

# COST OF CAPITAL STUDY

**YIELD CAPITALIZATION  
 2023 ASSESSMENT YEAR**

APPENDIX C

## PASSENGER AIRLINES

<b>EQUITY RATE</b>		<b>15.00%</b>	
<b>CAPITAL ASSET PRICING MODEL</b>			PAGE
CAPM Ex Ante	12.75%		6
<b>DIVIDEND GROWTH MODELS</b>			
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
	<b>RANGE</b>	10.5% - 22%	
<b>DEBT RATE</b>		<b>9.50%</b>	10
<b>OPERATING LEASE DEBT RATE</b>		<b>6.24%</b>	10
<b>MARKET CAPITAL STRUCTURE</b>			
		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%		
<b>WEIGHTED AVERAGE COST OF CAPITAL</b>		<b>10.74%</b>	

**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%
<b>Mean</b>		<b>1.55</b>	<b>9.74</b>	<b>0.24%</b>	<b>3,672,551,196</b>	<b>33.3%</b>		<b>0.0%</b>	<b>11,232,593,667</b>	<b>66.7%</b>		
<b>Weighted Mean</b>					<b>33,052,960,764</b>	<b>24.6%</b>		<b>0.0%</b>	<b>101,093,343,000</b>	<b>75.4%</b>		
<b>Harmonic Mean</b>		<b>1.52</b>						<b>0.0%</b>	<b>3,527,370,896.36</b>	<b>58.6%</b>	<b>134,146,303,764</b>	
<b>Median</b>		<b>1.60</b>	<b>6.61</b>	<b>-</b>	<b>3562653754</b>	<b>33.0%</b>		<b>0.0%</b>	<b>3,200,376,000.00</b>	<b>67.0%</b>	<b>5,897,870,300.39</b>	
<b>Max</b>		<b>1.75</b>	<b>38.8</b>	<b>2.15%</b>	<b>10697158386</b>	<b>67.0%</b>		<b>0.0%</b>	<b>32389000000</b>	<b>116.1%</b>		
<b>Min</b>		<b>1.10</b>	<b>-5.1</b>	<b>0.00%</b>	<b>-4487585700</b>	<b>-16.1%</b>		<b>0.0%</b>	<b>1583889000</b>	<b>33.0%</b>		
<b>Say</b>		<b>1.50</b>				<b>35%</b>		<b>0.0%</b>		<b>65%</b>		<b>100%</b>

**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%
			<b>Mean</b>		<b>38.0%</b>		<b>0.0%</b>		<b>15.8%</b>		<b>46.2%</b>		
			<b>Weighted Mean</b>	<b>72,922,054,695</b>	<b>36.8%</b>	<b>-</b>	<b>0.0%</b>	<b>24,440,567,097</b>	<b>12.32%</b>	<b>101,020,500,000</b>	<b>50.9%</b>	<b>198,383,121,792</b>	
			<b>Median</b>		<b>35.7%</b>		<b>0.0%</b>		<b>15.94%</b>		<b>48.4%</b>		
			<b>Harmonic Mean</b>		<b>31.2%</b>		<b>0.0%</b>		<b>9.8%</b>		<b>38.3%</b>		
			<b>Max</b>		<b>68.4%</b>		<b>0.0%</b>		<b>29.1%</b>		<b>67.3%</b>		
			<b>Min</b>		<b>16.2%</b>		<b>0.0%</b>		<b>4.5%</b>		<b>15.8%</b>		
			<b>Std Dev</b>		<b>17.3%</b>		<b>0.0%</b>		<b>9.9%</b>		<b>16.3%</b>		
			<b>Coefficient of Variation</b>		<b>0.46</b>		<b>0.0%</b>		<b>0.63</b>		<b>0.35</b>		
			<b>Target</b>		<b>50%</b>		<b>0%</b>		<b>15%</b>		<b>35%</b>		<b>100%</b>

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
		<b>Mean</b>		<b>0.4</b>		<b>5.6</b>		<b>18.5</b>				<b>1.5</b>
		<b>Median</b>		<b>0.4</b>		<b>5.0</b>		<b>18.3</b>				<b>1.4</b>
		<b>Harmonic Mean</b>		<b>0.3</b>		<b>5.0</b>		<b>15.6</b>				<b>1.2</b>
		<b>Max</b>		<b>0.8</b>		<b>9.6</b>		<b>28.9</b>		-		<b>3.2</b>
		<b>Min</b>		<b>0.2</b>		<b>3.6</b>		<b>9.9</b>		-		<b>0.6</b>
		<b>Std Dev</b>		<b>0.2</b>		<b>2.0</b>		<b>8.0</b>				<b>0.8</b>
		<b>Coefficient of Variation</b>		<b>0.48</b>		<b>0.37</b>		<b>0.43</b>				<b>0.51</b>
		<b>Say</b>		<b>1.00</b>		<b>5.00</b>		<b>16.00</b>		<b>NMF</b>		<b>1.50</b>

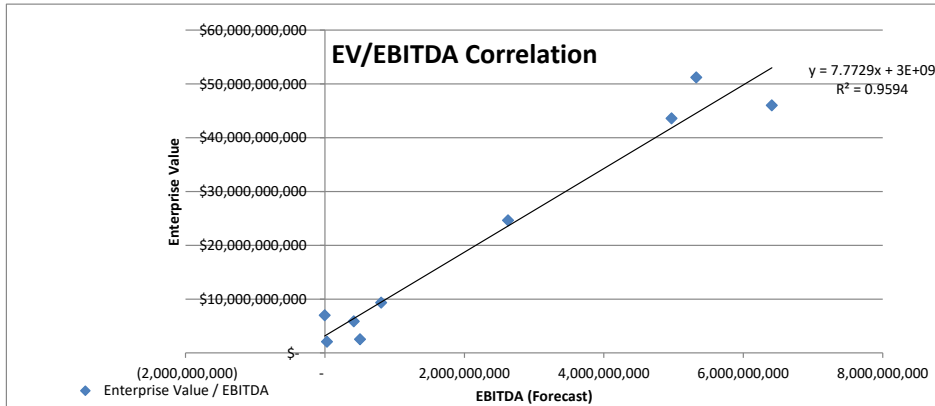
# ENTERPRISE VALUE MULTIPLES

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
	<b>Mean</b>			<b>(213.83)</b>	<b>2.58%</b>		<b>14.85</b>		<b>0.89</b>			<b>19.82</b>
	<b>Median</b>			<b>9.62</b>	<b>3.06%</b>		<b>9.39</b>		<b>0.89</b>			<b>8.75</b>
	<b>Harmonic Mean</b>											<b>9.91</b>
	<b>Max</b>			<b>70.04</b>	<b>5.87%</b>		<b>67.89</b>		<b>1.15</b>			<b>84.13</b>
	<b>Min</b>			<b>(2,061.83)</b>	<b>-1.47%</b>		<b>-</b>		<b>0.59</b>			<b>6.39</b>
	<b>Std Dev</b>			<b>693.30</b>	<b>2.1%</b>		<b>20.29</b>		<b>0.15</b>			<b>25.91</b>
	<b>Coefficient of Variation</b>			<b>(3.24)</b>	<b>0.82</b>		<b>1.37</b>		<b>0.17</b>			<b>1.31</b>
	<b>Say</b>			<b>17.00</b>	<b>3.00%</b>		<b>10.00</b>		<b>1.00</b>			<b>10.00</b>



## Forecast EV/EBITDA By Rank

Guideline Companies	EV/EBITDA forecast	
Spirit Airlines	0.00	<b>6.09 Low Average</b> <b>7.2 Low Median</b> <b>6.50 Say</b>
Allegiant Travel Co	5.08	
Delta Air Lines, Inc.	7.18	
United Continental Holding, Inc	8.77	
Southwest Airlines Co.	9.39	<b>22.53 High Average</b> <b>11.6 High Median</b> <b>11.00 Say</b>
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

2023 ASSESSMENT YEAR

PASSENGER AIRLINES

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

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**Ke = Cost of Equity** **12.75%**

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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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**Rp = Risk Premium** **5.85%**

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

to above

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**Rf = Risk Free Rate** **3.97%**

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**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

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**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%

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

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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%
<a href="https://www.cbo.gov/system/files/2021-02/56970-Outlook.pdf">https://www.cbo.gov/system/files/2021-02/56970-Outlook.pdf</a>		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 1.97%  
<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

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%	
							<b>Mean</b>			
							<b>Median</b>			
							<b>Harmonic Mean</b>			
							<b>Max</b>	<b>0.00%</b>		<b>0.00%</b>
							<b>Min</b>	<b>0.00%</b>		<b>0.00%</b>
							<b>Std Dev</b>			
							<b>Coefficient of Variation</b>			

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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%
						<b>Mean</b>	<b>27.85%</b>
						<b>Median</b>	<b>21.41%</b>
						<b>Harmonic Mean</b>	<b>19.32%</b>
						<b>Max</b>	<b>88.89%</b>
						<b>Min</b>	<b>9.56%</b>
						<b>Std Dev</b>	<b>23.9%</b>
						<b>Coefficient of Variation</b>	<b>0.86</b>
						<b>Say</b>	<b>20.00%</b>

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# SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

## DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 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	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%	
							<b>Mean</b>			
							<b>Median</b>			
							<b>Harmonic Mean</b>			
							<b>Max</b>	<b>0.00%</b>		<b>0.00%</b>
							<b>Min</b>	<b>0.00%</b>		<b>0.00%</b>
							<b>Std Dev</b>			
							<b>Coefficient of Variation</b>			

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NMF

# SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

## DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 ASSESSMENT YEAR

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%
								<b>Mean</b>	<b>7.46%</b>	<b>25.40%</b>
								<b>Median</b>	<b>7.46%</b>	<b>27.48%</b>
								<b>Harmonic Mean</b>	<b>7.46%</b>	<b>16.84%</b>
								<b>Max</b>	<b>7.46%</b>	<b>45.09%</b>
								<b>Min</b>	<b>7.46%</b>	<b>5.16%</b>
								<b>Std Dev</b>		<b>12.2%</b>
								<b>Coefficient of Variation</b>		<b>0.48</b>

**10.50%**

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# SUPPORT FOR DEBT RATING AND DEBT YIELD RATE

WASHINGTON STATE DEPARTMENT OF REVENUE

2023 ASSESSMENT YEAR

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+
<b>Overall Average Debt Rating</b>		<b>B1</b>	<b>B+</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%
<b>4th Qtr Average</b>	<b>4.81%</b>	<b>5.13%</b>	<b>5.48%</b>	<b>5.97%</b>
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%
<b>4th Qtr Average</b>		<b>5.43%</b>	<b>5.64%</b>	<b>5.93%</b>
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%
<b>4th Qtr Average</b>	<b>4.81%</b>	<b>4.84%</b>	<b>5.31%</b>	<b>6.01%</b>

	BB-	B+	B
<b>Bloomberg S&amp;P Corporate Bond Yields</b>	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%**

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# Passenger Airlines Bond Analysis

12/31/2023

2022.5

Company	Type/Symbol	Call	coupon	maturity	Price/Sales 2/23	Issued / Book	current yield	yield to	Weighted A Rating	Moody's S&P	Mkt Val	Mkt : Book	Embedded Rate	Debt Service	Industry	Company	
<b>FINRA</b>	<b>FINRA</b>																
American Airlines	AAL 495590	Y	3.750	2025	93.771	500,000	4.00%	6.53%	0.02%	Caa1	CCC	\$	468,855	93.77%	18,750	0.016%	0.217%
American Airlines	AAL 3687892	Y	6.250	2024	100.88	67,704	6.20%	5.62%	0.00%	Ba2	BBB-	\$	68,300	100.88%	4,231	0.002%	0.025%
American Airlines	CorBond AAL4150076	Y	4.950	2024	99.77	256,636	4.96%	5.11%	0.01%	B-	B-	\$					
American Airlines	CorBond AAL4218569	Y	3.375	2028	87.75	947,778	3.85%	6.06%	0.03%	B+	BB+	\$					
American Airlines	CorBond AAL5005428	N	6.500	2025	126.65	1,150,000				B-	B-	\$	192,637	92.00%	8,376	0.006%	0.085%
American Airlines	AAL 3978262	Y	4.000	2027	92.32	209,388	4.35%	6.09%	0.01%	BB	BB	\$	416,689	89.52%	17,156	0.014%	0.185%
American Airlines	Corp Bond AAL4160717	Y	3.700	2029	89.52	46,028	4.13%	5.99%	0.01%	BB	BB	\$	209,135	94.75%	8,167	0.005%	0.074%
American Airlines	Corp Bond AAL4547142	Y	3.700	2027	94.75	220,223	3.91%	5.03%	0.01%	Ba2	B	\$	918,397	96.90%	31,988	0.019%	0.253%
American Airlines	Corp Bond AAL4218569	Y	3.375	2028	96.9	947,778	3.48%	4.01%	0.02%	BB+	BB+	\$	258,650	97.24%	9,844	0.007%	0.101%
American Airlines	Corp Bond AAL4218570	Y	3.700	2029	97.22	266,046	3.81%	5.69%	0.01%	Ba2	B+	\$	491,182	91.50%	19,594	0.013%	0.180%
American Airlines	Corp Bond AAL4442279	Y	3.650	2030	91.5	536,811	3.99%	5.04%	0.01%	Baa1	B	\$	207,479	83.45%	9,945	0.008%	0.114%
American Airlines	Corp Bond AAL4442280	Y	4.000	2030	83.45	248,627	4.79%	6.90%	0.01%	Baa3	BB+	\$	175,857	87.03%	7,982	0.006%	0.077%
American Airlines	Corp Bond AAL5291551	Y	3.950	2032	87.03	202,065	4.54%	5.76%	0.01%	Baa3	B	\$	497,849	86.03%	18,229	0.014%	0.188%
American Airlines	Corp Bond AAL4867589	Y	3.150	2033	86.027	578,712	3.66%	4.88%	0.01%	Baa1	A-	\$	225,577	78.02%	10,128	0.009%	0.124%
American Airlines	Corp Bond AAL4867590	Y	3.500	2033	78.02	289,358	4.49%	6.45%	0.01%	BB+	B	\$	203,024	88.88%	8,795	0.007%	0.091%
American Airlines	Corp Bond AAL4867591	Y	3.850	2029	88.875	228,438	4.33%	5.96%	0.01%	Ba2	B	\$	192,637	92.00%	8,376	0.006%	0.085%
American Airlines	Corp Bond AAL3978262	Y	4.000	2027	92	209,388	4.35%	6.09%	0.01%	B+	B+	\$	510,851	90.04%	18,156	0.014%	0.190%
American Airlines	Corp Bond AAL4360356	Y	3.200	2029	90.04	567,360	3.55%	5.03%	0.01%	Baa1	B	\$	210,098	80.41%	9,537	0.010%	0.132%
American Airlines	Corp Bond AAL4360357	Y	3.650	2029	80.41	261,284	4.54%	7.58%	0.01%	Baa2	BB	\$	191,844	97.00%	8,990	0.006%	0.078%
American Airlines	Corp Bond AAL4442554	Y	4.950	2026	97	197,777	5.10%	5.92%	0.01%	Ba2	B	\$	372,363	92.26%	14,428	0.010%	0.134%
American Airlines	Corp Bond AAL4327176	Y	3.575	2029	92.263	403,589	3.87%	5.00%	0.01%	Baa1	A-	\$	229,498	87.52%	10,751	0.008%	0.114%
American Airlines	Corp Bond AAL4327177	Y	4.100	2029	87.522	262,218	4.68%	6.52%	0.01%	Baa3	BB+	\$	221,025	97.04%	11,957	0.007%	0.099%
American Airlines	Corp Bond AAL4327179	Y	5.250	2029	97.044	227,758	5.41%	6.01%	0.01%	Ba3	B	\$	256,045	99.77%	12,703	0.006%	0.087%
American Airlines	Corp Bond AAL4150076	Y	4.950	2024	99.77	256,635	4.96%	5.11%	0.01%	BB	B	\$	2,765,750	110.63%	29,750	0.086%	1.158%
American Airlines	Corp Bond AAL5007014	Y	11.750	2025	110.63	2,500,000	10.62%	6.97%	0.09%	Ba3	\$	375,009	92.91%	14,531	0.010%	0.131%	
American Airlines	Corp Bond AAL4288271	Y	3.600	2029	92.905	403,647	3.87%	4.90%	0.01%	Baa1	\$	208,764	97.27%	9,844	0.008%	0.103%	
American Airlines	Corp Bond AAL4288272	Y	4.000	2029	4.000	4,000	4.00%	4.00%	0.00%	Ba3	\$	112,196	94.50%	5,224	0.040%	0.544%	
American Airlines	Corp Bond AAL4288273	Y	4.400	2025	94.5	118,726	4.66%	6.87%	0.00%	Ba2	\$	161,145	84.45%	8,869	0.006%	0.076%	
American Airlines	Corp Bond AAL4526208	Y	3.600	2031	84.45	190,817	4.26%	5.99%	0.01%	Baa3	\$	364,386	88.44%	15,802	0.010%	0.138%	
American Airlines	Corp Bond AAL4526209	Y	3.350	2031	88.44	181,996	4.79%	6.44%	0.01%	Baa3	\$	516,606	85.60%	22,500	0.019%	0.261%	
American Airlines	Corp Bond AAL4405825	Y	3.000	2030	88.794	557,654	3.38%	4.82%	0.01%	Baa1	A	\$	495,163	88.79%	16,730	0.013%	0.179%
American Airlines	Corp Bond AAL4405827	Y	3.250	2030	81,064	256,143	4.01%	6.52%	0.01%	Baa3	BB+	\$	207,640	81.06%	8,325	0.008%	0.111%
American Airlines	Corp Bond AAL4544076	Y	3.750	2027	100.77	1,000,000	4.39%	5.45%	0.02%	Ba2	B	\$	92,202	92.20%	4,048	0.055%	0.709%
American Airlines	Corp Bond AAL5288053	Y	2.875	2036	82.060	757,825	3.50%	4.70%	0.02%	Baa	A-	\$	621,871	82.06%	21,787	0.018%	0.237%
<b>2 Book Val</b>	<b>200</b>	<b>sum</b>			<b>3125.759</b>	<b>\$ 15,043,791</b>	<b>Percent of book 1562.88%</b>	<b>0.40%</b>			<b>\$ 11,920,799</b>	<b>79.24%</b>	<b>4.41%</b>	<b>\$ 663,519</b>	<b>4.874%</b>		
<b>FINRA</b>	<b>FINRA</b>																
Delta Airlines	Corp Bond DAL 4277694	Y	3.625	2029	92.328	210,446	3.93%	5.04%	0.01%	A2	A+	\$	194,301	92.33%	7,629	0.005%	0.070%
Delta Airlines	Corp Bond DAL 4277695	Y	3.875	2029	92.75	46,765	4.18%	5.22%	0.00%	Baa1	B+	\$	43,375	92.75%	1,812	0.001%	0.016%
Delta Airlines	Corp Bond DAL 3702190	N	7.041	2023	100.85	24,488	6.98%	5.27%	0.00%	Ba2	BB	\$	24,696	100.85%	1,724	0.001%	0.009%
Delta Airlines	Corp Bond Dal 4622968	Y	3.800	2023	99.848	355,960	3.81%	4.11%	0.01%	Baa3	BB	\$	355,419	99.85%	13,526	0.007%	0.097%
Delta Airlines	Corp Bond Dal 4622969	Y	4.375	2028	91.536	500,000	4.78%	6.24%	0.02%	Baa3	BB	\$	457,680	91.54%	21,875	0.015%	0.201%
Delta Airlines	Corp Bond DAL 4900853	Y	2.900	2024	94.955	900,000	3.05%	6.54%	0.03%	Baa3	BB	\$	854,595	94.96%	26,100	0.029%	0.391%
Delta Airlines	Corp Bond DAL 4900990	Y	3.750	2029	85.601	600,000	4.38%	6.54%	0.02%	Baa3	BB	\$	513,606	85.60%	22,500	0.019%	0.261%
Delta Airlines	Corp Bond DAL 4962232	Y	2.000	2029	87.000	724,263	2.30%	4.32%	0.02%	A1	A+	\$	630,688	97.08%	14,485	0.015%	0.208%
Delta Airlines	Corp Bond DAL 4981654	Y	7.000	2025	102.011	2,822,752	6.86%	6.11%	0.09%	Baa2	BBB	\$	2,879,518	102.01%	197,593	0.085%	1.146%
Delta Airlines	Corp Bond DAL 4962233	Y	2.500	2029	87.000	204,106	2.87%	4.88%	0.00%	A3	BBB	\$	177,572	87.00%	5,103	0.005%	0.066%
Delta Airlines	Corp Bond DAL 5047253	Y	4.500	2025	97.250	1,644,178	4.63%	5.71%	0.05%	Baa1	B+	\$	1,598,963	97.25%	73,988	0.046%	0.624%
Delta Airlines	Corp Bond DAL 5047255	Y	4.750	2027	94.002	3,500,000	4.04%	6.01%	0.01%	Ba2	B	\$	3,298,800	94.25%	166,250	0.104%	1.398%
Delta Airlines	Corp Bond DAL 5000237	Y	7.375	2026	103.659	857,129	7.11%	6.18%	0.03%	Baa3	BB	\$	888,491	103.66%	63,213	0.026%	0.352%
Delta Airlines	Corp Bond DAL RY	Y	6.821	2024	106.770	25,108	6.39%	2.18%	0.00%	Baa2	\$	26,808	106.77%	1,713	0.000%	0.004%	
Delta Airlines	Corp Bond DAL 4806640	Y	3.204	2025	105.650	8,111	6.64%	4.47%	0.00%	Ba1	A	\$	8,521	105.65%	651	0.002%	0.026%
Delta Airlines	Corp Bond DAL 4806641	Y	3.404	2024	100.639	425,000	3.29%	4.38%	0.01%	A1	\$	413,389	97.27%	13,617	0.009%	0.124%	
Delta Airlines	Corp Bond DAL 3702264	Y	6.264	2023	100.133	75,000	3.38%	2.96%	0.00%	A3	\$	75,479	100.64%	2,553	0.001%	0.015%	
Delta Airlines	Corp Bond DAL 3702264	Y	6.264	2023	100.133	100,000	6.26%	6.05%	0.01%	WR	\$	100,000	100.13%	13,125	0.039%	0.504%	
<b>13 Book Val</b>	<b>1300</b>	<b>sum</b>			<b>1838.223</b>	<b>\$ 13,091,218</b>	<b>% of book 69.79%</b>	<b>0.38%</b>			<b>\$ 12,609,516</b>	<b>96.32%</b>	<b>4.92%</b>	<b>\$ 643,665</b>	<b>5.053%</b>		
<b>FINRA</b>	<b>FINRA</b>																
Hawaiian Airlines	Corp Bond HA 4007036	N	3.900	2027	88.020	173,336	4.43%	7.10%	0.01%	Ba3	BB	\$	152,570	76.99	6,760	0.006%	0.082%
Hawaiian Airlines	Corp Bond HA 4007037	N	4.950	2023	101.123	116,280	4.94%	4.70%	0.00%	WR	\$	116,423	101.12%	5,756	0.003%	0.036%	
<b>2 Book Val</b>	<b>200</b>	<b>sum</b>			<b>188.143</b>	<b>\$ 289,616</b>	<b>% of book 94.07%</b>	<b>0.01%</b>			<b>\$ 268,994</b>	<b>92.88%</b>	<b>12,516</b>	<b>\$ 643,665</b>	<b>0.118%</b>		
<b>South West Airlines</b>	<b>LUV 4422286</b>	Y	3.000	2026	93.137	300,000	3.22%	5.19%	0.01%	Baa1	BBB	\$	279,411	93.14%	9,000	0.008%	0.221%
<b>South West Airlines</b>	<b>LUV GG</b>	Y	7.375	2027	106.515	100,000	6.92%	5.69%	0.00%	Baa1	BBB	\$	106,515	106.52%	7,375	0.03%	0.081%
<b>South West Airlines</b>	<b>LUV4982569</b>	N	1.250	2025	115.500	2,300,000	1.08%	-4.47%	-0.05%	Baa1	BBB	\$	2,656,500	115.50%	28,750	-0.051%	-1.458%
<b>South West Airlines</b>	<b>LUV4565970</b>	Y	3.450	2027	91.625	300,000	3.77%	5.61%	0.01%	Baa1	BBB	\$	279,475	93.13%	10,008	0.008%	

## 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

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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	-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	103.45
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	26.49
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	57.41
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	52.60

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
<b>Historic</b>	0			0.00%	100.00%	4.35		-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
<b>Stage 1</b>	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
<b>Stage 2</b>	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
<b>Stage 3</b>	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
								<b>22.44%</b>

price = 42.94

Allegiant Travel Co  
 ALGT

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow
<b>Historic</b>	0			0.00%	100.00%	3.13		-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
<b>Stage 1</b>	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
<b>Stage 2</b>	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
<b>Stage 3</b>	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
								<b>22.13%</b>

price = 67.99

American Airlines Group  
 AAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow
<b>Historic</b>	0			0.00%	100.00%	0.50		-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
<b>Stage 1</b>	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
<b>Stage 2</b>	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
<b>Stage 3</b>	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
								<b>26.02%</b>

price = 12.72

Delta Air Lines Inc  
 DAL

	Year	Growth Rate	ROE	Reinvestment Rate	Payout Ratio	Earnings	FCFE	Cash Flow
<b>Historic</b>	0			0.00%	100.00%	3.20		-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
<b>Stage 1</b>	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
<b>Stage 2</b>	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
<b>Stage 3</b>	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
								<b>23.42%</b>

price = 32.86

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	
<b>Stage 1</b>	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	
<b>Stage 2</b>	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	
<b>Stage 3</b>	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
									<b>25.42%</b>

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	
<b>Stage 1</b>	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	
<b>Stage 2</b>	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	
<b>Stage 3</b>	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
									<b>20.48%</b>

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	
<b>Stage 1</b>	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	
<b>Stage 2</b>	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	
<b>Stage 3</b>	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
									<b>18.93%</b>

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	
<b>Stage 1</b>	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	
<b>Stage 2</b>	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	
<b>Stage 3</b>	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
									<b>18.79%</b>

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	
<b>Stage 1</b>	2024	3	12.82%	18.25%	62.27%	37.73%	4.15	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
<b>Stage 2</b>	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
<b>Stage 3</b>	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
									<b>22.69%</b>

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	<b>71.28</b>	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
<b>AA</b>	5.97	6.09	6.14	5.42	5.60	5.67	5.52	5.71	5.78	5.67%	5.77%
<b>AA-</b>	5.91	5.76	5.80	5.32	5.20	5.25	5.45	5.33	5.38	5.38%	5.49%
<b>A+</b>	5.94	5.60	5.28	5.37	5.03	4.71	5.51	5.18	4.85	5.18%	5.28%
<b>A</b>	6.11	6.03	5.90	5.25	5.05	4.93	5.41	5.14	5.02	5.19%	5.43%
<b>A-</b>	6.30	6.27	6.34	5.69	5.68	5.76	5.80	5.76	5.79	5.79%	5.93%
<b>BBB+</b>	6.30	6.20	6.13	5.59	5.47	5.37	5.72	5.55	5.43	5.57%	5.75%
<b>BBB</b>	6.71	6.58	6.53	6.01	5.91	5.96	6.19	6.10	6.11	6.13%	6.23%
<b>BBB-</b>	6.98	7.05	7.42	6.33	6.60	7.00	6.51	6.73	7.12	6.79%	6.86%
<b>BB+</b>	7.82	7.84		7.46	7.41		7.66	7.64		7.65%	7.64%
<b>BB</b>	11.16	9.91	9.59	11.65	9.09	8.53	12.07	9.60	9.11	10.26%	10.08%
<b>BB-</b>	9.27	8.85	8.62	8.22	8.71	8.50	8.29	8.69	8.47	8.48%	8.63%
<b>B+</b>	10.18	10.03	9.90	12.01	11.90	11.78	12.08	11.95	11.82	11.95%	11.29%
<b>B</b>	12.30	12.15		13.22	13.10		13.34	13.21		13.28%	12.89%
<b>B-</b>	8.76			8.05			7.59			7.59%	8.13%