

COST OF CAPITAL STUDY

YIELD CAPITALIZATION
2023 ASSESSMENT YEAR

APPENDIX C

PASSENGER AIRLINES

EQUITY RATE		15.00%	
CAPITAL ASSET PRICING MODEL			PAGE
CAPM Ex Ante	12.75%		6
DIVIDEND GROWTH MODELS			
Value Line, based on Dividends Growth	NMF		7
Value Line, based on Residual Income Method	20.00%		7a
Value Line, based on Residual Income Method Multistage	22.00%		
Value Line, based on Earnings Growth	NMF		8
Value Line, based on Return on Equity	10.50%		9
	RANGE	10.5% - 22%	
DEBT RATE		9.50%	10
OPERATING LEASE DEBT RATE		6.24%	10
MARKET CAPITAL STRUCTURE			
		Tax Shield	
Equity	50%	x 15.00% =	7.50%
Operating Leases	15%	x 6.24% x 76.00% =	0.71%
Debt	35%	x 9.50% x 76.00% =	2.53%
Marginal Tax Rate	24%		
WEIGHTED AVERAGE COST OF CAPITAL		10.74%	

SUPPORT FOR GUIDELINE COMPANIES

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 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	1.50	6.6	0.00%	3,816,238,236	67.0%	-	0.0%	1,883,000,000	33.0%	5,699,238,236	100.0%
Allegiant Travel Co	ALGT	1.40	8.5	0.00%	1,210,297,200	38.4%	-	0.0%	1,944,078,000	61.6%	3,154,375,200	100.0%
American Airlines Group	AAL	1.60	6.5	0.00%	(4,487,585,700)	-16.1%	-	0.0%	32,389,000,000	116.1%	27,901,414,300	100.0%
Delta Air Lines, Inc.	DAL	1.55	6.4	0.00%	6,456,560,000	23.8%	-	0.0%	20,671,000,000	76.2%	27,127,560,000	100.0%
Hawaiian Holdings, Inc.	HA	1.70	(5.1)	0.00%	333,401,858	17.4%	-	0.0%	1,583,889,000	82.6%	1,917,290,858	100.0%
JetBlue Airways Corp.	JBLU	1.70	8.1	0.00%	3,562,653,754	53.5%	-	0.0%	3,093,000,000	46.5%	6,655,653,754	100.0%
Southwest Airlines Co.	LUV	1.10	13.4	2.15%	10,697,158,386	57.1%	-	0.0%	8,046,000,000	42.9%	18,743,158,386	100.0%
Spirit Airlines	SAVE	1.75	38.8	0.00%	1,574,670,143	33.0%	-	0.0%	3,200,376,000	67.0%	4,775,046,143	100.0%
United Continental Holding, Inc	UAL	1.65	4.4	0.00%	9,889,566,888	25.9%	-	0.0%	28,283,000,000	74.1%	38,172,566,888	100.0%
Mean		1.55	9.74	0.24%	3,672,551,196	33.3%		0.0%	11,232,593,667	66.7%		
Weighted Mean					33,052,960,764	24.6%		0.0%	101,093,343,000	75.4%		
Harmonic Mean		1.52						0.0%	3,527,370,896.36	58.6%	134,146,303,764	
Median		1.60	6.61	-	3562653754	33.0%		0.0%	3,200,376,000.00	67.0%	5,897,870,300.39	
Max		1.75	38.8	2.15%	10697158386	67.0%		0.0%	32389000000	116.1%		
Min		1.10	-5.1	0.00%	-4487585700	-16.1%		0.0%	1583889000	33.0%		
Say		1.50				35%		0.0%		65%		100%

MARKET VALUE

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 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	42.94	126,533,098	5,433,331,228	58.2%	-	0.0%	2,436,114,451	26.1%	1,473,000,000	15.8%	9,342,445,679	100%
Allegiant Travel Co	ALGT	67.99	17,880,000	1,215,661,200	41.0%	-	0.0%	186,271,706	6.3%	1,561,939,000	52.7%	2,963,871,906	100%
American Airlines Group	AAL	12.72	655,122,000	8,333,151,840	16.2%	-	0.0%	10,438,809,058	20.3%	32,569,000,000	63.4%	51,340,960,898	100%
Delta Air Lines, Inc.	DAL	32.86	638,000,000	20,964,680,000	45.5%	-	0.0%	4,368,536,259	9.5%	20,700,000,000	45.0%	46,033,216,259	100%
Hawaiian Holdings, Inc.	HA	10.26	51,450,904	527,886,275	19.9%	-	0.0%	771,922,408	29.1%	1,356,561,000	51.1%	2,656,369,683	100%
JetBlue Airways Corp.	JBLU	6.48	323,877,614	2,098,726,939	35.7%	-	0.0%	937,695,942	15.9%	2,848,000,000	48.4%	5,884,422,881	100%
Southwest Airlines Co.	LUV	33.50	594,286,577	19,908,600,330	68.4%	-	0.0%	1,402,918,212	4.8%	7,786,000,000	26.8%	29,097,518,541	100%
Spirit Airlines	SAVE	19.38	109,124,750	2,114,837,655	28.6%	-	0.0%	1,935,739,746	26.1%	3,355,000,000	45.3%	7,405,577,401	100%
United Continental Holding, Inc	UAL	37.70	326,927,831	12,325,179,229	28.2%	-	0.0%	1,962,559,315	4.5%	29,371,000,000	67.3%	43,658,738,543	100%
			Mean		38.0%		0.0%		15.8%		46.2%		
			Weighted Mean	72,922,054,695	36.8%	-	0.0%	24,440,567,097	12.32%	101,020,500,000	50.9%	198,383,121,792	
			Median		35.7%		0.0%		15.94%		48.4%		
			Harmonic Mean		31.2%		0.0%		9.8%		38.3%		
			Max		68.4%		0.0%		29.1%		67.3%		
			Min		16.2%		0.0%		4.5%		15.8%		
			Std Dev		17.3%		0.0%		9.9%		16.3%		
			Coefficient of Variation		0.46		0.0%		0.63		0.35		
			Target		50%		0%		15%		35%		100%

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

SUPPORT FOR MARKET MULTIPLES

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 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	42.94	76.23	0.6	7.70	5.6	4.35	9.9	Nil		30.16	1.4
Allegiant Travel Co	ALGT	67.99	127.64	0.5	14.10	4.8	3.13	21.7	Nil		67.69	1.0
American Airlines Group	AAL	12.72	74.75	0.2	3.52	3.6	0.50	25.4	Nil		(6.85)	
Delta Air Lines, Inc.	DAL	32.86	71.48	0.5	6.52	5.0	3.20	10.3	Nil		10.12	3.2
Hawaiian Holdings, Inc.	HA	10.26	31.10	0.3	(2.02)		(4.67)		Nil		6.48	1.6
JetBlue Airways Corp.	JBLU	6.48	28.25	0.2	1.00	6.5	(0.80)		NIL		11.00	0.6
Southwest Airlines Co.	LUV	33.50	40.10	0.8	3.50	9.6	1.16	28.9	Nil		18.00	1.9
Spirit Airlines	SAVE	19.38	46.52	0.4	(1.17)		(1.74)		NIL		14.43	1.3
United Continental Holding, Inc	UAL	37.70	137.50	0.3	10.05	3.8	2.52	15.0	NIL		30.25	1.2
	Mean			0.4		5.6		18.5				1.5
	Median			0.4		5.0		18.3				1.4
	Harmonic Mean			0.3		5.0		15.6				1.2
	Max			0.8		9.6		28.9		-		3.2
	Min			0.2		3.6		9.9		-		0.6
	Std Dev			0.2		2.0		8.0				0.8
	Coefficient of Variation			0.48		0.37		0.43				0.51
	Say			1.00		5.00		16.00		NMF		1.50

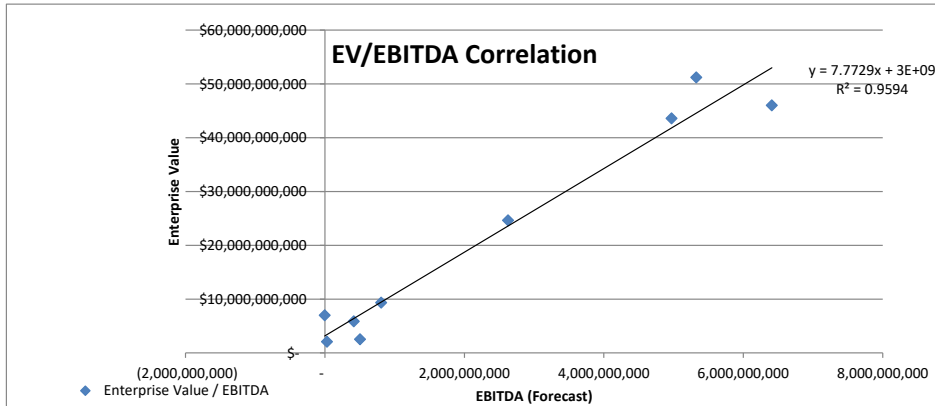
ENTERPRISE VALUE MULTIPLES

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 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	historic	(Growth)	forecast	forecast	forecast				
Alaska Air Group, Inc.	ALK	\$ 9,342,445,679	776,000,000	12.04	4.1%	807,893,905	11.56	10,499,565,000	0.89	974,304,855	139,935,000	8.38
Allegiant Travel Co	ALGT	\$ 2,559,433,906	475,729,000	5.38	5.9%	503,673,825	5.08	2,499,875,000	1.02	252,108,000	148,384,205	6.39
American Airlines Group	AAL	\$ 51,229,960,898	5,300,000,000	9.67	0.5%	5,325,209,224	9.62	53,856,000,000	0.95	2,306,029,440	3,094,055,000	9.49
Delta Air Lines, Inc.	DAL	\$ 46,033,216,259	6,276,000,000	7.33	2.1%	6,410,159,781	7.18	53,844,000,000	0.85	4,159,760,000	1,966,500,000	7.51
Hawaiian Holdings, Inc.	HA	\$ 2,098,386,683	29,961,000	70.04	3.2%	30,908,375	67.89	2,561,000,000	0.82	(103,930,826)	128,873,295	84.13
JetBlue Airways Corp.	JBLU	\$ 5,884,422,881	401,000,000	14.67	3.4%	414,604,763	14.19	9,979,200,000	0.59	323,877,614	270,560,000	9.90
Southwest Airlines Co.	LUV	\$ 24,667,518,541	2,563,000,000	9.62	2.5%	2,626,186,573	9.39	26,997,300,000	0.91	2,080,003,020	739,670,000	8.75
Spirit Airlines	SAVE	\$ 7,008,175,401	(3,399,000)	-2061.83	3.1%	(3,502,852)	0.00	6,098,550,000	1.15	(127,675,958)	318,725,000	36.68
United Continental Holding, Inc	UAL	\$ 43,592,738,543	5,045,000,000	8.64	-1.5%	4,970,776,470	8.77	52,644,000,000	0.83	3,285,624,702	2,790,245,000	7.17
	Mean			(213.83)	2.58%		14.85		0.89			19.82
	Median			9.62	3.06%		9.39		0.89			8.75
	Harmonic Mean											9.91
	Max			70.04	5.87%		67.89		1.15			84.13
	Min			(2,061.83)	-1.47%		-		0.59			6.39
	Std Dev			693.30	2.1%		20.29		0.15			25.91
	Coefficient of Variation			(3.24)	0.82		1.37		0.17			1.31
	Say			17.00	3.00%		10.00		1.00			10.00



Forecast EV/EBITDA By Rank

Guideline Companies	EV/EBITDA forecast	
Spirit Airlines	0.00	6.09 Low Average 7.2 Low Median 6.50 Say
Allegiant Travel Co	5.08	
Delta Air Lines, Inc.	7.18	
United Continental Holding, Inc	8.77	
Southwest Airlines Co.	9.39	22.53 High Average 11.6 High Median 11.00 Say
American Airlines Group	9.62	
Alaska Air Group, Inc.	11.56	
JetBlue Airways Corp.	14.19	
Hawaiian Holdings, Inc.	67.89	

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT CAPITAL ASSET PRICING MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

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PASSENGER AIRLINES

$$\text{Ex Ante} \\ K_e = R_f + \beta (R_p)$$

Ke = Cost of Equity **12.75%**

Rm =	rate of return	9.82%
Rf =	risk free rate	3.97%
Rp =	risk premium	5.85%
B =	Beta	1.50

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page 2

Rp = Risk Premium **5.85%**

Shannon Pratt and Roger Grabowski	3.50% - 6.00%	
Cost of Capital, Applications and Examples, Third Edition, 2008, page 113		
Dr. Aswath Damodaran	5.94%	chart page 14
http://pages.stern.nyu.edu/~adamodar/	5.85%	adjusted for Rf
2022 Implied Premium		

to above

Rf = Risk Free Rate **3.97%**

Value Line Investment Survey, Selected Yields January 6, 2023, page 1465
as of 12-27-22

US Treasury Securities year end data		
5 year		3.94%
10 year		3.84%
30 year		3.93%
30 year Zero		3.81%

to above

Federal Reserve Statistical Release (<http://www.federalreserve.gov/Releases/H15/Current/>)
as of 12-30-22

Treasury Constant Maturities		
5 year	3.99%	
10 year	3.88%	
20 year	4.14%	
30 year	3.97%	
20 year TIPS	<u>1.62%</u>	2.52%
30 year TIPS	<u>1.67%</u>	2.30%

TIPS inflation indication

Inflation **2.30%**

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The Livingston Survey, December 16, 2022, page 4, 8
Inflation median (measured by the CPI) over next 10 years

2.50%

Gross Domestic Product (GDP) Nominal **4.10%**

real GDP + inflation

Federal Reserve Projected Long Run Real GDP Growth

1.80%

Median Projection Value From Dec 14, 2022 Report
<https://www.federalreserve.gov/monetarypolicy/files/fomcproptabl20211215.pdf>

Congressional Budget Office Real GDP Economic Projections

The Budget and Economic Outlook 2023-2033	2023-2027	Table 2.3, pg 43
Average Percentage change Year To Year	2028-2033	1.80%
https://www.cbo.gov/system/files/2021-02/56970-Outlook.pdf		1.80%

Federal Reserve Bank of Philadelphia

The Livingston Survey, December 16, 2022, page 8
Average Annual Real GDP Growth Rate for Next 10 Years
<https://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey> 1.97%

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 ASSESSMENT YEAR

PASSENGER AIRLINES

Based on Dividend Growth

$$K_e = (D_1 + BB_1 / P_0) + G_D$$

Ke = Cost of Equity
 D1 = Expected Dividends
 BB1 = Expected Share Repurchase
 P0 = Current Stock Price
 GD = Sustainable Growth -- Dividend
 assumption: Sustainable growth can not exceed inflation plus real GDP

Company	Ticker	Stock Price (Po)	Expected FCFE1	Expected Dividend (D1)	Expected Buyback (BB1)	Dividend Yield (D1/Po)	Buyback Yield (BB1/Po)	Total Yield	Growth	Ke
Alaska Air Group, Inc.	ALK	42.94	0.96	0.00	0.96		2.25%			
Allegiant Travel Co	ALGT	67.99		0.00						
American Airlines Group	AAL	12.72	NMF	0.00					0.00%	
Delta Air Lines, Inc.	DAL	32.86	2.56	0.00	2.56		7.80%		0.00%	
Hawaiian Holdings, Inc.	HA	10.26		0.00					0.00%	
JetBlue Airways Corp.	JBLU	6.48	0.80	0.00	0.80		12.35%		0.00%	
Southwest Airlines Co.	LUV	33.50		0.72		2.15%			3.71%	
Spirit Airlines	SAVE	19.38	0.50	0.00	0.50		2.58%		0.00%	
United Continental Holding, Inc	UAL	37.70		0.00				wa	0.00%	
							Mean			
							Median			
							Harmonic Mean			
							Max	0.00%		0.00%
							Min	0.00%		0.00%
							Std Dev			
							Coefficient of Variation			

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NMF

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT RESIDUAL INCOME MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 ASSESSMENT YEAR

PASSENGER AIRLINES

$$K_e = (BVPS * (ROE - g)) / P_o + g$$

where $g = b * ROE$

Company	Ticker	Stock Price (Po)	Retention Rate (b)	Book Value Per Share (BVPS)	Return on Equity Forecast (ROE)	Sustainable Growth Rate (b * ROE)	Ke
Alaska Air Group, Inc.	ALK	42.94	0.24	30.16	28.00%	6.58%	21.62%
Allegiant Travel Co	ALGT	67.99	0.30	67.69	32.50%	9.59%	32.40%
American Airlines Group	AAL	12.72	0.96	(6.85)	95.50%	91.20%	88.89%
Delta Air Lines, Inc.	DAL	32.86	0.30	10.12	36.50%	10.95%	18.82%
Hawaiian Holdings, Inc.	HA	10.26	0.29	6.48	29.00%	8.41%	21.41%
JetBlue Airways Corp.	JBLU	6.48	0.00	11.00	12.00%	0.00%	20.37%
Southwest Airlines Co.	LUV	33.50	0.13	18.00	16.00%	2.08%	9.56%
Spirit Airlines	SAVE	19.38	0.15	14.43	15.00%	2.25%	11.74%
United Continental Holding, Inc	UAL	37.70	0.30	30.25	30.00%	9.00%	25.85%
						Mean	27.85%
						Median	21.41%
						Harmonic Mean	19.32%
						Max	88.89%
						Min	9.56%
						Std Dev	23.9%
						Coefficient of Variation	0.86
						Say	20.00%

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SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

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PASSENGER AIRLINES

Based on Earnings Growth

$$K_e = (D_1 + BB_1 / P_0) + G_D$$

Ke = Cost of Equity
 D1 = Expected Dividends
 BB1 = Expected Share Repurchase
 P0 = Current Stock Price
 GD = Sustainable Growth -- Dividend
 assumption: Sustainable growth can not exceed inflation plus real GDP

Company	Ticker	Stock Price (Po)	Expected FCFE1	Expected Dividend (D1)	Expected Buyback (BB1)	Dividend Yield (D1/Po)	Buyback Yield (BB1/Po)	Total Yield	Growth	Ke
Alaska Air Group, Inc.	ALK	42.94	0.96	0.00	0.96		2.25%			
Allegiant Travel Co	ALGT	67.99		0.00						
American Airlines Group	AAL	12.72	NMF	0.00					0.00%	
Delta Air Lines, Inc.	DAL	32.86	2.56	0.00	2.56		7.80%		0.00%	
Hawaiian Holdings, Inc.	HA	10.26		0.00					0.00%	
JetBlue Airways Corp.	JBLU	6.48	0.80	0.00	0.80		12.35%		0.00%	
Southwest Airlines Co.	LUV	33.50		0.72		2.15%			3.71%	
Spirit Airlines	SAVE	19.38	0.50	0.00	0.50		2.58%		0.00%	
United Continental Holding, Inc	UAL	37.70		0.00					0.00%	
							Mean			
							Median			
							Harmonic Mean			
							Max	0.00%		0.00%
							Min	0.00%		0.00%
							Std Dev			
							Coefficient of Variation			

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NMF

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

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PASSENGER AIRLINES

Based on Return on Equity

$K_e = (D1 / P_o) + G$
Ke = Cost of Equity
D1 = Expected Dividends
E1 = Expected Earnings
Po = Current Price
G = Growth
b = Retained Earnings % = (EPS - DPS) / EPS
ROE = Return on Equity = (E1 / Po)

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Expected Earnings (E1)	Dividend Yield (D1/Po)	Retained Earnings (b)	ROE (E1/Po)	Sustainable Growth Rate	Ke Dividends	Ke Earnings
Alaska Air Group, Inc.	ALK	42.94	0.00	6.50		100.0%	15.14%	15.14%		30.27%
Allegiant Travel Co	ALGT	67.99	0.00	8.00		100.0%	11.77%	11.77%		23.53%
American Airlines Group	AAL	12.72	0.00	1.95		100.0%	15.33%	15.33%		30.66%
Delta Air Lines, Inc.	DAL	32.86	0.00	5.10		100.0%	15.52%	15.52%		31.04%
Hawaiian Holdings, Inc.	HA	10.26	0.00	-2.00		100.0%	-19.49%	-19.49%		
JetBlue Airways Corp.	JBLU	6.48	0.00	0.80		100.0%	12.35%	12.35%		24.69%
Southwest Airlines Co.	LUV	33.50	0.72	2.50	2.15%	71.2%	7.46%	5.31%	7.46%	12.78%
Spirit Airlines	SAVE	19.38	0.00	0.50		100.0%	2.58%	2.58%		5.16%
United Continental Holding, Inc	UAL	37.70	0.00	8.50		100.0%	22.55%	22.55%		45.09%
								Mean	7.46%	25.40%
								Median	7.46%	27.48%
								Harmonic Mean	7.46%	16.84%
								Max	7.46%	45.09%
								Min	7.46%	5.16%
								Std Dev		12.2%
								Coefficient of Variation		0.48

10.50%

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SUPPORT FOR DEBT RATING AND DEBT YIELD RATE

WASHINGTON STATE DEPARTMENT OF REVENUE

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PASSENGER AIRLINES

Standard's and Poor's Website

Company	Ticker	Mergent's Ratings	S&P Ratings
Alaska Air Group, Inc.	ALK	Ba2	BB
Allegiant Travel Co	ALGT	B1	B+
American Airlines Group	AAL	B3	B-
Delta Air Lines, Inc.	DAL	Ba2	BB
Hawaiian Holdings, Inc.	HA	Caa1	B-
JetBlue Airways Corp.	JBLU	B1	B+
Southwest Airlines Co.	LUV	Baa2	BBB
Spirit Airlines	SAVE	B2	B
United Continental Holding, Inc	UAL	B1	B+
Overall Average Debt Rating		B1	B+

All issues

Bond Yields for Guideline Companies, All Ratings

5.15%

Mergent's Bond Record January 2023, page 81

Corporate	Aaa	Aa	A	Baa
October	5.10%	5.40%	5.74%	6.26%
November	4.90%	5.23%	5.58%	6.07%
December	4.43%	4.77%	5.12%	5.59%
4th Qtr Average	4.81%	5.13%	5.48%	5.97%
Public Utilities		Aa	A	Baa
October		5.68%	5.88%	6.18%
November		5.54%	5.75%	6.05%
December		5.06%	5.28%	5.57%
4th Qtr Average		5.43%	5.64%	5.93%
Industrials	Aaa	Aa	A	Baa
October	5.10%	5.11%	5.59%	6.33%
November	4.90%	4.92%	5.40%	6.08%
December	4.43%	4.48%	4.94%	5.61%
4th Qtr Average	4.81%	4.84%	5.31%	6.01%

	BB-	B+	B
Bloomberg S&P Corporate Bond Yields	8.48%	11.95%	13.28%

Debt Yield Rate

9.50%

Operating Lease Debt Rate

See Lease Bond Analysis 16 Tab

6.24%

Cost of Secured Debt (Possessory Lease)

Based on 4th Quarter Aa rate

4.75%

to page 1

DATA INPUT

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 ASSESSMENT YEAR

PASSENGER AIRLINES

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

				Historic Figures (2022)													
Guideline Companies		Stock Price 12/31/2021	Stock Price 12/31/2022	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	52.10	42.94	1.50	76.23	7.70	4.35	79.96	84.5%	5.8%	1,883	Nil	30.16	126,533,098	12.20	0.49	9,646
Allegiant Travel Co	ALGT	187.04	67.99	1.40	127.64	14.10	3.13	163.50	85.0%	2.5%	1,944	Nil	67.69	17,880,000	34.40	0.66	2,302
American Airlines Group	AAL	17.96	12.72	1.60	74.75	3.52	0.50	77.50	82.9%	0.7%	32,389	Nil	(6.85)	655,122,000	56.40	0.50	48,972
Delta Air Lines, Inc.	DAL	39.08	32.86	1.55	71.48	6.52	3.20	70.00	84.0%	4.5%	20,671	Nil	10.12	638,000,000	12.40	0.43	45,605
Hawaiian Holdings, Inc.	HA	18.37	10.26	1.70	31.10	(2.02)	(4.67)	58.49	69.2%	NMF	1,805	Nil	6.48	51,450,904	NMF	NMF	2,641
JetBlue Airways Corp.	JBLU	14.24	6.48	1.70	28.25	1.00	(0.80)	41.30	81.5%	NMF	3,150	NIL	11.00	323,877,614	NMF	0.87	9,158
Southwest Airlines Co.	LUV	42.84	33.50	1.10	40.10	3.50	1.16	52.15	83.4%	3.0%	8,046	Nil	18.00	594,286,577	32.70	1.09	15,790
Spirit Airlines	SAVE	21.85	19.38	1.75	46.52	(1.17)	(1.74)	-	0.0%	0.0%	3,200	NIL	14.43	109,124,750	NMF	NMF	5,069
United Continental Holding, Inc	UAL	43.78	37.70	1.65	137.50	10.05	2.52	160.00	83.4%	1.8%	28,398	NIL	30.25	326,927,831	20.70	0.34	44,955

Value Line February 2023

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 2022

DATA INPUT

WASHINGTON STATE DEPARTM

2023 ASSESSMENT YEAR

PASSENGER AIRLINES

Instructions: Data entered on this page

Guideline Companies					Projected (Next Year) 2023											
	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.	11.0%	557	15.5%	14.6%	84.30	9.90	6.50	80.50	86.0%	7.7%		31.30	124,550,000	10,500	13.5%	810
Allegiant Travel Co	15.1%	56	10.0%	4.6%	142.85	21.45	8.00	164.00	86.0%	5.6%	-	71.40	17,500,000	2,500	20.0%	140
American Airlines Group	5.5%	328	NMF	NMF	81.60	5.15	1.95	81.00	79.0%	2.4%	-	(6.85)	660,000,000	53,890	5.5%	1,285
Delta Air Lines, Inc.	12.0%	2,053	31.1%	31.8%	84.00	8.70	5.10	72.00	85.0%	6.1%	-	15.30	641,000,000	53,850	15.5%	3,300
Hawaiian Holdings, Inc.	NMF	(240)	NMF	NMF	49.25	0.85	(2.00)	60.15	80.0%	NMF	-	12.50	52,000,000	2,560	5.0%	(105)
JetBlue Airways Corp.	NMF	(260)	NMF	NMF	30.80	2.75	0.80	43.50	84.0%	2.6%	-	11.80	324,000,000	9,975	11.5%	260
Southwest Airlines Co.	10.0%	723	25.0%	6.8%	45.45	4.85	2.50	53.85	83.5%	5.5%	0.72	19.80	594,000,000	27,000	13.5%	1,485
Spirit Airlines	NMF	(441)	NMF	NMF	55.95	3.80	0.50			0.9%	-	14.90	109,000,000	6,100	9.5%	55
United Continental Holding, Inc	11.6%	831	25.6%	8.4%	160.50	16.15	8.50	160.00	85.0%	4.9%	-	32.45	328,000,000	52,650	14.0%	2,600

Value Line February 2023

The harmonic mean is the preferable m
high data points are given greater weigl
The harmonic mean, on the other hand,
Morning Star Data ending 2022

Blue Last Year Data Not Available

DATA INPUT

WASHINGTON STATE DEPARTM
 2023 ASSESSMENT YEAR
 PASSENGER AIRLINES

Instructions: Data entered on this page

			Longer Term Forecasts											Income Statement		
			Dividends Per Share			Earnings Per Share			Revenue Per Share					Operating Income	Current Assets	PP & E Gross
Guideline Companies	Return on Shareholder Equity	All Dividends to Net Profits	2024	2027	% Annual Change	2024	2027	% Annual Change	2024	2027	% Annual Change	Return on Shareholder Equity	Retained to Common Equity	M*/10K	M*/10K	M*/10K
Name	VL	VL	VL	VL		VL	VL		VL	VL		VL	VL	M*/10K	M*/10K	M*/10K
Alaska Air Group, Inc.	21.0%	0.0%	0.00	1.80	#DIV/0!	7.50	11.15	8.25%	88.30	108.00	4.11%	28.00%	23.50%	70,000,000	3,040,000,000	11,384,000,000
Allegiant Travel Co	11.0%	0.0%	0.00	3.00	#DIV/0!	12.00	32.45	22.01%	164.70	219.10	5.87%	32.50%	29.50%	271,073,000	1,274,269,000	3,625,530,000
American Airlines Group	0.0%	0.0%	NIL	NIL	0.00%	2.75	4.55	10.60%	83.30	85.30	0.48%	95.50%	95.50%	1,607,000,000	21,607,000,000	50,229,000,000
Delta Air Lines, Inc.	33.5%	0.0%	NIL	1.50	0.00%	7.00	8.50	3.96%	88.30	98.15	2.14%	36.50%	30.00%	3,661,000,000	13,011,000,000	33,109,000,000
Hawaiian Holdings, Inc.	0.0%	0.0%	NIL	NIL	0.00%	3.00	5.00	10.76%	57.00	66.60	3.16%	29.00%	29.00%	(210,054,000)	1,678,307,000	3,009,614,000
JetBlue Airways Corp.	7.0%	0.0%	NIL	NIL	0.00%	1.20	2.25	13.40%	33.05	39.05	3.39%	12.00%	0.00%	(298,000,000)	1,916,000,000	12,142,000,000
Southwest Airlines Co.	12.5%	29.0%	0.80	0.96	3.71%	3.50	5.25	8.45%	48.65	54.95	2.47%	16.00%	13.00%	1,017,000,000	14,808,000,000	30,984,000,000
Spirit Airlines	3.5%	0.0%	NIL	NIL	0.00%	1.75	3.85	17.08%	58.50	68.00	3.06%	15.00%	15.00%	(598,917,000)	1,993,983,000	4,848,317,000
United Continental Holding, Inc	6.5%	0.0%	NIL	NIL	0.00%	10.00	13.50	6.19%	168.70	156.65	-1.47%	30.00%	30.00%	2,337,000,000	20,058,000,000	54,929,000,000

TTM DATA UPDATE

Value Line February 2023
 The harmonic mean is the preferable m
 high data points are given greater weigl
 The harmonic mean, on the other hand,
 Morning Star Data ending 2022

DATA INPUT

WASHINGTON STATE DEPARTM

2023 ASSESSMENT YEAR

PASSENGER AIRLINES

Instructions: Data entered on this page

Guideline Companies	Balance Sheet				Cash Flow Statement	Other Financials			
	PP & E Net	Intangibles (excl. GW)	Current Liabilities Total	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*10K	10K/M*	10-K/M*	M*	10-K	10-K	10K	10-K
Alaska Air Group, Inc.	7,257,000,000	17,000,000	4,493,000,000	1,883,000,000	415,000,000	2,159,000,000	1,473,000,000	276,000,000	291,000,000
Allegiant Travel Co	2,810,693,000	-	869,831,000	1,944,078,000	181,035,000	1,626,114,000	1,561,939,000	152,900,000	23,621,000
American Airlines Group	30,200,000,000	2,059,000,000	21,496,000,000	32,389,000,000	2,298,000,000	34,903,000,000	32,569,000,000	3,274,000,000	1,395,000,000
Delta Air Lines, Inc.	33,109,000,000	5,992,000,000	25,940,000,000	20,671,000,000	2,107,000,000	21,381,000,000	20,700,000,000	2,359,000,000	508,000,000
Hawaiian Holdings, Inc.	1,874,352,000	13,500,000	1,120,324,000	1,583,889,000	136,169,000	1,631,725,000	1,356,561,000	47,836,000	103,846,000
JetBlue Airways Corp.	8,564,000,000	1,322,000,000	3,748,000,000	3,093,000,000	585,000,000	3,645,000,000	2,848,000,000	554,000,000	114,000,000
Southwest Airlines Co.	17,342,000,000	296,000,000	10,378,000,000	8,046,000,000	1,351,000,000	7,992,000,000	7,786,000,000	42,000,000	195,000,000
Spirit Airlines	3,749,498,000	-	1,596,581,000	3,200,376,000	313,090,000	3,642,400,000	3,355,000,000	346,888,000	282,428,000
United Continental Holding, Inc	34,448,000,000	2,762,000,000	19,992,000,000	28,283,000,000	2,456,000,000	31,194,000,000	29,371,000,000	2,911,000,000	252,000,000

Value Line February 2023

The harmonic mean is the preferable m

high data points are given greater weigl

The harmonic mean, on the other hand,

Morning Star Data ending 2022

2023 Multi Stage Dividend Growth Model Using FCFE

Airline Industry

Assumptions:

4.10%	GDP
6.6	Median Industry PE
0.0%	Target Dividend Payout Ratio
7.0%	Target ROE

Alaska Air Group
ALK

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		14.60%	706.08%	-606.08%	4.35			-42.94
	2022	1	49.43%	21.00%	85.16%	14.84%	6.50	0.96	0.96
	2023	2	17.88%	22.75%	66.69%	33.31%	7.66	2.55	2.55
Stage 1	2024	3	15.17%	24.50%	53.77%	46.23%	8.83	4.08	4.08
	2025	4	13.17%	26.25%	44.34%	55.66%	9.99	5.56	5.56
	2026	5	11.64%	28.00%	36.18%	63.82%	11.15	7.12	7.12
	2027	6	10.13%	23.80%	36.23%	63.77%	12.28	7.83	7.83
	2028	7	8.62%	19.60%	36.31%	63.69%	13.34	8.50	8.50
Stage 2	2029	8	7.12%	15.40%	36.41%	63.59%	14.29	9.08	9.08
	2030	9	5.61%	11.20%	36.61%	63.39%	15.09	9.57	9.57
	2031	10	4.10%	7.00%	58.57%	41.43%	15.71	6.51	108.02
Stage 3	11+	4.10%	7.00%	58.57%	41.43%	16.35	6.77		114.53

Ke = 18.07%

price = 42.94

Allegiant Travel Co
ALGT

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		4.60%	2222.73%	-2122.73%	3.13			-67.99
	2022	1	155.59%	11.00%	694.60%	-594.60%	8.00	-47.57	-47.57
	2023	2	76.41%	16.38%	264.50%	-164.50%	14.11	-23.22	-23.22
Stage 1	2024	3	43.31%	21.75%	138.95%	-38.95%	20.23	-7.88	-7.88
	2025	4	30.22%	27.13%	85.56%	14.44%	26.34	3.80	3.80
	2026	5	23.21%	32.50%	59.65%	40.35%	32.45	13.09	13.09
	2027	6	19.39%	27.40%	56.81%	43.19%	38.74	16.73	16.73
	2028	7	15.57%	22.30%	52.66%	47.34%	44.77	21.19	21.19
Stage 2	2029	8	11.74%	17.20%	46.06%	53.94%	50.03	26.99	26.99
	2030	9	7.92%	12.10%	33.88%	66.12%	53.99	35.70	35.70
	2031	10	4.10%	7.00%	58.57%	41.43%	56.21	23.29	386.52
Stage 3	11+	4.10%	7.00%	58.57%	41.43%	58.51	24.24		409.81

Ke = 16.20%

price = 67.99

American Airlines Group
AAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	4142.86%	-4042.86%	0.50			-12.72
	2022	1	290.00%	0.00%	NMF	NMF	1.95	NMF	0.00
	2023	2	33.33%	0.23875	104.71%	-4.71%	2.60	-0.12	-0.12
Stage 1	2024	3	25.00%	0.4775	41.88%	58.12%	3.25	1.89	1.89
	2025	4	20.00%	0.71625	23.27%	76.73%	3.90	2.99	2.99
	2026	5	16.67%	95.50%	14.82%	85.18%	4.55	3.88	3.88
	2027	6	14.15%	77.80%	14.96%	85.04%	5.19	4.42	4.42
	2028	7	11.64%	60.10%	15.19%	84.81%	5.80	4.92	4.92
Stage 2	2029	8	9.13%	42.40%	15.60%	84.40%	6.33	5.34	5.34
	2030	9	6.61%	24.70%	16.60%	83.40%	6.75	5.63	5.63
	2031	10	4.10%	7.00%	58.57%	41.43%	7.02	2.91	48.30
Stage 3	11+	4.10%	7.00%	58.57%	41.43%	7.31	3.03		51.21

Ke = 25.00%

price = 12.72

Delta Air Lines Inc
DAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		31.80%	848.21%	-748.21%	3.20			-32.86
	2022	1	59.38%	33.50%	49.75%	50.25%	5.10	2.56	2.56
	2023	2	16.67%	34.25%	41.71%	58.29%	5.95	3.47	3.47
Stage 1	2024	3	14.29%	35.00%	35.71%	64.29%	6.80	4.37	4.37
	2025	4	12.50%	35.75%	31.08%	68.92%	7.65	5.27	5.27
	2026	5	11.11%	36.50%	26.60%	73.40%	8.50	6.24	6.24
	2027	6	9.71%	30.60%	27.15%	72.85%	9.33	6.79	6.79
	2028	7	8.31%	24.70%	27.95%	72.05%	10.10	7.28	7.28
Stage 2	2029	8	6.90%	18.80%	29.27%	70.73%	10.80	7.64	7.64
	2030	9	5.50%	12.90%	31.78%	68.22%	11.39	7.77	7.77

price = 32.86

	2031	10	4.10%	7.00%	58.57%	41.43%	11.86	4.91	81.55	86.46
Stage 3		11+	4.10%	7.00%	58.57%	41.43%	12.34	5.11		

Ke = 20.43%

Hawaiian Holdings Inc

HA	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	-816.76%	916.76%	-4.67			-10.26
	2022	1	-57.17%	0.00%	NMF	NMF	-2.00	NMF	0.00
	2023	2	-87.50%	7.25%	-9655.17%	9755.17%	-0.25	-24.39	-24.39
Stage 1	2024	3	-700.00%	14.50%	804.60%	-704.60%	1.50	-10.57	-10.57
	2025	4	116.67%	21.75%	247.57%	-147.57%	3.25	-4.80	-4.80
	2026	5	53.85%	29.00%	151.37%	-51.37%	5.00	-2.57	-2.57
	2027	6	43.90%	24.60%	138.00%	-38.00%	7.19	-2.73	-2.73
	2028	7	33.95%	20.20%	118.80%	-18.80%	9.64	-1.81	-1.81
Stage 2	2029	8	24.00%	15.80%	88.92%	11.08%	11.95	1.32	1.32
	2030	9	14.05%	11.40%	35.96%	64.04%	13.63	8.73	8.73
	2031	10	4.10%	7.00%	58.57%	41.43%	14.19	5.88	97.57
Stage 3		11+	4.10%	7.00%	58.57%	41.43%	14.77	6.12	

Ke = 9.52%

price = 10.26

JetBlue Airways Corp

JBLU	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	-2857.14%	2957.14%	-0.80			-6.48
	2022	1	-200.00%	7.00%	647.32%	-547.32%	0.80	-4.38	-4.38
	2023	2	45.31%	8.25%	377.97%	-277.97%	1.16	-3.23	-3.23
Stage 1	2024	3	31.18%	9.50%	250.22%	-150.22%	1.53	-2.29	-2.29
	2025	4	23.77%	10.75%	178.65%	-78.65%	1.89	-1.48	-1.48
	2026	5	19.21%	12.00%	134.87%	-34.87%	2.25	-0.78	-0.78
	2027	6	16.18%	11.00%	119.67%	-19.67%	2.61	-0.51	-0.51
	2028	7	13.16%	10.00%	101.42%	-1.42%	2.96	-0.04	-0.04
Stage 2	2029	8	10.14%	9.00%	79.12%	20.88%	3.26	0.68	0.68
	2030	9	7.12%	8.00%	51.25%	48.75%	3.49	1.70	1.70
	2031	10	4.10%	7.00%	58.57%	41.43%	3.63	1.51	24.99
Stage 3		11+	4.10%	7.00%	58.57%	41.43%	3.78	1.57	

Ke = 5.01%

price = 6.48

Southwest Airlines Co

LUV	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		6.80%	1650.25%	-1550.25%	1.16			-33.50
	2022	1	115.52%	12.50%	220.00%	-120.00%	2.50	-3.00	-3.00
	2023	2	27.50%	13.38%	161.26%	-61.26%	3.19	-1.95	-1.95
Stage 1	2024	3	21.57%	14.25%	124.50%	-24.50%	3.88	-0.95	-0.95
	2025	4	17.74%	15.13%	99.63%	0.37%	4.56	0.02	0.02
	2026	5	15.07%	16.00%	80.47%	19.53%	5.25	1.03	1.03
	2027	6	12.87%	14.20%	75.22%	24.78%	5.93	1.47	1.47
	2028	7	10.68%	12.40%	68.45%	31.55%	6.56	2.07	2.07
Stage 2	2029	8	8.49%	10.60%	59.37%	40.63%	7.12	2.89	2.89
	2030	9	6.29%	8.80%	46.59%	53.41%	7.56	4.04	4.04
	2031	10	4.10%	7.00%	58.57%	41.43%	7.87	3.26	54.15
Stage 3		11+	4.10%	7.00%	58.57%	41.43%	8.20	3.40	

Ke = 6.17%

price = 33.50

Spirit Airlines Co

SAVE	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	-1839.08%	1939.08%	-1.74			-19.38
	2022	1	-128.74%	3.50%	4785.71%	-4685.71%	0.50	-23.43	-23.43
	2023	2	167.50%	6.38%	982.22%	-882.22%	1.34	-11.80	-11.80
Stage 1	2024	3	62.62%	9.25%	416.28%	-316.28%	2.18	-6.88	-6.88
	2025	4	38.51%	12.13%	229.29%	-129.29%	3.01	-3.89	-3.89
	2026	5	27.80%	15.00%	153.74%	-53.74%	3.85	-2.07	-2.07
	2027	6	23.06%	13.40%	136.72%	-36.72%	4.74	-1.74	-1.74
	2028	7	18.32%	11.80%	115.09%	-15.09%	5.61	-0.85	-0.85
Stage 2	2029	8	13.58%	10.20%	86.67%	13.33%	6.37	0.85	0.85
	2030	9	8.84%	8.60%	47.67%	52.33%	6.93	3.63	3.63
	2031	10	4.10%	7.00%	58.57%	41.43%	7.21	2.99	49.61

price = 19.38

Stage 3	11+	4.10%	7.00%	58.57%	41.43%	7.51	3.11		
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Ke = -2.43%

United Continental Holdings
UAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		8.40%	3390.02%	-3290.02%	2.52			-37.70
	2022	1	237.30%	6.50%	226.24%	-126.24%	8.50	-10.73	-10.73
	2023	2	14.71%	12.38%	103.60%	-3.60%	9.75	-0.35	-0.35
Stage 1	2024	3	12.82%	18.25%	62.27%	37.73%	11.00	4.15	4.15
	2025	4	11.36%	24.13%	42.30%	57.70%	12.25	7.07	7.07
	2026	5	10.20%	30.00%	29.94%	70.06%	13.50	9.46	9.46
	2027	6	8.98%	25.40%	30.56%	69.44%	14.71	10.22	10.22
	2028	7	7.76%	20.80%	31.45%	68.55%	15.85	10.87	10.87
Stage 2	2029	8	6.54%	16.20%	32.84%	67.16%	16.89	11.34	11.34
	2030	9	5.32%	11.60%	35.34%	64.66%	17.79	11.50	11.50
	2031	10	4.10%	7.00%	58.57%	41.43%	18.52	7.67	127.36
Stage 3	11+	4.10%	7.00%	58.57%	41.43%	19.28	7.99		135.04

price = 37.70

Ke = 18.59%

source: Value Line

2023 Multi Stage Ke Estimate Using Residual Income Model

Airline Industry

Assumptions:

15.56%	Sustainable Growth Rate
70.5%	Target Dividend Payout Ratio
32.7%	Target ROE

Future numbers are high due to unsustainable Growth rate. Base on Valueline

Alaska Air Group

ALK

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	
Historic	0			0.00%	100.00%	4.35		-42.94	price = 42.94
	2022	49.43%	21.00%	85.16%	14.84%	6.50	0.96	0.96	
	2023	17.88%	22.75%	66.69%	33.31%	7.66	2.55	2.55	
Stage 1	2024	15.17%	24.50%	53.77%	46.23%	8.83	4.08	4.08	
	2025	13.17%	26.25%	44.34%	55.66%	9.99	5.56	5.56	
	2026	11.64%	28.00%	44.37%	55.63%	11.15	6.20	6.20	
	2027	12.42%	28.94%	45.63%	54.37%	12.54	6.81	6.81	
	2028	13.21%	29.89%	46.82%	53.18%	14.19	7.55	7.55	
Stage 2	2029	13.99%	30.83%	47.93%	52.07%	16.18	8.42	8.42	
	2030	14.78%	31.78%	48.97%	51.03%	18.57	9.47	9.47	
	2031	15.56%	32.72%	47.56%	52.44%	21.46	11.25	11.25	
Stage 3	2032	15.56%	32.72%	47.56%	52.44%	24.80	13.00	13.00	
	2033	15.56%	32.72%	47.56%	52.44%	28.65	15.03	15.03	
	2220	199	15.56%	32.72%	47.56%	15,987,038,666,790.20	8,383,831,075,378.86	8,383,831,075,378.86	
	2221	200	15.56%	32.72%	47.56%	18,474,977,150,868.60	9,688,541,498,065.04	9,688,541,498,065.04	
								22.44%	

Allegiant Travel Co

ALGT

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	
Historic	0			0.00%	100.00%	3.13		-67.99	price = 67.99
	2022	155.59%	11.00%	694.60%	-594.60%	8.00	-47.57	-47.57	
	2023	76.41%	16.38%	264.50%	-164.50%	14.11	-23.22	-23.22	
Stage 1	2024	43.31%	21.75%	138.95%	-38.95%	20.23	-7.88	-7.88	
	2025	30.22%	27.13%	85.56%	14.44%	26.34	3.80	3.80	
	2026	23.21%	32.50%	66.71%	33.29%	32.45	10.80	10.80	
	2027	21.68%	32.54%	61.92%	38.08%	39.48	15.04	15.04	
	2028	20.15%	32.59%	57.14%	42.86%	47.44	20.33	20.33	
Stage 2	2029	18.62%	32.63%	52.37%	47.63%	56.27	26.80	26.80	
	2030	17.09%	32.68%	47.62%	52.38%	65.89	34.51	34.51	
	2031	15.56%	32.72%	47.56%	52.44%	76.15	39.93	39.93	
Stage 3	2032	15.56%	32.72%	47.56%	52.44%	88.00	46.15	46.15	
	2033	15.56%	32.72%	47.56%	52.44%	101.69	53.33	53.33	
	2220	199	15.56%	32.72%	47.56%	56,735,886,060,193.60	29,753,107,786,540.90	29,753,107,786,540.90	
	2221	200	15.56%	32.72%	47.56%	65,565,250,728,627.70	34,383,352,538,299.70	34,383,352,538,299.70	
								22.13%	

American Airlines Group

AAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	
Historic	0			0.00%	100.00%	0.50		-12.72	price = 12.72
	2022	290.00%	0.00%	NMF	NMF	1.95	NMF	0.00	
	2023	33.33%	0.23875	104.71%	-4.71%	2.60	-0.12	-0.12	
Stage 1	2024	25.00%	0.4775	41.88%	58.12%	3.25	1.89	1.89	
	2025	20.00%	0.71625	23.27%	76.73%	3.90	2.99	2.99	
	2026	16.67%	95.50%	17.22%	82.78%	4.55	3.77	3.77	
	2027	16.45%	82.94%	19.56%	80.44%	5.30	4.26	4.26	
	2028	16.22%	70.39%	22.74%	77.26%	6.16	4.76	4.76	
Stage 2	2029	16.00%	57.83%	27.29%	72.71%	7.14	5.19	5.19	
	2030	15.78%	45.28%	34.37%	65.63%	8.27	5.43	5.43	
	2031	15.56%	32.72%	47.56%	52.44%	9.56	5.01	5.01	
Stage 3	2032	15.56%	32.72%	47.56%	52.44%	11.05	5.79	5.79	
	2033	15.56%	32.72%	47.56%	52.44%	12.76	6.69	6.69	
	2220	199	15.56%	32.72%	47.56%	7,121,484,503,334.01	3,734,608,036,315.47	3,734,608,036,315.47	
	2221	200	15.56%	32.72%	47.56%	8,229,745,747,263.97	4,315,796,038,055.85	4,315,796,038,055.85	
								26.02%	

Delta Air Lines Inc

DAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	
Historic	0			0.00%	100.00%	3.20		-32.86	price = 32.86
	2022	59.38%	33.50%	49.75%	50.25%	5.10	2.56	2.56	
	2023	16.67%	34.25%	41.71%	58.29%	5.95	3.47	3.47	
Stage 1	2024	14.29%	35.00%	35.71%	64.29%	6.80	4.37	4.37	
	2025	12.50%	35.75%	31.08%	68.92%	7.65	5.27	5.27	
	2026	11.11%	36.50%	32.88%	67.12%	8.50	5.71	5.71	
	2027	12.00%	35.74%	36.07%	63.93%	9.52	6.09	6.09	
	2028	12.89%	34.99%	39.39%	60.61%	10.75	6.51	6.51	
Stage 2	2029	13.78%	34.23%	42.86%	57.14%	12.23	6.99	6.99	
	2030	14.67%	33.48%	46.49%	53.51%	14.02	7.50	7.50	
	2031	15.56%	32.72%	47.56%	52.44%	16.21	8.50	8.50	
Stage 3	2032	15.56%	32.72%	47.56%	52.44%	18.73	9.82	9.82	
	2033	15.56%	32.72%	47.56%	52.44%	21.64	11.35	11.35	
	2220	199	15.56%	32.72%	47.56%	12,074,016,074,494.50	6,331,786,222,563.44	6,331,786,222,563.44	
	2221	200	15.56%	32.72%	47.56%	13,953,001,287,154.20	7,317,152,865,154.81	7,317,152,865,154.81	
								23.42%	

Hawaiian Holdings Inc

HA

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow
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Historic	0			0.00%	100.00%	-4.67		-10.26	price = 10.26
2022	1	-57.17%	0.00%	0.00%	100.00%	-2.00	-2.00	-2.00	
2023	2	-87.50%	7.25%	0.00%	100.00%	-0.25	-0.25	-0.25	
Stage 1	2024	3	-700.00%	14.50%	0.00%	100.00%	1.50	1.50	
	2025	4	116.67%	21.75%	247.57%	-147.57%	3.25	-4.80	
	2026	5	53.85%	29.00%	159.27%	-59.27%	5.00	-2.96	
	2027	6	46.19%	29.74%	129.55%	-29.55%	7.31	-2.16	
	2028	7	38.53%	30.49%	101.27%	-1.27%	10.13	-0.13	
Stage 2	2029	8	30.88%	31.23%	74.34%	25.66%	13.25	3.40	
	2030	9	23.22%	31.98%	48.67%	51.33%	16.33	8.38	
	2031	10	15.56%	32.72%	47.56%	52.44%	18.87	9.90	
Stage 3	2032	11	15.56%	32.72%	47.56%	52.44%	21.81	11.44	
	2033	12	15.56%	32.72%	47.56%	52.44%	25.20	13.22	
	2220	199	15.56%	32.72%	47.56%	52.44%	14,060,243,169,207.30	7,373,392,037,529.30	7,373,392,037,529.30
	2221	200	15.56%	32.72%	47.56%	52.44%	16,248,329,456,184.20	8,520,855,691,725.24	8,520,855,691,725.24
									25.42%

JetBlue Airways Corp
JBLU

Historic	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price = 6.48
	0		NMF	0.00%	100.00%	-0.80		-6.48	
2022	1	-200.00%	7.00%	0.00%	100.00%	0.80	0.80	0.80	
2023	2	45.31%	8.25%	377.97%	-277.97%	1.16	-3.23	-3.23	
Stage 1	2024	3	31.18%	9.50%	250.22%	-150.22%	1.53	-2.29	
	2025	4	23.77%	10.75%	178.65%	-78.65%	1.89	-1.48	
	2026	5	19.21%	12.00%	153.97%	-53.97%	2.25	-1.21	
	2027	6	18.48%	16.14%	109.93%	-9.93%	2.67	-0.26	
	2028	7	17.75%	20.29%	83.89%	16.11%	3.14	0.51	
Stage 2	2029	8	17.02%	24.43%	66.67%	33.33%	3.67	1.22	
	2030	9	16.29%	28.58%	54.46%	45.54%	4.27	1.95	
	2031	10	15.56%	32.72%	47.56%	52.44%	4.94	2.59	
Stage 3	2032	11	15.56%	32.72%	47.56%	52.44%	5.70	2.99	
	2033	12	15.56%	32.72%	47.56%	52.44%	6.59	3.46	
	2220	199	15.56%	32.72%	47.56%	52.44%	3,677,823,001,268.99	1,928,702,832,991.45	1,928,702,832,991.45
	2221	200	15.56%	32.72%	47.56%	52.44%	4,250,173,989,666.47	2,228,851,853,867.88	2,228,851,853,867.88
									20.48%

Southwest Airlines Co
LUV

Historic	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price = 33.50
	0		6.80%	0.00%	100.00%	1.16		-33.50	
2022	1	115.52%	12.50%	220.00%	-120.00%	2.50	-3.00	-3.00	
2023	2	27.50%	13.38%	161.26%	-61.26%	3.19	-1.95	-1.95	
Stage 1	2024	3	21.57%	14.25%	124.50%	-24.50%	3.88	-0.95	
	2025	4	17.74%	15.13%	99.63%	0.37%	4.56	0.02	
	2026	5	15.07%	16.00%	94.80%	5.20%	5.25	0.27	
	2027	6	15.17%	19.34%	78.92%	21.08%	6.05	1.27	
	2028	7	15.27%	22.69%	67.72%	32.28%	6.97	2.25	
Stage 2	2029	8	15.36%	26.03%	59.40%	40.60%	8.04	3.26	
	2030	9	15.46%	29.38%	52.97%	47.03%	9.28	4.37	
	2031	10	15.56%	32.72%	47.56%	52.44%	10.73	5.63	
Stage 3	2032	11	15.56%	32.72%	47.56%	52.44%	12.40	6.50	
	2033	12	15.56%	32.72%	47.56%	52.44%	14.33	7.51	
	2220	199	15.56%	32.72%	47.56%	52.44%	7,993,282,840,680.91	4,191,791,517,537.38	4,191,791,517,537.38
	2221	200	15.56%	32.72%	47.56%	52.44%	9,237,215,279,198.43	4,844,127,428,588.81	4,844,127,428,588.81
									18.93%

Spirit Airlines Co
SAVE

Historic	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price = 19.38
	0		NMF	0.00%	100.00%	-1.74		-19.38	
2022	1	-128.74%	3.50%	0.00%	100.00%	0.50	0.50	0.50	
2023	2	167.50%	6.38%	982.22%	-882.22%	1.34	-11.80	-11.80	
Stage 1	2024	3	62.62%	9.25%	416.28%	-316.28%	2.18	-6.88	
	2025	4	38.51%	12.13%	229.29%	-129.29%	3.01	-3.89	
	2026	5	27.80%	15.00%	169.02%	-69.02%	3.85	-2.66	
	2027	6	25.35%	18.54%	123.52%	-23.52%	4.83	-1.13	
	2028	7	22.91%	22.09%	92.62%	7.38%	5.93	0.44	
Stage 2	2029	8	20.46%	25.63%	70.26%	29.74%	7.14	2.12	
	2030	9	18.01%	29.18%	53.34%	46.66%	8.43	3.93	
	2031	10	15.56%	32.72%	47.56%	52.44%	9.74	5.11	
Stage 3	2032	11	15.56%	32.72%	47.56%	52.44%	11.26	5.91	
	2033	12	15.56%	32.72%	47.56%	52.44%	13.01	6.82	
	2220	199	15.56%	32.72%	47.56%	52.44%	7,260,020,907,639.46	3,807,258,502,464.65	3,807,258,502,464.65
	2221	200	15.56%	32.72%	47.56%	52.44%	8,389,841,494,666.11	4,399,752,531,192.65	4,399,752,531,192.65
									18.79%

United Continental Holdings
UAL

Historic	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price = 37.70
	0		8.40%	0.00%	100.00%	2.52		-37.70	
2022	1	237.30%	6.50%	226.24%	-126.24%	8.50	-10.73	-10.73	
2023	2	14.71%	12.38%	103.60%	-3.60%	9.75	-0.35	-0.35	
Stage 1	2024	3	12.82%	18.25%	62.27%	37.73%	11.00	4.15	
	2025	4	11.36%	24.13%	42.30%	57.70%	12.25	7.07	

	2026	5	10.20%	30.00%	37.59%	62.41%	13.50	8.43	8.43
	2027	6	11.28%	30.54%	40.42%	59.58%	15.02	8.95	8.95
Stage 2	2028	7	12.35%	31.09%	43.16%	56.84%	16.88	9.59	9.59
	2029	8	13.42%	31.63%	45.81%	54.19%	19.14	10.37	10.37
	2030	9	14.49%	32.18%	48.36%	51.64%	21.92	11.32	11.32
	2031	10	15.56%	32.72%	47.56%	52.44%	25.33	13.28	13.28
Stage 3	2032	11	15.56%	32.72%	47.56%	52.44%	29.27	15.35	15.35
	2033	12	15.56%	32.72%	47.56%	52.44%	33.82	17.74	17.74
	2220	199	15.56%	32.72%	47.56%	52.44%	18,869,938,806,375.30	9,895,665,022,942.64	9,895,665,022,942.64
	2221	200	15.56%	32.72%	47.56%	52.44%	21,806,520,616,620.80	11,435,650,404,179.70	11,435,650,404,179.70
									22.69%

source: Value Line

IMPLIED PREMIUMS FOR US MARKET

Updated January 2023

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

Year	Earnings Yield	Dividend Yield	S&P 500	Earnings *	Dividends*	Dividends + Buybacks	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)
1960	5.34%	3.41%	58.11	3.10	1.98				2.66%	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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
2001	3.85%	1.37%	1148.09	38.85	15.74	30.08	-30.79%	-3.24%	1.80%	5.05%	3.25%	3.56%	1.73%	10.30%	3.62%
2002	5.23%	1.83%	879.82	46.04	16.08	29.83	18.51%	2.15%	1.20%	3.81%	2.61%	3.57%	2.29%	8.00%	4.10%
2003	4.87%	1.61%	1111.91	54.69	17.88	31.58	18.79%	11.19%	1.00%	4.25%	3.25%	5.35%	2.12%	11.00%	3.69%
2004	5.58%	1.60%	1211.92	67.68	19.407	40.60	23.75%	8.54%	2.18%	4.22%	2.04%	4.90%	2.02%	8.50%	3.65%
2005	5.47%	1.79%	1248.29	76.45	22.38	61.17	12.96%	15.32%	4.31%	4.39%	0.08%	6.16%	2.20%	8.00%	4.08%
2006	6.18%	1.77%	1418.3	87.72	25.05	73.16	14.74%	11.93%	4.88%	4.70%	-0.18%	5.93%	1.97%	12.50%	4.16%
2007	5.62%	1.89%	1468.36	82.54	27.73	95.36	-5.91%	10.70%	3.31%	4.02%	0.71%	5.03%	2.06%	5.00%	4.37%
2008	7.24%	3.11%	903.25	65.39	28.05	67.52	-20.78%	1.15%	1.59%	2.21%	0.62%	2.11%	4.05%	4.00%	6.43%
2009	5.35%	2.00%	1115.10	59.65	22.31	37.43	-8.78%	-20.46%	0.14%	3.84%	3.70%	0.28%	2.60%	7.20%	4.36%
2010	6.65%	1.84%	1257.64	83.66	23.12	55.53	40.25%	3.63%	0.13%	3.29%	3.16%	3.33%	2.24%	6.95%	5.20%
2011	7.72%	2.07%	1257.60	97.05	26.02	71.28	16.01%	12.54%	0.03%	1.88%	1.85%	2.75%	2.71%	7.18%	6.01%
2012	7.18%	2.13%	1426.19	102.47	30.44	75.90	5.58%	16.99%	0.05%	1.76%	1.71%	2.93%	2.47%	5.27%	5.78%
2013	5.81%	1.96%	1848.36	107.45	36.28	88.13	4.86%	19.19%	0.07%	3.04%	2.97%	5.01%	2.03%	4.28%	4.96%
2014	5.49%	1.92%	2058.90	113.01	39.44	101.98	5.17%	8.71%	0.05%	2.17%	2.12%	2.77%	2.24%	5.58%	5.78%
2015	5.20%	2.11%	2043.94	106.32	43.16	106.10	-5.92%	9.43%	0.21%	2.27%	2.06%	2.96%	2.46%	5.51%	6.12%
2016	4.86%	2.01%	2238.83	108.86	45.03	108.67	2.39%	4.33%	0.51%	2.45%	1.94%	2.64%	2.41%	5.54%	5.69%
2017	4.67%	1.86%	2673.61	124.94	49.73	108.28	14.77%	10.44%	1.39%	2.41%	1.02%	3.22%	2.36%	7.05%	5.08%
2018	5.92%	2.14%	2506.85	148.34	53.61	136.65	18.73%	7.80%	2.37%	2.68%	0.31%	3.24%	2.50%	4.12%	5.96%
2019	5.03%	1.82%	3230.78	162.35	58.80	150.50	9.44%	9.68%	1.55%	1.92%	0.37%	2.57%	3.96%	5.20%	5.20%
2020	3.68%	1.51%	3756.07	138.12	56.70	127.78	-14.92%	-3.57%	0.09%	0.93%	0.84%	0.74%	1.65%	5.42%	4.72%
2021	4.33%	1.24%	4766.18	206.38	59.20	147.24	47.67%	4.41%	0.06%	1.51%	1.45%	1.71%	1.72%	6.47%	4.24%
2022	5.72%	1.78%	3839.50	219.49	68.34	181.99	6.35%	15.44%	4.42%	3.88%	-0.54%	5.59%	2.16%	6.41%	5.94%

Summary of Bloomberg Bond Yields by Rating

2022 S&P Monthly Bond Yields

Rating	October 2022			November			December			Q4	
	20Y	25Y	30Y	20Y	25Y	30Y	20Y	25Y	30Y	Average	Average
AA	5.97	6.09	6.14	5.42	5.60	5.67	5.52	5.71	5.78	5.67%	5.77%
AA-	5.91	5.76	5.80	5.32	5.20	5.25	5.45	5.33	5.38	5.38%	5.49%
A+	5.94	5.60	5.28	5.37	5.03	4.71	5.51	5.18	4.85	5.18%	5.28%
A	6.11	6.03	5.90	5.25	5.05	4.93	5.41	5.14	5.02	5.19%	5.43%
A-	6.30	6.27	6.34	5.69	5.68	5.76	5.80	5.76	5.79	5.79%	5.93%
BBB+	6.30	6.20	6.13	5.59	5.47	5.37	5.72	5.55	5.43	5.57%	5.75%
BBB	6.71	6.58	6.53	6.01	5.91	5.96	6.19	6.10	6.11	6.13%	6.23%
BBB-	6.98	7.05	7.42	6.33	6.60	7.00	6.51	6.73	7.12	6.79%	6.86%
BB+	7.82	7.84		7.46	7.41		7.66	7.64		7.65%	7.64%
BB	11.16	9.91	9.59	11.65	9.09	8.53	12.07	9.60	9.11	10.26%	10.08%
BB-	9.27	8.85	8.62	8.22	8.71	8.50	8.29	8.69	8.47	8.48%	8.63%
B+	10.18	10.03	9.90	12.01	11.90	11.78	12.08	11.95	11.82	11.95%	11.29%
B	12.30	12.15		13.22	13.10		13.34	13.21		13.28%	12.89%
B-	8.76			8.05			7.59			7.59%	8.13%