Stock Price**	**Actual Earnings Ratio (EPS/P)**		**Projected Earnings Ratio (PEPS/P)**		**Cash Flow Ratio (CF/P)**		**Projected Cash Flow Ratio**	
Buckeye Partners	bpl	75.660	3.20	4.2%	3.70	4.9%	4.40	5.8%	5.10	6.7%
DCP Midstream Ptnrs *	dpm	45.430	2.84	6.3%	2.40	5.3%	3.65	8.0%	3.45	7.6%
Enbridge Energy Ptnrs *	eep	39.900	0.67	1.7%	1.33	3.3%	1.41	3.5%	N/A	N/A
Energy Transfer Part	etp	65.000	2.30	3.5%	2.55	3.9%	5.40	8.3%	5.85	9.0%
Enterprise Prod	epd	36.120	1.50	4.2%	1.65	4.6%	2.10	5.8%	2.30	6.4%
EQT Midstream Ptnrs *	eqm	88.000	3.52	4.0%	4.03	4.6%	4.44	5.0%	N/A	N/A
Kinder Morgan Energy	kmi	42.310	1.25	3.0%	1.50	3.5%	3.50	8.3%	3.85	9.1%
Magellan Mid Ptnrs	mmp	82.660	3.55	4.3%	3.70	4.5%	4.25	5.1%	4.40	5.3%
MarkWest Energy Ptrns *	mwe	67.190	0.92	1.4%	1.05	1.6%	2.56	3.8%	N/A	N/A
National Fuel Gas	nfg	69.530	3.52	5.1%	3.65	5.2%	8.11	11.7%	8.65	12.4%
ONEOK Ptnrs *	oks	39.630	2.33	5.9%	2.40	6.1%	3.52	8.9%	5.05	12.7%
Plains All Amer Pipe	paa	51.320	2.30	4.5%	2.80	5.5%	3.30	6.4%	3.80	7.4%
Spectra Energy Corp	se	36.300	1.55	4.3%	1.65	4.5%	2.80	7.7%	2.95	8.1%
TransCanada Corp	trp	49.100	2.25	4.6%	2.50	5.1%	4.35	8.9%	4.60	9.4%
Williams Partners LP	wpz	44.750	0.90	2.0%	2.00	4.5%	4.35	9.7%	5.30	11.8%
		Mean		**3.9%**		**4.5%**		**7.1%**		**8.8%**
Source: Value Line		**Median**		**4.2%**		**4.6%**		**7.7%**		**8.6%**
		Max		**6.3%**		**6.1%**		**11.7%**		**12.7%**
		Min		**1.4%**		**1.6%**		**3.5%**		**5.3%**
		Say		**4.0%**		**4.5%**		**7.5%**		**8.6%**

SUPPORT FOR DIRECT CAPITALIZATION EQUITY COMPONENT

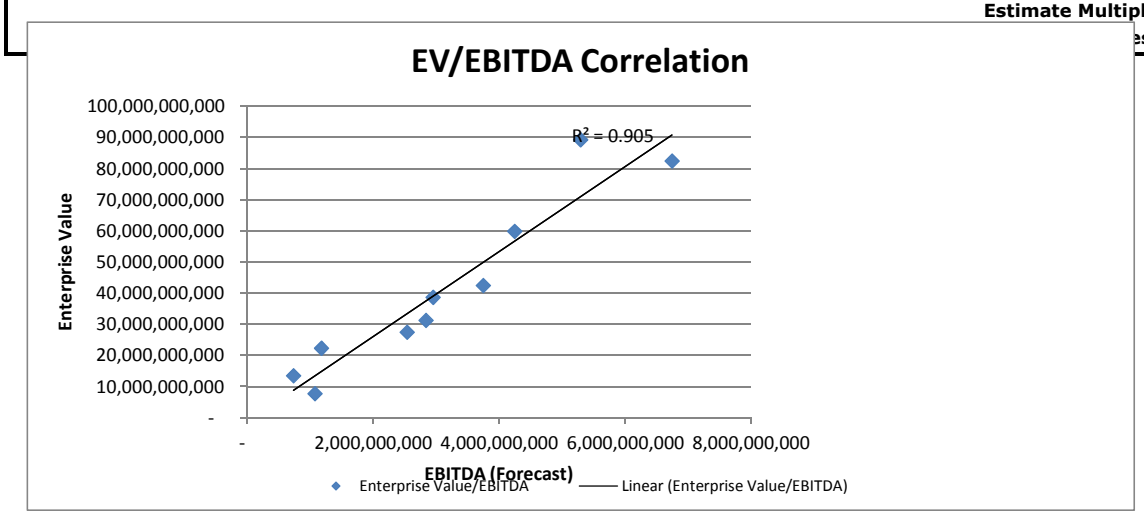
WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

4.75%

Company	Ticker	Stock Price	Enterprise Value	CF to Equity	Debt Svc	EBITDA Forecast	EV / EBITDA	EV / CF
Buckeye Partners	bpl	75.660	13,460,559,062	558,899,616	182,876,241	737,808,880	18.24	18.15
DCP Midstream Ptnrs *	dpm	45.430	7,656,305,511	412,167,180	119,996,194		4.80	14.39
Enbridge Energy Ptnrs	eep	39.900	20,006,688,673	464,305,699	326,221,701		7.80	25.31
Energy Transfer Part	etp	65.000	42,438,712,252	1,905,309,378	926,460,553	3,750,065,167	11.32	14.99
Enterprise Prod	epd	36.120	89,248,773,113	4,063,556,576	919,391,000	5,294,796,565	16.86	17.91
EQT Midstream Ptnrs *	eqm	88.000	6,036,251,572	269,451,035	33,049,579		23.50	19.95
Kinder Morgan Energy	kmi	42.310	82,420,006,495	3,598,803,254	1,848,491,775	6,747,312,026	12.22	15.13
Magellan Mid Ptnrs	mmp	82.660	22,301,212,584	965,040,092	167,758,147	1,183,050,615	18.85	19.69
MarkWest Energy Ptrns	mwe	67.190	15,566,507,581	455,744,000	171,237,872		17.00	24.83
National Fuel Gas	nfg	69.530	7,656,329,287	682,783,057	85,622,554	1,078,865,202	7.10	9.96
ONEOK Ptnrs *	oks	39.630	14,422,341,576	820,692,678	246,171,334		11.50	13.52
Plains All Amer Pipe	paa	51.320	27,416,143,503	1,227,711,642	395,359,947	2,542,952,019	10.78	16.89
Spectra Energy Corp	se	36.300	38,646,774,415	1,878,800,764	678,749,564	2,955,295,794	13.08	15.11
TransCanada Corp	trp	49.100	59,844,586,062	3,084,150,000	1,102,935,088	4,248,888,022	14.08	14.29
Williams Partners LP	wpz	44.750	31,212,312,389	1,912,721,739	547,934,460	2,841,202,701	10.99	12.68
		Total	**478,333,504,077**	**22,300,136,711**	**7,752,256,008**	**31,380,236,990**		
		Weighted Mean					**15.24**	**15.92**
		Mean	**31,888,900,272**	**1,486,675,781**	**516,817,067**	**3,138,023,699**	**13.21**	**16.85**
Source:		**Median**	**22,301,212,584**	**965,040,092**	**326,221,701**	**2,898,249,247**	**12.22**	**15.13**
Value Line & Yahoo Finance		**Max**	**89,248,773,113**	**4,063,556,576**	**1,848,491,775**	**6,747,312,026**	**23.50**	**25.31**
		Min	**6,036,251,572**	**269,451,035**	**33,049,579**	**737,808,880**	**4.80**	**9.96**
						Estimate Multiples	**12.00**	**17.50**
						es	**8.3%**	**5.7%**



STOCK PRICE

WASHINGTON STATE DEPARTMENT OF REVENUE

2015 ASSESSMENT YEAR

PIPELINES

55.53
42004.00

Buckeye Pipeline bpl

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	76.36	77.86	75.44	75.66	461,700	75.66	**75.66**

DCP Midstream Ptnrs dpm

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	46.59	46.84	45.35	45.43	357,000	45.43	**45.43**

Enbridge Energy Partners eep

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	40.45	40.76	39.79	39.9	1,171,200	39.9	**39.90**

Energy Transfer Part etp

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	66.28	66.85	64.99	65	916,600	65	**65.00**

Enterprise Products epd

12/31/2014	36.46	37.19	36.01	36.12	2,813,600	36.12	**36.12**

EQT Midstream Ptrns eqm

12/31/2014	89.62	92.44	86.82	88	391,200	88	**88.00**

Kinder Morgan Energy kmi

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	42.64	42.88	42.21	42.31	8,255,700	42.31	**42.31**

Magellan Mid Ptnrs mmp

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	84.24	86.34	82.51	82.66	998,500	82.66	**82.66**

MarkWest Energy Ptrns mwe

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	67.12	68.35	66.48	67.19	562,500	67.19	**67.19**

National Fuel Gas nfg

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	70.48	71.23	69.45	69.53	419,700	69.53	**69.53**

ONEOK Ptnrs oks

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	40.55	40.79	39.56	39.63	1,010,000	39.63	**39.63**

Plains All American Pipe paa

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	51.78	52.68	51.15	51.32	1,254,200	51.32	**51.32**

Spectra Energy se

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	36.65	36.83	36.25	36.3	2,732,700	36.3	**36.30**

TransCanada Corp trp

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	48.88	49.47	48.45	49.1	772,800	49.1	**49.10**

Williams Partners wpz

Date	Open	High	Low	Close	Volume	Adj. Close*	
12/31/2014	45.31	45.48	44.7	44.75	1,184,400	44.75	**44.75**

Source:
finance.yahoo.com
Historical Stock Quotes

IMPLIED PREMIUMS FOR US MARKET

These implied premiums are calculated using the S&P 500. Updated January 5, 2015.

Year	arnings Yiel	ividend Yiel	S&P 500	Earnings*	Dividends*	nge in Earnin	nge in Divide	T.Bill Rate	T.Bond Rate	Bond-Bill	oothed Grov	d Premium (t Growth Est		Implied Premium (FCFE)	ERP/Riskfree Rate
1960	5.34%	3.41%	58.11	3.10	1.98			0.0266	2.76%	0.10%	2.45%				
1961	4.71%	2.85%	71.55	3.37	2.04	8.60%	2.91%	2.13%	2.35%	0.22%	2.41%	2.92%		2.92%	1.24
1962	5.81%	3.40%	63.1	3.67	2.15	8.79%	5.21%	2.73%	3.85%	1.12%	4.05%	3.56%		3.56%	0.92
1963	5.51%	3.13%	75.02	4.13	2.35	12.75%	9.45%	3.12%	4.14%	1.02%	4.96%	3.38%		3.38%	0.82
1964	5.62%	3.05%	84.75	4.76	2.58	15.23%	10.08%	3.54%	4.21%	0.67%	5.13%	3.31%		3.31%	0.79
1965	5.73%	3.06%	92.43	5.30	2.83	11.20%	9.42%	3.93%	4.65%	0.72%	5.46%	3.32%		3.32%	0.71
1966	6.74%	3.59%	80.33	5.41	2.88	2.23%	1.96%	4.76%	4.64%	-0.12%	4.19%	3.68%		3.68%	0.79
1967	5.66%	3.09%	96.47	5.46	2.98	0.85%	3.37%	4.21%	5.70%	1.49%	5.25%	3.20%		3.20%	0.56
1968	5.51%	2.93%	103.86	5.72	3.04	4.81%	2.09%	5.21%	6.16%	0.95%	5.32%	3.00%		3.00%	0.49
1969	6.63%	3.52%	92.06	6.10	3.24	6.66%	6.49%	6.58%	7.88%	1.30%	7.55%	3.74%		3.74%	0.47
1970	5.98%	3.46%	92.15	5.51	3.19	-9.72%	-1.61%	6.53%	6.50%	-0.03%	4.78%	3.41%		3.41%	0.52
1971	5.46%	3.10%	102.09	5.57	3.16	1.15%	-0.74%	4.39%	5.89%	1.50%	4.57%	3.09%		3.09%	0.52
1972	5.23%	2.70%	118.05	6.17	3.19	10.76%	0.71%	3.84%	6.41%	2.57%	5.21%	2.72%		2.72%	0.42
1973	8.16%	3.70%	97.55	7.96	3.61	28.93%	13.24%	6.93%	6.90%	-0.03%	8.30%	4.30%		4.30%	0.62
1974	13.64%	5.43%	68.56	9.35	3.72	17.48%	3.14%	8.00%	7.40%	-0.60%	6.42%	5.59%		5.59%	0.76
1975	8.55%	4.14%	90.19	7.71	3.73	-17.54%	0.30%	5.80%	7.76%	1.96%	5.99%	4.13%		4.13%	0.53
1976	9.07%	3.93%	107.46	9.75	4.22	26.39%	13.10%	5.08%	6.81%	1.73%	8.19%	4.55%		4.55%	0.67
1977	11.43%	5.11%	95.1	10.87	4.86	11.53%	15.07%	5.12%	7.78%	2.66%	9.52%	5.92%		5.92%	0.76
1978	12.11%	5.39%	96.11	11.64	5.18	7.07%	6.60%	7.18%	9.15%	1.97%	8.48%	5.72%		5.72%	0.63
1979	13.48%	5.53%	107.94	14.55	5.97	25.01%	15.23%	10.38%	10.33%	-0.05%	11.70%	6.45%		6.45%	0.62
1980	11.04%	4.74%	135.76	14.99	6.44	3.01%	7.81%	11.24%	12.43%	1.19%	11.01%	5.03%		5.03%	0.40
1981	12.39%	5.57%	122.55	15.18	6.83	1.31%	6.08%	14.71%	13.98%	-0.73%	11.42%	5.73%		5.73%	0.41
1982	9.83%	4.93%	140.64	13.82	6.93	-8.95%	1.58%	10.54%	10.47%	-0.07%	7.96%	4.90%		4.90%	0.47
1983	8.06%	4.32%	164.93	13.29	7.12	-3.84%	2.76%	8.80%	11.80%	3.00%	9.09%	4.31%		4.31%	0.37
1984	10.07%	4.68%	167.24	16.84	7.83	26.69%	9.85%	9.85%	11.51%	1.66%	11.02%	5.11%		5.11%	0.44
1985	7.42%	3.88%	211.28	15.68	8.20	-6.91%	4.74%	7.72%	8.99%	1.27%	7.89%	4.03%	6.75%	3.84%	0.43
1986	5.96%	3.38%	242.17	14.43	8.19	-7.93%	-0.15%	6.16%	7.22%	1.06%	5.54%	3.36%	6.96%	3.58%	0.50
1987	6.49%	3.71%	247.08	16.04	9.17	11.10%	11.99%	5.47%	8.86%	3.39%	9.66%	4.18%	8.58%	3.99%	0.45
1988	8.20%	3.68%	277.72	24.12	10.22	50.42%	11.49%	6.35%	9.14%	2.79%	9.76%	4.12%	7.67%	3.77%	0.41
1989	6.80%	3.32%	353.4	24.32	11.73	0.83%	14.80%	8.37%	7.93%	-0.44%	9.58%	3.85%	7.46%	3.51%	0.44
1990	6.58%	3.74%	330.22	22.65	12.35	-6.87%	5.26%	7.81%	8.07%	0.26%	7.39%	3.92%	7.19%	3.89%	0.48
1991	4.58%	3.11%	417.09	19.30	12.97	-14.79%	5.03%	7.00%	6.70%	-0.30%	6.34%	3.27%	7.81%	3.48%	0.52
1992	4.16%	2.90%	435.71	20.87	12.64	8.13%	-2.59%	5.30%	6.68%	1.38%	4.67%	2.83%	9.83%	3.55%	0.53
1993	4.25%	2.72%	466.45	26.90	12.69	28.89%	0.41%	3.50%	5.79%	2.29%	4.73%	2.74%	8.00%	3.17%	0.55
1994	5.89%	2.91%	459.27	31.75	13.36	18.03%	5.34%	5.00%	7.82%	2.82%	7.23%	3.06%	7.17%	3.55%	0.45
1995	5.74%	2.30%	615.93	37.70	14.17	18.74%	6.00%	3.50%	5.57%	2.07%	5.65%	2.44%	6.50%	3.29%	0.59
1996	4.83%	2.01%	740.74	40.63	14.89	7.77%	5.10%	5.00%	6.41%	1.41%	6.13%	2.11%	7.92%	3.20%	0.50
1997	4.08%	1.60%	970.43	44.09	15.52	8.52%	4.25%	5.35%	5.74%	0.39%	5.45%	1.67%	8.00%	2.73%	0.48
1998	3.11%	1.32%	1229.23	44.27	16.20	0.41%	4.37%	4.33%	4.65%	0.32%	4.60%	1.38%	7.20%	2.26%	0.49
1999	3.07%	1.14%	1469.25	51.68	16.71	16.74%	3.16%	5.37%	6.44%	1.07%	5.75%	1.20%	12.50%	2.05%	0.32
2000	3.94%	1.23%	1320.28	56.13	16.27	8.61%	-2.65%	5.73%	5.11%	-0.62%	3.71%	1.65%	12.00%	2.87%	0.56
2001	3.85%	1.37%	1148.09	38.85	15.74	-30.79%	-3.24%	1.80%	5.05%	3.25%	3.56%	1.73%	10.30%	3.62%	0.72
2002	5.23%	1.83%	879.82	46.04	16.08	18.51%	2.15%	1.20%	3.81%	2.61%	3.57%	2.29%	8.00%	4.10%	1.08
2003	4.87%	1.61%	1111.91	54.69	17.88	18.79%	11.19%	1.00%	4.25%	3.25%	5.35%	2.12%	11.00%	3.69%	0.87
2004	5.58%	1.60%	1211.92	67.68	19.407	23.75%	8.54%	2.18%	4.22%	2.04%	4.90%	2.02%	8.50%	3.65%	0.86
2005	5.47%	1.79%	1248.29	76.45	22.38	12.96%	15.32%	4.31%	4.39%	0.08%	6.16%	2.20%	8.00%	4.08%	0.93
2006	6.18%	1.77%	1418.3	87.72	25.05	14.74%	11.93%	4.88%	4.70%	-0.18%	5.93%	1.97%	12.50%	4.16%	0.89
2007	5.62%	1.89%	1468.36	82.54	27.73	-5.91%	10.70%	3.31%	4.02%	0.71%	5.03%	2.06%	5.00%	4.37%	1.09
2008	7.24%	3.11%	903.25	65.39	28.05	-20.78%	1.15%	1.59%	2.21%	0.62%	2.11%	4.05%	4.00%	6.43%	2.91

2009	5.35%	2.00%	1115.10	59.65	22.31	-8.78%	-20.46%	0.14%	3.84%	3.70%	0.28%	2.60%	7.20%	4.36%	1.14