



COST OF CAPITAL STUDY

**YIELD CAPITALIZATION
2024 ASSESSMENT YEAR**

APPENDIX C

PASSENGER AIRLINES

EQUITY RATE		15.00%						
CAPITAL ASSET PRICING MODEL				PAGE				
CAPM Ex Ante	11.15%			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	17.00%							
Value Line, based on Earnings Growth	NMF			8				
Value Line, based on Return on Equity	23.00%			9				
	RANGE	11.15% - 23%						
DEBT RATE		9.10%		10				
OPERATING LEASE DEBT RATE		6.24%		10				
MARKET CAPITAL STRUCTURE		Tax Shield						
Equity	50%	x	15.00%	=	7.50%	3		
Operating Leases	10%	x	6.24%	x	76.00%	=	0.47%	3
Debt	40%	x	9.10%	x	76.00%	=	2.77%	3
Marginal Tax Rate	24%							
WEIGHTED AVERAGE COST OF CAPITAL		10.74%						

SUPPORT FOR GUIDELINE COMPANIES

WASHINGTON STATE DEPARTMENT OF REVENUE

2024 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	1.55	8.6	0.00%	4,112,971,040	78.5%	-	0.0%	1,125,000,000	21.5%	5,237,971,040	100.0%
Allegiant Travel Co	ALGT	1.45	9.6	2.93%	1,328,576,400	42.2%	-	0.0%	1,819,717,000	57.8%	3,148,293,400	100.0%
American Airlines Group	AAL	1.65	6.1	0.00%	(5,208,014,608)	-21.6%	-	0.0%	29,270,000,000	121.6%	24,061,985,392	100.0%
Delta Air Lines, Inc.	DAL	1.60	6.2	1.00%	10,894,950,000	39.0%	-	0.0%	17,071,000,000	61.0%	27,965,950,000	100.0%
Hawaiian Holdings, Inc.	HA	1.85	-	0.00%	95,356,160	5.8%	-	0.0%	1,537,152,000	94.2%	1,632,508,160	100.0%
JetBlue Airways Corp.	JBLU	1.80	(9.3)	0.00%	3,399,551,125	43.5%	-	0.0%	4,409,000,000	56.5%	7,808,551,125	100.0%
Southwest Airlines Co.	LUV	1.10	12.5	2.65%	10,551,242,226	56.9%	-	0.0%	7,978,000,000	43.1%	18,529,242,226	100.0%
Spirit Airlines	SAVE	1.80	(5.3)	0.00%	1,211,759,250	28.4%	-	0.0%	3,055,221,000	71.6%	4,266,980,250	100.0%
United Continental Holding, Inc	UAL	1.70	4.3	0.00%	9,332,017,646	27.1%	-	0.0%	25,057,000,000	72.9%	34,389,017,646	100.0%
Mean		1.61	3.64	0.73%	3,968,712,138	33.3%		0.0%	10,146,898,889	66.7%		
Weighted Mean					35,718,409,239	28.1%		0.0%	91,322,090,000	71.9%		127,040,499,239
Harmonic Mean		1.57						0.0%	3,102,278,759.72	53.7%		5,474,826,227.48
Median		1.65	6.11	-	3399551125	39.0%		0.0%	4,409,000,000.00	61.0%		
Max		1.85	12.5	2.93%	10894950000	78.5%		0.0%	29270000000	121.6%		
Min		1.10	-9.3	0.00%	-5208014608	-21.6%		0.0%	1125000000	21.5%		
Say		1.60				35%		0.0%		65%		100%

MARKET VALUE

WASHINGTON STATE DEPARTMENT OF REVENUE

2024 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	39.07	127,376,000	4,976,580,320	61.1%	-	0.0%	1,792,100,467	22.0%	1,382,000,000	17.0%	8,150,680,787	100%
Allegiant Travel Co	ALGT	81.97	17,915,000	1,468,492,550	42.2%	-	0.0%	196,240,739	5.6%	1,815,351,000	52.2%	3,480,084,289	100%
American Airlines Group	AAL	13.74	654,273,192	8,989,713,658	17.4%	-	0.0%	10,443,358,325	20.2%	32,310,000,000	62.4%	51,743,071,983	100%
Delta Air Lines, Inc.	DAL	40.13	639,000,000	25,643,070,000	52.9%	-	0.0%	4,476,162,473	9.2%	18,400,000,000	37.9%	48,519,232,473	100%
Hawaiian Holdings, Inc.	HA	14.20	51,824,000	735,900,800	24.5%	-	0.0%	855,254,584	28.5%	1,406,721,000	46.9%	2,997,876,384	100%
JetBlue Airways Corp.	JBLU	5.55	333,289,326	1,849,755,759	24.5%	-	0.0%	1,008,502,118	13.4%	4,691,000,000	62.1%	7,549,257,878	100%
Southwest Airlines Co.	LUV	28.73	596,115,380	17,126,394,867	65.2%	-	0.0%	1,416,584,808	5.4%	7,739,000,000	29.4%	26,281,979,676	100%
Spirit Airlines	SAVE	15.94	109,167,500	1,740,129,950	23.3%	-	0.0%	2,482,357,566	33.2%	3,253,500,000	43.5%	7,475,987,516	100%
United Continental Holding, Inc	UAL	41.26	328,014,680	13,533,885,697	31.2%	-	0.0%	1,573,633,705	3.6%	28,302,000,000	65.2%	43,409,519,402	100%
			Mean		38.0%		0.0%		15.7%		46.3%		
			Weighted Mean	76,063,923,602	38.1%	-	0.0%	24,244,194,786	12.15%	99,299,572,000	49.7%	199,607,690,387	
			Median		31.2%		0.0%		13.36%		46.9%		
			Harmonic Mean		31.2%		0.0%		9.2%		39.1%		
			Max		65.2%		0.0%		33.2%		65.2%		
			Min		17.4%		0.0%		3.6%		17.0%		
			Std Dev		17.9%		0.0%		10.8%		16.3%		
			Coefficient of Variation		0.47		0.0%		0.69		0.35		
			Target		50%		0%		10%		40%		100%

Source:

Stock Price: Yahoo

Market Value Debt: 10-k Reported Fair Value

SUPPORT FOR MARKET MULTIPLES

WASHINGTON STATE DEPARTMENT OF REVENUE

2024 ASSESSMENT YEAR

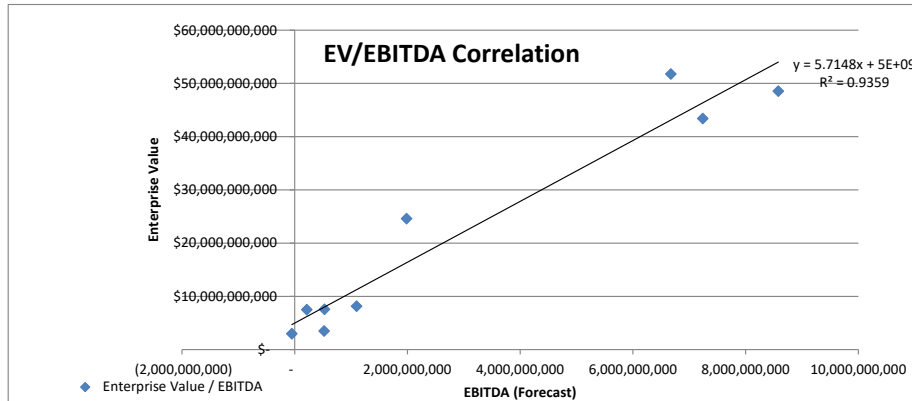
PASSENGER AIRLINES

Company	Ticker	Stock Price	Revenues	Multiple	Cash Flow	Multiple	Earnings	Multiple	Divds Decld	Multiple	Book Value	Multiple
Alaska Air Group, Inc.	ALK	39.07	81.85	0.5	8.10	4.8	4.53	8.6	Nil		32.29	1.2
Allegiant Travel Co	ALGT	81.97	140.10	0.6	19.80	4.1	7.31	11.2	1.20	68.3	74.16	1.1
American Airlines Group	AAL	13.74	80.76	0.2	6.41	2.1	2.65	5.2	Nil		(7.96)	
Delta Air Lines, Inc.	DAL	40.13	90.30	0.4	9.90	4.1	6.25	6.4	0.20	200.7	17.05	2.4
Hawaiian Holdings, Inc.	HA	14.20	52.41	0.3	(2.28)		(5.05)		Nil		1.84	7.7
JetBlue Airways Corp.	JBLU	5.55	28.70	0.2	1.40	4.0	(0.45)		NIL		10.20	0.5
Southwest Airlines Co.	LUV	28.73	43.78	0.7	4.21	6.8	1.57	18.3	0.72	39.9	17.70	1.6
Spirit Airlines	SAVE	15.94	49.00	0.3	(0.35)		(3.30)		NIL		11.10	1.4
United Continental Holding, Inc	UAL	41.26	163.80	0.3	18.30	2.3	10.05	4.1	NIL		28.45	1.5
		Mean		0.4		4.0		9.0		103.0		2.2
		Median		0.3		4.1		7.5		68.3		1.4
		Harmonic Mean		0.3		3.5		7.0		67.1		1.3
		Max		0.7		6.8		18.3		200.7		7.7
		Min		0.2		2.1		4.1		39.9		0.5
		Std Dev		0.2		1.6		5.2		85.8		2.3
		Coefficient of Variation		0.46		0.39		0.58		0.83		1.05
		Say		0.50		4.00		7.00		NMF		1.50

ENTERPRISE VALUE MULTIPLES

WASHINGTON STATE DEPARTMENT OF REVENUE
 2024 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	\$ 8,150,680,787	1,053,000,000	7.74	4.1%	1,096,318,018	7.43	10,801,350,000	0.75	1,031,745,600	125,762,000	7.04
Allegiant Travel Co	ALGT	\$ 3,480,084,289	499,546,000	6.97	4.5%	521,978,885	6.67	2,650,075,000	1.31	354,717,000	165,196,941	6.69
American Airlines Group	AAL	\$ 51,743,071,983	6,657,000,000	7.77	0.2%	6,671,796,941	7.76	54,615,000,000	0.95	4,193,891,161	2,940,210,000	7.25
Delta Air Lines, Inc.	DAL	\$ 48,519,232,473	8,394,000,000	5.78	2.2%	8,579,403,251	5.66	57,387,750,000	0.85	6,326,100,000	1,674,400,000	6.06
Hawaiian Holdings, Inc.	HA	\$ 2,972,337,384	(50,319,000)	-59.07	0.0%	(50,319,000)	0.00	-	#DIV/0!	(118,158,720)	128,011,611	301.67
JetBlue Airways Corp.	JBLU	\$ 7,549,257,878	517,000,000	14.60	1.9%	527,079,009	14.32	9,503,000,000	0.79	466,605,056	426,881,000	8.45
Southwest Airlines Co.	LUV	\$ 24,582,979,676	1,944,000,000	12.65	2.1%	1,983,952,785	12.39	28,488,800,000	0.86	2,509,645,750	704,249,000	7.65
Spirit Airlines	SAVE	\$ 7,475,987,516	206,354,000	36.23	3.5%	213,514,204	35.01	5,500,000,000	1.36	(38,208,625)	296,068,500	28.99
United Continental Holding, Inc	UAL	\$ 43,409,519,402	7,079,000,000	6.13	2.3%	7,239,033,931	6.00	56,999,250,000	0.76	6,002,668,644	2,575,482,000	5.06
	Mean			4.31	2.31%		10.58		#DIV/0!			42.10
	Median			7.74	2.21%		7.43		#DIV/0!			7.25
	Harmonic Mean											8.34
	Max			36.23	4.49%		35.01		#DIV/0!			301.67
	Min			(59.07)	0.00%		-		#DIV/0!			5.06
	Std Dev			25.61	1.6%		10.03		#DIV/0!			97.62
	Coefficient of Variation			5.94	0.67		0.95		#DIV/0!			2.32
	Say			36.00	2.00%		10.00		1.00			10.00



Forecast EV/EBITDA By Rank

Guideline Companies	EV/EBITDA forecast	
Hawaiian Holdings, Inc.	0.00	5.15 Low Average 6.0 Low Median 6.00 Say
Delta Air Lines, Inc.	5.66	
United Continental Holding, Inc	6.00	
Allegiant Travel Co	6.67	15.38 High Average 12.4 High Median 12.00 Say
Alaska Air Group, Inc.	7.43	
American Airlines Group	7.76	
Southwest Airlines Co.	12.39	
JetBlue Airways Corp.	14.32	
Spirit Airlines	35.01	

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT CAPITAL ASSET PRICING MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2024 ASSESSMENT YEAR

PASSENGER AIRLINES

$$\text{Ex Ante}$$

$$K_e = R_f + \beta (R_p)$$

Ke = Cost of Equity **11.15%**

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Rm =	rate of return	8.48%
Rf =	risk free rate	4.03%
Rp =	risk premium	4.45%
B =	Beta	1.60

page 2

Rp = Risk Premium **4.45%**

to above

Shannon Pratt and Roger Grabowski	3.50% - 6.00%	
Cost of Capital, Applications and Examples, Third Edition, 2008, page 113		
Dr. Aswath Damodaran	4.60%	chart page 14
http://pages.stern.nyu.edu/~adamodar/	4.45%	adjusted for Rf
2023 Implied Premium		

Rf = Risk Free Rate **4.03%**

to above

Value Line Investment Survey, Selected Yields January 12, 2024, page 829
as of 12-27-23

US Treasury Securities year end data	
5 year	3.84%
10 year	3.88%
30 year	4.03%
30 year Zero	4.00%

Federal Reserve Statistical Release (<http://www.federalreserve.gov/Releases/H15/Current/>)
as of 12-30-23

Treasury Constant Maturities		
5 year	3.84%	
10 year	3.88%	
20 year	4.20%	
30 year	4.03%	
20 year TIPS	<u>1.82%</u>	2.38%
30 year TIPS	<u>1.90%</u>	2.13%
		TIPS inflation indication

Inflation **2.13%**

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The Livingston Survey, December 15, 2023, page 2, 8
Inflation median (measured by the CPI) over next 10 years 2.26%

Gross Domestic Product (GDP) Nominal **3.93%**

real GDP + inflation

Federal Reserve Projected Long Run Real GDP Growth 1.80%

Median Projection Value From Dec 13, 2023 Report
<https://www.federalreserve.gov/monetarypolicy/files/fomcproptabl20231213.pdf>

Congressional Budget Office Real GDP Economic Projections

The Budget and Economic Outlook 2024-2034	2024-2028	Table 2.3, pg 43
Average Percentage change Year To Year	2029-2034	2.20%
https://www.cbo.gov/system/files/2024-02/59710-Outlook.pdf		1.90%

Federal Reserve Bank of Philadelphia

The Livingston Survey, December 16, 2023, page 8
Average Annual Real GDP Growth Rate for Next 10 Years 2.00%
<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
2024 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	39.07		0.00						
Allegiant Travel Co	ALGT	81.97		2.40		2.93%			3.13%	
American Airlines Group	AAL	13.74	2.25	0.00	2.25		16.38%		0.00%	
Delta Air Lines, Inc.	DAL	40.13	4.55	0.40	4.15	1.00%	10.33%	11.33%	25.59%	36.93%
Hawaiian Holdings, Inc.	HA	14.20		0.00					0.00%	
JetBlue Airways Corp.	JBLU	5.55	#DIV/0!	0.00					0.00%	
Southwest Airlines Co.	LUV	28.73		0.76		2.65%			6.40%	
Spirit Airlines	SAVE	15.94		0.00					0.00%	
United Continental Holding, Inc	UAL	41.26	9.60	0.00	9.60		23.27%	wa	0.00%	
							Mean	11.33%		36.93%
							Median	11.33%		36.93%
							Harmonic Mean	11.33%		36.93%
							Max	11.33%		36.93%
							Min	11.33%		36.93%
							Std Dev			
							Coefficient of Variation			

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NMF

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT RESIDUAL INCOME MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2024 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	39.07	0.21	32.29	26.00%	5.46%	22.44%
Allegiant Travel Co	ALGT	81.97	0.25	74.16	28.00%	7.00%	26.00%
American Airlines Group	AAL	13.74	0.00	(7.96)	0.00%	0.00%	0.00%
Delta Air Lines, Inc.	DAL	40.13	0.30	17.05	35.50%	10.47%	21.11%
Hawaiian Holdings, Inc.	HA	14.20	0.00	1.84	0.00%	0.00%	0.00%
JetBlue Airways Corp.	JBLU	5.55	0.11	10.20	11.00%	1.21%	19.20%
Southwest Airlines Co.	LUV	28.73	0.10	17.70	14.00%	1.33%	9.14%
Spirit Airlines	SAVE	15.94	0.14	11.10	14.00%	1.96%	10.34%
United Continental Holding, Inc	UAL	41.26	0.35	28.45	34.50%	11.90%	27.48%
						Mean	15.08%
						Median	19.20%
						Harmonic Mean	
						Max	27.48%
						Min	0.00%
						Std Dev	10.6%
						Coefficient of Variation	0.70
						Say	20.00%

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**SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT
DIVIDEND GROWTH MODEL**

WASHINGTON STATE DEPARTMENT OF REVENUE
2024 ASSESSMENT YEAR
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	39.07		0.00						
Allegiant Travel Co	ALGT	81.97		2.40		2.93%			3.13%	
American Airlines Group	AAL	13.74	2.25	0.00	2.25		16.38%		0.00%	
Delta Air Lines, Inc.	DAL	40.13	4.55	0.40	4.15	1.00%	10.33%	11.33%	25.59%	36.93%
Hawaiian Holdings, Inc.	HA	14.20		0.00					0.00%	
JetBlue Airways Corp.	JBLU	5.55	#DIV/0!	0.00					0.00%	
Southwest Airlines Co.	LUV	28.73		0.76		2.65%			6.40%	
Spirit Airlines	SAVE	15.94		0.00					0.00%	
United Continental Holding, Inc.	UAL	41.26	9.60	0.00	9.60		23.27%		0.00%	
							Mean	11.33%		36.93%
							Median	11.33%		36.93%
							Harmonic Mean	11.33%		36.93%
							Max	11.33%		36.93%
							Min	11.33%		36.93%
							Std Dev			
							Coefficient of Variation			

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NMF

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2024 ASSESSMENT YEAR

PASSENGER AIRLINES

Based on Return on Equity

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

K_e = Cost of Equity
D₁ = Expected Dividends
E₁ = Expected Earnings
P₀ = Current Price
G = Growth
b = Retained Earnings % = (EPS - DPS) / EPS
ROE = Return on Equity = (E₁ / P₀)

Company	Ticker	Stock Price (P ₀)	Expected Dividend (D ₁)	Expected Earnings (E ₁)	Dividend Yield (D ₁ /P ₀)	Retained Earnings (b)	ROE (E ₁ /P ₀)	Sustainable Growth Rate	K _e Dividends	K _e Earnings
Alaska Air Group, Inc.	ALK	39.07	0.00	4.55		100.0%	11.65%	11.65%		23.29%
Allegiant Travel Co	ALGT	81.97	2.40	8.55	2.93%	71.9%	10.43%	7.50%	10.43%	17.93%
American Airlines Group	AAL	13.74	0.00	2.25		100.0%	16.38%	16.38%		32.75%
Delta Air Lines, Inc.	DAL	40.13	0.40	6.45	1.00%	93.8%	16.07%	15.08%	16.07%	31.15%
Hawaiian Holdings, Inc.	HA	14.20	0.00	0.00			0.00%			
JetBlue Airways Corp.	JBLU	5.55	0.00	-0.60		100.0%	-10.81%	-10.81%		
Southwest Airlines Co.	LUV	28.73	0.76	2.30	2.65%	67.0%	8.01%	5.36%	8.01%	13.37%
Spirit Airlines	SAVE	15.94	0.00	-3.00		100.0%	-18.82%	-18.82%		
United Continental Holding, Inc	UAL	41.26	0.00	9.60		100.0%	23.27%	23.27%		46.53%
								Mean	11.50%	27.50%
								Median	10.43%	27.22%
								Harmonic Mean	10.60%	23.29%
								Max	16.07%	46.53%
								Min	8.01%	13.37%
								Std Dev	4.1%	11.9%
								Coefficient of Variation	0.36	0.43

23.00%

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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	CCC+
United Continental Holding, Inc	UAL	B1	BB-
Overall Average Debt Rating		B1	B+

All issues

Bond Yields for Guideline Companies, All Ratings

5.15%

Mergent's Bond Record January 2024, page 101

Corporate	Aaa	Aa	A	Baa
October	5.61%	5.97%	6.18%	6.63%
November	5.61%	5.57%	5.78%	6.19%
December	4.74%	5.05%	5.25%	5.64%
4th Qtr Average	5.32%	5.53%	5.74%	6.15%
Public Utilities		Aa	A	Baa
October		6.19%	6.34%	6.61%
November		5.82%	5.96%	6.20%
December		5.27%	5.42%	5.68%
4th Qtr Average		5.76%	5.91%	6.16%
Industrials	Aaa	Aa	A	Baa
October	5.61%	5.76%	6.02%	6.64%
November	5.20%	5.32%	5.59%	6.18%
December	4.74%	4.82%	5.07%	5.60%
4th Qtr Average	5.18%	5.30%	5.56%	6.14%

	BB-	B+	B
Bloomberg S&P Corporate Bond Yields	10.41%	7.54%	7.28%

Debt Yield Rate

9.10%

Operating Lease Debt Rate

See Lease Bond Analysis 16 Tab

6.24%

Cost of Secured Debt (Possessory Lease)

Based on 4th Quarter Aa rate

5.00%

to page 1

DATA INPUT

WASHINGTON STATE DEPARTMENT OF REVENUE

2024 ASSESSMENT YEAR

PASSENGER AIRLINES

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

				Historic Figures (2023)													
Guideline Companies		Stock Price 12/31/2022	Stock Price 12/31/2023	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	42.94	39.07	1.55	81.85	8.10	4.53	99.94	83.7%	5.6%	2,182	Nil	32.29	127,376,000	7.80	0.54	10,426
Allegiant Travel Co	ALGT	67.99	81.97	1.45	140.10	19.80	7.31	180.85	85.9%	5.3%	1,820	1.20	74.16	17,915,000	6.90	0.70	2,510
American Airlines Group	AAL	12.72	13.74	1.65	80.76	6.41	2.65	83.00	83.5%	3.5%	29,270	Nil	(7.96)	654,273,192	5.40	0.31	52,788
Delta Air Lines, Inc.	DAL	32.86	40.13	1.60	90.30	9.90	6.25	75.00	85.0%	6.9%	17,071	0.20	17.05	639,000,000	6.30	0.37	58,048
Hawaiian Holdings, Inc.	HA	10.26	14.20	1.85	52.41	(2.28)	(5.05)	61.06	0.0%	NMF	1,597	Nil	1.84	51,824,000	NMF	NMF	2,716
JetBlue Airways Corp.	JBLU	6.48	5.55	1.80	28.70	1.40	(0.45)	42.20	82.6%	NMF	3,300	NIL	10.20	333,289,326	NMF	NMF	9,615
Southwest Airlines Co.	LUV	33.50	28.73	1.10	43.78	4.21	1.57	56.24	80.0%	3.8%	7,978	0.72	17.70	596,115,380	18.70	1.14	26,091
Spirit Airlines	SAVE	19.38	15.94	1.80	49.00	(0.35)	(3.30)	-	0.0%	0.0%	3,300	NIL	11.10	109,167,500	NMF	NMF	5,340
United Continental Holding, Inc	UAL	37.70	41.26	1.70	163.80	18.30	10.05	160.00	83.9%	6.2%	25,148	NIL	28.45	328,014,680	4.00	0.27	53,717

Value Line February 2024

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 2023

DATA INPUT

WASHINGTON STATE DEPARTM

2024 ASSESSMENT YEAR

PASSENGER AIRLINES

Instructions: Data entered on this page

					Projected (Next Year) 2024											
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.	12.3%	583	25.0%	14.2%	85.05	8.35	4.55	110.00	84.5%	5.3%		35.45	127,000,000	10,800	12.0%	580
Allegiant Travel Co	18.8%	132	27.2%	9.9%	149.30	22.10	8.55	185.00	86.0%	5.7%	2.40	78.85	17,750,000	2,650	22.0%	152
American Airlines Group	7.0%	1,859	23.0%	NMF	82.75	5.90	2.25	83.00	84.0%	2.7%	-	(5.65)	660,000,000	54,600	7.0%	1,485
Delta Air Lines, Inc.	14.9%	4,020	23.0%	36.5%	89.25	10.20	6.45	77.00	85.0%	7.3%	0.40	19.45	643,000,000	57,400	15.5%	4,200
Hawaiian Holdings, Inc.	1.6%	(261)	NMF	NMF	-	-	-	-	0.0%	NMF	-	-	-	-	0.0%	-
JetBlue Airways Corp.	6.1%	(151)	NMF	NMF	27.95	1.30	(0.60)	43.65	83.0%	NMF	-	9.45	340,000,000	9,500	8.3%	(205)
Southwest Airlines Co.	9.3%	986	23.5%	9.3%	47.80	4.60	2.30	60.20	83.0%	5.2%	0.76	19.30	596,000,000	28,440	12.0%	1,480
Spirit Airlines	6.3%	(360)	NMF	NMF	50.00	0.05	(3.00)			0.0%	-	8.00	110,000,000	5,500	7.0%	(330)
United Continental Holding, Inc	15.1%	3,337	22.7%	35.8%	173.25	18.55	9.60	162.00	85.0%	5.7%	-	38.45	329,000,000	57,000	14.0%	3,235

Value Line February 2024

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 2023

Blue Last Year Data Not Available

DATA INPUT

WASHINGTON STATE DEPARTM
 2024 ASSESSMENT YEAR
 PASSENGER AIRLINES

Instructions: Data entered on this page

			Longer Term Forecasts											Income Statement		
Guideline Companies	Return on Shareholder Equity	All Dividends to Net Profits	Dividends Per Share			Earnings Per Share			Revenue Per Share			Return on Shareholder Equity	Retained to Common Equity	Operating Income	Current Assets	PP & E Gross
			2025	2028	% Annual Change	2025	2028	% Annual Change	2025	2028	% Annual Change					
Name	VL	VL	VL	VL		VL	VL		VL	VL		VL	VL	M*/10K	M*/10K	M*/10K
Alaska Air Group, Inc.	13.0%	0.0%	0.00	2.40	#DIV/0!	9.95	18.25	12.90%	90.90	111.20	4.11%	26.00%	21.00%	394,000,000	2,705,000,000	12,730,000,000
Allegiant Travel Co	11.0%	28.0%	2.40	2.80	3.13%	10.00	28.75	23.52%	162.85	202.85	4.49%	28.00%	25.00%	251,468,000	1,001,130,000	5,226,814,000
American Airlines Group	0.0%	0.0%	NIL	NIL	0.00%	2.85	3.20	2.34%	85.10	86.05	0.22%	0.00%	0.00%	3,034,000,000	20,367,000,000	52,864,000,000
Delta Air Lines, Inc.	33.5%	6.0%	0.48	1.50	25.59%	7.50	9.00	3.71%	94.00	104.85	2.21%	35.50%	29.50%	5,521,000,000	10,269,000,000	57,193,000,000
Hawaiian Holdings, Inc.	0.0%	0.0%	-	-	0.00%	-	-	0.00%	-	-	0.00%	0.00%	0.00%	(293,675,000)	1,170,940,000	3,164,145,000
JetBlue Airways Corp.	0.0%	0.0%	NIL	NIL	0.00%	0.10	1.25	65.72%	29.60	32.60	1.95%	11.00%	11.00%	(230,000,000)	2,160,000,000	13,189,000,000
Southwest Airlines Co.	13.0%	33.0%	0.88	1.20	6.40%	2.70	3.70	6.50%	49.50	54.80	2.06%	14.00%	9.50%	224,000,000	13,955,000,000	33,818,000,000
Spirit Airlines	0.0%	0.0%	NIL	NIL	0.00%	-1.00	1.25	-204.56%	52.70	62.50	3.47%	14.00%	14.00%	(495,757,000)	1,512,127,000	4,688,149,000
United Continental Holding, Inc	25.5%	0.0%	NIL	NIL	0.00%	12.00	15.50	5.25%	181.80	203.30	2.26%	34.50%	34.50%	4,211,000,000	18,487,000,000	62,525,000,000

TTM DATA UPDATE

Value Line February 2024
 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 2023

DATA INPUT

WASHINGTON STATE DEPARTM

2024 ASSESSMENT YEAR

PASSENGER AIRLINES

Instructions: Data entered on this page

	Balance Sheet				Cash Flow Statement	Other Financials			
Guideline Companies	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
Name	M* / 10K	M*10K	10K/M*	10-K/M*	M*	10-K	10-K	10K	10-K
Alaska Air Group, Inc.	8,388,000,000	16,000,000	4,459,000,000	1,125,000,000	451,000,000	2,471,000,000	1,382,000,000	353,000,000	208,000,000
Allegiant Travel Co	3,447,111,000	-	1,212,307,000	1,819,717,000	223,130,000	1,826,921,000	1,815,351,000	439,937,000	24,948,000
American Airlines Group	30,764,000,000	2,051,000,000	22,062,000,000	29,270,000,000	2,254,000,000	32,396,000,000	32,310,000,000	3,632,000,000	1,369,000,000
Delta Air Lines, Inc.	35,486,000,000	5,983,000,000	26,418,000,000	17,071,000,000	2,341,000,000	18,610,000,000	18,400,000,000	2,983,000,000	532,000,000
Hawaiian Holdings, Inc.	2,013,616,000	13,500,000	1,145,401,000	1,537,152,000	133,615,000	1,581,009,000	1,406,721,000	43,857,000	109,741,000
JetBlue Airways Corp.	9,168,000,000	762,000,000	3,628,000,000	4,409,000,000	621,000,000	4,716,000,000	4,691,000,000	307,000,000	126,000,000
Southwest Airlines Co.	19,375,000,000	296,000,000	12,256,000,000	7,978,000,000	1,522,000,000	7,919,000,000	7,739,000,000	29,000,000	198,000,000
Spirit Airlines	3,519,128,000	-	1,671,592,000	3,055,221,000	320,872,000	3,439,100,000	3,253,500,000	315,580,000	381,239,000
United Continental Holding, Inc	39,815,000,000	2,725,000,000	22,203,000,000	25,057,000,000	2,671,000,000	29,075,000,000	28,302,000,000	4,018,000,000	197,000,000

Value Line February 2024

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 2023

2023 Multi Stage Dividend Growth Model Using FCFE

Airline Industry

Assumptions:

3.93%	GDP
6.1	Median Industry PE
0.0%	Target Dividend Payout Ratio
11.0%	Target ROE

Alaska Air Group
ALK

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		14.20%	4.01%	95.99%	4.53			-39.07
	2022	1	0.44%	579.04%	-479.04%	4.55	-21.80		-21.80
	2023	2	75.27%	264.29%	-164.29%	7.98	-13.10		-13.10
Stage 1	2024	3	42.95%	154.07%	-54.07%	11.40	-6.16		-6.16
	2025	4	30.04%	101.55%	-1.55%	14.83	-0.23		-0.23
	2026	5	23.10%	74.11%	25.89%	18.25	4.73		4.73
	2027	6	19.27%	67.10%	32.90%	21.77	7.16		7.16
	2028	7	15.43%	58.00%	42.00%	25.13	10.55		10.55
Stage 2	2029	8	11.60%	45.67%	54.33%	28.04	15.23		15.23
	2030	9	7.76%	28.07%	71.93%	30.22	21.73		21.73
	2031	10	3.93%	35.73%	64.27%	31.40	20.18	199.32	219.50
Stage 3	11+	3.93%	11.00%	35.73%	64.27%	32.64	20.98		
Ke =									15.50%

price = 39.07

Allegiant Travel Co
ALGT

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		9.90%	154.21%	-54.21%	7.31			-81.97
	2022	1	16.96%	536.95%	-436.95%	8.55	-37.36		-37.36
	2023	2	59.06%	243.49%	-143.49%	13.60	-19.51		-19.51
Stage 1	2024	3	37.13%	138.86%	-38.86%	18.65	-7.25		-7.25
	2025	4	27.08%	89.72%	10.28%	23.70	2.44		2.44
	2026	5	21.31%	63.69%	36.31%	28.75	10.44		10.44
	2027	6	17.83%	24.60%	41.64%	33.88	14.11		14.11
	2028	7	14.36%	21.20%	51.33%	38.74	18.86		18.86
Stage 2	2029	8	10.88%	41.60%	58.40%	42.96	25.08		25.08
	2030	9	7.41%	27.29%	72.71%	46.14	33.55		33.55
	2031	10	3.93%	35.73%	64.27%	47.95	30.82	304.32	335.14
Stage 3	11+	3.93%	11.00%	35.73%	64.27%	49.83	32.03		
Ke =									13.57%

price = 81.97

American Airlines Group
AAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	-137.22%	237.22%	2.65			-13.74
	2022	1	-15.09%	NMF	NMF	2.25	NMF		0.00
	2023	2	10.56%	NMF	NMF	2.49	NMF		0.00
Stage 1	2024	3	9.55%	NMF	NMF	2.73	NMF		0.00
	2025	4	8.72%	NMF	NMF	2.96	NMF		0.00
	2026	5	8.02%	NMF	NMF	3.20	NMF		0.00
	2027	6	7.20%	2.20%	290.10%	-190.10%	3.43	-6.52	-6.52
	2028	7	6.38%	4.40%	126.47%	-26.47%	3.65	-0.97	-0.97
Stage 2	2029	8	5.56%	6.60%	71.93%	28.07%	3.85	1.08	1.08
	2030	9	4.75%	8.80%	44.66%	55.34%	4.04	2.23	2.23
	2031	10	3.93%	11.00%	35.73%	64.27%	4.19	2.70	26.62
Stage 3	11+	3.93%	11.00%	35.73%	64.27%	4.36	2.80		
Ke =									5.58%

price = 13.74

Delta Air Lines Inc
DAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		36.50%	29.09%	70.91%	6.25			-40.13
	2022	1	3.20%	29.50%	70.50%	6.45	4.55		4.55
	2023	2	9.88%	26.46%	73.54%	7.09	5.21		5.21
Stage 1	2024	3	8.99%	23.92%	76.08%	7.73	5.88		5.88
	2025	4	8.25%	21.78%	78.22%	8.36	6.54		6.54
	2026	5	7.62%	19.39%	80.61%	9.00	7.25		7.25

price = 40.13

	2027	6	6.88%	30.60%	20.08%	79.92%	9.62	7.69	7.69
	2028	7	6.15%	25.70%	21.04%	78.96%	10.21	8.06	8.06
Stage 2	2029	8	5.41%	20.80%	22.45%	77.55%	10.76	8.35	8.35
	2030	9	4.67%	15.90%	24.72%	75.28%	11.27	8.48	8.48
	2031	10	3.93%	11.00%	35.73%	64.27%	11.71	7.53	74.31
Stage 3		11+	3.93%	11.00%	35.73%	64.27%	12.17	7.82	
									Ke = 19.22%

Hawaiian Holdings Inc
HA

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	-909.09%	1009.09%	-5.05			-14.20
	2022	1	-100.00%	0.00%	NMF	0.00	NMF		0.00
	2023	2	#DIV/0!	0.00%	NMF	0.00	NMF		0.00
Stage 1	2024	3	#DIV/0!	0.00%	NMF	0.00	NMF		0.00
	2025	4	#DIV/0!	0.00%	NMF	0.00	NMF		0.00
	2026	5	#DIV/0!	0.00%	NMF	0.00	NMF		0.00
	2027	6	#DIV/0!	2.20%	NMF	#DIV/0!	NMF		0.00
	2028	7	#DIV/0!	4.40%	NMF	#DIV/0!	NMF		0.00
Stage 2	2029	8	#DIV/0!	6.60%	NMF	#DIV/0!	NMF		0.00
	2030	9	#DIV/0!	8.80%	NMF	#DIV/0!	NMF		0.00
	2031	10	#DIV/0!	11.00%	35.73%	64.27%	#DIV/0!	NMF	#DIV/0!
Stage 3		11+	3.93%	11.00%	35.73%	64.27%	#DIV/0!	#DIV/0!	
									Ke = #VALUE!

price = 14.20

JetBlue Airways Corp
JBLU

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	303.03%	-203.03%	-0.45			-5.55
	2022	1	33.33%	0.00%	#DIV/0!	#DIV/0!	-0.60	#DIV/0!	#DIV/0!
	2023	2	-77.08%	2.75%	-12231.40%	12331.40%	-0.14	-16.96	-16.96
Stage 1	2024	3	-336.36%	5.50%	2587.41%	-2487.41%	0.33	-8.08	-8.08
	2025	4	142.31%	8.25%	711.88%	-611.88%	0.79	-4.82	-4.82
	2026	5	58.73%	11.00%	434.27%	-334.27%	1.25	-4.18	-4.18
	2027	6	47.77%	11.00%	334.64%	-234.64%	1.85	-4.33	-4.33
	2028	7	36.81%	11.00%	235.00%	-135.00%	2.53	-3.41	-3.41
Stage 2	2029	8	25.85%	11.00%	135.36%	-35.36%	3.18	-1.12	-1.12
	2030	9	14.89%	11.00%	35.73%	64.27%	3.65	2.35	2.35
	2031	10	3.93%	11.00%	35.73%	64.27%	3.80	2.44	24.10
Stage 3		11+	3.93%	11.00%	35.73%	64.27%	3.95	2.54	
									Ke = #VALUE!

price = 5.55

Southwest Airlines Co
LUV

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		9.30%	422.70%	-322.70%	1.57			-28.73
	2022	1	46.50%	13.00%	117.06%	-17.06%	2.30	-0.39	-0.39
	2023	2	15.22%	13.25%	99.68%	0.32%	2.65	0.01	0.01
Stage 1	2024	3	13.21%	13.50%	86.42%	13.58%	3.00	0.41	0.41
	2025	4	11.67%	13.75%	75.98%	24.02%	3.35	0.80	0.80
	2026	5	10.45%	14.00%	65.32%	34.68%	3.70	1.28	1.28
	2027	6	9.14%	13.40%	58.51%	41.49%	4.04	1.68	1.68
	2028	7	7.84%	12.80%	51.07%	48.93%	4.35	2.13	2.13
Stage 2	2029	8	6.54%	12.20%	42.90%	57.10%	4.64	2.65	2.65
	2030	9	5.23%	11.60%	33.88%	66.12%	4.88	3.23	3.23
	2031	10	3.93%	11.00%	35.73%	64.27%	5.07	3.26	32.21
Stage 3		11+	3.93%	11.00%	35.73%	64.27%	5.27	3.39	
									Ke = 5.52%

price = 28.73

Spirit Airlines Co
SAVE

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		NMF	-82.64%	182.64%	-3.30			-15.94

price = 15.94

	2022	1	-9.09%	0.00%	NMF	NMF	-3.00	NMF	0.00
	2023	2	-35.42%	3.50%	-1566.82%	1666.82%	-1.94	-32.29	-32.29
Stage 1	2024	3	-54.84%	7.00%	-1734.69%	1834.69%	-0.88	-16.05	-16.05
	2025	4	-121.43%	10.50%	5396.83%	-5296.83%	0.19	-9.93	-9.93
	2026	5	566.67%	14.00%	3243.71%	-3143.71%	1.25	-39.30	-39.30
	2027	6	454.12%	13.40%	2549.04%	-2449.04%	6.93	-169.63	-169.63
	2028	7	341.57%	12.80%	1789.26%	-1689.26%	30.59	-516.67	-516.67
Stage 2	2029	8	229.02%	12.20%	954.73%	-854.73%	100.63	-860.15	-860.15
	2030	9	116.48%	11.60%	33.88%	66.12%	217.85	144.04	144.04
	2031	10	3.93%	11.00%	35.73%	64.27%	226.41	145.52	1436.95
Stage 3		11+	3.93%	11.00%	35.73%	64.27%	235.31	151.24	
									Ke = 1.42%

United Continental Holdings
UAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Terminal Value	Cash Flow
Historic	0		35.80%	-40.71%	140.71%	10.05			-41.26
	2022	1	-4.48%	25.50%	60.25%	39.75%	9.60	3.82	3.82
	2023	2	15.36%	27.75%	47.99%	52.01%	11.08	5.76	5.76
Stage 1	2024	3	13.32%	30.00%	39.18%	60.82%	12.55	7.63	7.63
	2025	4	11.75%	32.25%	32.61%	67.39%	14.03	9.45	9.45
	2026	5	10.52%	34.50%	26.67%	73.33%	15.50	11.37	11.37
	2027	6	9.20%	29.80%	26.45%	73.55%	16.93	12.45	12.45
	2028	7	7.88%	25.10%	26.15%	73.85%	18.26	13.48	13.48
Stage 2	2029	8	6.56%	20.40%	25.72%	74.28%	19.46	14.45	14.45
	2030	9	5.25%	15.70%	25.03%	74.97%	20.48	15.35	15.35
	2031	10	3.93%	11.00%	35.73%	64.27%	21.28	13.68	135.09
Stage 3		11+	3.93%	11.00%	35.73%	64.27%	22.12	14.22	
									Ke = 26.59%

price = 41.26

source: Value Line

2023 Multi Stage Ke Estimate Using Residual Income Model
Airline Industry

Assumptions:

4.37%	Sustainable Growth Rate
83.9%	Target Dividend Payout Ratio
18.1%	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%	4.53		-39.07
	2022	1	0.44%	13.00%	579.04%	-479.04%	4.55	-21.80
	2023	2	75.27%	16.25%	264.29%	-164.29%	7.98	-13.10
Stage 1	2024	3	42.95%	19.50%	154.07%	-54.07%	11.40	-6.16
	2025	4	30.04%	22.75%	101.55%	-1.55%	14.83	-0.23
	2026	5	23.10%	26.00%	74.45%	25.55%	18.25	4.66
	2027	6	19.36%	24.42%	63.92%	36.08%	21.78	7.86
	2028	7	15.61%	22.84%	51.93%	48.07%	25.18	12.10
Stage 2	2029	8	11.86%	21.27%	38.17%	61.83%	28.17	17.42
	2030	9	8.12%	19.69%	22.20%	77.80%	30.46	23.70
	2031	10	4.37%	18.11%	24.13%	75.87%	31.79	24.12
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	33.18	25.17
	2033	12	4.37%	18.11%	24.13%	75.87%	34.63	26.27
	2220	199	4.37%	18.11%	24.13%	75.87%	103,158.56	78,264.43
	2221	200	4.37%	18.11%	24.13%	75.87%	107,667.16	81,685.02

price = 39.07

16.44%

Allegiant Travel Co
 ALGT

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow
Historic	0			0.00%	100.00%	7.31		-81.97
	2022	1	16.96%	11.00%	536.95%	-436.95%	8.55	-37.36
	2023	2	59.06%	15.25%	243.49%	-143.49%	13.60	-19.51
Stage 1	2024	3	37.13%	19.50%	138.86%	-38.86%	18.65	-7.25
	2025	4	27.08%	23.75%	89.72%	10.28%	23.70	2.44
	2026	5	21.31%	28.00%	64.00%	36.00%	28.75	10.35
	2027	6	17.92%	26.02%	55.85%	44.15%	33.90	14.97
	2028	7	14.53%	24.04%	46.35%	53.65%	38.83	20.83
Stage 2	2029	8	11.15%	22.07%	35.16%	64.84%	43.16	27.98
	2030	9	7.76%	20.09%	21.76%	78.24%	46.51	36.39
	2031	10	4.37%	18.11%	24.13%	75.87%	48.54	36.82
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	50.66	38.43
	2033	12	4.37%	18.11%	24.13%	75.87%	52.87	40.11
	2220	199	4.37%	18.11%	24.13%	75.87%	157,513.89	119,502.79
	2221	200	4.37%	18.11%	24.13%	75.87%	164,398.12	124,725.73

price = 81.97

15.26%

American Airlines Group
 AAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow
Historic	0			0.00%	100.00%	2.65		-13.74
	2022	1	-15.09%	0.00%	0.00%	2.25	2.25	2.25
	2023	2	10.56%	0	NMF	NMF	NMF	0.00
Stage 1	2024	3	9.55%	0	NMF	NMF	2.73	0.00
	2025	4	8.72%	0	NMF	NMF	2.96	0.00
	2026	5	8.02%	0.00%	NMF	NMF	3.20	0.00
	2027	6	7.29%	3.62%	181.06%	-81.06%	3.43	-2.78
	2028	7	6.56%	7.24%	80.46%	19.54%	3.66	0.71
Stage 2	2029	8	5.83%	10.87%	46.93%	53.07%	3.87	2.05
	2030	9	5.10%	14.49%	30.16%	69.84%	4.07	2.84
	2031	10	4.37%	18.11%	24.13%	75.87%	4.25	3.22
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	4.43	3.36
	2033	12	4.37%	18.11%	24.13%	75.87%	4.63	3.51
	2220	199	4.37%	18.11%	24.13%	75.87%	13,782.03	10,456.16
	2221	200	4.37%	18.11%	24.13%	75.87%	14,384.38	10,913.16

price = 13.74

13.58%

Delta Air Lines Inc
 DAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow
Historic	0			0.00%	100.00%	6.25		-40.13
	2022	1	3.20%	33.50%	29.50%	70.50%	6.45	4.55
	2023	2	9.88%	34.00%	26.46%	73.54%	7.09	5.21
Stage 1	2024	3	8.99%	34.50%	23.92%	76.08%	7.73	5.88
	2025	4	8.25%	35.00%	21.78%	78.22%	8.36	6.54
	2026	5	7.62%	35.50%	19.64%	80.36%	9.00	7.23
	2027	6	6.97%	32.02%	19.74%	80.26%	9.63	7.73
	2028	7	6.32%	28.54%	19.87%	80.13%	10.24	8.20
Stage 2	2029	8	5.67%	25.07%	20.03%	79.97%	10.82	8.65
	2030	9	5.02%	21.59%	20.24%	79.76%	11.36	9.06
	2031	10	4.37%	18.11%	24.13%	75.87%	11.86	9.00
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	12.37	9.39
	2033	12	4.37%	18.11%	24.13%	75.87%	12.92	9.80
	2220	199	4.37%	18.11%	24.13%	75.87%	38,476.36	29,191.28
	2221	200	4.37%	18.11%	24.13%	75.87%	40,157.99	30,467.10

price = 40.13

18.72%

Hawaiian Holdings Inc
HA

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price =
Historic	0			0.00%	100.00%	-5.05		-14.20	14.20
	2022	1	-100.00%	0.00%	0.00%	0.00	0.00	0.00	
	2023	2	#DIV/0!	0.00%	#DIV/0!	0.00	#DIV/0!	#DIV/0!	
Stage 1	2024	3	#DIV/0!	0.00%	#DIV/0!	0.00	#DIV/0!	#DIV/0!	
	2025	4	#DIV/0!	0.00%	#DIV/0!	0.00	#DIV/0!	#DIV/0!	
	2026	5	#DIV/0!	0.00%	#DIV/0!	0.00	#DIV/0!	#DIV/0!	
	2027	6	#DIV/0!	3.62%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
	2028	7	#DIV/0!	7.24%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Stage 2	2029	8	#DIV/0!	10.87%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
	2030	9	#DIV/0!	14.49%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
	2031	10	#DIV/0!	18.11%	24.13%	75.87%	#DIV/0!	#DIV/0!	
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	#DIV/0!	#DIV/0!	
	2033	12	4.37%	18.11%	24.13%	75.87%	#DIV/0!	#DIV/0!	
	2220	199	4.37%	18.11%	24.13%	75.87%	#DIV/0!	#DIV/0!	
	2221	200	4.37%	18.11%	24.13%	75.87%	#DIV/0!	#DIV/0!	

NMF

JetBlue Airways Corp
JBLU

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price =
Historic	0		NMF	0.00%	100.00%	-0.45		-5.55	5.55
	2022	1	33.33%	0.00%	#DIV/0!	-0.60	#DIV/0!	#DIV/0!	
	2023	2	-77.08%	2.75%	0.00%	-0.14	-0.14	-0.14	
Stage 1	2024	3	-336.36%	5.50%	0.00%	0.33	0.33	0.33	
	2025	4	142.31%	8.25%	711.88%	-611.88%	0.79	-4.82	
	2026	5	58.73%	11.00%	435.07%	-335.07%	1.25	-4.19	
	2027	6	47.86%	12.42%	297.74%	-197.74%	1.85	-3.65	
	2028	7	36.99%	13.84%	188.63%	-88.63%	2.53	-2.24	
Stage 2	2029	8	26.11%	15.27%	99.84%	0.16%	3.19	0.01	
	2030	9	15.24%	16.69%	26.19%	73.81%	3.68	2.72	
	2031	10	4.37%	18.11%	24.13%	75.87%	3.84	2.91	
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	4.01	3.04	
	2033	12	4.37%	18.11%	24.13%	75.87%	4.18	3.17	
	2220	199	4.37%	18.11%	24.13%	75.87%	12,463.19	9,455.58	9,455.58
	2221	200	4.37%	18.11%	24.13%	75.87%	13,007.90	9,868.84	9,868.84

NMF

Southwest Airlines Co
LUV

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price =
Historic	0		9.30%	0.00%	100.00%	1.57		-28.73	28.73
	2022	1	46.50%	13.00%	117.06%	-17.06%	2.30	-0.39	
	2023	2	15.22%	13.25%	99.68%	0.32%	2.65	0.01	
Stage 1	2024	3	13.21%	13.50%	86.42%	13.58%	3.00	0.41	
	2025	4	11.67%	13.75%	75.98%	24.02%	3.35	0.80	
	2026	5	10.45%	14.00%	65.95%	34.05%	3.70	1.26	
	2027	6	9.23%	14.82%	54.09%	45.91%	4.04	1.86	
	2028	7	8.02%	15.64%	43.48%	56.52%	4.37	2.47	
Stage 2	2029	8	6.80%	16.47%	33.92%	66.08%	4.66	3.08	
	2030	9	5.59%	17.29%	25.28%	74.72%	4.92	3.68	
	2031	10	4.37%	18.11%	24.13%	75.87%	5.14	3.90	
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	5.36	4.07	
	2033	12	4.37%	18.11%	24.13%	75.87%	5.60	4.25	
	2220	199	4.37%	18.11%	24.13%	75.87%	16,674.28	12,650.46	12,650.46
	2221	200	4.37%	18.11%	24.13%	75.87%	17,403.04	13,203.35	13,203.35

11.08%

Spirit Airlines Co
SAVE

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow	price =
Historic	0		NMF	0.00%	100.00%	-3.30		-15.94	15.94
	2022	1	-9.09%	0.00%	0.00%	0.00%	-3.00	-3.00	
	2023	2	-35.42%	3.50%	0.00%	0.00%	-1.94	-1.94	
Stage 1	2024	3	-54.84%	7.00%	0.00%	0.00%	-0.88	-0.88	
	2025	4	-121.43%	10.50%	0.00%	0.00%	0.19	0.19	
	2026	5	566.67%	14.00%	3244.34%	-3144.34%	1.25	-39.30	
	2027	6	454.21%	14.82%	2305.65%	-2205.65%	6.93	-152.80	
	2028	7	341.75%	15.64%	1465.63%	-1365.63%	30.60	-417.92	
Stage 2	2029	8	229.29%	16.47%	709.49%	-609.49%	100.77	-614.19	
	2030	9	116.83%	17.29%	25.28%	74.72%	218.50	163.26	
	2031	10	4.37%	18.11%	24.13%	75.87%	228.05	173.02	
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	238.02	180.58	
	2033	12	4.37%	18.11%	24.13%	75.87%	248.42	188.47	
	2220	199	4.37%	18.11%	24.13%	75.87%	740,069.34	561,476.53	561,476.53
	2221	200	4.37%	18.11%	24.13%	75.87%	772,414.48	586,016.18	586,016.18

15.93%

United Continental Holdings
UAL

Growth Reinvestment Payout Cash

	Year	Rate	ROE	Rate	Ratio	Earnings	FCFE	Flow
Historic	0		35.80%	0.00%	100.00%	10.05		-41.26
	2022	1	-4.48%	25.50%	0.00%	100.00%	9.60	9.60
	2023	2	15.36%	27.75%	47.99%	52.01%	11.08	5.76
Stage 1	2024	3	13.32%	30.00%	39.18%	60.82%	12.55	7.63
	2025	4	11.75%	32.25%	32.61%	67.39%	14.03	9.45
	2026	5	10.52%	34.50%	26.92%	73.08%	15.50	11.33
	2027	6	9.29%	31.22%	25.81%	74.19%	16.94	12.57
	2028	7	8.06%	27.94%	24.44%	75.56%	18.30	13.83
Stage 2	2029	8	6.83%	24.67%	22.70%	77.30%	19.55	15.12
	2030	9	5.60%	21.39%	20.43%	79.57%	20.65	16.43
	2031	10	4.37%	18.11%	24.13%	75.87%	21.55	16.35
Stage 3	2032	11	4.37%	18.11%	24.13%	75.87%	22.49	17.07
	2033	12	4.37%	18.11%	24.13%	75.87%	23.48	17.81
	2220	199	4.37%	18.11%	24.13%	75.87%	69,941.22	53,063.07
	2221	200	4.37%	18.11%	24.13%	75.87%	72,998.04	55,382.22
								26.41%

price = 41.26

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%	4.03%
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%
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%
2023	4.61%	1.46%	4769.83	219.70	69.69	164.25	0.10%	1.98%	5.20%	3.88%	-1.32%	3.60%	1.97%	6.41%	4.60%

Summary of Bloomberg Bond Yields by Rating

2023 S&P Monthly Bond Yields

Rating	October 2023			November			December			Q4	
	20Y	25Y	30Y	20Y	25Y	30Y	20Y	25Y	30Y	Average	Average
AA	6.36	6.49	6.62	5.71	5.95	6.09	5.20	5.47	5.62	5.43%	5.95%
AA-	6.38	6.27	6.33	5.69	5.59	5.66	5.16	5.06	5.14	5.12%	5.70%
A+	6.47	6.15	5.86	5.73	5.39	5.09	5.21	4.91	4.65	4.92%	5.50%
A	6.39	6.35	6.39	5.65	5.61	5.69	5.08	5.00	5.07	5.05%	5.69%
A-	6.65	6.69	6.82	5.84	5.90	6.08	5.36	5.47	5.66	5.50%	6.05%
BBB+	6.78	6.67	6.57	5.94	5.78	5.62	5.39	5.28	5.17	5.28%	5.91%
BBB	7.08	7.04	7.01	6.22	6.19	6.17	5.69	5.66	5.66	5.67%	6.30%
BBB-	7.53	7.34	7.29	6.88	7.38	7.81	6.38	6.83	7.18	6.80%	7.18%
BB+	8.18	8.28		7.60	7.74		7.07	7.23		7.15%	7.68%
BB	10.65	9.63	9.53	9.17	8.44	8.35	8.07	8.14	8.05	8.09%	8.89%
BB-	9.83	10.26	9.84	9.55	10.28	9.98	9.80	10.84	10.59	10.41%	10.11%
B+	9.39	9.29	9.19	8.71	8.63	8.54	7.62	7.54	7.46	7.54%	8.49%
B	8.22	8.12		7.67	7.59		7.32	7.24		7.28%	7.69%
B-	15.61			12.47			12.59			12.59%	13.56%