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**Memorandum**

From:

To: Brandon Mills, Executive Director of the DD Investment Fund

Date: 12<sup>th</sup> December 2012

Subject: Southwest Airlines-Analysis and Valuation

The current memo outlines the analysis and valuation of Southwest Airlines along with sectoral trends in the US airline industry, its prospects for growth in the near future

## **Overview of the US Airlines Industry and Growth Prospects**

In the last 20 years, capacity in the US airline industry has grown at a CAGR of 1.4 % to ~ 1,012 billion available seat miles while passenger traffic has grown at a CAGR of 2.7% to 826 billion revenue passenger miles. Thus capacity utilisation has steadily increased from 63% in the year 1990 to 82% in the year 2011. The mean capacity utilisation of the airline industry is 72% while the median stands at 71%. The historical trends over the last 20 years have been outlined in Annexure 1.

Industry Revenue has grown @ 2.92% CAGR to ~104 bn \$. The industry is only marginally profitable with average returns (Industry Operating Profit/Industry Assets) of merely 0.7% across the last 20 years. The trends in returns in outlined in Annexure 2. ROIC below WACC translates to loss of investor wealth.

The Annexure 3 depicts the trend between Passenger Revenue and GDP (Source: MIT Airline Data Project)

Annual U.S Domestic Average Itinerary Fare has grown at a CAGR of merely 1.38% from \$292 to \$ 364. However it registered healthy growth rates of 8.4% and 8.2% in 2010 and 2011.

The market share of key players is set out in Annexure 4 and 5. It may be seen that the top 5 players after the mergers - Delta Air Lines Inc., American Airlines Inc., United Air Lines + Continental, Southwest +Airtan and US Airways Inc. control 80% of the market. This shows signs of consolidation in the US industry.

The factors that are at play in the current scenario are as follows:

- a) Economic trends are weak

- b) Consumer confidence is well below optimum levels
- c) Manufacturing activity showing little to no expansion
- d) Premium travel trends are exhibiting little growth

The recent change in the ability of legacy airlines to generate revenues represents a structural change and cannot be considered cyclic. Whereas revenue per available seat mile (RASM) has become a most important industry benchmark, as load factors continue to increase, focus on yield, or revenue per revenue passenger mile, will be the critical metric to watch to signal a carrier's success. In most cases, today's fares are equal to fares charged in the mid 1990s. And the premiums that carriers could charge in markets where they had a significant market position have dissipated largely as the result of increased competition.

The key to growth and profitability has been to diversify the route portfolio as has been adopted by the major airlines. (Annexure 5)

There is a common view that the U.S. airline industry is likely to remain profitable over the next two decades given the improving worldwide trends in air travel. International traffic is expected to grow 4.2% per year, in contrast to US domestic travel that will grow at a more modest clip of 2.7% annually. This projection assumes a steady economic recovery with no major calamities like a large rise in oil price, swings in macroeconomic policy or further financial meltdowns

However, growth may be held back until 2015 because of the rising fuel costs and the after-effects of the financial crisis in the U.S. and Europe. While macro economic factors and volatile energy prices are factors that are beyond the control of airlines, the key issue will be capacity cutting/discipline

## **Southwest's Business Model**

America's largest discount carrier has been a subject of interest for business travellers since its launch in 1971. Rollin King and Herb Kelleher started the airlines with one simple notion: "If you get your passengers to their destinations when they want to get there, on time, at the lowest possible fares, and make darn sure they have a good time doing it, people will fly your airline".

The airlines has evolved from being a short-haul, regional airline to the nation's largest carrier in terms of originating passengers boarded; serving 72 cities in 37 states. It plans to further service longer-haul destinations like Hawaii and Alaska, along with near-international destinations like the Bahamas.

Southwest has the lowest operating-cost structure in the US domestic airline industry and offers the lowest and most of all simplest fares. Although the airline industry suffered a major blow from the terrorist attack of September 11th, 2001 and the 2008/2009 economic crisis, the company is still holding strong; while other airline companies are in debt or have gone bankrupt.

However, the high labor costs that helped drive American Airlines into bankruptcy are becoming a threat at Southwest. Pilot pay rose 50% in the last 10 years, while the biggest competitors cut their pay rates, along with thousands of employees. Southwest still has an advantage on total costs, because it primarily uses one type of plane. (While other airline fleets can employ ten or more types of aircraft, Southwest uses just the Boeing 737. The cost-saving efficiencies accrue to it in training costs for mechanics, inventory carrying costs, interchangeability of fleet, parking of planes on the ground and bulk discounts from the airline manufacturers.) Also, it flies to secondary airports, and its workers always hustle to get planes into the air.

Southwest's edge on costs has been cut in half in the past decade. And it doesn't have the same growth opportunities as restructured legacy carriers, whose benefit from lucrative international business. Southwest Airlines opportunities for profitable domestic routes are minimal (annexure 7). In the past two years, rivals such as United and Delta earned higher profits than Southwest, and US Airways was close. That trio cut costs in bankruptcy and boosted revenue with acquisitions, and American appears headed down the same track. How does Southwest maintain its high wage rates and remain a low-cost leader?

With growing volumes of passenger traffic increasing operational complexity, say load factor increases and challenges the ability of the carrier to maintain its 20-minute turns as more passengers were involved at each station, the airlines will have to reinvent its business strategy.

### **Forecast and Valuation**

The forecasted income statement for the next 5 years is set out in Annexure 8. This is based on extrapolating Southwest Airlines past performance into the future. The parameters used in the financial forecasting model are based on the company's last 10 year performance. It has a

The P/E Ratio that the company has commanded in the last 8 years is set out in Annexure 9. Its valuation w.r.t Industry and S&P 500 is as follows:

	South East Airlines	Industry Avg	S&P 500	South East Airlines 5Y Avg*
Price/Earnings	15.2	15.2	15.1	39.3
Price/Book	1	2	2.1	1.3
Price/Sales	0.4	0.4	1.3	0.7
Price/Cash Flow	3.4	3.6	9.2	6.5
Dividend Yield %	0.4	0.9	2.3	0.2

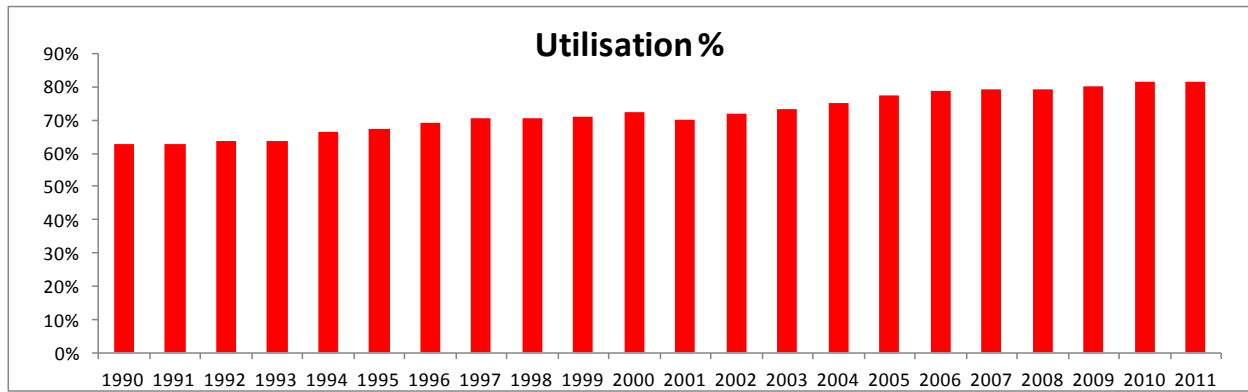
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The Adjusted Net Income YE Dec'11 is \$ 178 mn. Common Stock is \$808 mn. Basic Earnings per Share (EPS) excluding Extra Items & Disc Op is 0.22 \$ for the YE Dec'11.

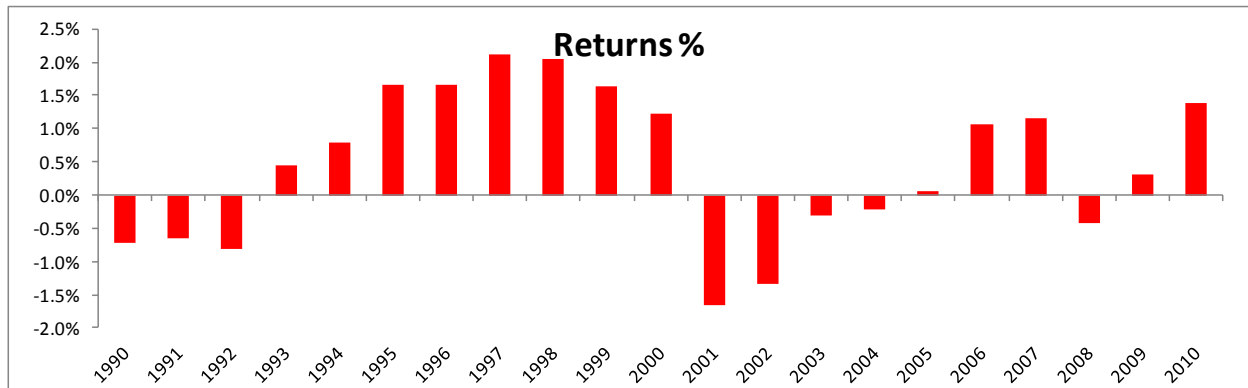
With sales likely to grow @ 10.9% p.a. and Gross Profit Margins expanding progressively by 2% Y-O-Y, based on the 10 year CAGR from 2001 to 2010). Selling, General, & Administrative Expense is taken as the average of the last 3 years. Depreciation and Interest is taken as the average rate for 2011, is taken as the average rate for 2011, Tax is taken as the average rate for 2009-2011.

Thus the EPS is likely to be  $\$ 821.2 / .808 = 1.01\$$ . South West Airlines has historically commanded higher Price-Earnings of 39.3 times as compared to its current valuation of 15.2 times and industry average of 15.2 times. Applying conservatism as there are concerns over the sustainability of its business model with the new market dynamics , we extrapolate the earnings to project the share price at 2016 E to  $15.2 * 1.01 = 15.35\$$ . Thus the total market valuation could be 12.48 bn \$ approx.

## Annexure 1

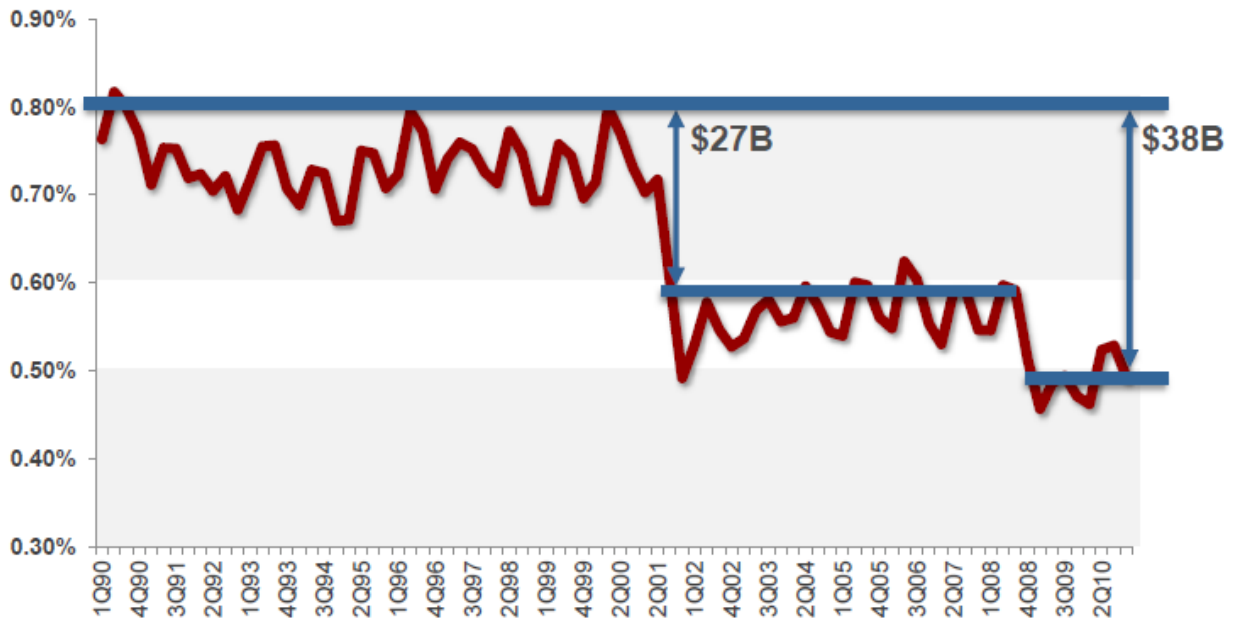


## Annexure 2



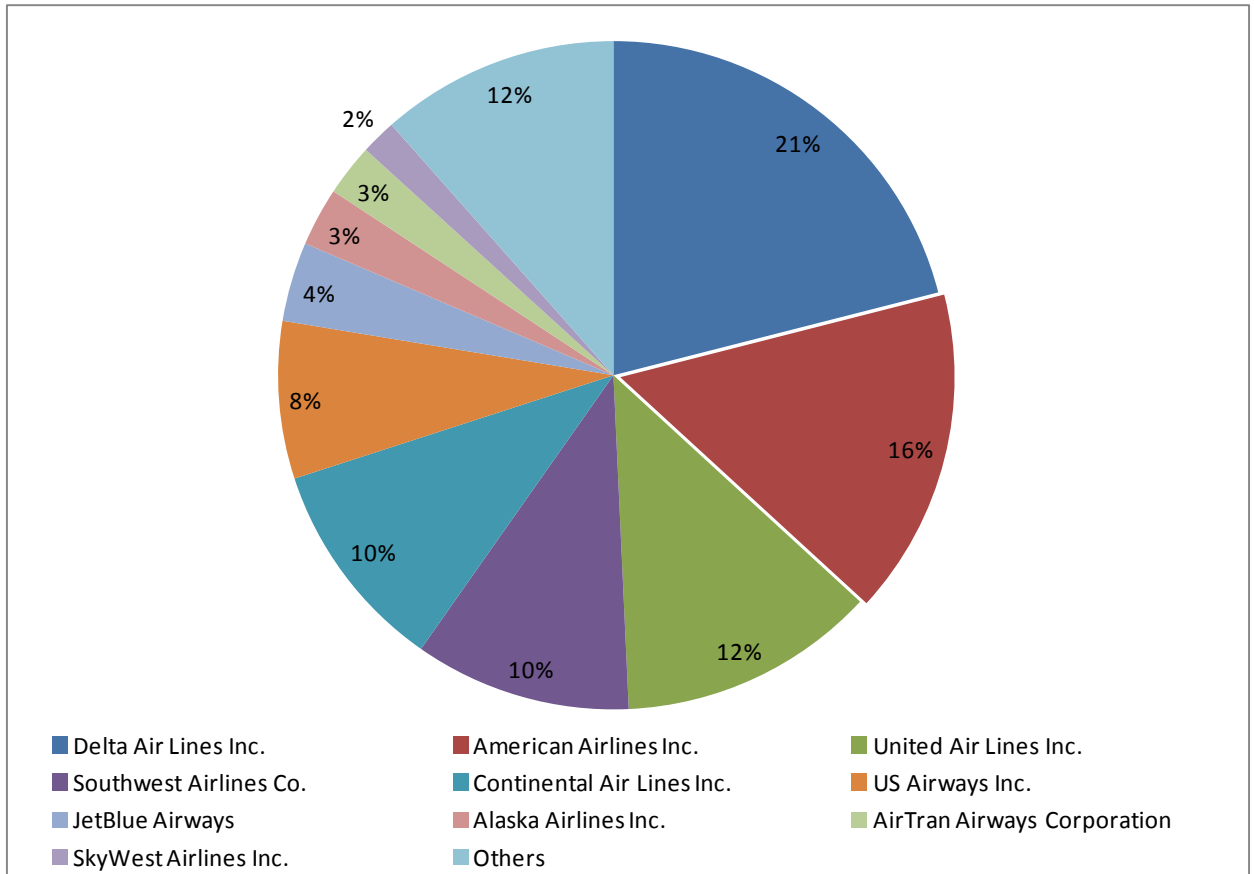


### Annexure 3: Relation between GDP Growth and Passenger Revenue

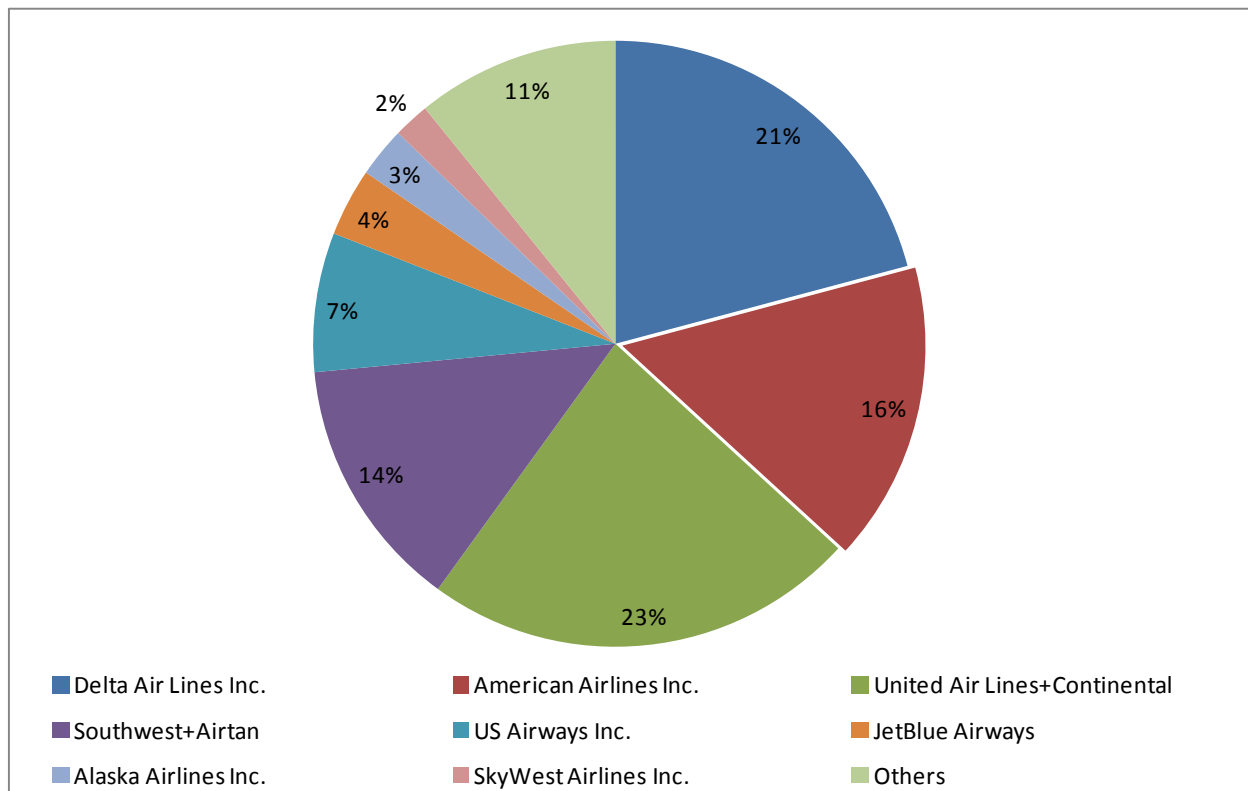


Source: <http://web.mit.edu/airlinedata/www/default.html>

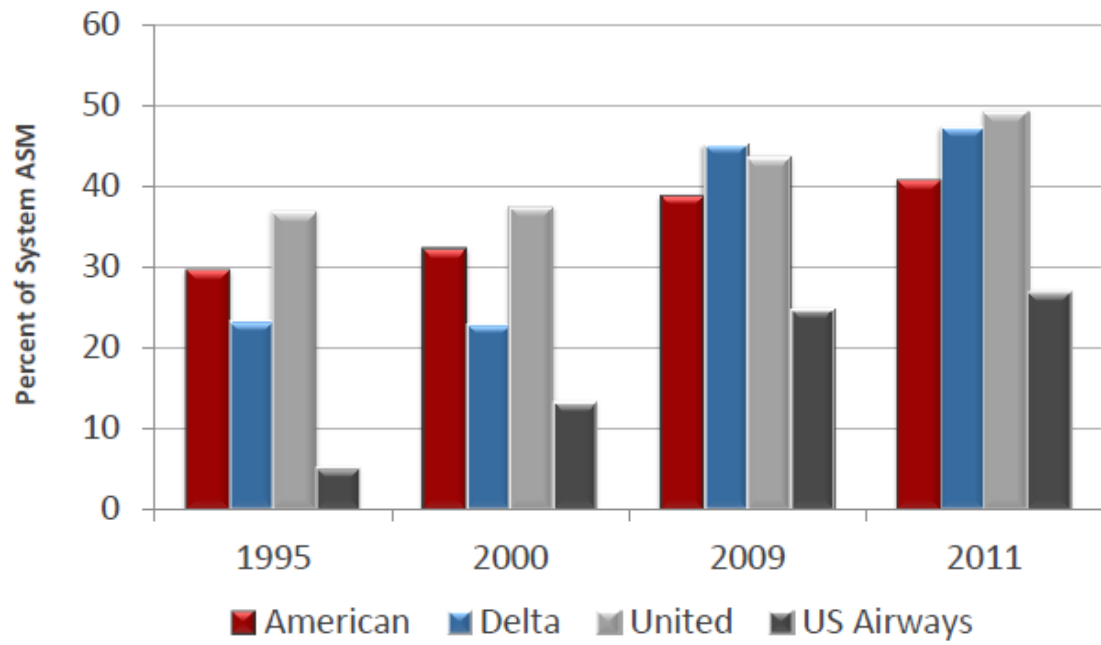
### Annexure 4 (Market Share by Revenue Passenger Miles)



### Annexure 5 (Market Share by Passenger Revenues)



## Annexure 6



## Annexure 7



## Annexure 8

Southwest Airlines						
	2011A	2012E	2013E	2014E	2015E	2016E
Sales	\$ 15,658.00	\$ 17,364.72	\$ 19,257.48	\$ 21,356.54	\$ 23,684.40	\$ 26,266.00
Cost of Goods Sold	\$ 12,237.00	\$ (13,468.08)	\$ (14,849.67)	\$ (16,370.52)	\$ (18,044.32)	\$ (19,886.05)
Gross Profit	\$ 3,421.00	\$ 3,896.64	\$ 4,407.81	\$ 4,986.02	\$ 5,640.09	\$ 6,379.95
Selling, General, & Administrative Expense	\$ (1,862.00)	\$ (2,085.44)	\$ (2,335.69)	\$ (2,615.98)	\$ (2,929.89)	\$ (3,281.48)
Operating Income Before Deprec. Depreciation, Depletion, & Amortization	\$ 1,559.00	\$ 1,811.20	\$ 2,072.11	\$ 2,370.05	\$ 2,710.19	\$ 3,098.47
	\$ (715.00)	\$ (1,245.13)	\$ (1,309.48)	\$ (1,373.82)	\$ (1,438.16)	\$ (1,502.51)
Operating Profit	\$ 844.00	\$ 566.07	\$ 762.64	\$ 996.22	\$ 1,272.03	\$ 1,595.97
Interest Expense	\$ (194.00)	\$ (204.09)	\$ (204.09)	\$ (204.09)	\$ (204.09)	\$ (204.09)
Non-Operating Income/Expense	\$ (176.00)	\$ -	\$ -	\$ -	\$ -	\$ -
Special Items	\$ (151.00)	\$ -	\$ -	\$ -	\$ -	\$ -
Pretax Income	\$ 323.00	\$ 361.98	\$ 558.54	\$ 792.13	\$ 1,067.94	\$ 1,391.87
Total Income Taxes	\$ (145.00)	\$ (148.41)	\$ (229.00)	\$ (324.77)	\$ (437.85)	\$ (570.67)
Minority Interest						
Adjusted Net Income	\$ 178.00	\$ 213.57	\$ 329.54	\$ 467.36	\$ 630.08	\$ 821.20
Dividends Paid		\$ -	\$ -	\$ -	\$ -	\$ -

Annexure 9 (P/E Ratio)

