2020

CORPORATE VALUATION

Financial Analysis and Forecasting

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FINAL REPORT

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Executive Summary

Final Recommendation

<u>Short-term investors</u> – SELL, target price of $18.44.

<u>Long-term investors</u> – HOLD, MODERATE BUY, target price of $49.19

(see Intrinsic Value Re-assessment on p.43),

With a range of $8.88 to $57.29 based on worst-case pessimistic and best-case optimistic debt and equity scenarios.

Southwest Airlines has and will continue to distinguish itself in the airline industry as a low cost-leader, with both price efficiency and overall network capability leadership. Relevant factors in consideration for the final recommendation given are as follows.

Financial Ratio analysis indicates that, prior to the coronavirus shutdown, Southwest (SW) had the highest profitability per seat mile, lower leverage, and tracked with competitors in relation to liquidity. In addition, Southwest offered larger Dividend Payout Ratio than competitors, and completed stock buybacks each year from 2017-2019, both of which have ceased as a condition of the government bailout.

FCFF valuation was driven by increasing revenues and operating margins which tracked with a terminal growth rate of 3.96% prior to coronavirus shutdown.

Risk and return analysis with a sample portfolio indicated that Southwest's (LUV) average expected return of 1.72% monthly is greater than the risk adjusted return or required return of (sample portfolio consists of stocks NEM and LUV) 1.14% monthly which means it is underpriced/undervalued. LUV stock has a current beta is 1.2 when a regression is run against monthly 5-years of S&P500 data representing the market.

Comparable valuation based on a current long-term growth projection of 0% indicated that the range of the expected share price is from $11.35 to $30.68 based on P/E ratios, which are lower than the market price snapshot of $35.61, indicating that the stock is overvalued. This signal of overvaluation may be due to investors viewing LUV as a favorable

stock perhaps due to its long-term growth, and signals of market price due to dividend payout and stock buyback policies.

Scenario Analysis revealed intrinsic value/share expected ranges based on updated WACC values. WACC weights of total debt and equity prior to the covid-19 shutdown were 39.54% debt to 60.46% equity. The most pessimistic future outlook indicates 52.01% to 47.99%, respectively. The most optimistic future outlook indicates weights of 43.65% to 56.35%, which Indicates that SW will need to increase both equity and debt in either case, with debt being currently favored due to favorable interest rates as well as the case that Southwest is not over-levered.

Sensitivity table for current enterprise value as a function of WACC and growth rates indicated that our range of values for optimistic and pessimistic tracks with estimates of two-year ranges of -25% to 0% growth rate and WACC values of 8% to 9.5%.

Finally, a **relative evaluation of EV/EBITDA** indicates that only three competitor airlines can be compared due to positive EBITDA, Spirit (266.28), Air Canada (74.31), and Southwest (77.46). According to this metric, Air Canada has EV/EBITDA multiple that is 4.24% more favorable than Southwest.

Industry + Company Overview

Industry Overview

In 1938 the Civil Aeronautics Board was created to regulate airlines in the United States. This governing body decided routes airlines could fly and fares they charged passengers. Deregulation started in October 1978 when U.S. Congress passed the Airline Deregulation Act of 1978 and on January 1, 1983 all regulations on fares were eliminated. After deregulation competition increased and started price wars that increased operating costs and diminished returns, with an increase in mergers and bankruptcies. This is much like our current landscape today.[1]

[1] "Deregulating the Airlines," 1985, E. E. Baily et al., MIT Press, Cambridge.

The airline Industry poses unique challenges to a business. The industry is labor, energy, and capital intensive and is largely dependent on fuel and technology. The industry is heavily taxed and subject to government regulations. It is at times a volatile industry because recessions, acts of terrorism, weather/natural disasters, and contagious diseases (as they are experiencing now with COVID-19) have an immediate impact on sales. Survival in this highly competitive environment requires great operational efficiency.

Market strategies in the industry vary but tend to fall on extremes of the continuum of product versus cost focus. The cost leadership strategy (Otherwise known as 'Southwest model") focuses on driving down costs for customers in general. Carriers with this strategy often provide unbundled services to maintain low costs. The differentiation strategy focuses on having unique product offerings with the business customer being the highest value marketing target.[2]. Airlines have recently attempted to reduce costs by replacing aging planes with a fuel-efficient fleet, increasing passenger capacity, or using hub-and-spoke routing to decrease costs. Due to unique industry attributes, additional accounting ratios are used to gauge company efficiency as well as fuel costs and are included in this analysis.[3]

Southwest Overview

Southwest Airlines Co. operates Southwest Airlines, a major passenger airline that provides scheduled air transportation in the United States and near-international markets. Southwest started service on June 18, 1971, with three Boeing 737 aircraft serving three Texas cities: Dallas, Houston, and San Antonio. At December 31, 2019, Southwest had a total of 747 Boeing 737 aircraft in its fleet and served 101 destinations in 40 states, the District of Columbia, the Commonwealth of Puerto Rico, and ten near-international countries: Mexico, Jamaica, The Bahamas, Aruba, Dominican Republic, Costa Rica, Belize, Cuba, the Cayman Islands, and Turks and Caicos. On March 13, 2019, the FAA issued an emergency order for all U.S. airlines to ground the Boeing 737 MAX aircraft, including the 34 MAX 8 aircraft in Southwest's fleet. The MAX groundings adversely affected Southwest's operations and financial results for the year ended December 31, 2019.[4]

[2]"A quantitative means of comparing competitive advantage among airlines with heterogeneous business models: Analysis of U.S. airlines," 2018, Loren Moir & Gui Lohmann, Journal of Air Transport Management, Vol. 69
[3] "Measurement of efficiency in the airline industry using data envelopment analysis," 2013, Atul Rai, Investment Management and Financial Innovations, Volume 10, Issue 1
[4] Southwest Airlines Co., 2019, 10-K SEC filing

Although Southwest started on the low-cost carrier model, it has since become a more hybrid operation, differentiating based on customer satisfaction, price, geography, and network availability. Southwest is large enough to operate using a traditional hub and spoke model, but it has its own distinct strategy of network saturation and continuous geographic expansion.

Competitors

Competitors for this analysis were determined for Southwest based on the prerequisite that they were publicly traded companies with financial statements that could be analyzed, and three overlapping factors: they were listed on Bloomberg terminal as being competitors, they were indicated as competitors in a Southwest Hoover report, and they were identified as having market strategies in geographic competition with Southwest. Since Southwest uses a hybrid strategy, multiple types of airlines following differentiation (Delta, American, United, Alaska, Air Canada), cost (Spirit), and hybrid (JetBlue) strategies were used for comparison purposes. JetBlue is one airline that identifies as hybrid, but it does not have a strong differentiation strategy outside of focusing on providing value to business passengers and is often termed as being "stuck in the middle" between strategies.[5]

[5] "A quantitative means of comparing competitive advantage among airlines with heterogeneous business models: Analysis of U.S. airlines," 2018, Loren Moir & Gui Lohmann, Journal of Air Transport Management, Vol. 69

Financial Analysis

Method

Ratios from the fiscal years of 2017 – 2019 at Southwest were compared side by side to identify fluctuations. Then, the data of SW was compared against competitors averages to evaluate Southwest's relative success. Last, enhancement details were found in the financial statements and 10k notes. *(See Tables 1-3)*

Ratio Analysis

DuPont Analysis - Profitability

Return on Equity (**ROE)** averaged higher for Southwest across the analysis period (FY 2017 through 2019) than competitors with a downturn in ROE in FY 2019. Based on the DuPont formula (ROE = Profit Margin [PM] * Asset Turnover [TATO] * Leverage Ratio [EM]), SW consistently has higher **PM** ratio than competitors. **TATO** meets or exceeds industry competitors and is stable across the analysis period (FY 2017 through 2019). Southwest maintains low **EM** compared with competitors; therefore, PM is likely responsible for consistently higher ROE ratio and for dropping ROE in 2019. *(See Figures 1 and 2)*

Table 1 - Financial Ratios Across Airlines - FY 2017

In Millions of USD except Per Share	Average* FY 2017	Southwest FY 2017	Jet Blue FY 2017	Spirit FY 2017	Delta FY 2017	Alaska FY 2017	American FY 2017	United FY 2017	Air Canada FY 2017
Market Value *(Performance)*									
Market Capitalization to Book Value	**(1.83)**	3.75	1.52	1.74	3.16	2.61	(31.72)	2.21	2.07
Profitability									
Operating Margin (%)	**13.11**	15.75	13.96	15.40	14.33	15.77	10.44	9.60	9.61
Return on Assets (%)	**9.07**	13.87	11.93	11.39	6.11	9.27	2.46	5.20	12.34
Operating Profit per Available Seat Mile Including Fuel	**0.57**	1.32	1.32	1.30	(0.12)	1.95	0.27	0.13	(1.60)
Operating Profit per Available Seat Mile Excluding Fuel	**3.11**	3.97	3.75	3.38	2.54	4.28	2.99	2.76	1.23
Dupont Analysis *(ROE)*									
Normalized Return on Equity (%)	**29.52**	37.45	26.07	14.85	27.72	24.75	—	23.89	51.89
Profit Margin (%)	**11.12**	15.88	16.26	15.72	7.79	12.16	3.01	5.67	12.48
Total Asset Turnover	**0.83**	0.87	0.73	0.72	0.78	0.76	0.82	0.92	0.99
Leverage Ratio	**7.64**	2.68	2.18	2.31	4.23	3.24	34.63	4.74	7.09
Asset Management *(Efficiency)*									
Accounts Receivable Turnover	**30.88**	35.01	33.63	58.45	18.53	24.55	25.48	30.04	21.37
Days Sales Outstanding - DSO	**13.21**	10.43	10.85	6.24	19.70	14.87	14.33	12.15	17.08
Fuel Cost per Available Seat Mile	**2.54**	2.65	2.43	2.08	2.66	2.33	2.72	2.63	2.83
Fuel % of Oper Exp	**21.62**	23.00	22.60	27.25	19.21	21.64	19.56	20.00	19.67
Debt Management *(Leverage)*									
Long Term Debt to Total Equity (%)	**80.61**	41.71	21.20	78.76	52.61	65.38	—	145.40	159.21
Liquidity									
Current Ratio	**0.83**	0.70	0.56	1.93	0.41	0.80	0.60	0.56	1.06
Quick Ratio	**0.65**	0.57	0.44	1.43	0.26	0.73	0.44	0.40	0.91
Cash Ratio	**0.53**	0.48	0.32	1.36	0.14	0.60	0.33	0.30	0.75
Altman's Z-Score* *(Bankruptcy Risk)*	**2.31**	3.73	2.29	2.42	2.21	2.81	1.50	1.79	1.74
Free Cash Flow	**247.42**	1,806.00	177.00	(203.64)	1,132.00	564.00	(1,227.00)	(585.00)	316.00
Dividend Payout Ratio (%)	**7.77**	8.52	0.00	0.00	22.81	15.40	15.44	0.00	0.00
Sustainable Growth Rate (%)	**34.83**	33.97	26.07	26.32	19.94	25.42	—	24.65	87.44

*Note: calculated competitor average

Source: Calculations based on company and Bloomberg data.

Table 2 - Financial Ratios Across Airlines - FY 2018

In Millions of USD except Per Share	Average* FY 2018	Southwest FY 2018	Jet Blue FY 2018	Spirit FY 2018	Delta FY 2018	Alaska FY 2018	American FY 2018	United FY 2018	Air Canada FY 2018
Market Value *(Performance)*									
Market Capitalization to Book Value	**(9.12)**	2.61	1.05	2.05	2.48	2.00	(87.52)	2.25	2.14
Profitability									
Operating Margin (%)	**8.28**	14.83	3.64	8.69	12.29	7.96	6.60	8.03	4.22
Return on Assets (%)	**4.13**	9.60	1.82	3.35	6.91	4.04	2.49	4.66	0.19
Operating Profit per Available Seat Mile Including Fuel	**0.14**	1.06	(0.01)	0.96	0.22	0.99	(0.43)	(0.11)	(1.60)
Operating Profit per Available Seat Mile Excluding Fuel	**3.32**	3.95	3.16	3.53	3.64	3.95	3.08	3.27	1.98
Dupont Analysis *(ROE)*									
Normalized Return on Equity (%)	**18.37**	24.98	10.72	16.84	29.87	15.37	—	26.91	3.94
Profit Margin (%)	**5.13**	11.22	2.47	4.69	8.86	5.29	3.17	5.15	0.21
Total Asset Turnover	**0.81**	0.86	0.74	0.71	0.78	0.76	0.79	0.90	0.91
Leverage Ratio	**3.64**	2.63	2.20	2.52	4.35	3.00	—	4.87	5.92
Asset Management *(Efficiency)*									
Accounts Receivable Turnover	**32.27**	35.72	33.59	68.53	18.95	23.38	25.76	29.86	22.36
Days Sales Outstanding - DSO	**13.00**	10.22	10.87	5.33	19.27	15.61	14.17	12.22	16.32
Fuel Cost per Available Seat Mile	**3.19**	2.89	3.17	2.57	3.42	2.96	3.51	3.38	3.58
Fuel % of Oper Exp	**25.25**	24.60	25.70	31.60	23.03	25.40	23.63	24.00	24.04
Debt Management *(Leverage)*									
Long Term Debt to Total Equity (%)	**111.25**	34.68	46.08	105.04	102.68	43.11	—	176.41	270.77
Liquidity									
Current Ratio	**0.73**	0.64	0.55	1.61	0.34	0.61	0.48	0.51	1.11
Quick Ratio	**0.60**	0.54	0.43	1.38	0.22	0.54	0.36	0.39	0.97
Cash Ratio	**0.50**	0.47	0.35	1.33	0.10	0.42	0.26	0.29	0.83
Altman's Z-Score* *(Bankruptcy Risk)*	**1.92**	3.03	1.72	2.16	1.78	2.36	0.92	1.64	1.78
Free Cash Flow	**982.94**	2,971.00	86.00	(100.51)	1,846.00	235.00	(212.00)	2,004.00	1,034.00
Dividend Payout Ratio (%)	**10.81**	14.12	0.00	0.00	23.10	36.09	13.17	0.00	0.00
Sustainable Growth Rate (%)	**12.68**	21.72	4.01	8.44	23.08	7.75	—	22.68	1.10

*Note: calculated competitor average

Source: Calculations based on company and Bloomberg data.

Table 3 - Financial Ratios Across Airlines - FY 2019

In Millions of USD except Per Share	Average* FY 2019	Southwest FY 2019	Jet Blue FY 2019	Spirit FY 2019	Delta FY 2019	Alaska FY 2019	American FY 2019	United FY 2019	Air Canada FY 2019
Market Value *(Performance)*									
Market Capitalization to Book Value	**(11.21)**	2.85	1.10	1.22	2.45	1.92	(104.08)	1.93	2.91
Profitability									
Operating Margin (%)	**11.71**	13.55	10.29	14.04	13.83	12.29	7.32	10.54	11.79
Return on Assets (%)	**6.00**	8.82	4.97	5.49	7.64	6.43	2.80	5.92	5.95
Operating Profit per Available Seat Mile Including Fuel	**0.58**	0.83	0.77	1.20	1.98	1.59	(0.24)	0.23	(1.70)
Operating Profit per Available Seat Mile Excluding Fuel	**3.56**	3.59	3.66	3.58	5.07	4.41	3.06	3.37	1.72
Dupont Analysis *(ROE)*									
Normalized Return on Equity (%)	**24.46**	23.37	12.32	16.80	32.22	19.75	—	29.03	37.71
Profit Margin (%)	**7.91**	10.26	7.03	8.75	10.14	8.76	3.68	6.96	7.72
Total Asset Turnover	**0.76**	0.86	0.71	0.63	0.75	0.73	0.76	0.85	0.77
Leverage Ratio	**3.77**	2.65	2.41	2.91	4.30	2.96	—	4.71	6.47
Asset Management *(Efficiency)*									
Accounts Receivable Turnover	**31.28**	27.12	36.62	63.07	18.19	25.49	26.49	31.01	22.22
Days Sales Outstanding - DSO	**13.20**	13.46	9.97	5.79	20.06	14.32	13.78	11.77	16.43
Fuel Cost per Available Seat Mile	**2.98**	2.76	2.89	2.38	3.09	2.82	3.30	3.14	3.42
Fuel % of Oper Exp	**23.74**	22.30	25.30	29.84	21.09	24.33	22.00	22.98	22.09
Debt Management *(Leverage)*									
Long Term Debt to Total Equity (%)	**102.99**	28.72	55.85	140.56	92.25	62.41	—	158.80	182.36
Liquidity									
Current Ratio	**0.70**	0.67	0.67	1.25	0.41	0.64	0.45	0.55	0.97
Quick Ratio	**0.58**	0.58	0.59	1.04	0.28	0.58	0.30	0.42	0.88
Cash Ratio	**0.48**	0.45	0.50	0.98	0.14	0.48	0.21	0.33	0.76
Altman's Z-Score* *(Bankruptcy Risk)*	**1.89**	3.24	1.77	1.56	2.00	2.23	1.00	1.78	1.52
Free Cash Flow	**1,635.35**	2,960.00	293.00	216.78	3,489.00	1,026.00	(453.00)	2,381.00	3,170.00
Dividend Payout Ratio (%)	**8.59**	15.13	0.00	0.00	20.56	22.44	10.56	0.00	0.00
Sustainable Growth Rate (%)	**22.15**	19.83	12.00	16.00	26.08	14.76	—	27.90	38.45

*Note: calculated competitor average

Source: Calculations based on company and Bloomberg data.

Figure 1 – Return on Equity FY 2017 – 2019: SW and Competitors

Note: Calculations *(Fig 1 and Fig 2)* based on company and Bloomberg Data.

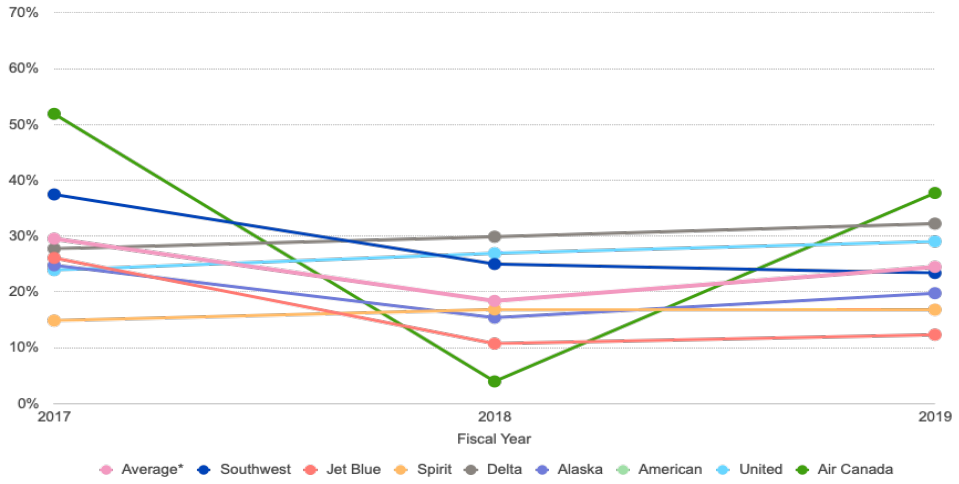
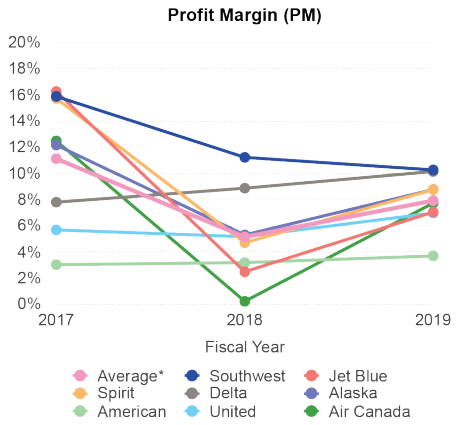
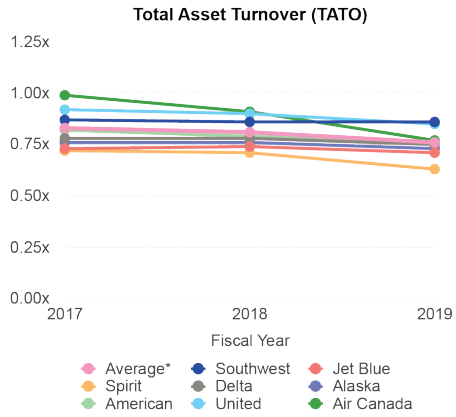
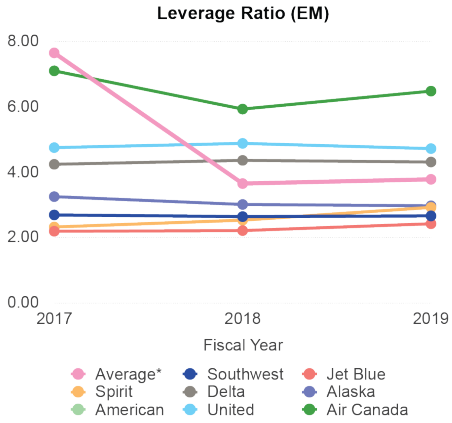


Figure 2 – DuPont Analysis Split: SW and Competitors







There is a potential **opportunity** for improvement based on profit observations which align with financial statements. For SW, there is a decreasing trend in Net Income (NI) over the analysis period. NI dropped significantly by 32% between 2017 and 2019. There is a rise in operating sales which is offset with growing operating expenses resulting in a decrease in overall PM.

Table 4 - Profitability - ROE

Return on Equity	Average* FY 2017	Average* FY 2018	Average* FY 2019	Southwest FY 2017	Southwest FY 2018	Southwest FY 2019
Profitability						
Normalized Return on Equity (%)	29.52	18.37	24.46	37.45	24.98	23.37

*Note: calculated competitor average
Source: Calculations based on company and Bloomberg data.

Table 5 - Profitability - Net Income

Net Income (Millions)	Southwest FY 2017	Southwest FY 2018	Southwest FY 2019
Profitability			
Net Income (Millions)	3,357	2,465	2,300

*Note: calculated competitor average
Source: Calculations based on company and Bloomberg data.

Figure 3 – Southwest ROE 2017 - 2019

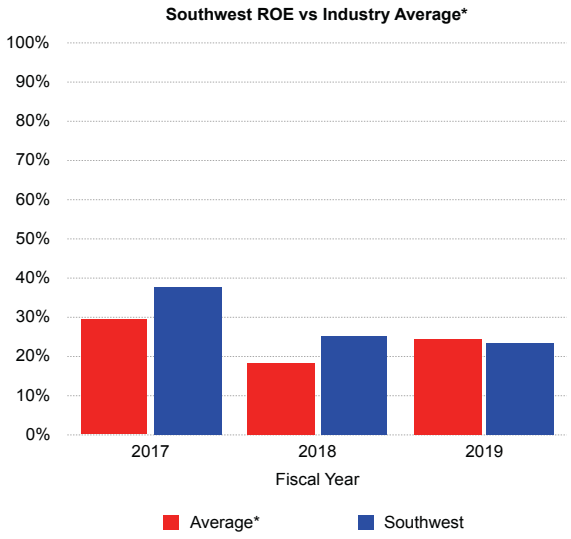
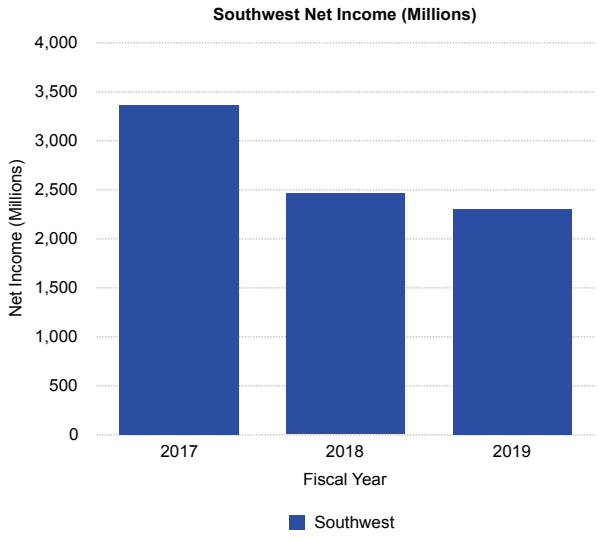


Figure 4 – Southwest Net Income 2017 - 2019



Note: Calculations based on company and Bloomberg Data.

Looking across all expenses, SW Operating Margin % (OM) remains above competitor averages across all three years. Yet, operating Profit per Available Seat Mile Including Fuel[6] declines over the three years (but remains above the competitor averages) while Operating Profit per Available Seat Mile Excluding Fuel Is steady across the three years and stays above competitor averages. This indicates that fuel expense is a significant factor in reductions to operating profits over the analysis period, however this is consistent with industry trends in fuel pricing. Most of the industry competitors including SW use fuel price hedging strategies and thereby fuel costs are relatively stable over time, with the notable exception of Spirit Airlines having higher overall fuel costs above and beyond industry average changes in fuel costs.

Asset Management (Efficiency)

Accounts Receivables Turnover (ARTO) indicates a decrease over the analysis period meaning accounts are taking longer to clear. **Days Sales Outstanding (DSO)** is increasing over the three years reflecting the same potential issue. competitor averages over the analysis period indicate better overall performance in Accounts Receivable (AR) efficiency.

Table 6 - Efficiency

	Southwest FY 2017	Southwest FY 2018	Southwest FY 2019
Accounts Receivables Turnover (ARTO)	35.01	35.72	27.12
Days Sales Outstanding (DSO)	10.43	10.22	13.46

*Note: calculated competitor average
Source: Calculations based on company and Bloomberg data.

The time period to collect AR revenue has grown over the last three years. The Income Statement (IS) indicates that sales are increasing and the Balance Sheet (BS) indicates that over the same time period that AR has increased overall by 64%.

One hypothesis of why AR increased more significantly in 2019 is that SW updated its loyalty program in October 2019. SW changed its award-winning loyalty program, in which customer's earned loyalty points become "forever" points. Previously, loyalty points expired within certain periods. Points are counted as AR. This change may have partly contributed to the increase in AR in 2019.

[6] "Profit Per Seat Mile Gauges Airline Performance: BI Basics," 2016, George Ferguson, BLOOMBERG PROFESSIONAL SERVICE

There is an **opportunity** to improve ARTO given higher Competitors Averages. However, increases in AR could have resulted in an increase in sales and deployment of a recent overhaul of the rewards system in October 2017, resulting in increased expenses, indicating a decline in Net Income (NI). The 64% increase in receivables does not match growth in sales as sales increased modestly at 5-6% which further supports the hypothesis that the increase in AR may be a result of the rewards program deployment.

SW's DSO shows an opportunity for improvement, however cash flows have increased from 2017-2019 due to stock buybacks and subsequent reduction of dividend payments, as well as a decrease in Fixed Assets in 20218/19 so this may not be the highest priority efficiency and more of a long-term strategy of rebalancing relative to competitors. SW maintains a strong position against competitors despite decreases.

TATO is stable and consistently exceeds industry standards. Current Assets (CA) have marginally increased through leasing agreements while Fixed Assets are decreasing due to a reduction in Deposits on Flight Equipment Purchase Contracts and 10% increase to Depreciation. Overall changes in assets will be addressed in more detail below in liquidity.

Liquidity

Southwest is slightly below competitor averages on liquidity ratios (Quick Ratio [QR], Current Ratio [CR], Cash Ratio [CR]) for the years 2017-2019). However, Cash and Cash Equivalents are increasing on the Balance Sheet during this time. SW likely holds either less Current Assets (CA) or more Current Liabilities (CL) than competitors. Marginal differences between Quick Ratio and Current Ratio indicates the relative unimportance of inventory in this analysis.

Quick Ratio is stable for SW and slightly increasing, meaning liquidity is increasing. SW reached competitor averages in 2019.

Current ratio over the analysis period indicates a decrease reflecting the increase in current liabilities by 30.4% despite an increase of 25% in Current Assets (CA) from 2017-2019. The increase in Current Liabilities (CL) is primarily due to Current maturities of Long-term Debt which grew by 35% from 2017-2019. The other increases in Current Liabilities are growth in account Payables, increase of Accruals and Air Traffic Control Liabilities. The increases in CA

are due to a 24% increase in Cash and Cash Equivalents and 64% increase in Accounts receivables.

Cash Ratio is slightly below competitor averages throughout the analysis period and decreasing although cash is increasing. Therefore, the change in the proportion of cash and cash equivalents to current liabilities is due to an increase in Current Liabilities and not a reduction in Cash or in Short-term Investments. Southwest holds less Long-term debt than competitors, and in the last three years a significant amount has matured in Current Portion of Long-term debt. They likely keep higher CL than others while overall having less long –term debt, so although seemingly less liquid by these ratios in isolation, it is likely not very reflective of an issue of overall liquidity.

This is made clear by looking at the **Altman Z score**[7]. Southwest holds above a score of 3.0 throughout the analysis time period which indicates they are very unlikely to go into bankruptcy. competitor averages are at or under 2. This is further supported in the 10k with the announcement that SW has recently been granted an A credit rating.

Debt (Leverage)

Southwest keeps a low debt ratio compared to other airlines and has decreased Long-term Debt overall.

Table 7 - Debt (Leverage)

Debt	Average* FY 2017	Average* FY 2018	Average* FY 2019	Southwest FY 2017	Southwest FY 2018	Southwest FY 2019
Debt Management *(Leverage)*						
Long Term Debt to Total Equity (%)	80.61	111.25	102.99	41.71	34.68	28.72

*Note: calculated competitor average
Source: Calculations based on company and Bloomberg data.

Shareholder Equity (SE) has been reduced marginally by stock buyback purchases. From 2017-2019, this allowed the Dividend Payout ratio to increase by 76% despite a decreasing NI which was likely due at least in part to the use of cash for stock buybacks. This strategy also

[7] "Altman's Z-Score in the Airline Business. Case Study of Major U.S. Carriers. Are they Potential Bankruptcy Candidates?" 2014, A. Stepanyan, International Journal of Advances in Management and Economics, Vol. 3, Issue 1

indicated an increase of Retained Earnings (RE) on the BS due to reductions in dividend payments leading to a negligible change in Total SE.

Free Cash Flow is above competitor averages and is a key strength of Southwest relative to industry comparisons. SW has decreased Long-term Liabilities overall and thereby reducing current portions of long-term debt as well. SW is in a position for expansion with reserves of cash and relatively low long-term debt as indicated in a current Sustainable Growth Rate of 19.83%. However, **Sustainable Growth Rate** has dropped with competitor averages and SW's ROE from 33.97 in 2017 to 19.82 in 2019. If Southwest plans to grow, they can only grow about 20% before they will need to take on Debt or Release Equity.

Summary

Southwest financial ratios are similar to competitor averages in most areas of analysis, especially in relation to JetBlue and Spirit Airlines, with the notable exception of size, as both competitors have much smaller fleets, sales, and cash flow positions. Southwest is closer in size to the larger airlines (Delta, American, United) in terms of assets and cash positions, however their overall financial strategy appears more aligned with smaller value carriers. SW has strengths of low debt and high credit rating, increasing operating revenues, and higher Market Value Performance ratio to industry averages and of other Low-Cost Carriers like Jet Blue and Spirit. Slight weaknesses are AR/DSO against competitor averages yet more favorable against those of JetBlue and Spirit.

What is indicated for Southwest currently is an increasing Cash reserve and an increasing Accounts Receivable indicative of a change in sales or pricing strategy. There are reductions in Long-term debt due to maturity and decreases to shares outstanding due to stock buyback.

Although SW is increasing their liquidity, they are slightly below the competitor averages though right around those of JetBlue. This increased liquidity could signal growth or just trying to reach par with industry averages.

Southwest may be buying Treasury Stock to offset dividends in order to increase Retained Earnings. If they are planning to expand, increased RE may offset Additional Funds Needed

(AFN). Market Value Performance is much higher for SW than competitor averages and this liquidity strategy may be suggestive of future growth, acquisition, or merger potentials.

Recommendations

Maximize Value

Assess Credit Terms and Collections

Southwest appears to have a strong cash position with no immediate need to convert AR currently to be as fast as previous cycles or at par with industry averages – this is likely a short-term change. Increased AR and DSO ratio could point towards strategies for sales (e.g., change in points system for customers in October 2019) or a way to control larger short-term expenses. Accounts Payable have increased from 2017-2019 by 19%, much less than the growth in AR. It doesn't seem like they are delaying paying in proportion to delaying receipts as a general strategy. Sales have increased about 5-6% over the analysis period. At the same time, expenses and taxes have increased: salary/wages by 14% and fuel by 6.6% and total operating expenses have increased ~ 10%. If AR is improved it could help profit margin and improve the falling ROE stated for 2019.

Increase EBIT Next Year

To be more profitable next year, they will have to manage their increases in expenses and focus on new sales. SW has successfully used fuel hedging strategies to mitigate external expenses due to fuel increases as their operating profits are above competitor averages. Though, any opportunity at capturing low fuel rates should continue to be investigated - for example right now with the announcement of Saudi Arabia dropping fuel prices to $6- $8 a barrel.

Table 8 - Operating Profit

	Average* FY 2017	Average* FY 2018	Average* FY 2019	Southwest FY 2017	Southwest FY 2018	Southwest FY 2019
Operating Profit per Available Seat Mile Including Fuel	0.57	0.14	0.58	1.32	1.06	0.83

*Note: calculated competitor average

Source: Calculations based on company and Bloomberg data.

Internally, it is likely increased wages and salaries that are responsible for the largest expense increases. Many of SW's employees have union contracts that are set for years and negotiable at term. If wages are not highly reducible at this time due to contractual obligations, then the focus may be increasing sales so that increases in expenses are matched - as sales growth is

currently 5-6% cost increases are currently outpacing sales growth. From the 2019 10 K report we know that SW is opening new flights to Hawaii, likely to increase sales as that market does not currently have much competition. This may also be why it appears SW is holding cash - to purchase new PP&E or other short- or long-term assets to facilitate this growth which could be key to future EBIT growth.

Increase NI

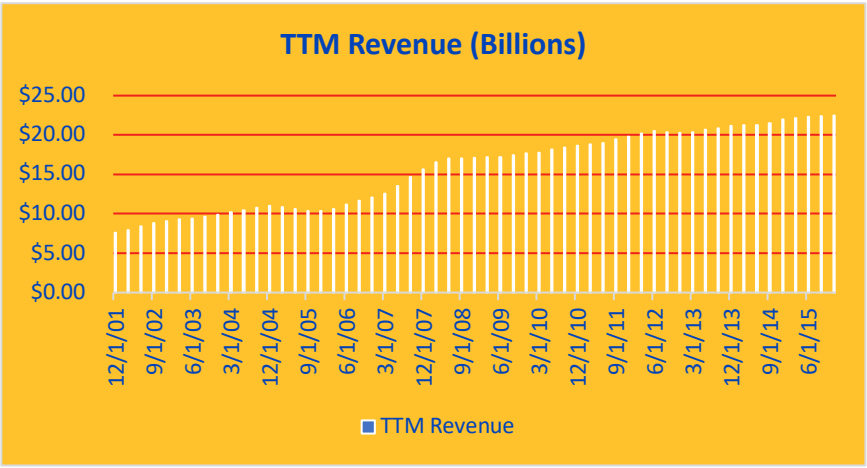
One major impact on SW's decreasing NI is growing taxes. In 2017 they had a tax credit due to new Fed tax cuts however over 2017 to 2019 they saw in increase of tax expense of 14%. The federal tax cuts while being favorable is some ways also eliminated other deductions and preferences. Because union wages, fuel prices, and tax expenses are not necessarily controllable at this time, it will be important for Southwest to find new opportunities to capitalize on assets and markets to increase sales in order to improve NI.

Corporate Valuation

Introduction

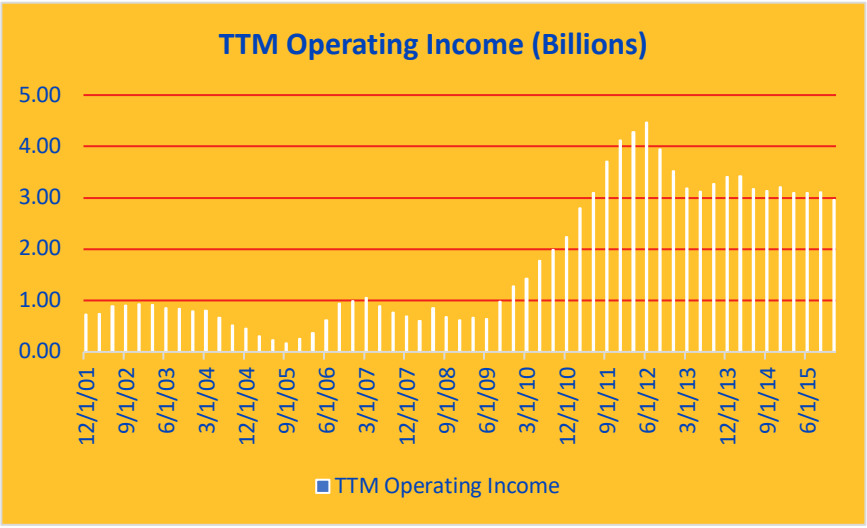
To forecast FCFF we first estimated a Revenue Growth Rate after reviewing revenues from 2005 to 2019. From ratio analysis in Part One we know that Southwest revenues are increasing and higher than competitor averages. In Part One we also reviewed operating income and concluded that operating income and margin were decreasing due to rising external costs and made the recommendation to focus on growth. Next, we used additional information gathered quarterly and Part One data to determine inputs and drivers of the **FCFF Simple Ginzu Model** in order to forecast Revenue Growth Rates, FCFF, and Present Value of FCFF over ten years.

Figure 5 – Southwest TTM Revenue (Billions)



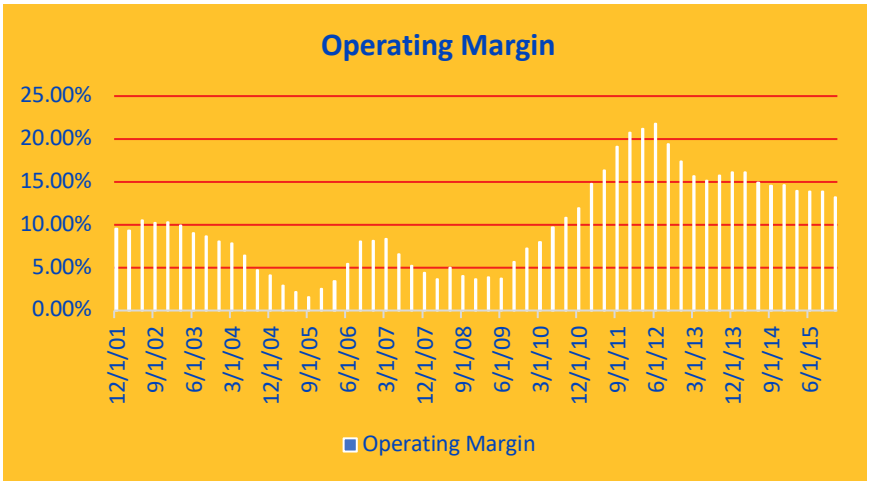
Source: Data based on Macrotrends.net

Figure 6 – Southwest TTM Operating Income (Billions)



Source: Data based on Macrotrends.net

Figure 7 – Southwest Operating Margin



Source: Data based on Macrotrends.net

Value Drivers / Assumptions (Input Rationale)

(*Note - Please reference Appendix for inputs, drivers, and outputs in this discussion)

Overall**, Total Revenues** *(Figure 5)* have increased since 2005 with a dip during the 2008 recession. Recently Southwest has experienced their highest revenues. In our last analysis, Part One, we suggested SW is on a growth trajectory and made the recommendation of expansion into new markets to outpace rising external costs. Given this information on revenues, this seems like sales are growing as a trend. We will use this as the basis of determining the growth rate taking average from *2012 – 2019* since this is where the curve appears to normalize to a steady growth pattern. We predict the growth rate to reflect this interval having the knowledge that SW has recently entered a new market. However, given the COVID-19 development, there may be a temporary drop, but we expect normalization after this anomaly. This yields an average annual growth rate of **3.97%.** The industry average is estimated to be 4.84% which seems to be reasonable growth expectation.

Operating Income *(Figure 6)* remained low until great growth in 2015, peaking in 2016 to $4.5 billion and dropping to a steady rate in 2017 until 2019. We will assume this will stay consistent and will use an average value from 2017 until today. Given Part One, we know SW's wages have been increasing due to more hires and their contract rates are with union and more likely to increase over time than decrease. What is interesting is that revenues remained high during a

time of low operating income for the years 2012 until the peak in 2016. This could be indicative of a growth spurt during those years that we don't expect to see at this time.

Operating Margin *(Figure 7)* took a big turn in 2015 increasing to about 20% following the trend of operating income. Then dropped in 2017 like operating income to a steadier rate until 2019. We don't anticipate the great increases so we will only pull from the normalized time frame, again given the recent COVID-19 development this will be a safer future assumption which is based on the period of *2017-2019*. This yields an Average Operating Margin of 14.63%. This is higher than predicted industry average of 11.60%. However, this follows history as SW is over industry averages in this market (*Table 9 & Table 1 - 3*).

Table 9 - Operating Margin

	Ind.Average* FY 2017	Ind.Average* FY 2018	Ind.Average* FY 2019	Southwest FY 2017	Southwest FY 2018	Southwest FY 2019
Profitability						
Operating Margin (%)	13.11	8.28	11.71	15.75	14.83	13.55

*Note: Calculated competitor average
Source: Calculations based on company and Bloomberg data.

However, given recent events in the market it is uncertain if SW will be able to retain the increase that it normally sees. This is due to considering their recent increases in wages and staffing which, due to union contracts will not be reduceable despite loss of sales at this time. However, fuel rates are at record lows which was part of creating SW's high margins in 2015/2016 and therefore do not expect margins to completely bottom out. Also, industry bailouts might stabilize margins as well.

Year of Convergence is estimated to be 5 years. This is the average business cycle and generally provides enough time to see a recession and growth period in the market.

Sales to Capital Ratio is the industry average in the US. The current southwest sales to capital ratio in the most recent year is 1.29. However, we used a higher ratio of 1.50 which is the same as the ratio of the industry average. This is because we assume that the revenues will continue to increase soon making growth more efficient.

Risk free Rate used is one of the lowest risk rates which comes from 10-year US treasury yield on March 20. The 10-year US treasury yield is one of the lowest risks in the market, and most major rating companies give a high rate in 2019. For instance, S&P rated “AA+”, Moody’s “Aaa”, and Fitch and DBRS “AAA”. Based on their rating, we can say that the US long treasury is safe.

Initial Cost of Capital Southwest’s initial cost of capital is higher than that of the industry average, which makes sense because Southwest’s profitability is higher than the industry average.

Note: Other inputs not focused on in this write up were calculated in excel including tax calculations, shares outstanding calculations, growth rate calculations. These calculations, graph or table data can be referenced in Appendices.

Figure 8 – Southwest Historical vs Projected Revenue

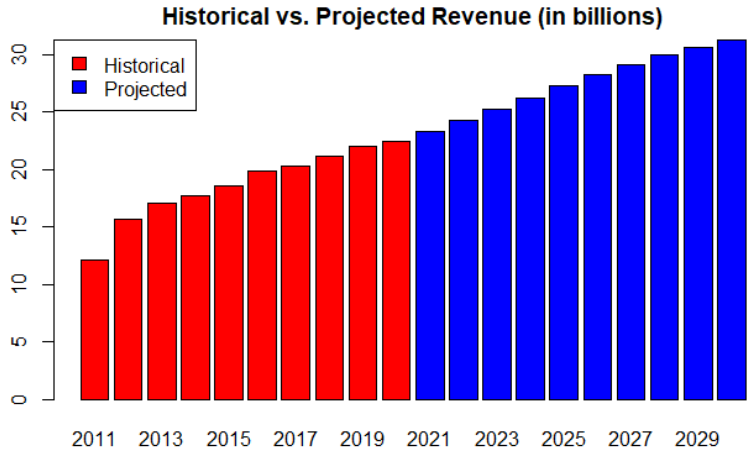


Figure 9 – Southwest Historical vs Projected Operating Income

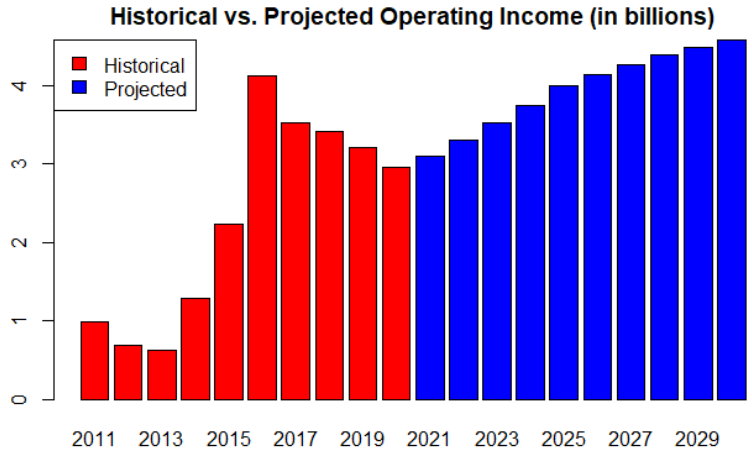
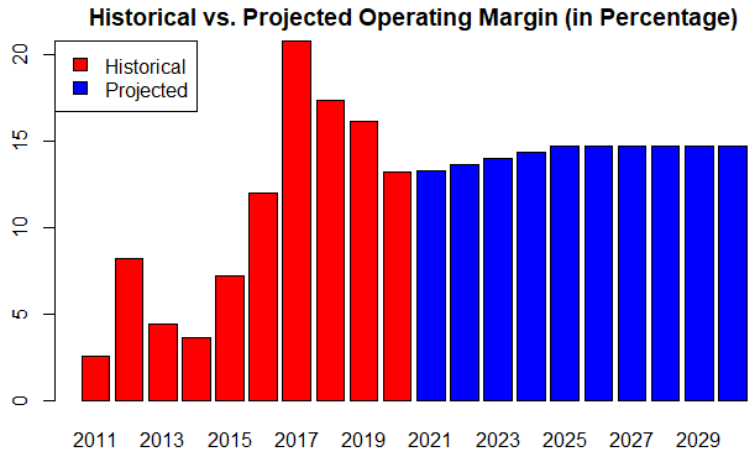


Figure 10 – Southwest Historical vs Projected Operating Margin



Outputs / Results

Table 10 - Comparison Data

	Southwest	Industry (US data)	Industry (Global data)
Revenue growth in the most recent year =	2.11%	4.84%	7.14%
Pre-tax operating margin in the most recent year =	12.94%	11.60%	8.46%
Sales to capital ratio in most recent year =	1.29	1.5	1.01
Return on invested capital in most recent year=	12.99%	13.69%	6.64%
Standard deviation in stock prices =	43.00%	31.74%	30.61%
Cost of capital =	9.33%	5.86%	5.78%
Revenues in year 10 (*in Millions*)	$31,887		
Pre-tax Operating Income in year 10 based on operating margin = (*in Millions)*	$4,678		
Return on invested capital in year 10 based on sales/capital ratio =	14.78%		

Table 11 - Valuation Output

Southwest	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Terminal
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
Revenue Growth Rate (%)		3.97%	3.97%	3.97%	3.97%	3.97%	3.58%	3.18%	2.79%	2.39%	2.00%	2.00%
FCFF *(in Millions)*		$1,816.98	$1,954.22	$2,099.49	$2,253.22	$2,415.84	$2,547.96	$2,676.77	$2,801.03	$2,919.49	$3,030.91	$2,806.68
PV of FCFF *(in Millions)*		$1,661.90	$1,634.86	$1,606.47	$1,576.94	$1,546.44	$1,499.43	$1,455.59	$1,414.73	$1,376.70	$1,341.36	

Terminal Growth Rate is 2.0%

Summary

Southwest had consistent growth in revenues since 2012. Operating Margins in airlines tend to be somewhat volatile due to external economic pressures (e.g., fuel prices, wages), with Southwest having higher than industry averages with stability seen in the last three years. They were positioned for growth over 2017-2019 however due to Boeing groundings they were unable to capitalize on that in 2019. This uniquely positions SW to negotiate better plane purchase rates in this critical time and capitalize on lower fuel prices by changing fuel hedging strategy. We expect SW to (after a possible temporary downshift which we have ignored for now) return to usual metrics reflected in using the average Operating Margin over the last three years. They are positioned for growth but not rapid or large-scale growth like they had in 2015-2016 which is reflected in our modest growth rate and margin assumptions for the Ginzu model. This modest growth rate also reflects a steady increasing FCFF over the term.

Risk and Return Analysis

Introduction

We determined the risk of Southwest (LUV) against the market (S&P 500) in comparison to Newmont Mining Corp (NEM).[8] These results allowed us to determine if Southwest is under- or over-valued in terms of this example portfolio. Ten- year averages, covariance, and correlation tables follow below.

Analysis

Table 12 - Historical Data

	LUV	NEM	S&P 500
Average Historical Return	1.72%	0.69%	0.98%
Historical Standard Deviation	8.31%	10.17%	3.58%

Source: Based on Yahoo Finance

Table 13 - Matrix

Correlation Matrix (standardized)

	LUV	NEM	S&P 500
LUV	1.0000		
NEM	-0.1196	1.0000	
S&P 500	0.5178	-0.0220	1.0000

Covariance Matrix (unstandardized)

	LUV	NEM	S&P 500
LUV	0.006842		
NEM	-0.001002	0.010260	
S&P 500	0.001525	-0.000079	0.001268

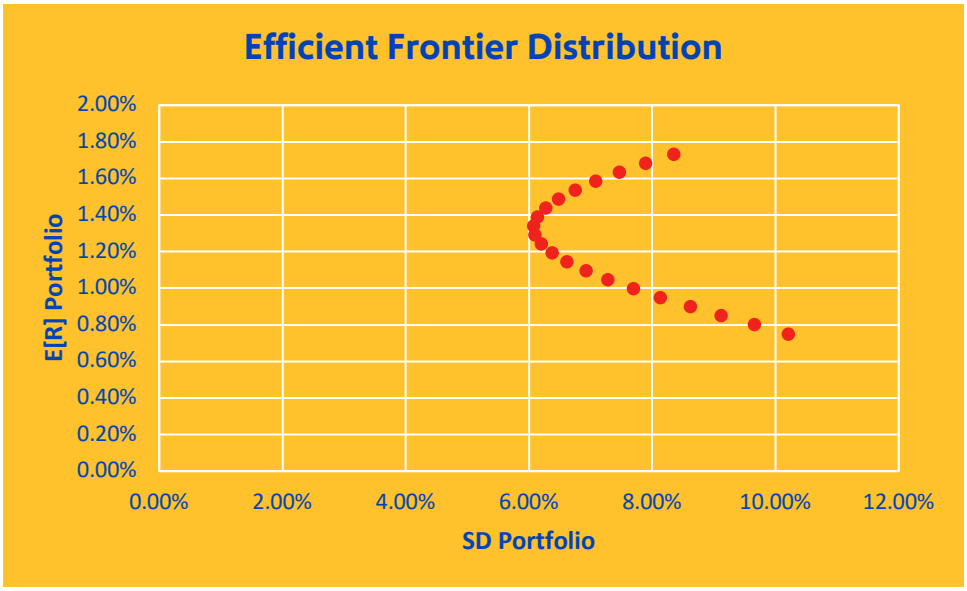
There is a negative correlation between NEM and LUV of -0.1196 which indicates that in a combined portfolio risk will be more widely distributed based on market conditions. We created various portfolios of different weights with the two stocks and charted risk (standard deviation) versus expected returns.

The optimal portfolio is 60% LUV and 40% NEM with portfolio return of 1.31% and standard deviation of 6.04%. In contrast, a portfolio of the lowest risk equity (LUV) alone has a standard deviation of 8.3%. Similarly, NEM alone has a return of 0.69% with a standard deviation of

[8] Yahoo Finance

10.17%. The expected risk of the two-stock portfolio reduces the potential risk of the lowest risk one stock portfolio (LUV) by 7.57%.

Figure 11 – Efficient Frontier Distribution



To calculate betas, we ran regressions of the monthly data over 5 years with LUV and NEM against the market portfolio S&P500 with beta (Slope) of NEM = -0.063 and LUV = 1.203. A negative beta indicates that as the market increases (X axis) the returns of NEM decreases and vice versa. See regression summary and scatter plots below. A positive sloping line for LUV is indicated due to positive market correlations and negative sloping line of NEM is indicated due to its slightly negative correlation to the market returns.

Table 14 – LUV Regression Summary

LUV

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.005389829	0.006758119	0.797533817	0.426743033
S&P 500	1.202785095	0.182915939	6.575616657	1.38626E-09

Figure 12 – Scatter Plot LUV

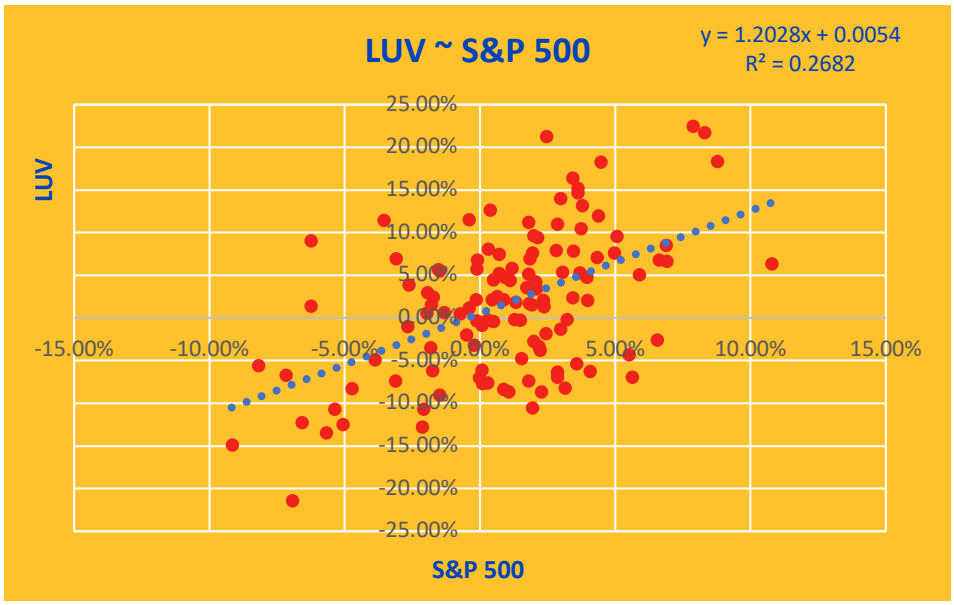
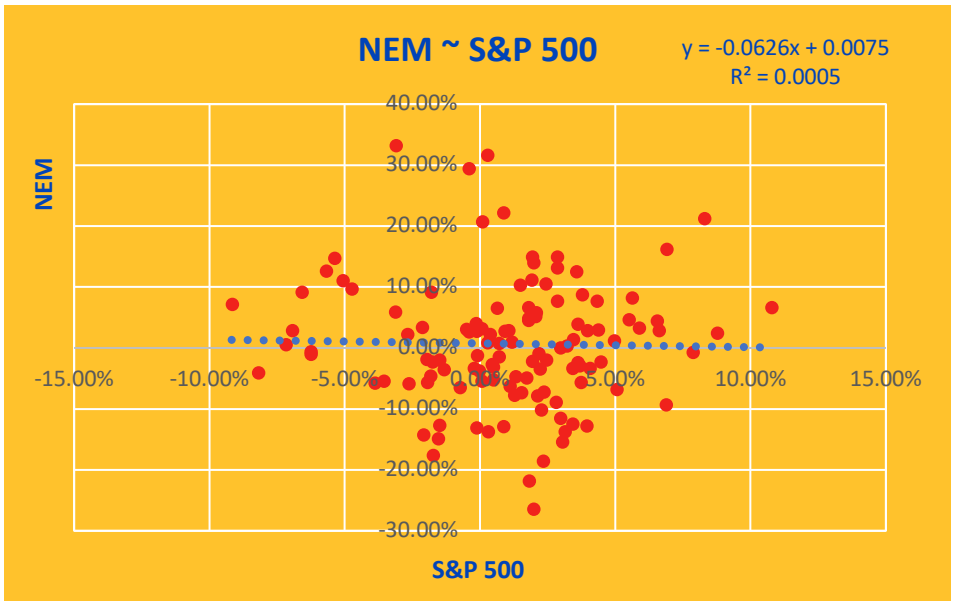


Table 15 – NEM Regression Summary

NEM

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.007524887	0.009671824	0.778021498	0.43811355
S&P 500	-0.0625508	0.261778555	-0.23894547	0.81156237

Figure 13 – Scatter Plot NEM



Potential Limitations

There is a 28% difference between calculated beta of LUV (1.2) and beta (1.1) from Bloomberg across the same 10-year horizon, which is likely attributed to Bloomberg using daily data with respectively more data points versus our calculated beta using monthly data. The reported beta on Yahoo Finance for NEM is 0.08, which is an 86% change from our calculated beta (-.06) and in a positive direction which may indicate that NEM tracks closer to the risk free rate and does not tracking S&P 500 and/or that the 5-year horizon for the beta is different (Yahoo Finance) than our calculated 10-year horizon.

Table 16 - Historical Return vs Calculated Required Return

	LUV	NEM	S&P 500
Average Historical Return	1.72%	0.69%	0.98%
Average Calculated Required Return	**1.14%**	**0.15%**	

Southwest's (LUV) average expected return of 1.72% is greater than the risk adjusted return or required return of 1.14% which means it is underpriced/undervalued. Its Beta of 1.2 is greater than one indicating that the stock has greater than average market risk. When the market increases 10% LUV stock increases 12.03% similarly if the market decreases by 10% LUV decreases 12.03%. This stock might appeal to a moderately less risk-averse investor. As of January 2020 LUV, has exceeded its average return. However, in December 2019 LUV dropped to a return of -6.35%. Due to recent volatility in this equity buy or sell positions are both risky. A current hold position is based on hopes of the market stabilizing and a resuming of some of the larger historical returns which range over the ten-year horizon of -22% to 23.4%.

LUV	
Mean	**0.01722748**
Median	**0.02103298**
Standard Deviation	0.08306062
Sample Variance	0.00689907
Range	0.4385454
Minimum	**-0.2137709**
Maximum	**0.22477446**
Sum	2.06729697
Count	120

Potential for growth is currently indicated as Southwest has an excess of cash around $1 billion which can be used for capital expenditures or weather storms ahead. Since recent returns are above required return and indication that LUV is undervalued, a hold position for this stock is preferred to be selling and buying is currently not recommended due to current market volatility.

Table 17- Recent Returns

	LUV	NEM	S&P 500
11/1/19	2.40%	-3.35%	3.40%
12/1/19	-6.35%	13.15%	2.86%
1/1/20	2.18%	4.08%	-0.16%

NEM

Mean	**0.00690927**
Median	**0.00445113**
Standard Deviation	0.10171595
Sample Variance	0.01034613
Range	0.59669587
Minimum	**-0.2642711**
Maximum	**0.33242479**
Sum	0.82911245
Count	120

NEM is also underpriced compared to market returns (S&P500). The average historical return of .69% is greater than the risk adjusted return or required return of .15%. NEM has a beta of -0.063 which is less than one, meaning it is close to risk free rate. For example, if NEM decreases by .63% the market increases by 10% and conversely when NEM increases by .63% the market decreases by 10%. This is a good balancing stock for a portfolio. LUV is positively correlated and NEM closely tracks with the risk-free rate[9], it is negatively correlated with LUV, and has a range historical returns in a ten-year horizon of -26% to 33%. Required return analysis indicates that NEM is undervalued.

Given this example portfolio used to assess risk, we indicate a hold recommendation for this stock because it is undervalued and makes a good addition to a portfolio with betas greater than 1 (one). Though, we do not recommend buy due to market volatility currently.

9 Risk free rate is calculated from 10-year average return of 10-year treasury bond data taken from St. Louis Federal Reserve.

Valuation

Comparable Valuation

In this section, we used comparable valuation to determine a range of expected prices for Southwest (LUV) and compared them to competitor airlines to determine if Southwest is under or over-valued.

As the recent COVID19 Pandemic has caused heavy travel restrictions affecting the overall airline industry, in order to make more realistic assumptions about Southwest's near-future outlook, we used more recent data of Price-Earnings ratios from macrotrends.net and ycharts.com, and Enterprise Value and EBITDA from macrotrends.net and Yahoo Finance. We used these data to analyze how competitors are priced in the market and then computed the pricing for Southwest using expected EPS and evaluated Southwest's EV/EBITDA.

P/E ratio

As a result of the recent travel restrictions caused by the COVID-19 pandemic, there is a large difference between the current stock price and the 2019 stock price. In order to make our evaluation more realistic analysis, we used the data from March 31th 2020 and compared the data to the most direct competitor airlines. Most airlines had negative Q1 EPS which was meaningless to use the multiple method. We took the TTM EPS as valuation data (taking into consideration some effects of the 2020 Q1 results).

Table 18 – Stock Price, EPS and P/E ratio

	Southwest LUV	Jet Blue JBLU	Spirit SAVE	Delta DAL	Alaska ALK	United UAL
Stock Price (March 31th)	$35.61	$8.95	$12.85	$28.53	$28.47	$31.55
EPS (TTM/4)	$0.90	$0.45	$1.02	$1.56	$1.54	$0.92
P/E ratio	9.95	5.03	3.17	4.58	4.61	8.57

We used 0% growth rate for LUV EPS as a more realistic forecast the upcoming year versus the average of 3.97% (pre-COVID-19) we calculated in part 2. Then in order to get expected price, we multiplied LUV EPS by the average, high, and low competitor P/E ratio. The range of expected share price is from $11.35 to $30.68 which are much lower than the LUV market price of $35.61. Based on this calculation, SW seems overvalued. However, even historically, SW

has generally had a higher P/E ratio than most of its direct competitors, so what that can imply is that investors were likely more willing to invest in SW looking at it from the market's perspective.

LUV	
Expected Growth Rate 2020 (post-COVID19)	**0.00%**

Table 19 - Expected Price - P/E Ratios

Competitors	Jet Blue	Spirit	Delta	Alaska	United
	JBLU	SAVE	DAL	ALK	UAL
Price-Earnings Ratio	5.03	3.17	4.58	4.61	8.57
Average Competitor P/E Ratio		5.19			
High Competitor P/E Ratio					8.57
Low Competitor P/E Ratio		3.17			

Expected Share Price	Southwest
	LUV
Expected Market Price	$18.59
High Price	$30.68
Low Price	$11.35

Note: Calculations based on sourced data
Source: Data from macrotrends.net

EV / EBITDA

In determining the EV/EBITDA, we used the data from 2010 to 2019 to get a historical overview, and 2020 Q1 data to compare current situation with historical data. In 2019, Southwest EV/EBITDA is 6.67 and its competitors' average is 5.96. As you can see the Figure 17, southwest tends to have higher ratio than the average.

In 2020 Q1, Southwest still has much higher EV/EBITDA than its competitor's average. Based on both historical and current EV/EBITDA, we assume that many investors expect that Southwest is stronger in this pandemic than its competitors.

Table 20 – EV/EBITDA

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Southwest	6.67	5.68	8.46	6.30	5.99	9.70	5.84	0.46	5.91	6.27
Competitors' Average	5.96	6.76	5.85	5.30	5.03	8.82	0.93	2.48	-5.15	4.27

Figure 14 – EV/EBITDA (2010–2019)

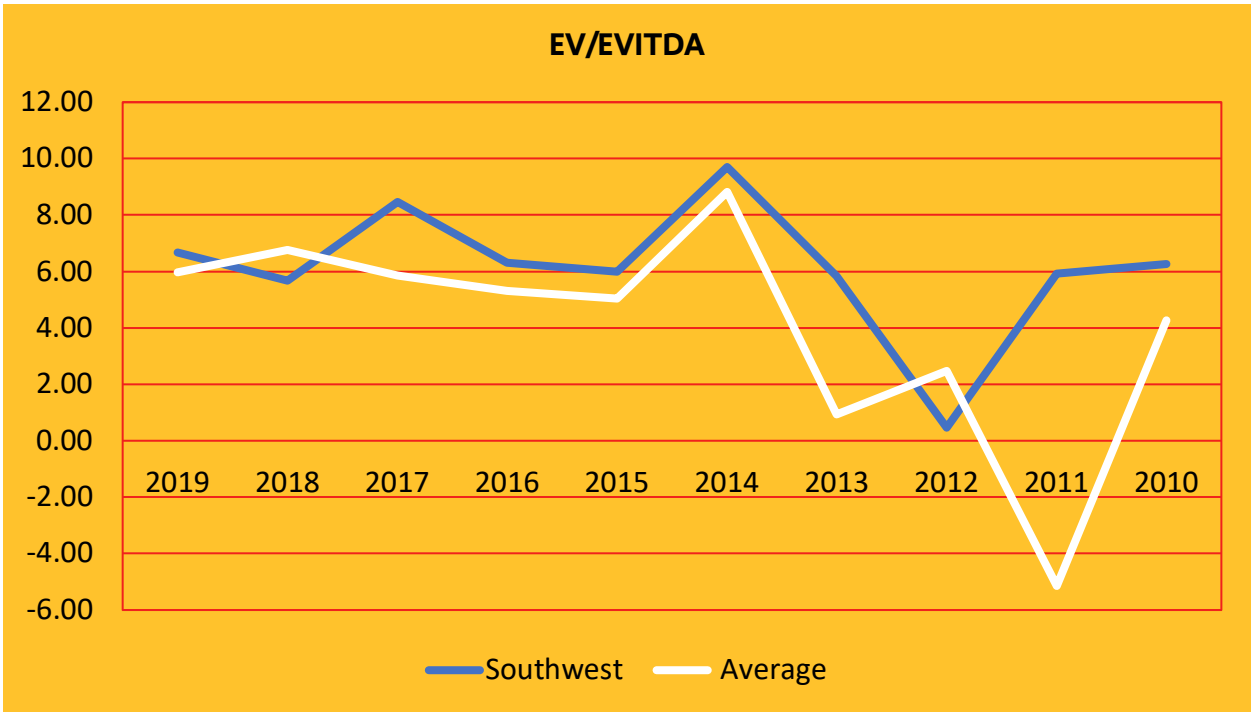


Table 21 – Current EV/EBITDA

	Southwest	Competitors' Average
EV/EBITDA (2020. Q1)	94.95	33.65

Discounted Cash Flow Model for Intrinsic Value

WACC Assessment

In determining the WACC the first value calculated was Market Value of Shareholder Equity. Using market data from April 20, 2020, the amount calculated by multiplying the outstanding shares by stock price is $15,778.48. Market value of debt was calculated from the 2019 financial statement long term debts (note 6) including bonds and debentures. The Present Value of outstanding bonds is approximately $1,427.31 (in millions) with a total of 5 bonds and debentures outstanding.

To find total debt the PV of bonds/debentures was added to the loan expectations, financial obligations, stated leases, and the remaining Balance Sheet items of Long-term liabilities outstanding. Since the present value of bonds calculated was simplified by aggregating into one YTM inferred from an average of current corporate bond yields across three credit ratings agencies (see table 8), the present value of bonds in total debt is an estimate only.

YTM or the rate of debt used in discounting bonds and in determining the weights of debt in WACC was calculated based on the credit rating of Southwest which was recently downgraded. This downgrade will reduce the cost of debt in WACC calculation which explains why at the end of 2019 Southwest had a WACC above 9% and now is about 100 basis points lower or estimated to be close to 8% (See table 9). The rate of equity used was the rate of required return (CAPM) for LUV calculated in Part 3 at 13.68% annually.

Table 22 - YTM

Credit Agency	Rating	Rating date	Rating Type	YTM Snapshot	Snapshot date	YTM Average	
Moody's	Baa1	3/17/20	downgrade	4.50%	4/10/20		
Fitch	BBB+	4/10/20	downgrade	3.13%	4/15/20		
Standard & Poor's	BBB	3/18/20	downgrade	3.13%	4/15/20		
						3.59%	**YTM**

Source: St. Louis Fed

Table 23 - WACC Calculations

	(in millions)
Market Values of SE and Debt	
Market Value of bonds - Calculated	$1,427.31
Market Value of Equity - Calculated	$15,778.48
tax rate	22.21%
1-TR	77.79%
LUV Beta	1.2028
Rate of Debt (YTM)	3.59%
Rate of Equity (Req. Return Part 3)	13.68%
Price/Share as of April 20, 2020	$31.06
Share outstanding as of April 20, 2020	508
Total Debt	
MV of bonds and Debentures	$1,427.31
Contractual Obligations expected 2020	3,626
Air traffic liability - noncurrent	$1,053.00
Deferred income taxes	$2,364.00
Construction obligation	$164.00
Noncurrent operating lease liabilities	$978.00
Other noncurrent liabilities	$706.00
Total Debt	$10,318.31

WACC Calculations (End of 2019)	
V=D+E	$26,096.79
E/V (Weight of Equity)	60.46%
D/V (Weight of Debt)	39.54%
New WACC estimate	9.38%

Southwest tends to carry lower debt ratios compared to most competitors as seen below in Table 10. This is true for all listed competitors but also for key competitors Spirit and Jet Blue.

Table 24 - Long Term Debt to Total Equity Ratio - FY 2019 (From Part One)

In Millions of USD except Per Share	Average* FY 2019	Southwest FY 2019	Jet Blue FY 2019	Spirit FY 2019	Delta FY 2019	Alaska FY 2019	American FY 2019	United FY 2019	Air Canada FY 2019
Debt Management *(Leverage)*									
Long Term Debt to Total Equity (%)	102.99	28.72	55.85	140.56	92.25	62.41	—	158.80	182.36

*Note: calculated competitor average
Source: Calculations based on company and Bloomberg data.

The weights of total debt and equity are 39.54% and 60.46%, respectively. The average WACC compounded for Southwest over the ten-year horizon is 8% according to our Ginzu model FCFF model. The calculated WACC value found above is based on financials reporting at the end of 2019 and is 9.38%. This is higher than expected likely due to using current market values for equity value and financial data from the end of 2019 to calculate total debt. With any additional issuance of new long-term debt this value is likely to decrease. Given the Coronavirus circumstances, higher debt is seen as a more conservative assumption and therefore taking on any additional long-term debt will decrease the WACC value. Additionally, lower yields corresponding to drops in interest rates at this time would result in decreasing WACC.

Using the WACC value of 9.38% as an input in the Ginzu FCFF financial model, in addition to expected growth rates reported in Part Two, Present Value of Free Cash Flow values were determined and the final value per share is estimated to be $72.00. *(Additional details of intrinsic valuation can be found in Appendices, Part Two.)*

Table 25 – Projected Growth Rates (From Part Two)

Southwest	Base 2019	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Year 6 2025	Year 7 2026	Year 8 2027	Year 9 2028	Year 10 2029	Terminal
Revenue Growth Rate (%)		3.97%	3.97%	3.97%	3.97%	3.97%	3.58%	3.18%	2.79%	2.39%	2.00%	2.00%

Table 26 - Cash Flows

Southwest (in millions)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Terminal
Revenues	$23,318	$24,244	$25,207	$26,207	$27,248	$28,222	$29,120	$29,932	$30,649	$31,262	$31,887
Operating Margin %	13.29%	13.63%	13.98%	14.32%	14.67%	14.67%	14.67%	14.67%	14.67%	14.67%	14.67%
EBIT	$3,099	$3,306	$3,524	$3,754	$3,997	$4,140	$4,272	$4,391	$4,496	$4,586	$4,678
EBIT (1-t)	$2,411	$2,571	$2,741	$2,920	$3,109	$3,198	$3,275	$3,342	$3,397	$3,440	$3,508
Reinvestment	$594	$617	$642	$667	$694	$650	$599	$541	$478	$409	$702
FCFF	$1,817	$1,954	$2,099	$2,253	$2,416	$2,548	$2,677	$2,801	$2,919	$3,031	$2,807

Table 27 - Present Value of Cash Flows

Southwest (in millions)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
PV (FCFF)	$1,672.63	$1,656.05	$1,637.81	$1,618.09	$1,597.05	$1,556.54	$1,516.92	$1,478.20	$1,440.36	$1,403.38

Table 28 - The Value

Terminal value	$61,658
PV(Terminal value)	$28,549
PV (CF over next 10 years)	$15,577
Value of operating assets =	$44,126
Adjustment for distress	$-
- Debt & Minority Interests	$10,099
+ Cash & Other Non-operating assets	$2,548
Value of equity	$36,575
- Value of equity options	$-
Number of shares	508
Value per share	**$72.00**

Summary + Recommendations

A high P/E ratio of 9.95 indicates that investors are more likely willing to invest in Southwest's (SW) stock. SW also has the highest P/E ratio among competitors which indicates that investors expect higher growth from SW compared to the overall market despite the recent market shock to the airline industry. This could be because there is either positive sentiment towards their market equity, or in this case the signal could be that we are in a recession with a flight to safety where a high P/E ratio could be signaling the effects of SW having a low leverage capital

structure. The WACC weights were estimated to be about at 40% debt to 60% equity structure which is consistently lower than competitors.

Based on the P/E ratio analysis, it is likely that Southwest is overvalued given it's expected share value. However, it may also be the case that LUV is either overpriced or viewed as a safe haven in the airline industry.

In terms of EV/EBITDA, we can say that SW has historically been overvalued in the airplane market. From 2011 to 2019, the EV/EBITDA numbers are higher than the average. Under the effects of COVID-19 pandemic, LUV EV/EBITDA is still higher at 94.95 and its competitors'' average is 33.65. According to these numbers, we can say that LUV is overvalued.

Based on both P/E ratio and EV/EBITDA analysis, SW has historically had high expectations from investors, which seems to have resulted in a higher-than-average share price still now.

Based on the Free Cash Flow Discount Model, the intrinsic value of stock is $72.00. As of 4/22/2020 the stock is selling in the market for close to $30.00 trending downwards. This indicates that the company is undervalued, however, the Free Cash Flow Discount assumptions of growth could be the source of an overvaluation which were completed before this current financial crisis started. The last several years of revenue reported by SW used as inputs for FCFF in part two were some of SW's highest in the last ten years. Given this time of recession in the airline industry, recent growth rates may not be accurately represented and may have a higher margin of error.

Based on the Discounted Free Cash Flow model, a hold position for SW stock would be advised as it is presently undervalued due to outside extenuating forces. If the market returns in about one year and back to the expected growth rate the stock will likely increase in value to levels prior to the downturn, which for the prior five years was close to 30%. If investor strategy is long-term, SW stock is likely to continue to increase in value in the coming years. Some investors may sell their shares as the dividend for the stock will be removed for the duration of and as a condition of the agreed government bailout of the airline industry.

According to CCN news, among the top four U.S. carriers of Southwest, Delta, American Airlines and United Airlines, SW is better prepared because SW is the only carrier with net cash

balance [of $2.2 billion], and has agreed with the U.S. Government for $3.2[10] billion bailout. In terms of PRASM[11] (Passenger Revenue per available seat mile), for 2019 SW is 13.28[12] which is marginally lower than Delta 15.65, American Airlines 14.72 and United Airlines 13.98. However, Southwest has parked at least 50% airplanes since the virus outbreak began. It also has been working to otherwise cut capacity by as much as 60% for the end of April and May which in terms of overall capacity is less than competitors. For example, Delta has announced plans to reduce capacity by 80% domestically and United across the board by 90%. Last, 97% of LUV revenue comes from domestic business only. These above factors strongly indicate that Southwest may be the fastest to recover from this pandemic because the time of recession in the airline industry may likely have a larger negative impact on international carriers than domestic flights. In short, we conclude that investors should **hold** SW stocks now.

We do expect that SW will incorporate innovation and hygiene improvements to accommodate the changing circumstance.

[10] https://www.ccn.com/who-will-survive-the-covid-19-crisis-southwest-or-american-airlines/
[11] Passenger revenue per available seat mile (PRASM) is the revenue generated from flying one seat one mile, based only on the revenue generated from ticket sales.
[12] https://www.officerwayfinder.com/blog/2019q4

Scenario Analysis

Due to COVID 19 and the subsequent drastic changes to SW's future earnings, we conducted a scenario analysis to better predict future earnings based on current Quarter One results. First, we calculated a range of expected WACC (Debt and Equity) values in a pessimistic to optimistic range. Then these values were used as the discount factor of Free Cash Flow to predict new intrinsic value/share ranges. The optimistic and pessimistic results create possibilities of where SW's intrinsic value/share could fall. From this range, we assessed a realistic scenario in order to obtain a final recommendation for investors.

Debt Re-Assessment

Up to the end of Quarter One, new debt financing equals $6.148 billion dollars. Of this amount $3.2 billion is provided from the CARES government aid package. SW also revealed they are considering securing another $1.8 billion dollar loan with an unknown cost of debt. A new-debt analysis explores a pessimistic view, that the additional $6.148 billion in additional debt is not enough to cover expenses for the year and an optimistic view, that SW will not need to secure any additional funds greater than those already added in quarter one. Find these totals below in the ***New Range of WACC Values Chart*** *below.*

Equity Re-Assessment

According to Yahoo finance, new equity financing equals $9.075 billion dollars. Compared to the fourth quarter in 2019, it was down about 10% in the first quarter in 2020. In the Quarter One guidance, SW did a large repurchase of shares and paid dividends. Also, SW announced an offering $55 million common shares, so now the number of shares is $589 million.

In order to get the new equity values (which is close to the current situation) we used the three new stock prices with the ranges determined from March 13th, the day of state of emergency from the state government was declared, to May 11th. In this term, the highest stock price was $41.28, the lowest one was $24.93 and the latest one was $25.24.

In addition, we assumed three scenarios in terms of the number of shares. The optimistic scenario assumes that SW will not continue to issue more shares and will continue to repurchase shares as they have recently done, indicating a return to pre-COVID 19 WACC

weights. On the other hand, the pessimistic scenario expects that SW will continue to issue more shares as debt increases and need for capital increases. Based on these new scenarios, we calculated three new WACC values in the chart below.

New Range of WACC Values

Table 29 - WACC new assumptions

	Total Debt (million)	Number of shares(million)	Stock Price
Current	$10,308	589	$25.24 (May 11th)
Optimistic	$16,466	519M	$41.28
Pessimistic	$20,260	750M	$24.92

Table 30 - New WACC

	WACC
Current	9.22%
Optimistic	8.93%
Pessimistic	8.02%

As previously mentioned, Quarter One guidance reveals that SW repurchased shares and paid dividends. Repurchasing shares is in line with their actions from 2017-2019. This could be just par for the course for them or a signal that SW believed their stock price to be undervalued. However, at the start of Q2 SW re-issued shares. This was likely to increase equity. However, issuing shares can also send a signal to investors that the stock price is overvalued - as we mentioned in the P/E ratio and EV/EBITDA part, the stock price historically was overvalued comparing with competitors' P/E ratio and EV/EBITDA. There are many reasons stocks could be issued but considering now a WACC point of view, issuing shares could also be indicative of SW's ideal capital structure. By increasing shares in the market, the equity value increases protecting the WACC from becoming too low.

In addition, because 97% of SW's revenue comes from the domestic business and many investors expects that domestic flights will recover earlier than international flights, SW still stands in the overvalued position even if the covid-19 pandemic happened. On the other hand, about 70% of revenue of Delta and about 55% of revenue of United Airlines comes from domestic flights. Comparing with competitors, we can say that SW is stronger in this pandemic than its competitors.

Impact on Southwest

For both new assumptions, pessimistic and optimistic, the WACC percentages have decreased from the current mark. The weight of debt has greatly increased disproportionally to the increase in equity value lowering both scenario's WACC values due to debt's lower cost than equity. To calculate new WACC values the cost of debt remained the same since the initial cost of debt used for valuation is based on the downgraded bbb rating average of all three reporting agencies. The cost of equity also remained the same for this scenario analysis.

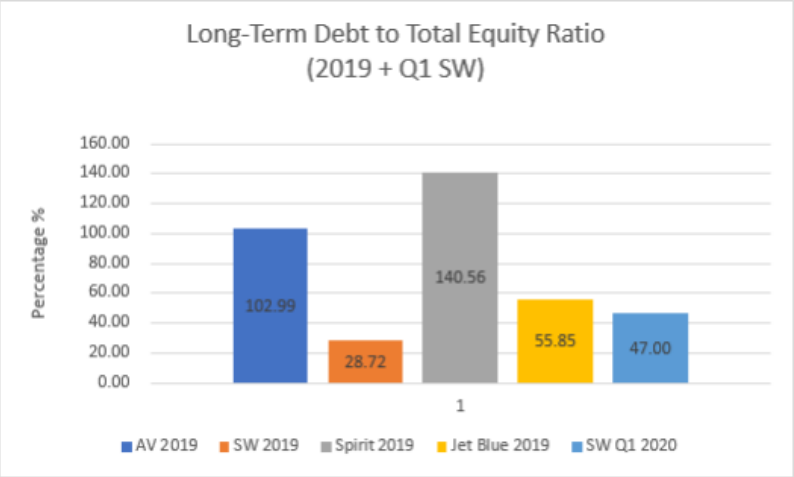
Table 31 - WACC weight

Weight	Dept	Equity
Current	40.97%	59.03%
Optimistic	43.65%	56.35%
Pessimistic	52.01%	47.99%

Because SW maintains a low leverage ratio and a high cash balance from the end of 2019 (due to raising funds to purchase planes that were never purchased – refer to Part One), SW entered 2020 in an optimal position to accept debt. Typically, taking on high debt can increase cost of debt as well as equity. Fortunately, the government aid is offered at low interest rates and SW's good credit (if applying to non-government loans) protects SW from increasing their cost of debt significantly in the short term.

Quarter One reports a new leverage ratio of 47%. Looking in the chart below, *Long-Term debt / Total Equity Ratio (2019 + Q1)*, SW's original 2019 leverage is 28%. Although the new leverage of 47% is more than 1.5 times greater than where they were, SW is still significantly beneath the averages of 2019 of their competitors including Jet Blue and Spirit. This means that even if COVID-19 continues to cause ups and downs, SW retains borrowing capacity. For this reason, the pessimistic view of taking on greater additional debt than the government aid is feasible.

Figure 15 – Long Term Debt / Total Equity 2019 + Q1



Optimistically, If Southwest can access new sources of liquidity, they will not need to issue increased debt - provided COVID-19 outbreaks begin to slow. Due to testing and a wide scale effort to stop the spread of COVID-19, this is a realistic possibility. Quarter One guidance suggests that SW is looking into new sources of liquidity. This includes sales and lease back of their airplanes. This could earn them upwards of $800 million dollars.

Reducing expenses is an important factor in reducing debt and equity new issuances. Quarter One reports that SW has managed to decrease their operating expenses by greater than 4%. They have continued to make operational cuts such as parking hundreds of their planes in long term storage. Southwest's response has been quick and appropriate. Remember, they have experience with extraordinary circumstances; something they faced in the terrorist attack of 9/11.

According to the Quarter One report, net income is negative $94 million, and the second quarter financial performance is expected to decline. Because in many states the stay-at-home order lasts until the end of May (and possibly July), the revenue in April and May is expected to drop by 95%. We can assume that domestic flights will slightly start to recover beginning from June as the optimistic view. However, there is a possibility that COVID-19 will rapidly expand in the winter, so there could be another pandemic at the end of the year. If it would happen, a third of a year's earnings could fall by more than 90 percent which is the pessimistic theory. However, because SW focuses on domestic business, we assume that this fiscal year's growth rate will be 0% as a very optimistic theory. Because it took about five years to recover from 9/11 recession, we expect that COVID-19 pandemic will also need about 5 years to recover in the airline

industry. In short, in terms of growth rete, we used 0% growth rate as a long-term growth rate to get value by share.

Sensitivity Table for Short-Term Enterprise Value

We constructed a sensitivity table for enterprise value at the end of 2021 based on unlevered free cash flows (FCFF) for 2019 based on the same WACC inputs for our Ginzu FCFF model, with a terminal value of 67,195 (in millions) discounted to the end of 2019 to 62,399 (see Tables below, note highlighted values).

Table 32 - Inputs (2019)

	Value (assumed constant)
WACC (discount rate)	9.38%
Growth of FCF after 2019	3.97%
FCF	$3,360 million
TV (2-year horizon)	$67,195 million

Table 33- Outputs (2-year projected DCF)

	Value
NPV (2-year horizon)	$62,399.15 million

Table 34 - Two-year DCF sensitivity Table based on 2019 FCF of $3,368 million
Estimated enterprise value after 2011 in millions USD

		WACC							
Growth Rate		**6.5%**	**7.0%**	**7.5%**	**8.0%**	**8.5%**	**9.0%**	**9.5%**	**10.0%**
	-75%	1,201	1,192	1,183	1,175	1,166	1,158	1,150	1,141
	-50%	3,629	3,519	3,554	3,517	3,482	3,447	3,412	3,379
	-25%	9,322	9,165	9,012	8,864	8,721	8,581	8,447	8,316
	0%	51,962	48,000	44,800	42,000	39,529	37,333	35,368	33,600
	1%	61,152	56,061	51,753	48,060	44,860	42,059	39,588	37,392
	2%	74,790	67,323	61,213	56,121	51,812	48,119	44,919	42,118
	3%	96,186	84,185	74,850	67,382	61,272	56,180	51,871	48,177
	4%	134,649	112,248	96,246	84,244	74,909	67,441	61,330	56,238

Based on these rough estimates on a short-term view of unlevered free cash flows and given our short- and long-term price estimates, the target prices of this sensitivity analysis are roughly in line with value estimates provided by the Ginzu FCFF model (see Intrinsic Value Re-Assessment section below) with 589m shares outstanding (low, -25% growth, 9.5% WACC, ~ $14.34; high, 0% growth, 8% WACC, ~ $71.30). Overall, this table indicates that Southwest is positioned to weather this storm unless current growth continues between -75% and -50% over the next two years.

Relative Valuation

The chart below indicates current Enterprise Value for Southwest and its competitors. As you can see, Southwest is neither as large as the traditional hub and spoke international and domestic airlines, but it is much larger than its leaner more efficient competitors.

Table 35 - Enterprise Value (as of 5/8/2020)

	Southwest	JetBlue	Spirit	Delta	Alaska	American	United	Air Canada
Enterprise Value	15,570	3,870	2,130	25,520	3,815	25,160	19,410	5,276
SW % difference	-	75.14%	86.32%	(63.90%)	75.50%	(61.59%)	(24.66%)	66.11%

Source: Data from yahoo finance

Note: EBITDA for most of Southwest's competitors was negative for Q1 2020, losing as little as 75% year-over-year in Southwest's case or as much as 1600% year-over-year in Spirit Airline's case.

Table 36 - EBITDA (Q1 2020)

	Southwest	JetBlue	Spirit	Delta	Alaska	American	United	Air Canada
EBITDA change from 2019	201	(195)	8	(410)	(213)	(2,466)	(972)	71
SW % difference	-	197.01%	96.02%	303.98%	205.97%	1326.87%	583.58%	64.68%

Source: macrotrends.net or 10-Q

If we try a relative valuation based on EV/EBITDA multiple as is common for airlines, note that since most competitors have negative EBITDA the multiple cannot be calculated as it is a meaningless number (see Table below). Since Spirit airlines and Air Canada are the only comparable airlines due to having positive EBITDA, we note that Southwest is doing comparably better than Spirit, but not quite as well as Air Canada. This is useful to note and it is worth watching Air Canada coming out of the Toronto stock exchange, as it is currently valued at $19.47 and priced at ~ $10.

Table 37 - EV/EBITDA (as of 5/8/2020)								
	Southwest	JetBlue	Spirit	Delta	Alaska	American	United	Air Canada
EV/EBITDA	77.46	-	266.28	-	-	-	-	74.31

Note: a lower EV/EBITDA multiple may signal that a company is undervalued, blank scores indicate negative EBITDA, and EV/EBITDA multiples prior to restrictions were in the high 30's to mid 40's.

Intrinsic Value Re-Assessment

With a new range of WACC values, new value/share scenarios were calculated using the Ginzu FCFF spreadsheet. The Ginzu Spreadsheet was used in the initial valuation. Due to the range of inputs we used in the first analysis, in order to maintain consistency, we used the same initial inputs however updated WACC values at the appropriate new rates per scenario. Other updated inputs include current stock price, current number of shares outstanding, and growth rates for each assumption. The free cash flows, value of equity, value of operations and other detailed data is in ***Appendices, Part 3***.

Table 38- Outlooks				
	Pessimistic Outlook	Target Shor-term (Q1 guidance w -25%)	Target Long-term	Optimistic
Growth Rate	-75%	-25%	0%	0%
WACC	8.02%	9.22%	9.22%	8.93%
Value per share	$8.88	$18.94	$49.19	$57.29
Conclusion	Overvalued	Overvalued	Undervalued	Undervalued

The Ginzu FCFF model uses a five-year period of stable growth, then forecasts the expected growth rates for years 6-10 to determine Free Cash Flows, the terminal value, and the value/share. Considering this, the growth rate of –75% is quite extreme and it is likely the $8.88 value/share is lower than a short-term model would predict. However, distant cash flows' values are more severely discounted and contribute less to the intrinsic value. $8.88 reflects a lower than expected intrinsic value but still provides direction for a recommendation. Similarly, all the scenario intrinsic value/share prices will be more severe given the Longterm horizon but will reflect the direction of change appropriately if considering a long- term outlook. The final recommendation of Hold is based on a long-term view at 0% growth which is optimistically achievable in the long-term and a more realistic assumption for the Ginzu model.

Final Recommendation

Short-term investors – SELL, target price of $18.44.
Long-term investors – HOLD, MODERATE BUY, target price of $49.19.

We offer as a range of $8.88 to $57.29 based on worst-case pessimistic and best-case optimistic debt and equity scenarios as described above. We speculate that in the short term, LUV is overvalued and has not yet reached bottom. We also take into consideration that Southwest is under current government bailout conditions not allowed to offer dividends, nor is it able to complete any stock buybacks during the bailout period. Since Southwest has historically a much larger dividend payout ratio than its competitors, this stock may not be a favorable buy for institutional investors that are attracted to high dividends or the certainty of a stock that is more resilient to volatility based on regular stock buybacks. Our long-term view is a hold rather than a buy or strong buy because our forecasts are based on 0% growth, which may be overly optimistic given the uncertain amount that airlines will be shrinking over the next year or more, as well as the uncertain length of time the covid-19 pandemic will be impacting global travel. This uncertainty increases risk for investors, so our forecast is offered as conservative guidance.

Appendices

Part 1

Balance Sheet

LUV US (Southwest) - Balance Sheet	(in millions)		
	31-Dec-17	31-Dec-18	31-Dec-19
ASSETS			
Current assets:			
Cash and cash equivalents	1,495	1,854	2,548
Short-term investments	1,778	1,835	1,524
Accounts and other receivables	662	568	1,086
Inventories of parts and supplies, at cost	420	461	529
Prepaid expenses and other current assets	460	310	287
Total current assets	4,815	5,028	5,974
Fixed assets:			
Property and equipment, at cost:			
Flight equipment	21,368	21,753	21,629
Ground property and equipment	4,399	4,960	5,672
Deposits on flight equipment purchase contracts	919	775	248
Assets constructed for others	1,543	1,768	164
Gross fixed assets	28,229	29,256	27,713
Less allowance for depreciation and amortization	9,690	9,731	10,688
Net fixed assets	18,539	19,525	17,025
Goodwill	970	970	970
Operating lease right-of-use assets	0	0	1,349
Other assets	786	720	577
Total long-term assets	20,295	21,215	19,921
Total assets	**25,110**	**26,243**	**25,895**
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable	1,320	1,416	1,574
Accrued liabilities	1,700	1,749	1,749
Current operating lease liabilities	0	0	353
Air traffic liability	3,495	4,134	4,457
Current maturities of long-term debt	348	606	819
Total current liabilities	6,863	7,905	8,952
Long-term liabilities:			
Long-term debt less current maturities	3,320	2,771	1,846
Air traffic liability - noncurrent	1,070	936	1,053
Deferred income taxes	2,119	2,427	2,364
Construction obligation	1,390	1,701	164
Noncurrent operating lease liabilities	0	0	978
Other noncurrent liabilities	707	650	706
Total long-term liabilities	8,606	8,485	7,111
Total liabilities	15,469	16,390	16,063
Stockholders' equity:			
Common stock, $1.00 par value: 2,000,000,000 authorized; 807,611,634 issued	808	808	808
Capital in excess of par value	1,451	1,510	1,581
Retained earnings	13,832	15,967	17,945
Accumulated other comprehensive income (loss)	12	20	(61)
Treasury stock, at cost: 219,060,856 in 2017 255,008,275 in 2018 288,547,318 in 2019	(6,462)	(8,452)	(10,441)
Total stockholders' equity	9,641	9,853	9,832
Total liabilities + equity	**25,110**	**26,243**	**25,895**
	recast from 2018	*from 2019*	*from 2019*

Source: Company Report

Income Statement

LUV US (Southwest) - Income Statement	(in millions)		
	Year ended 31-Dec-17	Year ended 31-Dec-18	Year ended 31-Dec-19
OPERATING REVENUES:			
Passenger	19,763	20,455	20,776
Freight	173	175	172
Other	1,210	1,335	1,480
Total operating revenues	*21,146*	*21,965*	*22,428*
OPERATING EXPENSES:			
Salaries, wages, and benefits	7,305	7,649	8,293
Fuel and oil	4,076	4,616	4,347
Maintenance materials and repairs	1,001	1,107	1,223
Landing fees and airport rentals	1,292	1,334	1,363
Depreciation and amortization	1,218	1,201	1,219
Other operating expenses	2,847	2,852	3,026
Total operating expenses	*17,739*	*18,759*	*19,471*
OPERATING INCOME *(EBIT)*	**3,407**	**3,206**	**2,957**
OTHER EXPENSES (INCOME):			
Interest expense	114	131	118
Capitalized interest	(49)	(38)	(36)
Interest income	(35)	(69)	(90)
Other (gains) losses, net	112	18	8
Total other expenses (income)	142	42	0
INCOME BEFORE INCOME TAXES	**3,265**	**3,164**	**2,957**
PROVISION (BENEFIT) FOR INCOME TAXES	(92)	699	657
NET INCOME	**3,357**	**2,465**	**2,300**
NET INCOME PER SHARE, BASIC	5.58	4.3	4.28
NET INCOME PER SHARE, DILUTED	5.57	4.29	4.27

Source: Company Report

Part 2
FCFF Input / Assumptions

FCFF Inputs / Assumptions		
Revenue Growth Rate Expectation		
Date	TTM Revenue	
12/31/19	$22.43	
12/31/18	$21.97	2.09%
12/31/17	$21.15	3.88%
12/31/16	$20.29	4.24%
12/31/15	$19.82	2.37%
12/31/14	$18.61	6.50%
12/31/13	$17.70	5.14%
12/31/12	$17.09	3.57%
Avg 2012-2019 Annual Growth Rate		**3.97%**

Source: Data based on Macrotrends.net

Operating Margin Expectations	
Date	Operating Margin
12/31/19	13.18%
12/31/18	14.60%
12/31/17	16.11%
Avg Op Margin 2017-2019	**14.63%**

Source: Data based on Macrotrends.net

Calculations Based on Balance Sheet

FCFF INPUT

Long-term liabilities plus current portion of long term debt.

7,930	2019
9,091	2018

FCFF INPUT OUTSTANDING SHARES

Issued Shares	807611634	**OUTSTANDING SHARES**	**in millions**
TS 2019	-288547318	519064316	519
TS 2018	-255008275	552603359	553

Source: Balance sheet (*refer to Part One Appendix 1*)

Calculations Based on Income Statement

FCFF INPUTS

Effective Tax Rate

22.22%	2019
22.09%	2018

Source: Income Statement (*refer to Part One Appendix 2*)

Excel Sheet Input / Drivers			
Country of incorporation	United States		
Industry (US)	Air Transport		
Industry (Global)	Air Transport	Last 10K	Years since last 10K
Revenues	$22,428.00	$21,965.00	1
Operating income or EBIT	$2,957.00	$3,206.00	1
Interest expense	$118.00	$131.00	
Book value of equity	$9,832.00	$9,853.00	
Book value of debt	$7,930.00	$9,091.00	
Do you have R&D expenses to capitalize?	No		
Do you have operating lease commitments?	Yes		
Cash and Marketable Securities	$2,548.00	$1,854.00	
Number of shares outstanding =	519		
Current stock price =	$37.66		
Effective tax rate =	22.21%		
Marginal tax rate =	25.00%		
The value drivers below:			
Compounded annual revenue growth rate over next 5 years =	3.97%	*Growth Lever*	
Target pre-tax operating margin (EBIT as % of sales in year 10) =	14.67%	*Profitability Lever*	
Year of convergence	5	*Speed of convergence level*	
Sales to capital ratio (for computing reinvestment) =	1.5	*Efficiency of Growth Lever*	
Market numbers			
Risk-free rate	0.92%		
Initial cost of capital =	9.33%		
Other inputs			
Do you have employee options outstanding?	No		
Standard deviation on stock price =	43.00%		

Addition of Operating Leases to Final Outputs				
Inputs				
Operating lease expense in current year =			$256.00	
Operating Lease Commitments (From footnote to financials)				
Year	**Commitment**			
1	398			
2	398			
3	205			
4	205			
5	661			
6 and beyond	661			
Output				
Pre-tax Cost of Debt =		3.93%		
Number of years embedded in yr 6 estimate =			2	
Converting Operating Leases into debt				
Year	**Commitment**	**Present Value**		
1	$398.00	$382.95		
2	$398.00	$368.47		
3	$205.00	$182.61		
4	$205.00	$175.71		
5	$661.00	$545.13		
6 and beyond	$330.50	$514.60		
Debt Value of leases =		$2,169.46		
Restated Financials				
Depreciation on Operating Lease Asset =				$309.92
Adjustment to Operating Earnings =				($53.92)
Adjustment to Total Debt outstanding =				$2,169.46
Adjustment to Depreciation =				$309.92

Part 3

Ginzu FCFF - Intrinsic Value Re-Assessment All Scenarios

Pessimistic, (75%) Growth Rate

The Assumptions

	Base year	Years 1-5	Years 6-10		After year 10
Revenues (a)	$22,428	**-75.00%**	2.00%		2.00%
Operating margin (b)	12.94%	12.94%	14.67%		14.67%
Tax rate	22.21%	22.21%	25.00%		25.00%
Reinvestment (c)		**Sales to capital ratio =**	1.5	**RIR =**	20.00%
Return on capital	12.99%	**Marginal ROIC =**	19.42%		10.00%
Cost of capital (d)		8.02%	6.55%		6.55%

The Cash Flows

	Revenues	Operating Margin	EBIT	EBIT (1-t)	Reinvestment	FCFF
1	$5,607	13.29%	$745	$580	($11,214)	$11,794
2	$1,402	13.63%	$191	$149	($2,804)	$2,952
3	$350	13.98%	$49	$38	($701)	$739
4	$88	14.32%	$13	$10	($175)	$185
5	$22	14.67%	$3	$2	($44)	$46
6	$9	14.67%	$1	$1	($9)	$10
7	$5	14.67%	$1	$1	($3)	$3
8	$4	14.67%	$1	$0	($1)	$1
9	$3	14.67%	$0	$0	$0	$1
10	$3	14.67%	$0	$0	$0	$0
Terminal year	$3	14.67%	$0	$0	$0	$0

The Value

Terminal value		**$6**	
PV (Terminal value)		$3	
PV (CF over next 10 years)		$14,211	
Value of operating assets =		**$14,214**	
- Debt & Minority Interests		$10,099	
+ Cash & Other Non-operating assets		$2,548	
Value of equity		**$6,662**	
Number of shares		750	
Value per share	$8.88	**Stock was trading at =**	$24.93

Optimistic Short-term, (0%) Growth Rate

The Assumptions					
	Base year	Years 1-5	Years 6-10		After year 10
Revenues (a)	$22,428	**0.00%**	2.00%		2.00%
Operating margin (b)	12.94%	12.94%	14.67%		14.67%
Tax rate	22.21%	22.21%	25.00%		25.00%
Reinvestment (c)		Sales to capital ratio =	1.5	RIR =	20.00%
Return on capital	12.99%	Marginal ROIC =	64.19%		10.00%
Cost of capital (d)		8.93%	6.55%		6.55%

The Cash Flows						
	Revenues	Operating Margin	EBIT	EBIT (1-t)	Reinvestment	FCFF
1	$22,428	13.29%	$2,980	$2,319	-	$2,319
2	$22,428	13.63%	$3,058	$2,379	-	$2,379
3	$22,428	13.98%	$3,135	$2,439	-	$2,439
4	$22,428	14.32%	$3,213	$2,499	-	$2,499
5	$22,428	14.67%	$3,290	$2,559	-	$2,559
6	$22,518	14.67%	$3,303	$2,551	$60	$2,491
7	$22,698	14.67%	$3,330	$2,553	$120	$2,433
8	$22,970	14.67%	$3,370	$2,565	$182	$2,383
9	$23,338	14.67%	$3,424	$2,587	$245	$2,342
10	$23,805	14.67%	$3,492	$2,619	$311	$2,308
Terminal year	$24,281	14.67%	$3,562	$2,671	$534	$2,137

The Value			
Terminal value		**$46,950**	
PV (Terminal value)		$21,322	
PV (CF over next 10 years)		$15,732	
Value of operating assets =		**$37,055**	
- Debt & Minority Interests		$10,099	
+ Cash & Other Non-operating assets		$2,548	
Value of equity		**$29,503**	
Number of shares		515	
Value per share	**$57.29**	Stock was trading at =	$41.28

Middle Short-Term, (25%) Growth Rate

The Assumptions					
	Base year	Years 1-5	Years 6-10		After year 10
Revenues (a)	$22,428	-25.00%	2.00%		2.00%
Operating margin (b)	12.94%	12.94%	14.67%		14.67%
Tax rate	22.21%	22.21%	25.00%		25.00%
Reinvestment (c)		Sales to capital ratio =	1.5	RIR =	20.00%
Return on capital	12.99%	Marginal ROIC =	18.97%		10.00%
Cost of capital (d)		9.20%	6.55%		6.55%

The Cash Flows						
	Revenues	Operating Margin	EBIT	EBIT (1-t)	Reinvestment	FCFF
1	$16,821	13.29%	$2,235	$1,739	($3,738)	$5,477
2	$12,616	13.63%	$1,720	$1,338	($2,804)	$4,142
3	$9,462	13.98%	$1,323	$1,029	($2,103)	$3,132
4	$7,096	14.32%	$1,017	$791	($1,577)	$2,368
5	$5,322	14.67%	$781	$607	($1,183)	$1,790
6	$4,279	14.67%	$628	$485	($695)	$1,180
7	$3,671	14.67%	$539	$413	($405)	$818
8	$3,348	14.67%	$491	$374	($215)	$589
9	$3,235	14.67%	$475	$359	($76)	$434
10	$3,299	14.67%	$484	$363	$43	$320
Terminal year	$3,365	14.67%	$494	$370	$74	$296

The Value			
Terminal value		$6,507	
PV (Terminal value)		$2,904	
PV (CF over next 10 years)		$15,509	
Value of operating assets =		$18,413	
- Debt & Minority Interests		$10,099	
+ Cash & Other Non-operating assets		$2,548	
Value of equity		$10,861	
Number of shares		589	
Value per share	$18.44	Stock was trading at =	$25.24

Optimistic, Long-term 0% Growth Rate

The Assumptions					
	Base year	Years 1-5	Years 6-10		After year 10
Revenues (a)	$22,428	**0.00%**	2.00%		2.00%
Operating margin (b)	12.94%	12.94%	14.67%		14.67%
Tax rate	22.21%	22.21%	25.00%		25.00%
Reinvestment (c)		Sales to capital ratio =	1.5	RIR =	20.00%
Return on capital	12.99%	Marginal ROIC =	64.19%		10.00%
Cost of capital (d)		9.20%	6.55%		6.55%

The Cash Flows						
	Revenues	Operating Margin	EBIT	EBIT (1-t)	Reinvestment	FCFF
1	$22,428	13.29%	$2,980	$2,319	-	$2,319
2	$22,428	13.63%	$3,058	$2,379	-	$2,379
3	$22,428	13.98%	$3,135	$2,439	-	$2,439
4	$22,428	14.32%	$3,213	$2,499	-	$2,499
5	$22,428	14.67%	$3,290	$2,559	-	$2,559
6	$22,518	14.67%	$3,303	$2,551	$60	$2,491
7	$22,698	14.67%	$3,330	$2,553	$120	$2,433
8	$22,970	14.67%	$3,370	$2,565	$182	$2,383
9	$23,338	14.67%	$3,424	$2,587	$245	$2,342
10	$23,805	14.67%	$3,492	$2,619	$311	$2,308
Terminal year	$24,281	14.67%	$3,562	$2,671	$534	$2,137

The Value			
Terminal value		**$46,950**	
PV (Terminal value)		$20,955	
PV (CF over next 10 years)		$15,564	
Value of operating assets =		**$36,519**	
- Debt & Minority Interests		$10,099	
+ Cash & Other Non-operating assets		$2,548	
Value of equity		**$28,968**	
Number of shares		589	
Value per share	$49.18	Stock was trading at =	$25.24