



COST OF CAPITAL STUDY

**YIELD CAPITALIZATION
2018 ASSESSMENT YEAR**

APPENDIX C

PASSENGER AIRLINES

EQUITY RATE						12.50%		
CAPITAL ASSET PRICING MODEL							PAGE	
CAPM Ex Ante		8.69%					6	
DIVIDEND GROWTH MODELS								
Value Line, based on Dividends Growth		NMF					7	
Value Line, based on Earnings Growth		12.50%					8	
Value Line, based on Return on Equity		16.50%					9	
				RANGE		8.6875% - 16.5%		
DEBT RATE						6.50%	10	
COST OF SECURED DEBT (LEASE) RATE						3.75%	10	
MARKET CAPITAL STRUCTURE					Tax Shield			
Equity	60%	x	12.50%	=		7.50%	3	
Operating Leases	20%	x	3.75%	x	76.00%	=	0.57%	3
Debt	20%	x	6.50%	x	76.00%	=	0.99%	3
Marginal Tax Rate	24%							
WEIGHTED AVERAGE COST OF CAPITAL						9.06%		

SUPPORT FOR GUIDELINE COMPANIES

WASHINGTON STATE DEPARTMENT OF REVENUE

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Capital Structure at Book Value

Company	Ticker	Beta	P/E Ratio	Div'd Yield	Common Stock	%	Preferr ed Stock	%	Long Term Debt	%	Total Debt & Equity	%
Alaska Air Group, Inc.	ALK	1.20	12.3	1.74%	3,726,292,172	62.2%	-	0.0%	2,262,000,000	37.8%	5,988,292,172	100.0%
Allegiant Travel Co	ALGT	0.90	13.9	1.55%	553,080,070	36.8%	-	0.0%	950,000,000	63.2%	1,503,080,070	100.0%
American Airlines Group	AAL	1.30	11.2	0.77%	4,031,999,110	15.2%	-	0.0%	22,511,000,000	84.8%	26,542,999,110	100.0%
Delta Air Lines, Inc.	DAL	1.30	8.6	2.18%	13,927,900,000	67.9%	-	0.0%	6,592,000,000	32.1%	20,519,900,000	100.0%
Hawaiian Holdings, Inc.	HA	1.25	9.6	1.20%	842,171,363	62.2%	-	0.0%	511,201,000	37.8%	1,353,372,363	100.0%
JetBlue Airways Corp.	JBLU	1.20	10.9	0.00%	4,847,100,000	82.9%	-	0.0%	1,003,000,000	17.1%	5,850,100,000	100.0%
SkyWest, Inc.	SKYW	1.55	12.1	0.60%	1,749,687,278	42.4%	-	0.0%	2,377,000,000	57.6%	4,126,687,278	100.0%
Southwest Airlines Co.	LUV	1.20	14.1	0.89%	10,424,700,000	75.8%	-	0.0%	3,320,000,000	24.2%	13,744,700,000	100.0%
Spirit Airlines	SAVE	1.40	13.0	0.00%	1,786,457,750	56.3%	-	0.0%	1,387,000,000	43.7%	3,173,457,750	100.0%
United Continental Holding, Inc	UAL	1.35	9.0	0.00%	9,169,012,863	43.9%	-	0.0%	11,703,000,000	56.1%	20,872,012,863	100.0%
	Mean	1.27	11.5	0.89%	5,105,840,060	54.6%		0.0%	5,261,620,100	45.4%		
	Weighted Mean				51,058,400,604	49.2%		0.0%	52,616,201,000	50.8%	103,674,601,604	
	Harmonic Mean	1.24	11.2		1,950,748,894.02	43.62%		0.0%	1,620,126,231.56	37.11%	3,989,406,770.56	
	Median	1.28	11.6	0.83%	3879145641	59.3%		0.0%	2,319,500,000.00	40.7%		
	Max	1.55	14.1	2.18%	13927900000	82.9%		0.0%	22511000000	84.8%		
	Min	0.90	8.6	0.00%	553080070	15.2%		0.0%	511201000	17.1%		
	Say	1.25				52%		0.0%		48%		100%

**SUPPORT FOR CAPITAL STRUCTURE
MARKET VALUE**

WASHINGTON STATE DEPARTMENT OF REVENUE
2018 ASSESSMENT YEAR
PASSENGER AIRLINES

Capital Structure at Market Value

Company	Ticker	Stock Price	Common Shares	Common Stock	%	Preferred Stock	%	Operating Lease	%	Long Term Debt	%	Total Debt & Equity	Sum
Alaska Air Group, Inc.	ALK	73.51	123,387,158	9,070,189,985	66.8%	-	0.0%	3,556,556,291	26.2%	959,000,000	7.1%	13,585,746,276	100%
Allegiant Travel Co	ALGT	154.75	16,077,909	2,488,056,418	68.4%	-	0.0%	29,310,885	0.8%	1,122,669,000	30.8%	3,640,036,303	100%
American Airlines Group	AAL	52.03	479,999,894	24,974,394,485	36.8%	-	0.0%	17,044,575,340	25.1%	25,848,000,000	38.1%	67,866,969,825	100%
Delta Air Lines, Inc.	DAL	56.00	707,000,000	39,592,000,000	75.6%	-	0.0%	4,052,494,315	7.7%	8,700,000,000	16.6%	52,344,494,315	100%
Hawaiian Holdings, Inc.	HA	39.85	52,471,736	2,090,998,680	52.1%	-	0.0%	1,477,616,582	36.8%	444,099,000	11.1%	4,012,714,261	100%
JetBlue Airways Corp.	JBLU	22.34	321,000,000	7,171,140,000	74.8%	-	0.0%	1,268,232,458	13.2%	1,154,000,000	12.0%	9,593,372,458	100%
SkyWest, Inc.	SKYW	53.10	51,842,586	2,752,841,317	35.0%	-	0.0%	2,415,072,147	30.7%	2,698,400,000	34.3%	7,866,313,463	100%
Southwest Airlines Co.	LUV	65.45	594,000,000	38,877,300,000	87.9%	-	0.0%	2,474,227,938	5.6%	2,859,000,000	6.5%	44,210,527,938	100%
Spirit Airlines	SAVE	44.85	69,377,000	3,111,558,450	45.3%	-	0.0%	2,172,894,560	31.6%	1,583,200,000	23.1%	6,867,653,010	100%
United Continental Holding, Inc	UAL	67.40	296,252,435	19,967,414,119	49.0%	-	0.0%	6,973,156,929	17.1%	13,787,000,000	33.9%	40,727,571,048	100%
			Mean		59.2%		0.0%		19.5%		21.3%		
			Weighted Mean	150,095,893,452	59.9%	-	0.0%	41,464,137,445	16.54%	59,155,368,000	23.6%	250,715,398,898	
			Median		59.4%		0.0%		21.12%		19.8%		
			Harmonic Mean		54.1%		0.0%		5.4%		14.5%		
			Max		87.9%		0.0%		36.8%		38.1%		
			Min		35.0%		0.0%		0.8%		6.5%		
			Std Dev		18.0%		0.0%		12.4%		12.2%		
			Coefficient of Variation		0.30		0.0%		0.63		0.57		
			Target		60%		0%		20%		20%		100%

Source:
Stock Price: Yahoo
Market Value Debt: 10-k Reported Fair Value

SUPPORT FOR MARKET MULTIPLES

WASHINGTON STATE DEPARTMENT OF REVENUE

2018 ASSESSMENT YEAR

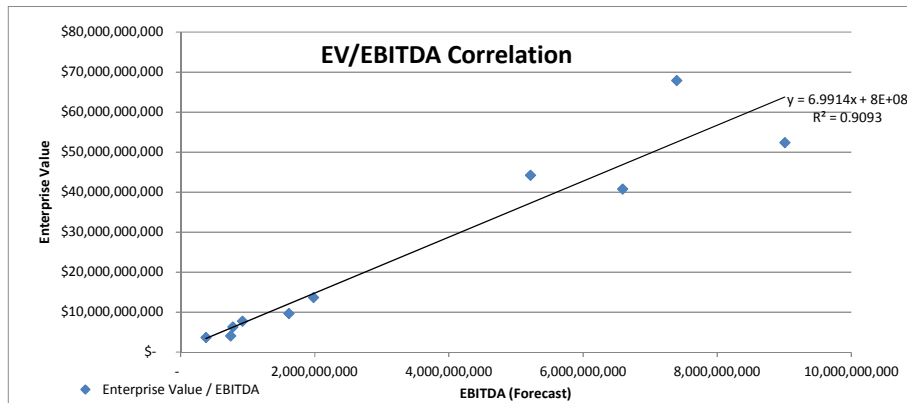
PASSENGER AIRLINES

Company	Ticker	Stock Price	Revenues	Multiple	Cash Flow	Multiple	Earnings	Multiple	Divds Decld	Multiple	Book Value	Multiple
Alaska Air Group, Inc.	ALK	73.51	64.80	1.1	9.70	7.6	6.64	11.1	1.20	61.3	30.20	2.4
Allegiant Travel Co	ALGT	154.75	94.00	1.6	17.35	8.9	9.55	16.2	2.40	64.5	34.40	4.5
American Airlines Group	AAL	52.03	90.20	0.6	7.75	6.7	3.90	13.3	0.40	130.1	8.40	6.19
Delta Air Lines, Inc.	DAL	56.00	58.50	1.0	8.23	6.8	4.93	11.4	1.02	54.9	19.70	2.84
Hawaiian Holdings, Inc.	HA	39.85	50.85	0.8	6.80	5.9	4.66	8.6	0.12	332.1	16.05	2.5
JetBlue Airways Corp.	JBLU	22.34	21.90	1.0	3.20	7.0	1.76	12.7	-		15.10	1.5
SkyWest, Inc.	SKYW	53.10	61.60	0.9	9.15	5.8	3.43	15.5	0.32	165.9	33.75	1.6
Southwest Airlines Co.	LUV	65.45	36.65	1.8	5.55	11.8	3.41	19.2	0.48	136.4	17.55	3.7
Spirit Airlines	SAVE	44.85	38.35	1.2	5.25	8.5	3.18	14.1	-		25.75	1.7
United Continental Holding, Inc	UAL	67.40	129.70	0.5	14.45	4.7	6.76	10.0	-		30.95	2.2
		Mean		1.0		7.4		13.2			135.0	2.9
		Median		1.0		6.9		13.0			130.1	2.5
		Harmonic Mean		0.9		6.9		12.5			94.5	2.4
		Max		1.8		11.8		19.2			332.1	6.2
		Min		0.52		4.7		8.6			54.9	1.48
		Std Dev		0.4		2.0		3.2			97.2	1.5
		Coefficient of Variation		0.40		0.27		0.24			0.72	0.51
		Say		1.00		7.00		12.00			NMF	2.50

ENTERPRISE VALUE MULTIPLES

WASHINGTON STATE DEPARTMENT OF REVENUE
2018 ASSESSMENT YEAR
PASSENGER AIRLINES

Guideline Companies	Ticker	EV+OL	EBITDA + OL	EV / EBITDA	Annual Change Rate	EBITDA	EV / EBITDA	Revenue	EV / Sales	CF	Debt Service	EV / CF
				historic	(Growth)	forecast	forecast	forecast				
Alaska Air Group, Inc.	ALK	\$ 13,585,746,276	1,906,000,000	7.13	4.0%	1,981,920,641	6.85	11,821,800,000	1.15	1,196,855,433	62,335,000	10.79
Allegiant Travel Co	ALGT	\$ 3,640,036,303	352,098,000	10.34	7.1%	376,984,318	9.66	1,690,275,000	2.15	278,951,721	72,973,485	10.34
American Airlines Group	AAL	\$ 67,866,969,825	6,957,000,000	9.76	6.3%	7,395,393,182	9.18	44,500,500,000	1.53	3,719,999,179	1,680,120,000	12.57
Delta Air Lines, Inc.	DAL	\$ 52,344,494,315	8,700,000,000	6.02	3.5%	9,006,686,230	5.81	43,608,000,000	1.20	5,818,610,000	565,500,000	8.20
Hawaiian Holdings, Inc.	HA	\$ 4,012,714,261	721,521,000	5.56	3.7%	748,010,828	5.36	2,839,200,000	1.41	356,807,805	28,866,435	10.40
JetBlue Airways Corp.	JBLU	\$ 9,593,372,458	1,546,000,000	6.21	4.6%	1,616,440,084	5.93	7,672,500,000	1.25	1,027,200,000	75,010,000	8.70
SkyWest, Inc.	SKYW	\$ 7,692,313,463	896,807,000	8.58	2.9%	922,941,533	8.33	3,200,600,000	2.40	474,359,662	175,396,000	11.84
Southwest Airlines Co.	LUV	\$ 44,210,527,938	4,931,000,000	8.97	5.8%	5,217,131,013	8.47	22,512,000,000	1.96	3,296,700,000	185,835,000	12.69
Spirit Airlines	SAVE	\$ 6,234,653,010	734,852,000	8.48	6.2%	780,667,613	7.99	3,240,200,000	1.92	364,229,250	102,908,000	13.35
United Continental Holding, Inc	UAL	\$ 40,727,571,048	6,268,000,000	6.50	5.2%	6,591,146,790	6.18	39,998,000,000	1.02	4,280,847,686	896,155,000	7.87
	Mean			7.75	4.92%		7.38		1.60			10.68
	Median			7.81	4.86%		7.42		1.47			10.60
	Harmonic Mean			7.43	4.55%		7.09		1.48			10.34
	Max			10.34	7.07%		9.66		2.40			13.35
	Min			5.56	2.91%		5.36		1.02			7.87
	Std Dev			1.69	1.4%		1.54		0.48			1.95
	Coefficient of Variation			0.22	0.28		0.21		0.30			0.18
	Say			7.50	5.00%		7.00		1.50			10.00



Forecast EV/EBITDA By Rank

Guideline Companies	EV/EBITDA forecast	
Hawaiian Holdings, Inc.	5.36	6.03 Low Average 5.9 Low Median 6.0 Say
Delta Air Lines, Inc.	5.81	
JetBlue Airways Corp.	5.93	
United Continental Holding, Inc	6.18	
Alaska Air Group, Inc.	6.85	8.73 High Average 8.5 High Median 8.5 Say
Spirit Airlines	7.99	
SkyWest, Inc.	8.33	
Southwest Airlines Co.	8.47	
American Airlines Group	9.18	
Allegiant Travel Co	9.66	

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT CAPITAL ASSET PRICING MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE
2018 ASSESSMENT YEAR
PASSENGER AIRLINES

$$\text{Ex Ante} \\ \text{Ke} = \text{Rf} + \beta (\text{Rp})$$

Ke = Cost of Equity			8.69%
			to page 1
Rm =	rate of return	7.50%	
Rf =	risk free rate	2.75%	
Rp =	risk premium	4.75%	
B =	Beta	1.25	page 2
Rp = Risk Premium			4.75%
			to above
Shannon Pratt and Roger Grabowski	Cost of Capital, Applications and Examples, Fifth Edition, 2014	3.50% - 6.00%	
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/ 2017 Implied Premium	5.08% 4.73%	chart page 14 adjusted for Rf
John Graham and Campbell Harvey	Duke CFO magazine Global Business Outlook 4th Qtr 2017	7.16% 2.37% 6.78%	10 year expected return 95% Interval 10 year expect adjusted for Rf
Rf = Risk Free Rate			2.75%
			to above
Value Line Investment Survey, Selected Yields January 5, 2018, page 2573	as of 12-27-17		
	US Treasury Securities year end data		
	5 year	2.19%	
	10 year	2.41%	
	30 year	2.75%	
	30 year Zero	2.87%	
Federal Reserve Statistical Release (http://www.federalreserve.gov/Releases/H15/Current/)	as of 12-29-17		
	Treasury Constant Maturities		
	5 year	2.20%	
	10 year	2.40%	
	20 year	2.58%	
	30 year	2.74%	
	20 year TIPS	<u>0.61%</u>	1.97%
	30 year TIPS	<u>0.73%</u>	2.01%
			TIPS inflation indication
Inflation			2.00%
			to appraisal template
Value Line Investment Survey, Economic Series January 6, 2017, page 1500	Consumer Price Index Annual Rate of Change 2019-2021		2.50%
Federal Reserve Bank of Philadelphia	The Livingston Survey, December 15, 2017		Table 3
	Inflation median (measured by the CPI) over next 10 years		2.34%
	https://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey		
Gross Domestic Product (GDP)			3.80%
Federal Reserve Projected Long Run Real GDP Growth	Median Projection Value From Dec 13, 2017 Report		1.80%
	http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm		
Congressional Budget Office Real GDP Economic Projections	The Budget and Economic Outlook 2018-2028		Table D-1, pg 140
	Average Percentage Change From Year To Year	2018-2022	2.18%
	http://www.cbo.gov/publication/53651	2023-2028	1.73%
Federal Reserve Bank of Philadelphia	The Livingston Survey, December 15, 2017		pg 4
	Average Annual Real GDP Growth Rate for Next Ten Years		2.18%
	https://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey		

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Based on Dividend Growth

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

Ke = Cost of Equity
 D1 = Expected Dividends
 P0 = Current Stock Price
 GD = Sustainable Growth -- Dividend
 assumption: Sustainable growth can not exceed inflation plus real GDP

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	Dividend Growth (G)	Ke	Forecast Dividend Growth	Ke Forecast Growth	Sustainable Dividend Growth	Ke Sustainable Growth
Alaska Air Group, Inc.	ALK	73.51	1.28	1.74%	6.67%	8.41%	4.56%	6.31%	3.80%	5.54%
Allegiant Travel Co	ALGT	154.75	2.40	1.55%	0.00%		2.38%	3.93%	2.38%	3.93%
American Airlines Group	AAL	52.03	0.40	0.77%	0.00%		9.86%	10.62%	3.80%	4.57%
Delta Air Lines, Inc.	DAL	56.00	1.22	2.18%	19.61%	21.79%	9.86%	12.03%	3.80%	5.98%
Hawaiian Holdings, Inc.	HA	39.85	0.48	1.20%	300.00%	301.20%	0.00%	1.20%	-	1.20%
JetBlue Airways Corp.	JBLU	22.34	0.00							
SkyWest, Inc.	SKYW	53.10	0.32	0.60%	0.00%		6.79%	7.39%	3.80%	4.40%
Southwest Airlines Co.	LUV	65.45	0.58	0.89%	20.83%	21.72%	8.02%	8.90%	3.80%	4.69%
Spirit Airlines	SAVE	44.85	0.00							
United Continental Holding, Inc	UAL	67.40	0.00							
				Mean	1.28%	88.28%		7.20%		4.33%
				Median	1.20%	21.75%		7.39%		4.57%
				Harmonic Mean	1.06%	18.67%		4.20%		3.35%
				Max	2.18%	301.20%		12.03%		5.98%
				Min	0.60%	8.41%		1.20%		1.20%
				Std Dev	0.6%	142.1%		3.8%		1.5%
				Coefficient of Variation	0.45	1.61		0.52		0.36

Source: Value Line Projections 12-16 to 18-22

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Say NMF

Value Line Projections are incomplete and/or have large differences. Data sets have high coefficients of variation. No meaningful figure can be reconciled from the inputs.

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Based on Earnings Growth

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

Ke = Cost of Equity
 D1 = Expected Dividends
 P0 = Current Stock Price
 G = Sustainable Growth -- Earnings
 assumption Sustainable growth can not exceed inflation plus real GDP

Company	Ticker	Stock Price (Po)	Expected Earnings (D1)	Yield (D1/Po)	Earnings Growth (G)	Ke	Forecast Earnings Growth	Ke Forecast Growth	Sustainable Earnings Growth	Ke Sustainable Growth	Ke Multistage Earnings Model
Alaska Air Group, Inc.	ALK	73.510	6.00	8.16%	-9.64%		4.42%	12.58%	3.80%	11.96%	12.63%
Allegiant Travel Co	ALGT	154.750	11.10	7.17%	16.23%	23.40%	2.38%	9.56%	2.38%	9.56%	10.80%
American Airlines Group	AAL	52.030	4.65	8.94%	19.23%	28.17%	7.81%	16.75%	3.80%	12.74%	16.73%
Delta Air Lines, Inc.	DAL	56.000	6.50	11.61%	31.85%	43.45%	4.48%	16.08%	3.80%	15.41%	17.59%
Hawaiian Holdings, Inc.	HA	39.850	4.15	10.41%	-10.94%		4.35%	14.77%	3.80%	14.21%	14.23%
JetBlue Airways Corp.	JBLU	22.340	2.05	9.18%	16.48%	25.65%	4.10%	13.27%	3.80%	12.98%	12.12%
SkyWest, Inc.	SKYW	53.100	4.40	8.29%	28.28%	36.57%	3.92%	12.21%	3.80%	12.09%	10.76%
Southwest Airlines Co.	LUV	65.450	4.65	7.10%	36.36%	43.47%	4.56%	11.67%	3.80%	10.90%	10.30%
Spirit Airlines	SAVE	44.850	3.45	7.69%	8.49%	16.18%	4.56%	12.26%	3.80%	11.49%	10.39%
United Continental Holding, Inc	UAL	67.400	7.50	11.13%	10.95%	22.07%	2.13%	13.26%	2.13%	13.26%	15.82%
			Mean	8.97%		29.87%		13.24%		12.46%	13.14%
			Median	8.61%		26.91%		12.92%		12.41%	12.37%
			Harmonic Mean	8.72%		26.88%		12.92%		12.26%	12.65%
			Max	11.61%		43.47%		16.75%		15.41%	17.59%
			Min	7.10%		16.18%		9.56%		9.56%	10.30%
			Std Dev	0.02		10.2%		2.1%		1.7%	2.8%
			Coefficient of Variation	17.90%		0.34		0.16		0.13	0.21

Source: Value Line Projections 12-16 to 18-22

Say **12.50%**
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SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Based on Return on Equity

$K_e = (D1 / P_o) + G$

K_e = Cost of Equity
 $D1$ = Expected Dividends
 $E1$ = Expected Earnings
 P_o = Current Price
 G = Sustainable Growth
 b = Retained Earnings % = (1 - Payout Ratio)
 ROE = Return on Equity = ($E1 / P_o$)

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Expected Earnings (E1)	Dividend Yield (D1/Po)	Retained Earnings (b)	ROE (E1/Po)	Growth (b*ROE)	K_e Dividends	K_e Earnings
Alaska Air Group, Inc.	ALK	73.51	1.28	6.00	1.74%	79.0%	8.16%	6.45%	8.19%	14.61%
Allegiant Travel Co	ALGT	154.75	2.40	11.10	1.55%	78.0%	7.17%	5.59%	7.15%	12.77%
American Airlines Group	AAL	52.03	0.40	4.65	0.77%	91.0%	8.94%	8.13%	8.90%	17.07%
Delta Air Lines, Inc.	DAL	56.00	1.22	6.50	2.18%	81.0%	11.61%	9.40%	11.58%	21.01%
Hawaiian Holdings, Inc.	HA	39.85	0.48	4.15	1.20%	88.0%	10.41%	9.16%	10.37%	19.58%
JetBlue Airways Corp.	JBLU	22.34	0.00	2.05		100.0%	9.18%	9.18%		18.35%
SkyWest, Inc.	SKYW	53.10	0.32	4.40	0.60%	93.0%	8.29%	7.71%	8.31%	15.99%
Southwest Airlines Co.	LUV	65.45	0.58	4.65	0.89%	88.0%	7.10%	6.25%	7.14%	13.36%
Spirit Airlines	SAVE	44.85	0.00	3.45		100.0%	7.69%	7.69%		15.38%
United Continental Holding, Inc	UAL	67.40	0.00	7.50		100.0%	11.13%	11.13%		22.26%
Mean									8.80%	17.04%
Median									8.31%	16.53%
Harmonic Mean									8.56%	16.51%
Max									11.58%	22.26%
Min									7.14%	12.77%
Std Dev									1.6%	3.2%
Coefficient of Variation									0.19	0.19

16.50%

to page 1

SUPPORT FOR DEBT RATING AND DEBT YIELD RATE

WASHINGTON STATE DEPARTMENT OF REVENUE

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Company	Ticker	Mergent's Ratings	S&P Ratings
Alaska Air Group, Inc.	ALK	A3	BB+
Allegiant Travel Co	ALGT	-	BB-
American Airlines Group	AAL	A2	BB-
Delta Air Lines, Inc.	DAL	A1	BBB-
Hawaiian Holdings, Inc.	HA	Baa1	BB-
JetBlue Airways Corp.	JBLU	-	BB
SkyWest, Inc.	SKYW	Caa1	-
Southwest Airlines Co.	LUV	Baa1	BBB+
Spirit Airlines	SAVE		BB-
United Continental Holding, Inc	UAL	A2	BB-
Overall Average Debt Rating		Baa1	BB

All issues

Bond Yields for Guideline Companies, All Ratings

5.79%

Mergent's Bond Record January 2018, page 249

Corporate	Aaa	Aa	A	Baa
October	3.60%	3.75%	3.91%	4.32%
November	3.57%	3.67%	3.84%	4.27%
December	3.51%	3.61%	3.79%	4.22%
4th Qtr Average	3.56%	3.68%	3.85%	4.27%
Public Utilities	Aa	A	Baa	
October		3.74%	3.91%	4.26%
November		3.65%	3.83%	4.16%
December		3.62%	3.79%	4.14%
4th Qtr Average		3.67%	3.84%	4.19%
Industrials	Aaa	Aa	A	Baa
October	3.60%	3.74%	3.90%	4.37%
November	3.57%	3.68%	3.85%	4.37%
December	3.51%	3.60%	3.79%	4.31%
4th Qtr Average	3.56%	3.67%	3.85%	4.35%

Standard & Poor's Long Term Bond Yields (%) 4th Qtr

S&P	Avg YTM	Med YTM
BB+	5.65%	5.69%
BB	6.57%	6.05%
BB-	6.78%	7.05%

Source: Bloomberg Bond Yields, January 2018.

Debt Yield Rate

6.50%

Cost of Secured Debt (Lease)

Based on 4th Quarter Aa rate

3.75%

to page 1

Add'l Bond Data Pg

Passenger Airlines Bond Analysis

Formulas

Company	Type/Symbol	Call	coupon	maturity	Price/Sales 12/17	Issued / Book	Outstanding	current yield	yield to maturity	Weighted A Rating	Mkt Val	Mkt : Book	Embedd	Debt Service	Industry WAYTM	Company WAYTM	
American Airlines	Sr		4.625	2020	101.62	\$ 500,000,000	\$ 500,000,000	4.55%	3.50%	0.10%	BB-	\$		508,100,000	101.62%	23,125,000	
American Airlines	AAL 3707067 FINRA		7.930	2020	103.062	\$ 233,668,000	\$ 233,668,000	7.69%	5.74%	0.07%	A-S&P	\$		240,822,914	103.06%	18,529,872	
American Airlines	Fixed Rt Sr		5.500	2019	103.12	\$ 750,000,000	\$ 750,000,000	5.33%	-0.71%	-0.03%	BB-	\$		773,400,000	103.12%	41,250,000	
3 Book Val		300	sum		307.802	\$ 1,483,668,000	\$ 1,483,668,000	Percent of boo	102.60%	0.14%	\$	\$	1,522,322,914	102.61%	5.59%	\$ 82,904,872	
FINRA																	
Delta Airlines	Corp Bond DAL 4277694	Y	3.625	2029	99.539	\$ 312,524,000	\$ 312,524,000	3.64%	3.68%	0.06%	Aa2	\$		311,083,264	99.54%	11,328,995	
Delta Airlines	Corp Bond DAL 4277695	Y	3.875	2029	103.782	\$ 69,449,000	\$ 69,449,000	3.73%	3.44%	0.01%	A1	\$		72,075,561	103.78%	2,691,149	
Delta Airlines	Corp Bond DAL 4277696	Y	4.250	2025	100	\$ 118,027,000	\$ 118,027,000	4.25%	4.25%	0.03%	Baa1	\$		118,027,000	100.00%	5,016,148	
Delta Airlines	Corp Bond DAL 4465817	Y	2.875	2020	99.977	\$ 1,000,000,000	\$ 1,000,000,000	2.88%	2.89%	0.16%	Baa3	\$		999,770,000	99.98%	28,750,000	
Delta Airlines	Corp Bond DAL 4465824	Y	3.625	2022	100.123	\$ 1,000,000,000	\$ 1,000,000,000	3.62%	3.59%	0.20%	Baa3	\$		1,001,230,000	100.12%	36,250,000	
Delta Airlines	Corp Bond DAL 4571567	Y	2.600	2020	98.764	\$ 450,000,000	\$ 450,000,000	2.63%	3.46%	0.09%	Baa3	\$		444,438,000	98.76%	11,700,000	
Delta Airlines	Corp Bond DAL RV	Y	6.718	2024	109.613	\$ 586,891,000	\$ 586,891,000	6.13%	4.69%	0.15%	Baa1	\$		643,308,832	109.61%	39,427,337	
Delta Airlines	Corp Bond DAL RY	Y	6.821	2024	112.141	\$ 954,408,000	\$ 954,408,000	6.08%	4.30%	0.22%	A3	\$		1,070,282,675	112.14%	65,100,170	
Delta Airlines	Corp Bond DAL RZ	Y	8.021	2024	112.000	\$ 265,366,000	\$ 265,366,000	7.16%	5.44%	0.08%	Baa2	\$		297,209,202	112.00%	21,285,007	
Delta Airlines	Corp Bond DAL SE	Y	5.300	2020	102.782	\$ 292,750,000	\$ 292,750,000	5.16%	3.37%	0.05%	A1	\$		300,894,305	102.78%	15,515,750	
Delta Airlines	Corp Bond DAL SD	Y	6.200	2020	101.4	\$ 450,000,000	\$ 450,000,000	6.11%	5.21%	0.13%	A1	\$		456,300,000	101.40%	27,900,000	
Delta Airlines	Corp Bond DAL SB	Y	7.750	2021	107.264	\$ 568,796,000	\$ 568,796,000	7.23%	4.61%	0.14%	A1	\$		610,113,341	107.26%	44,081,690	
Delta Airlines	Corp Bond DAL 3872807	Y	4.750	2021	103.5	\$ 353,689,000	\$ 353,689,000	4.59%	3.27%	0.06%	A2	\$		366,068,115	103.50%	16,800,228	
13 Book Val		1300	sum		1350.89	\$ 6,421,900,000	\$ 6,421,900,000	% of book	52.18%	1.39%	\$	\$	6,690,801,014	104.19%	5.07%	\$ 325,846,473	
FINRA																	
Hawaiian Airlines	Corp Bond HA 4007036	N	3.900	2027	98.900	\$ 328,260,000	\$ 328,260,000	3.94%	4.06%	0.07%	Baa1	\$		324649140	98.90%	12,802,140	
Hawaiian Airlines	Corp Bond HA 4007037	N	4.950	2023	101.850	\$ 116,280,000	\$ 116,280,000	4.86%	4.49%	0.03%	BB+	\$		118431180	101.85%	5,755,860	
2 Book Val		200	sum		200.750	\$ 444,540,000	\$ 444,540,000	% of book	100.38%	0.10%	\$	\$	443,080,320	99.67%	18,558,000	0.073%	1.249%
South West Airlines	Dep Fxd Rt Nt		7.375	2027	125.31	\$ 100,000,000	\$ 100,000,000	5.90%	3.83%	0.02%	BBB+	\$		125,310,000	125.31%	7,375,000	
South West Airlines			2.650	2020	100.59	\$ 500,000,000	\$ 500,000,000	5.09%	2.25%	0.06%	BBB+	\$		502,950,000	100.59%	13,250,000	
2 Book Val		200	sum		225.90	\$ 600,000,000	\$ 600,000,000	% of book	112.95%	0.08%	\$	\$	628,260,000	104.71%	3.44%	\$ 20,625,000	
FINRA																	
Allegiant Travel Co	D	Y	5.500	2019	103.75	\$ 300,000,000	\$ 300,000,000	5.30%	-1.89%	-0.03%	B1	\$		311,250,000	103.75%	16,500,000	
1 Book Val		100	sum		103.75	\$ 300,000,000	\$ 300,000,000	% of book	103.75%	-0.03%	\$	\$	311,250,000	103.75%	5.50%	\$ 16,500,000	
FINRA																	
United Continental Holdings	Corp Bond UAL 3943653	Y	6.125	2018	104.250	\$ 425,000,000	\$ 425,000,000	5.88%	14.93%	0.35%	Ba1	\$		443,062,500	104.25%	26,031,250	
United Continental Holdings	Corp Bond UAL AK	Y	9.250	2018	100.250	\$ 116,812,000	\$ 116,812,000	9.23%	9.76%	0.06%	Baa2	\$		117,104,030	100.25%	10,805,110	
United Continental Holdings	Corp Bond UAL 4594839	Y	3.500	2031	99.000	\$ 677,175,000	\$ 677,175,000	3.54%	3.60%	0.13%	Aa3	\$		670,403,250	99.00%	23,701,125	
United Continental Holdings	Corp Bond UAL 4036436	Y	4.300	2027	103.500	\$ 720,315,000	\$ 720,315,000	4.15%	3.81%	0.15%	A s&p	\$		745,526,025	103.50%	30,973,545	
United Continental Holdings	Corp Bond UAL 4002863	Y	6.375	2018	101.230	\$ 300,000,000	\$ 300,000,000	6.30%	8.89%	0.15%	Ba3	\$		303,690,000	101.23%	19,125,000	
United Continental Holdings	Corp Bond UAL 3594591	N	8.809	2019	99.300	\$ 151,088,000	\$ 151,088,000	8.37%	9.81%	0.08%	Ba1	\$		150,030,384	99.30%	12,550,880	
United Continental Holdings	Corp Bond UAL 3816461	N	6.820	2019	102.000	\$ 96,000,000	\$ 96,000,000	6.69%	2.74%	0.01%	Baa1	\$		97,920,000	102.00%	6,547,200	
United Continental Holdings	Corp Bond UAL 45948538	Y	3.700	2031	98.988	\$ 257,965,000	\$ 257,965,000	3.74%	3.80%	0.05%	A2	\$		255,354,394	98.99%	9,544,705	
United Continental Holdings	Corp Bond UAL 4149528	Y	3.750	2028	100.400	\$ 823,071,000	\$ 823,071,000	3.74%	3.70%	0.17%	A	\$		826,363,284	100.40%	30,865,163	
United Continental Holdings	Corp Bond UAL 3816478	N	6.900	2019	99.562	\$ 505,951,000	\$ 505,951,000	6.93%	7.83%	0.22%	WR	\$		503,734,935	99.56%	34,910,619	
United Continental Holdings	Corp Bond UAL 3816446	N	6.648	2019	100.125	\$ 485,605,000	\$ 485,605,000	6.64%	6.39%	0.17%	WR	\$		486,212,006	100.13%	32,283,020	
United Continental Holdings	Corp Bond UAL AA	N	7.875	2020	100.710	\$ 304,842,000	\$ 304,842,000	6.91%	5.06%	0.08%	A	\$		320,184,698	105.03%	32,649,999	
United Continental Holdings	Corp Bond UAL 3670541	N	6.545	2020	103.625	\$ 541,746,000	\$ 541,746,000	6.32%	4.01%	0.12%	Baa2	\$		461,384,293	103.63%	35,457,276	
United Continental Holdings	Corp Bond UAL 3816458	N	6.795	2020	103.250	\$ 137,051,000	\$ 137,051,000	6.58%	4.51%	0.03%	BBB	\$		141,505,158	103.25%	9,312,615	
United Continental Holdings	Corp Bond UAL AM	Y	6.000	2020	103.250	\$ 64,492,000	\$ 64,492,000	5.81%	3.73%	0.01%	BBB+	\$		66,587,990	103.25%	3,869,520	
United Continental Holdings	Corp Bond UAL 4307724	Y	3.450	2029	99.270	\$ 333,652,000	\$ 333,652,000	3.48%	3.53%	0.06%	Aa3	\$		331,216,340	99.27%	11,510,994	
United Continental Holdings	Corp Bond UAL 3829885	Y	6.250	2021	104.300	\$ 139,103,000	\$ 139,103,000	5.99%	4.40%	0.03%	BBB-	\$		145,084,429	104.30%	8,693,938	
United Continental Holdings	Corp Bond UAL AB	N	9.558	2021	103.510	\$ 173,629,000	\$ 173,629,000	9.23%	7.95%	0.08%	Ba1	\$		179,723,378	103.51%	16,594,460	
United Continental Holdings	Corp Bond UAL AJ	Y	7.250	2021	107.460	\$ 527,625,000	\$ 527,625,000	6.75%	4.05%	0.12%	A3	\$		566,985,825	107.46%	38,252,813	
United Continental Holdings	Corp Bond UAL 3816472	N	7.255	2021	105.033	\$ 304,842,000	\$ 304,842,000	6.91%	5.06%	0.08%	A	\$		320,184,698	105.03%	22,119,336	
United Continental Holdings	Corp Bond UAL 3816468	N	7.566	2021	101.200	\$ 111,077,000	\$ 111,077,000	7.48%	7.03%	0.04%	Baa2	\$		112,409,924	101.20%	8,404,086	
United Continental Holdings	Corp Bond UAL AL	Y	4.750	2022	103.900	\$ 362,659,000	\$ 362,659,000	4.57%	3.55%	0.07%	A	\$		376,802,701	103.90%	17,226,303	
United Continental Holdings	Corp Bond UAL 3816432	N	7.707	2022	108.000	\$ 380,340,000	\$ 380,340,000	7.14%	5.15%	0.11%	BBB	\$		410,767,200	108.00%	29,312,804	
United Continental Holdings	Corp Bond UAL 3816447	N	6.703	2022	104.475	\$ 385,760,000	\$ 385,760,000	6.42%	5.27%	0.11%	A	\$		403,029,029	104.48%	25,857,895	
United Continental Holdings	Corp Bond UAL 3816457	N	8.048	2022	106.939	\$ 395,780,000	\$ 395,780,000	7.53%	5.80%	0.13%	A-	\$		423,243,174	106.94%	31,852,374	
United Continental Holdings	Corp Bond UAL 3816474	N	8.388	2022	102.009	\$ 113,149,000	\$ 113,149,000	8.22%	7.71%	0.05%	BBB-	\$		115,422,163	102.01%	9,490,938	
United Continental Holdings	Corp Bond UAL 3816450	N	9.798	2022	107.007	\$ 311,010,000	\$ 311,010,000	9.16%	7.45%	0.13%	BB-	\$		332,802,471	107.01%	30,472,760	
United Continental Holdings	Corp Bond UAL AE	Y	5.983	2023	108.250	\$ 756,762,000	\$ 756,762,000	5.53%	3.95%	0.16%	A3	\$		819,194,865	108.25%	45,277,070	
United Continental Holdings	Corp Bond UAL 4036435	Y	5.375	2023	104.040	\$ 209,036,000	\$ 209,036,000	5.17%	4.37%	0.05%	BBB-	\$		217,481,054	104.04%	11,235,685	
United Continental Holdings	Corp Bond UAL CD	Y	6.636	2024	106.615	\$ 485,086,000	\$ 485,086,000	6.22%	5.22%	0.14%	Ba1	\$		517,174,439	106.62%	32,190,307	
United Continental Holdings	Corp Bond UAL 4149543	Y	4.625	2024	102.500	\$ 238,418,000	\$ 238,418,000	4.51%	4.11%	0.05%	BBB-s&p	\$					

DATA INPUT

WASHINGTON STATE DEPARTMENT OF REVENUE

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

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

Guideline Companies		Stock Price 12/31/2016	Stock Price 12/31/2017	Historic Figures (2017)													
				Beta levered	Revenues Per Share	Cash Flow Per Share	Earnings Per Share	Gross Equipment Per Share	Load Factor	%Net Profit Margin	Long-Term Debt (\$Mil)	Dividends Per Share	Bk Value Per Share	Common Shares	Trailing P/E Ratio	Relative P/E Ratio	Net Operating Revenues (\$Mil)
Name	Ticker	Yahoo	Yahoo	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL
Alaska Air Group, Inc.	ALK	88.73	73.51	1.20	64.80	9.70	6.64	75.00	84.3%	10.4%	2,260	1.20	30.20	123,387,158	10.10	0.65	7,933
Allegiant Travel Co	ALGT	166.40	154.75	0.90	94.00	17.35	9.55	95.00	81.6%	10.4%	950	2.40	34.40	16,077,909	17.20	0.80	1,504
American Airlines Group	AAL	46.69	52.03	1.30	90.20	7.75	3.90	90.00	82.6%	4.5%	22,511	0.40	8.40	479,999,894	13.00	0.60	42,207
Delta Air Lines, Inc.	DAL	49.19	56.00	1.30	58.50	8.23	4.93	35.00	85.6%	8.7%	6,592	1.02	19.70	707,000,000	10.60	0.49	41,244
Hawaiian Holdings, Inc.	HA	57.00	39.85	1.25	50.85	6.80	4.66	40.75	85.9%	9.2%	450	0.12	16.05	52,471,736	9.10	0.48	2,696
JetBlue Airways Corp.	JBLU	22.42	22.34	1.20	21.90	3.20	1.76	28.65	84.3%	8.3%	1,000	-	15.10	321,000,000	11.30	0.56	7,015
SkyWest, Inc.	SKYW	36.45	53.10	1.55	61.60	9.15	3.43	105.00	80.4%	5.7%	2,377	0.32	33.75	51,842,586	16.50	0.72	3,204
Southwest Airlines Co.	LUV	49.84	65.45	1.20	36.65	5.55	3.41	43.00	83.9%	9.8%	3,320	0.48	17.55	594,000,000	16.80	0.71	21,171
Spirit Airlines	SAVE		44.85	1.40	38.35	5.25	3.18	-	0.0%	8.4%	1,388	-	25.75	69,377,000	12.30	0.62	2,648
United Continental Holding, Inc	UAL	72.88	67.40	1.35	129.70	14.45	6.76	105.00	82.4%	5.4%	12,200	-	30.95	296,252,435	9.70	0.49	37,736

Value Line February 2018

The harmonic mean is the preferable method for averaging multiples, such as the price/earning ratio, in which price is in the numerator. If these ratios are averaged using an arithmetic mean (a common error), high data points are given greater weights than low data points.

The harmonic mean, on the other hand, gives equal weight to each data point

Morning Star Data ending 2017

DATA INPUT

WASHINGTON STATE DEPARTM

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Instructions: Data entered on this page

					Projected (Next Year) 2018											
Guideline Companies	Operating Margin	Net Profit (\$Mil)	Income Tax Rate	Return on Shareholder Equity	Revenues Per Share	Cash Flow Per Share	Earnings Per Share	Gross Equipment Per Share	Load Factor	% Net Profit Margin	Dividends Per Share	Bk Value Per Share	Common Shares	Net Operating Revenues	Operating Margin	Net Profit (\$Mil)
Name	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL
Alaska Air Group, Inc.	21.5%	823	37.5%	22.0%	96.90	9.20	6.00	75.00	84.5%	8.7%	1.28	31.95	122,000,000	8,530	18.0%	740
Allegiant Travel Co	25.0%	156	37.3%	28.5%	109.05	19.70	11.10	100.00	83.0%	10.4%	2.40	38.70	15,500,000	1,690	22.0%	175
American Airlines Group	14.0%	1,919	37.8%	48.9%	102.30	9.10	4.65	95.00	82.5%	4.8%	0.40	9.75	435,000,000	44,500	13.0%	2,115
Delta Air Lines, Inc.	20.5%	3,568	37.0%	25.5%	63.20	9.90	6.50	37.00	85.0%	10.3%	1.22	23.20	690,000,000	43,600	19.5%	4,500
Hawaiian Holdings, Inc.	19.5%	248	37.7%	29.0%	54.60	6.35	4.15	41.50	85.0%	7.6%	0.48	16.85	52,000,000	2,840	15.5%	215
JetBlue Airways Corp.	21.0%	575	38.0%	12.0%	24.75	3.75	2.05	29.00	84.5%	8.6%	-	15.95	310,000,000	7,680	20.0%	660
SkyWest, Inc.	20.5%	182	37.6%	10.4%	61.55	10.50	4.40	107.45	81.0%	7.2%	0.32	35.60	52,000,000	3,200	20.0%	230
Southwest Airlines Co.	22.5%	2,076	36.7%	19.9%	40.20	7.00	4.65	45.00	84.0%	11.9%	0.58	19.65	560,000,000	22,500	23.0%	2,670
Spirit Airlines	19.0%	211	37.1%	12.5%	47.65	5.90	3.45			7.3%	-	26.85	68,000,000	3,240	16.0%	235
United Continental Holding, Inc	17.0%	2,052	35.4%	23.0%	142.85	15.50	7.50	109.00	83.0%	5.3%	-	35.35	280,000,000	40,000	14.0%	2,110

Value Line February 2018

The harmonic mean is the preferable m

high data points are given greater weig

The harmonic mean, on the other hand,

Morning Star Data ending 2017

DATA INPUT

WASHINGTON STATE DEPARTM

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Instructions: Data entered on this page

			Longer Term Forecasts												
			Dividends Per Share			Earnings Per Share			Revenue Per Share			Income Statement			
Guideline Companies	Return on Shareholder Equity	All Dividends to Net Profits	2019	2023	% Annual Change	2019	2023	% Annual Change	2019	2023	% Annual Change	Return on Shareholder Equity	Operating Income	Current Assets	PP & E Gross
Name	VL	VL	VL	VL		VL	VL		VL	VL		VL	M*	M*	M*
Alaska Air Group, Inc.	19.0%	21.0%	1.36	1.70	4.56%	7.25	9.00	4.42%	74.65	90.75	3.98%	23.00%	1,260,000,000	2,146,000,000	9,275,000,000
Allegiant Travel Co	29.0%	22.0%	2.80	3.15	2.38%	14.00	15.75	2.38%	122.60	172.50	7.07%	24.50%	227,000,000	541,000,000	1,789,000,000
American Airlines Group	50.0%	9.0%	0.50	0.80	9.86%	5.15	7.50	7.81%	113.05	153.45	6.30%	50.00%	4,058,000,000	9,146,000,000	49,802,000,000
Delta Air Lines, Inc.	30.5%	19.0%	1.50	2.40	9.86%	7.15	8.90	4.48%	67.15	79.85	3.53%	25.50%	6,114,000,000	7,844,000,000	40,660,000,000
Hawaiian Holdings, Inc.	24.5%	12.0%	0.52	0.64	0.00%	4.00	4.95	4.35%	57.20	68.50	3.67%	25.00%	484,000,000	702,000,000	2,401,000,000
JetBlue Airways Corp.	13.5%	0.0%	0.16	0.28	0.00%	2.25	2.75	4.10%	27.25	34.05	4.56%	14.50%	1,000,000,000	1,206,000,000	10,786,000,000
SkyWest, Inc.	12.5%	7.0%	0.36	0.50	6.79%	4.95	6.00	3.92%	63.45	73.25	2.91%	14.50%	388,000,000	995,000,000	5,650,000,000
Southwest Airlines Co.	24.5%	12.0%	0.68	1.00	8.02%	5.20	6.50	4.56%	44.35	58.80	5.80%	23.00%	3,515,000,000	4,815,000,000	28,229,000,000
Spirit Airlines	13.0%	0.0%	0.00	0.00	0.00%	4.00	5.00	4.56%	53.95	73.00	6.23%	15.50%	389,000,000	1,280,000,000	2,446,000,000
United Continental Holding, Inc	20.0%	0.0%	-	-	0.00%	9.00	10.00	2.13%	155.55	200.00	5.16%	19.50%	3,498,000,000	7,113,000,000	38,144,000,000

TTM DATA UPDATE

Value Line February 2018

The harmonic mean is the preferable m
high data points are given greater weig

The harmonic mean, on the other hand,
Morning Star Data ending 2017

DATA INPUT

WASHINGTON STATE DEPARTM

2018 ASSESSMENT YEAR

PASSENGER AIRLINES

Instructions: Data entered on this page

Guideline Companies	Balance Sheet			Cash Flow Statement	Other Financials			
	Intangibles (excl. GW)	Current Liabilities	Long Term Debt Less Current Maturities	Depreciation & Amortization	Carrying Value Debt	Fair Value Debt	Current Maturity Long Term Debt	Aircraft Rental Expense
	M*	10K/M*	10-K/M*	M*	10-K	10-K	10K	10-K
Alaska Air Group, Inc.	133,000,000	2,700,000,000	2,262,000,000	372,000,000	2,569,000,000	959,000,000	307,000,000	274,000,000
Allegiant Travel Co	-	550,000,000	950,000,000	122,000,000	1,171,000,000	1,122,669,000	214,761,000	3,098,000
American Airlines Group	2,203,000,000	14,964,000,000	22,511,000,000	1,702,000,000	25,065,000,000	25,848,000,000	2,554,000,000	1,197,000,000
Delta Air Lines, Inc.	4,847,000,000	18,573,000,000	6,592,000,000	2,235,000,000	8,440,000,000	8,700,000,000	2,242,000,000	351,000,000
Hawaiian Holdings, Inc.	15,000,000	892,000,000	511,201,000	113,000,000	433,072,000	444,099,000	59,470,000	124,521,000
JetBlue Airways Corp.	-	2,395,000,000	1,003,000,000	446,000,000	1,075,000,000	1,154,000,000	196,000,000	100,000,000
SkyWest, Inc.	-	821,000,000	2,377,000,000	293,000,000	2,712,400,000	2,698,400,000	309,678,000	215,807,000
Southwest Airlines Co.	413,000,000	6,905,000,000	3,320,000,000	1,218,000,000	2,808,000,000	2,859,000,000	348,000,000	198,000,000
Spirit Airlines	-	647,000,000	1,387,000,000	140,000,000	1,539,600,000	1,583,200,000	115,430,000	205,852,000
United Continental Holding, Inc	3,539,000,000	12,676,000,000	11,703,000,000	2,149,000,000	13,268,000,000	13,787,000,000	1,565,000,000	621,000,000

Value Line February 2018

The harmonic mean is the preferable m

high data points are given greater weig

The harmonic mean, on the other hand

Morning Star Data ending 2017

2018 Multi Stage Dividend Growth Model Using FCFE

Airline Industry

Assumptions:	3.80%	GDP
	11.6	Median Industry PE
	10.5%	Target Dividend Payout Ratio
	22.1%	Target ROE

Alaska Air Group
ALK

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		22.00%	-43.61%	143.61%	6.64			-73.51
	2018	1	-9.64%	19.00%	65.79%	34.21%	6.00	2.05	2.05
	2019	2	12.50%	20.00%	55.56%	44.44%	6.75	3.00	3.00
Stage 1	2020	3	11.11%	21.00%	47.62%	52.38%	7.50	3.93	3.93
	2021	4	10.00%	22.00%	41.32%	58.68%	8.25	4.84	4.84
	2022	5	9.09%	23.00%	34.92%	65.08%	9.00	5.86	5.86
	2023	6	8.03%	22.82%	30.56%	69.44%	9.72	6.75	6.75
	2024	7	6.97%	22.64%	26.13%	73.87%	10.40	7.68	7.68
Stage 2	2025	8	5.92%	22.46%	21.63%	78.37%	11.02	8.63	8.63
	2026	9	4.86%	22.28%	17.06%	82.94%	11.55	9.58	9.58
	2027	10	3.80%	22.10%	17.19%	82.81%	11.99	9.93	144.73
Stage 3	11+	3.80%	22.10%	17.19%	82.81%	12.45	2.14		

price = 73.51

Ke = 12.63%

Allegiant Travel Co
ALGT

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		28.50%	73.44%	26.56%	9.55			-154.75
	2018	1	16.23%	29.00%	36.11%	63.89%	11.10	7.09	7.09
	2019	2	10.47%	27.88%	34.01%	65.99%	12.26	8.09	8.09
Stage 1	2020	3	9.48%	26.75%	32.37%	67.63%	13.43	9.08	9.08
	2021	4	8.66%	25.63%	31.10%	68.90%	14.59	10.05	10.05
	2022	5	7.97%	24.50%	29.12%	70.88%	15.75	11.16	11.16
	2023	6	7.14%	24.02%	26.23%	73.77%	16.87	12.45	12.45
	2024	7	6.30%	23.54%	23.23%	76.77%	17.94	13.77	13.77
Stage 2	2025	8	5.47%	23.06%	20.09%	79.91%	18.92	15.12	15.12
	2026	9	4.63%	22.58%	16.83%	83.17%	19.79	16.46	16.46
	2027	10	3.80%	22.10%	17.19%	82.81%	20.55	17.01	248.01
Stage 3	11+	3.80%	22.10%	17.19%	82.81%	21.33	3.67		

price = 154.75

Ke = 10.80%

American Airlines Group
AAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		48.90%	87.02%	12.98%	3.90			-52.03
	2018	1	19.23%	50.00%	30.65%	69.35%	4.65	3.23	3.23
	2019	2	15.32%	50.00%	26.57%	73.43%	5.36	3.94	3.94
Stage 1	2020	3	13.29%	50.00%	23.46%	76.54%	6.08	4.65	4.65
	2021	4	11.73%	50.00%	20.99%	79.01%	6.79	5.36	5.36
	2022	5	10.50%	50.00%	18.32%	81.68%	7.50	6.13	6.13
	2023	6	9.16%	44.42%	17.60%	82.40%	8.19	6.75	6.75
	2024	7	7.82%	38.84%	16.68%	83.32%	8.83	7.35	7.35
Stage 2	2025	8	6.48%	33.26%	15.45%	84.55%	9.40	7.95	7.95
	2026	9	5.14%	27.68%	13.73%	86.27%	9.88	8.53	8.53
	2027	10	3.80%	22.10%	17.19%	82.81%	10.26	8.49	123.81
Stage 3	11+	3.80%	22.10%	17.19%	82.81%	10.65	1.83		

price = 52.03

Ke = 16.73%

Delta Air Lines Inc
DAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		25.50%	144.10%	-44.10%	4.93			-56.00
	2018	1	31.85%	30.50%	30.26%	69.74%	6.50	4.53	4.53
	2019	2	9.23%	29.25%	28.89%	71.11%	7.10	5.05	5.05
Stage 1	2020	3	8.45%	28.00%	27.83%	72.17%	7.70	5.56	5.56

price = 56.00

	2021	4	7.79%	26.75%	27.02%	72.98%	8.30	6.06	6.06
	2022	5	7.23%	25.50%	25.66%	74.34%	8.90	6.62	6.62
	2023	6	6.54%	24.82%	23.60%	76.40%	9.48	7.24	7.24
	2024	7	5.86%	24.14%	21.42%	78.58%	10.04	7.89	7.89
Stage 2	2025	8	5.17%	23.46%	19.12%	80.88%	10.56	8.54	8.54
	2026	9	4.49%	22.78%	16.68%	83.32%	11.03	9.19	9.19
	2027	10	3.80%	22.10%	17.19%	82.81%	11.45	9.48	138.20
Stage 3	11+		3.80%	22.10%	17.19%	82.81%	11.88	2.04	147.68

Ke = 17.59%

Hawaiian Holdings Inc
HA

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		29.00%	-49.52%	149.52%	4.66			-39.85
	2018	1	-10.94%	24.50%	19.67%	4.15	3.33		3.33
	2019	2	4.82%	24.63%	18.67%	4.35	3.54		3.54
Stage 1	2020	3	4.60%	24.75%	17.76%	4.55	3.74		3.74
	2021	4	4.40%	24.88%	16.93%	4.75	3.95		3.95
	2022	5	4.21%	25.00%	16.51%	4.95	4.13		4.13
	2023	6	4.13%	24.42%	16.57%	5.15	4.30		4.30
	2024	7	4.05%	23.84%	16.63%	5.36	4.47		4.47
Stage 2	2025	8	3.96%	23.26%	16.69%	5.58	4.64		4.64
	2026	9	3.88%	22.68%	16.75%	5.79	4.82		4.82
	2027	10	3.80%	22.10%	17.19%	6.01	4.98	72.57	77.55
Stage 3	11+		3.80%	22.10%	17.19%	6.24	1.07		

Ke = 14.23%

price = 39.85

JetBlue Airways Corp
JBLU

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		12.00%	74.56%	25.44%	1.76			-22.34
	2018	1	16.48%	13.50%	63.23%	2.05	0.75		0.75
	2019	2	8.54%	13.75%	57.20%	2.23	0.95		0.95
Stage 1	2020	3	7.87%	14.00%	52.08%	2.40	1.15		1.15
	2021	4	7.29%	14.25%	47.69%	2.58	1.35		1.35
	2022	5	6.80%	14.50%	42.74%	2.75	1.57		1.57
	2023	6	6.20%	16.02%	34.94%	2.92	1.90		1.90
	2024	7	5.60%	17.54%	28.50%	3.08	2.21		2.21
Stage 2	2025	8	5.00%	19.06%	23.08%	3.24	2.49		2.49
	2026	9	4.40%	20.58%	18.46%	3.38	2.76		2.76
	2027	10	3.80%	22.10%	17.19%	3.51	2.91	42.36	45.26
Stage 3	11+		3.80%	22.10%	17.19%	3.64	0.63		

Ke = 12.12%

price = 22.34

SkyWest Inc
SKYW

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		10.40%	127.96%	-27.96%	3.43			-53.10
	2018	1	28.28%	12.50%	72.73%	4.40	1.20		1.20
	2019	2	9.09%	13.00%	64.10%	4.80	1.72		1.72
Stage 1	2020	3	8.33%	13.50%	56.98%	5.20	2.24		2.24
	2021	4	7.69%	14.00%	51.02%	5.60	2.74		2.74
	2022	5	7.14%	14.50%	44.65%	6.00	3.32		3.32
	2023	6	6.47%	16.02%	36.24%	6.39	4.07		4.07
	2024	7	5.81%	17.54%	29.29%	6.76	4.78		4.78
Stage 2	2025	8	5.14%	19.06%	23.44%	7.11	5.44		5.44
	2026	9	4.47%	20.58%	18.46%	7.42	6.05		6.05
	2027	10	3.80%	22.10%	17.19%	7.71	6.38	93.02	99.40
Stage 3	11+		3.80%	22.10%	17.19%	8.00	1.38		

Ke = 10.76%

price = 53.10

Southwest Airlines Co
LUV

Growth Reinvestment Payout Terminal Cash

	Year	Rate	ROE	Rate	Ratio	Earnings	FCFE	Value	Flow	
Historic	0		19.90%	164.54%	-64.54%	3.41				price = 65.45
Stage 1	2018	1	36.36%	24.50%	40.60%	59.40%	4.65	2.76	2.76	
	2019	2	9.95%	24.13%	37.50%	62.50%	5.11	3.20	3.20	
	2020	3	9.05%	23.75%	34.93%	65.07%	5.58	3.63	3.63	
	2021	4	8.30%	23.38%	32.77%	67.23%	6.04	4.06	4.06	
	2022	5	7.66%	23.00%	29.95%	70.05%	6.50	4.55	4.55	
Stage 2	2023	6	6.89%	22.82%	26.80%	73.20%	6.95	5.09	5.09	
	2024	7	6.12%	22.64%	23.61%	76.39%	7.37	5.63	5.63	
	2025	8	5.34%	22.46%	20.36%	79.64%	7.77	6.19	6.19	
	2026	9	4.57%	22.28%	17.06%	82.94%	8.12	6.74	6.74	
	2027	10	3.80%	22.10%	17.19%	82.81%	8.43	6.98	101.76	108.74
Stage 3	11+	3.80%	22.10%	17.19%	82.81%	8.75	1.50			
								Ke =	10.30%	

Spirit Airlines Co
SAVE

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow	
Historic	0		12.50%	38.42%	61.58%	3.18				price = 44.85
Stage 1	2018	1	8.49%	13.00%	86.40%	13.60%	3.45	0.47	0.47	
	2019	2	11.23%	13.63%	74.11%	25.89%	3.84	0.99	0.99	
	2020	3	10.10%	14.25%	64.36%	35.64%	4.23	1.51	1.51	
	2021	4	9.17%	14.88%	56.48%	43.52%	4.61	2.01	2.01	
	2022	5	8.40%	15.50%	48.26%	51.74%	5.00	2.59	2.59	
Stage 2	2023	6	7.48%	16.82%	39.01%	60.99%	5.37	3.28	3.28	
	2024	7	6.56%	18.14%	31.09%	68.91%	5.73	3.95	3.95	
	2025	8	5.64%	19.46%	24.26%	75.74%	6.05	4.58	4.58	
	2026	9	4.72%	20.78%	18.29%	81.71%	6.34	5.18	5.18	
	2027	10	3.80%	22.10%	17.19%	82.81%	6.58	5.45	79.38	84.82
Stage 3	11+	3.80%	22.10%	17.19%	82.81%	6.83	1.17			
								Ke =	10.39%	

United Continental Holdings
UAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow	
Historic	0		23.00%	49.53%	50.47%	6.76				price = 67.40
Stage 1	2018	1	10.95%	20.00%	41.67%	58.33%	7.50	4.38	4.38	
	2019	2	8.33%	19.88%	38.70%	61.30%	8.13	4.98	4.98	
	2020	3	7.69%	19.75%	36.17%	63.83%	8.75	5.59	5.59	
	2021	4	7.14%	19.63%	33.97%	66.03%	9.38	6.19	6.19	
	2022	5	6.67%	19.50%	31.25%	68.75%	10.00	6.88	6.88	
Stage 2	2023	6	6.09%	20.02%	27.57%	72.43%	10.61	7.68	7.68	
	2024	7	5.52%	20.54%	24.08%	75.92%	11.19	8.50	8.50	
	2025	8	4.95%	21.06%	20.77%	79.23%	11.75	9.31	9.31	
	2026	9	4.37%	21.58%	17.61%	82.39%	12.26	10.10	10.10	
	2027	10	3.80%	22.10%	17.19%	82.81%	12.73	10.54	153.64	164.18
Stage 3	11+	3.80%	22.10%	17.19%	82.81%	13.21	2.27			
								Ke =	15.82%	

source: Value Line

IMPLIED PREMIUMS FOR US MARKET

Updated January 2018

These implied premiums are calculated using the S&P 500.

Year	Earnings Yield	Dividend Yield	S&P 500	Earnings*	Dividends*	Change in Earnings	Change in Dividends	T.Bill Rate	T.Bond Rate	Bond-Bill	Smoothed Growth	Implied Premium (DDM)	Analyst Growth Estimate	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	0.086021	0.0290803	0.0213	2.35%	0.22%	2.41%	2.92%		2.92%	124.26%
1962	5.81%	3.40%	63.1	3.67	2.15	0.087865	0.0520921	0.0273	3.85%	1.12%	4.05%	3.56%		3.56%	92.47%
1963	5.51%	3.13%	75.02	4.13	2.35	0.127517	0.0944933	0.0312	4.14%	1.02%	4.96%	3.38%		3.38%	81.64%
1964	5.62%	3.05%	84.75	4.76	2.58	0.152252	0.1008247	0.0354	4.21%	0.67%	5.13%	3.31%		3.31%	78.62%
1965	5.73%	3.06%	92.43	5.30	2.83	0.111966	0.0941953	0.0393	4.65%	0.72%	5.46%	3.32%		3.32%	71.40%
1966	6.74%	3.59%	80.33	5.41	2.88	0.022281	0.0196188	0.0476	4.64%	-0.12%	4.19%	3.68%		3.68%	79.31%
1967	5.66%	3.09%	96.47	5.46	2.98	0.008489	0.033662	0.0421	5.70%	1.49%	5.25%	3.20%		3.20%	56.14%
1968	5.51%	2.93%	103.86	5.72	3.04	0.048072	0.0208576	0.0521	6.16%	0.95%	5.32%	3.00%		3.00%	48.70%
1969	6.63%	3.52%	92.06	6.10	3.24	0.066558	0.0648727	0.0658	7.88%	1.30%	7.55%	3.74%		3.74%	47.46%
1970	5.98%	3.46%	92.15	5.51	3.19	-0.09716	-0.016084	0.0653	6.50%	-0.03%	4.78%	3.41%		3.41%	52.46%
1971	5.46%	3.10%	102.09	5.57	3.16	0.011531	-0.007402	0.0439	5.89%	1.50%	4.57%	3.09%		3.09%	52.46%
1972	5.23%	2.70%	118.05	6.17	3.19	0.107623	0.0071284	0.0384	6.41%	2.57%	5.21%	2.72%		2.72%	42.43%
1973	8.16%	3.70%	97.55	7.96	3.61	0.289287	0.1323984	0.0693	6.90%	-0.03%	8.30%	4.30%		4.30%	62.32%
1974	13.64%	5.43%	68.56	9.35	3.72	0.17481	0.0314345	0.08	7.40%	-0.60%	6.42%	5.59%		5.59%	75.54%
1975	8.55%	4.14%	90.19	7.71	3.73	-0.17541	0.0029703	0.058	7.76%	1.96%	5.99%	4.13%		4.13%	53.22%
1976	9.07%	3.93%	107.46	9.75	4.22	0.263949	0.131047	0.0508	6.81%	1.73%	8.19%	4.55%		4.55%	66.81%
1977	11.43%	5.11%	95.1	10.87	4.86	0.115251	0.1506998	0.0512	7.78%	2.66%	9.52%	5.92%		5.92%	76.09%
1978	12.11%	5.39%	96.11	11.64	5.18	0.070745	0.0659969	0.0718	9.15%	1.97%	8.48%	5.72%		5.72%	62.51%
1979	13.48%	5.53%	107.94	14.55	5.97	0.250143	0.1522592	0.1038	10.33%	-0.05%	11.70%	6.45%		6.45%	62.44%
1980	11.04%	4.74%	135.76	14.99	6.44	0.030074	0.0780592	0.1124	12.43%	1.19%	11.01%	5.03%		5.03%	40.47%
1981	12.39%	5.57%	122.55	15.18	6.83	0.01308	0.0607629	0.1471	13.98%	-0.73%	11.42%	5.73%		5.73%	40.99%
1982	9.83%	4.93%	140.64	13.82	6.93	-0.0895	0.015751	0.1054	10.47%	-0.07%	7.96%	4.90%		4.90%	46.80%
1983	8.06%	4.32%	164.93	13.29	7.12	-0.03845	0.0276084	0.088	11.80%	3.00%	9.09%	4.31%		4.31%	36.53%
1984	10.07%	4.68%	167.24	16.84	7.83	0.266878	0.0985064	0.0985	11.51%	1.66%	11.02%	5.11%		5.11%	44.40%
1985	7.42%	3.88%	211.28	15.68	8.20	-0.06912	0.0473796	0.0772	8.99%	1.27%	7.89%	4.03%	6.75%	3.84%	42.71%
1986	5.96%	3.38%	242.17	14.43	8.19	-0.07933	0.001503	0.0616	7.22%	1.06%	5.54%	3.36%	6.96%	3.58%	49.58%
1987	6.49%	3.71%	247.08	16.04	9.17	0.111004	0.1198877	0.0547	8.86%	3.39%	9.66%	4.18%	8.58%	3.99%	45.03%
1988	8.20%	3.68%	277.72	24.12	10.22	0.504163	0.1149194	0.0635	9.14%	2.79%	9.76%	4.12%	7.67%	3.77%	41.25%
1989	6.80%	3.32%	353.4	24.32	11.73	0.008292	0.1480205	0.0837	7.93%	-0.44%	9.58%	3.85%	7.46%	3.51%	44.26%
1990	6.58%	3.74%	330.22	22.65	12.35	-0.06867	0.0526169	0.0781	8.07%	0.26%	7.39%	3.92%	7.19%	3.89%	48.20%
1991	4.58%	3.11%	417.09	19.30	12.97	-0.1479	0.0503044	0.07	6.70%	-0.30%	6.34%	3.27%	7.81%	3.48%	51.94%
1992	4.16%	2.90%	435.71	20.87	12.64	0.081347	-0.025896	0.053	6.68%	1.38%	4.67%	2.83%	9.83%	3.55%	53.14%
1993	4.25%	2.72%	466.45	26.90	12.69	0.288931	0.0041035	0.035	5.79%	2.29%	4.73%	2.74%	8.00%	3.17%	54.75%
1994	5.89%	2.91%	459.27	31.75	13.36	0.180297	0.0533848	0.05	7.82%	2.82%	7.23%	3.06%	7.17%	3.55%	45.40%
1995	5.74%	2.30%	615.93	37.70	14.17	0.187402	0.0599811	0.035	5.57%	2.07%	5.65%	2.44%	6.50%	3.29%	59.07%
1996	4.83%	2.01%	740.74	40.63	14.89	0.077719	0.0509999	0.05	6.41%	1.41%	6.13%	2.11%	7.92%	3.20%	49.92%
1997	4.08%	1.60%	970.43	44.09	15.52	0.085159	0.0425234	0.0535	5.74%	0.39%	5.45%	1.67%	8.00%	2.73%	47.56%
1998	3.11%	1.32%	1229.23	44.27	16.20	0.004083	0.0436799	0.0433	4.65%	0.32%	4.60%	1.38%	7.20%	2.26%	48.60%
1999	3.07%	1.14%	1469.25	51.68	16.71	0.167382	0.0315953	0.0537	6.44%	1.07%	5.75%	1.20%	12.50%	2.05%	31.83%
2000	3.94%	1.23%	1320.28	56.13	16.27	0.086107	-0.026532	0.0573	5.11%	-0.62%	3.71%	1.65%	12.00%	2.87%	56.16%
2001	3.85%	1.37%	1148.09	38.85	15.74	-0.30786	-0.032422	0.018	5.05%	3.25%	3.56%	1.73%	10.30%	3.62%	71.68%
2002	5.23%	1.83%	879.82	46.04	16.08	0.185071	0.0215361	0.012	3.81%	2.61%	3.57%	2.29%	8.00%	4.10%	107.61%
2003	4.87%	1.61%	1111.91	54.69	17.88	0.18788	0.1119403	0.01	4.25%	3.25%	5.35%	2.12%	11.00%	3.69%	86.82%
2004	5.58%	1.60%	1211.92	67.68	19.41	0.237521	0.0854027	0.0218	4.22%	2.04%	4.90%	2.02%	8.50%	3.65%	86.49%
2005	5.47%	1.79%	1248.29	76.45	22.38	0.12958	0.1531921	0.0431	4.39%	0.08%	6.16%	2.20%	8.00%	4.08%	92.94%
2006	6.18%	1.77%	1418.3	87.72	25.05	0.147417	0.1193029	0.0488	4.70%	-0.18%	5.93%	1.97%	12.50%	4.16%	88.51%
2007	5.62%	1.89%	1468.36	82.54	27.73	-0.05905	0.106986	0.0331	4.02%	0.71%	5.03%	2.06%	5.00%	4.37%	108.71%
2008	7.24%	3.11%	903.25	65.39	28.05	-0.20778	0.0115398	0.0159	2.21%	0.62%	2.11%	4.05%	4.00%	6.43%	290.95%
2009	5.35%	2.00%	1115.1	59.65	22.31	-0.08778	-0.204635	0.0014	3.84%	3.70%	0.28%	2.60%	7.20%	4.36%	113.54%
2010	6.65%	1.84%	1257.64	83.66	23.12	0.402515	0.0363066	0.0013	3.29%	3.16%	3.33%	2.24%	6.95%	5.20%	158.05%
2011	7.72%	2.07%	1257.6	97.05	26.02	0.160053	0.1254325	0.0003	1.88%	1.85%	2.75%	2.71%	7.18%	6.01%	319.68%
2012	7.18%	2.13%	1426.19	102.47	30.44	0.055848	0.1698693	0.0005	1.76%	1.71%	2.93%	2.47%	5.27%	5.78%	328.41%
2013	5.81%	1.96%	1848.36	107.45	36.28	0.0486	0.1918528	0.0007	3.04%	2.97%	5.01%	2.03%	4.28%	4.96%	163.16%
2014	5.57%	1.87%	2058.9	114.74	38.57	0.067846	0.0631202	0.00053	2.17%	2.12%	2.55%	2.24%	5.58%	5.78%	266.36%
2015	5.20%	2.11%	2043.94	106.32	43.16	-0.0592	0.0943	0.0021	2.27%	2.06%	2.96%	2.46%	5.55%	6.12%	270.00%
2016	4.86%	2.01%	2238.83	108.86	45.03	0.0239	0.0433	0.0051	2.45%	1.94%	2.64%	2.41%	5.54%	5.69%	232.00%
2017	4.67%	1.86%	2673.61	124.94	49.73	0.147713	0.1043749	0.0139	2.41%	1.02%	3.22%	2.36%	7.05%	5.08%	210.79%

Summary of Bloomberg Bond Yields by Rating

2017 S&P Monthly Bond Yields

Rating	October			November			December		
	20Y	25Y	30Y	20Y	25Y	30Y	20Y	25Y	30Y
AA	3.737	3.751	3.725	3.726	3.744	3.736	3.609	3.603	3.571
AA-	3.939	3.932	3.95	3.96	3.921	3.913	3.81	3.79	3.787
A+	3.947	3.986	4.019	3.876	3.915	3.983	3.762	3.816	3.856
A	3.89	3.927	3.877	3.803	3.9	3.872	3.766	3.798	3.773
A-	4.164	4.202	4.428	4.134	4.166	4.367	4.036	4.061	4.244
BBB+	4.298	4.33	4.501	4.289	4.352	4.517	4.182	4.277	4.448
BBB	4.718	4.694	4.683	4.715	4.687	4.677	4.564	4.546	4.552
BBB-	5.137	5.048	5.068	5.144	5.103	5.089	5.012	4.969	5.01
BB+	5.792	5.6	N/A	5.785	5.504	N/A	5.806	5.398	N/A
BB	6.676	8.02	8.027	6.304	6.045	6.046	5.99	6	5.998
BB-	6.182	7.054	7.061	6.202	7.115	7.116	6.161	7.049	7.048
B+	6.706	6.769	6.815	7.604	8.856	9.089	7.561	8.594	8.736
B	9.365	10.704	N/A	9.615	11.103	N/A	9.847	11.547	N/A
B-	9.198	N/A	N/A	9.625	N/A	N/A	9.819	N/A	N/A