

# - Spirit Airlines (SAVE) - Quick Sheet

Mkt Cap: 1.3B \* Price (Feb 10): \$18.50 \* Price Target: \$38.50 in 3 years

## Company Description

Spirit Airlines is an airliner that actually operates as a business with their shareholder's interests in mind. Spirit operates two business: one is the sale of a ticket on any of their 200 daily flights to over 50 destinations, the second is ancillary sales, such as beverages and checked bags. Spirit unbundles the ticket such that when you buy one, all you get is a safe flight from departure to destination. By stripping the airfare of the frills of a standard airliner, Spirit is able to significantly reduce their ticket price. In essence, consumers pay only for what they actually use. This not only provides added flexibility to consumers, but also reduces unneeded stress on the airliner. As airline prices have far exceeded the rate of inflation, there is significant demand for an airliner employing the ultra low cost carrier model.



Spirit has outperformed the market since its IPO in May 2011 by 50%.

## Thesis

Due to Spirit's recent IPO, there isn't enough of an "established" track record to encourage institutional investors and analysts to enter into the stock. This forms the basis for which the stock trades at an industry average multiple. It's my view that once the company has two years of earnings and a beta, the market will likely realize its outperformance within the industry and award it a target multiple representative of an industry leader (I predict around 17x forward). Many investors are wary of entering the airline industry due to past challenges. However, if earnings grow as modeled, there should be an upside of 24% a year with most of the gains being realized in the next year and a half. Shareholders will be rewarded by capital appreciation as is indicated by my price target of \$38.50. Furthermore, due to significant industry consolidation as of late, a tender offer for Spirit is not out of the question.

## Competitive Advantage

- \* Lean balance sheet & strong cash position enhance flexibility and adaptability to adverse scenarios.
- \* High barriers to entry for new market participants. Airlines will struggle to adopt Spirit's model as its success rests on a lean operation and fleet efficiency
- \* Ability to resurrect new market demand by having the lowest costs in the industry.
- \* Not susceptible to industry price pressure as they Spirit will not compete in markets for which they cannot confidently claim a 25% EBITDAR margin.
- \* Strong presence in Latin America, which proves challenging to incumbents given excessive regulation and untimely business practices in many Latin American countries.

## Catalysts

- 1) Increased analyst and institutional interest after two years of established performance.
- 2) Simple capital model and large cash balance opens doors for shareholder enhancing acquisitions
- 3) Enhanced focus on Latin American travel.
- 4) Enhancing ROE through debt and continuous innovation on ancillary revenues.
- 5) PE participation aligns board & management with shareholder interests.
- 6) If an airliner wished to operate a low cost carrier, Spirit could be an acquisition target.

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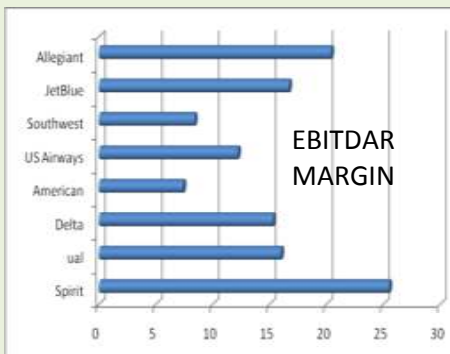
## Pro Forma Income Statement

	2013	2014	2015	Growth Estimates
<b>Operating Revenue</b>				
Passenger	896	1022	1165	14%
Non-Ticket	802	1083	1353	Varies
<b>Total Operating Revenue</b>	<u>1698</u>	<u>2104</u>	<u>2518</u>	
<b>Operating Expenses</b>				
Aircraft Fuel	558	670	805	20%
Wages	262	314	377	20%
Aircraft Rent	182	227	284	25%
Other	370	463	580	25% (blend)
<b>Total Operating Expenses</b>	<u>1372</u>	<u>1675</u>	<u>2045</u>	
<b>Operating Income</b>	<u>325</u>	<u>429</u>	<u>473</u>	
<b>Total Other Expenses</b>	1.05	1.05	1.05	
<b>EBT</b>	324	428	472	
<b>Provision for Taxes</b>	120	159	175	
<b>Net Income</b>	<u>204</u>	<u>270</u>	<u>297</u>	
<b>Shares Outstanding</b>	72.27	80	85	
<b>EPS</b>	<u>2.83</u>	<u>3.38</u>	<u>3.5</u>	

For a more detailed pro-forma income statement please see part two of the paper as well as the appendix. If one takes an eleven times multiple against 2015 EPS it gets you to the target of \$38.50. By taking the geometric average, you arrive at an annualized 24% where the bulk of the gains should be in the early part of 2014. There is sufficient sensitivity analysis done further in the paper to expose the reader to the flexibility and limitations of these numbers.

## Comparables

	Spirit	Industry
P/E 4Q Trailing	12.5x	12.66x
P/E 4Q Forward	11.5x	10.07x
Return on Equity	15.89%	9.27%
Current Ratio	2.01	1.16
Gross Profit Margin	14.35%	7.52%
ROA (ROI)	10.05%	2.61%
RASM-CASM	1.32 ¢	0.191 ¢
Net Profit Margin	8.98%	2.75%



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## The Consumer

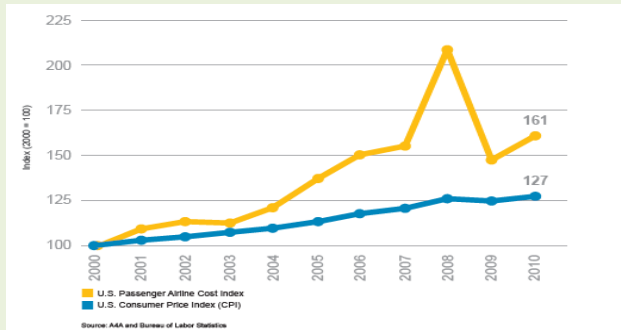
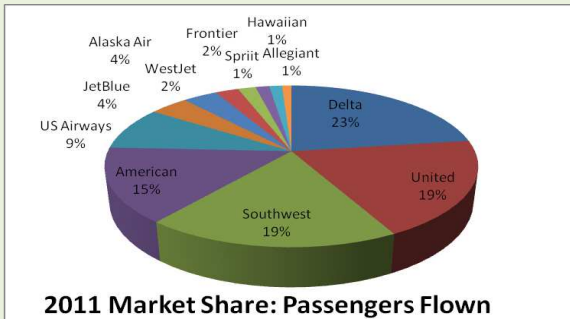
The Spirit consumer is one who has been priced out of the airline market. Due to the significant cost of flying compared to the average inflation rate, many 'would-be-flyers' resort to alternative forms of transportation.

Spirit doesn't target business travel nor those who don't pay for their own travel. Spirit looks for the highly price elastic consumer.

Besides the discount flyer, Spirit seeks to service those who travel to the Caribbean and various South American countries.



CPI Index (in blue) vs the average percentage ticket cost increase (orange)



## How Spirit Makes Money

In 2006, Spirit Airlines decided to make the move to an ultra low cost carrier. Management realized that there was a large base of travelers who have been priced out of the air travel market. By reviving this demand, Spirit can reintroduce consumers to the airline market by offering them lower prices. Lower prices come at a cost. Spirit takes the traditional ticket and unbundles it. If there are any frills that were once enjoyed with flying, they are certainly no longer complimentary on a Spirit flight. This allows Spirit to offer average ticket prices at least 25% of the next closest competitor and often even deeper discounts can be found.

The firm's airline business is still profitable, but it is the ancillary revenues that truly drive Spirit's profitability. By allowing consumers to discern which products they choose to consume, Spirit can best capture their 'surplus' while simultaneously reducing operating drag on their own system.

Spirit never enters a market for which they cannot realize significant EBITDAR margins nor do they attempt to enter markets by which the consumers have high demands of the airlines such as business travel or expensive highly sought after routes. Instead, they choose to enter markets that are currently overpriced and don't have a low cost carrier option. Spirit has identified over 200 markets for which it can enter and maintain margins. Spirit trains its pilots on a single fleet and trains their flight attendants to push additional products. The operating environment is sleek and Spirit has proven profitable during \$140 gas, a pilot strike, and the global economic crisis.

The above pro-forma, while representing the base case, is incredibly conservative. This is an incredibly interesting opportunity that is overlooked by analysts and institutional investors in part due to its recent IPO, a bias against the airliners, and a general misunderstanding of the airline model due to personal consumption bias. As the report will demonstrate, Spirit not only deserves to be trading at a P/E north of the industry average, but will also remain very profitable and expansive in their growth for the next three years.

# - Part 1: The Business -

## And you Thought Spirit Was an Airline.....

The traditional airline model revolves around an all-in-one fee in the form of a ticket purchase that awards the consumer the luxuries of not just the flight but “complimentary” services such as baggage check, bag carry on, beverages & snacks, free ticket printing, tv or media services, ect. These complementary services are (in most cases) implicit within the ticket price. Spirit unbundles the entire flight package such that when you buy a plane ticket, the ticket is all you buy. If you want to carry bags on the plane, it will cost you. If you want a soda, it will cost you. If you check baggage at the airport, it will really cost you. So one might wonder why anyone would ever fly Spirit? To start, the average ticket price is around \$72 and in most cases less than half the cost of other providers. The consumer is then offered these services and they can choose which ones to consume. This empowers the consumer by allowing them to decide the extent of the additional costs that are otherwise indiscriminately applied to them. This strategy also creates significant cost reductions for Spirit by not complementarily offering products to those that don’t want them or would otherwise choose not to consume them had they not been free. Instead of a peak controlled pricing model, Spirit employs what I’m going to call a systematic stress conservation pricing model.

The following is an example of the decision process an individual must go through when choosing between Spirit and another airliner. You want to fly Ft. Lauderdale, FL to Dallas, TX on Saturday February 2<sup>nd</sup> 2013 and return Saturday February 9<sup>th</sup> 2013. Flying Spirit flight 971 and 972 respectively has an after tax ticket cost of \$167.80. The next cheapest flight for the same day and destination is American Airlines flight 659 and 2060 respectively at \$271.80. The consumer now must decide for themselves the extent of the benefits they hope to enjoy unrelated to the pure safe transportation of oneself from Ft. Lauderdale to Dallas. Will the consumer need to bring several bags? Do they want coffee and soda? Will they consume \$104 in benefits from the “complimentary” services that American Airlines provides? If the consumer is price sensitive which is the target market for Spirit, then they will choose to fly with less luxuries and choose the cheaper airliner. However, they aren’t bound to a binary decision of all inclusive or non inclusive goods. They may consume only certain goods that they value less than the cost of obtaining all of them at \$104. Thus the consumer may choose to spend an additional \$50 on the ticket price of the Spirit ticket for soda and a carry-on bag.

Conceptualize Spirit as a two division business. One division is human transportation, which is nothing more than just the sale of a ticket and the liability to the consumer of organizing their departure from one city and safe landing in another. The second division is the ancillary sales that normally are “complimentary” in other airlines. This second division makes up 40% of revenues within the Spirit business and rivals all its competitors.

## The First Business: A Ticket

The first business is a fairly simple one and is better compared to a bus company than an airline. A bus doesn’t offer you the frills of pillows and complementary coffee, they simply get you from A to B. Spirit flies both nationally and internationally with more than 200 daily flights to over 50 destinations. Their international business is centered around the Caribbean and their national business is fairly dispersed with large hubs in cities such as Ft. Lauderdale, Dallas, Chicago, and Atlantic City. By charging sub industry average fares they stimulate demand that otherwise would have sought alternative forms of transportation. Spirit keeps flight costs as cheap as possible while maximizing capacity and efficiency.

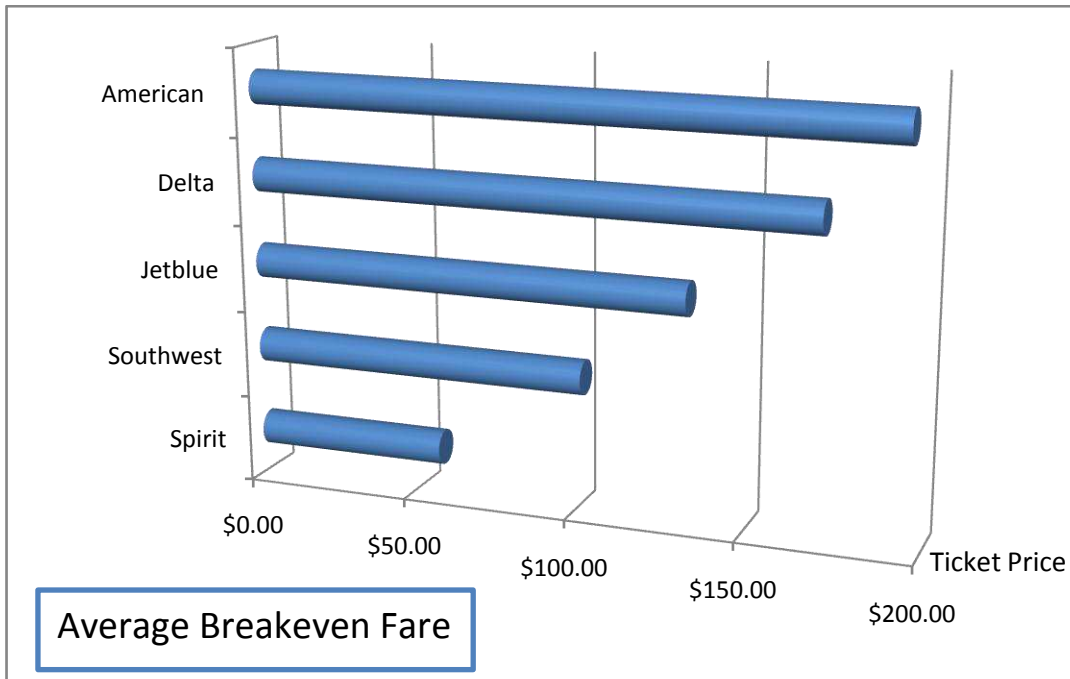
-[Please see [Appendix A](#) for airline definitions]-

### Industry Specific Metrics Comparing Spirit and the Industry Average

	CASM (in cents)	Load Factor	Breakeven Fare	RASM-CASM (in cents)
Spirit	10.2	85.9%	\$58	1.32
Industry Average	12.3	85.6%	\$120.6	0.19

CASM – Cost per average seat mile  
RASM – revenue per average seat mile

The costs of operation are kept low through larger hour per day aircraft utilization, high density seating, simple operations, low ground time, and a productive workforce. Furthermore, Spirit operates the A320 Airbus family of planes. By flying a single fleet type it reduces the need to retrain pilots and reduces maintenance costs as all employees of Spirit are highly familiar with this model.



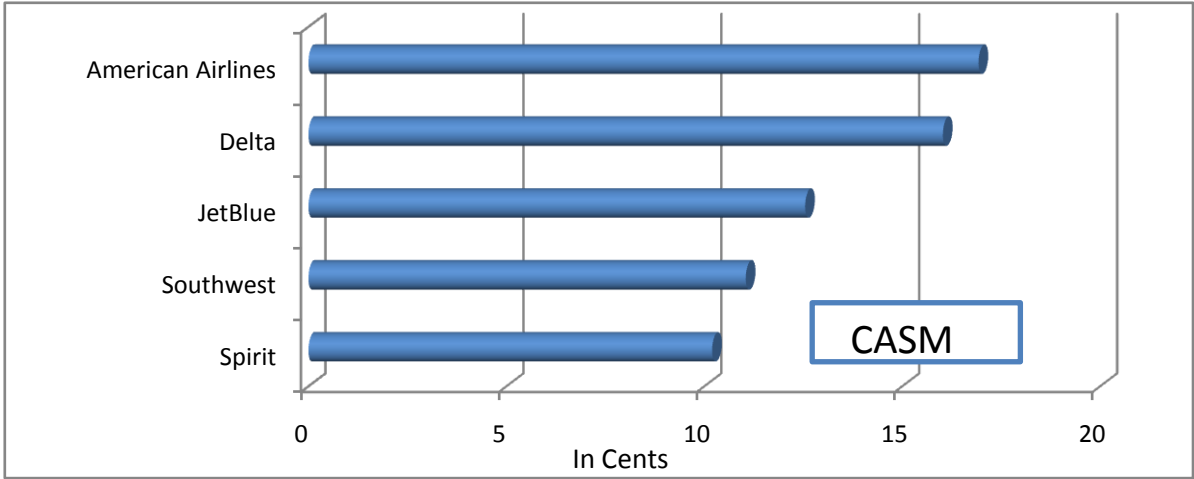
Spirit's position within the industry will be discussed in great detail, however it may be prudent to start off with some quick profitability highlights. In the table below you can see the most recent industry data covering two of the most popular indicators of profitability and efficiency. Revenue Passenger Miles (RPM) are a measure of traffic calculated by multiplying the number of revenue paying passengers by the distance traveled. . Average Seat Miles (ASM) measures passenger carrying capacity. It is defined as the number of seats available multiplied by the miles flown. This is the primary unit of production for an airliner.

November Air Traffic Statistics (2012)									
	Spirit	JetBlue	American	United	Delta	Southwest	US Airways	Average	Spirit Ranks
Percentage Change for Month of November YoY									
RPM	28.1%	5.7%	0.9%	-2.3%	1.2%	-1.5%	4%	5.15%	1st
ASM	30.9%	8%	2.1%	-2.6%	-0.2%	0.4%	2.5%	5.87%	1st
Percentage Change YTD YoY									
RPM	19.8%	9.6%	0%	-0.7%	0.1%	-1%	2.9%	3.83%	1st
ASM	20.7%	7.8%	-1.2%	-1.1%	-1.8%	-0.3%	2.4%	3.31%	1st

## The Second Business: Ancillary Revenues

The second business buys and sells goods and services and is represented on the income statement as non-ticket revenue. This revenue is generated from air travel fees through baggage, bookings, food sales, commissions from hotel, rental car and trip insurance, and other products.

Ancillary revenues are an area of the business that Spirit seeks to expand upon and has reasonable hopes to elevate its revenue generation as a percentage of total revenue to 50%. The Spirit model is all about price and as such should be viewed as a typical company which sells products, has costs of goods sold, and after subsequent additions and subtractions produces a profit. Cost per Available Seat Mile (CASM) is a popular industry indicator for the efficiency of an airline.



These costs drive more than just revenue, they drive savings incentives on behalf of the consumer. Even after all the additional frills the consumer chooses to accept, they still almost always end up spending less than their next cheapest option.

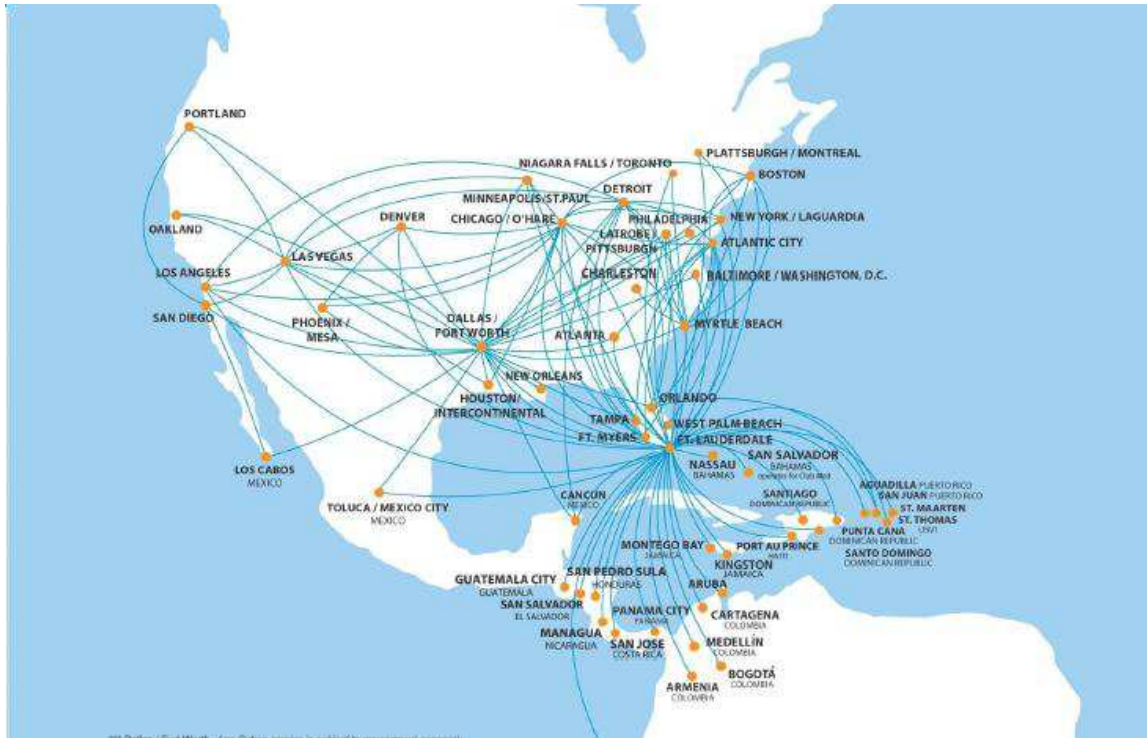
This model has allowed Spirit to be a bellwether company able to thwart the systematic challenges of any business as well as those particular to the airline industry. Spirit has been profitable and maintained margins over the last five years since the low cost carrier model was implemented. In this time they have experienced two major hurricanes, a pilot strike that kept planes on the ground for a week, \$140 gas prices, and the worst global economy since the great depression. It is not by luck and chance that this is possible, especially in a business so margin sensitive. Spirit has an established track record not just of adaptation, but of proof of their business model.

## Strategy & Growth



Spirit's business strategy that supports and maintains their high margin plans has been fairly consistent over the last six years and, by management confession, shouldn't be expected to change. Spirit is able to grow by entering underserved and overpriced markets, creating a market for consumers, and innovating on their non-ticket revenue generation.

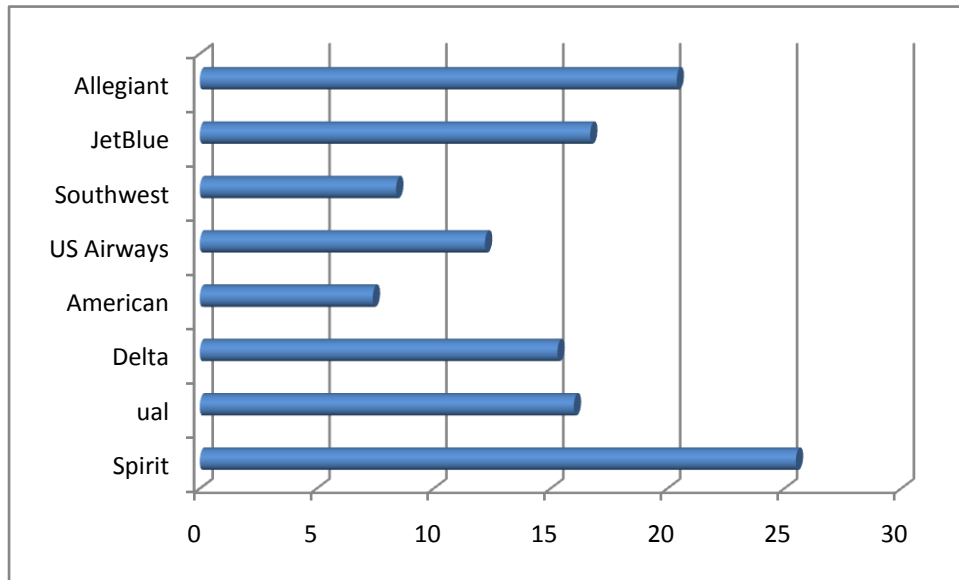
**Spirit Airlines Flight Destinations (2012)**



Spirit is currently in 110 markets and management has identified another 400 for which it can exploit without compromising earnings before interest, taxes, depreciation, amortization, and aircraft rent and ownership cost (EBITDAR) margins. Spirit chooses to enter a new market if they can maintain their approximately 20% EBITDAR margins while cutting the price of current competition by about 25% as this is how they stimulate new demand. The below graph shows EBITDAR margins for Spirit and other industry players. Spirit makes up only 1 percent of the domestic market and the majority of their international travel revolves around the Caribbean and currently makes up only 3% of total Caribbean travel. By expanding fixed costs over large scale operations, over time, Spirit can and will mature into a significantly larger airline than it is today. Airlines take on two forms of debt, they either take out loans to own planes, or they have long term capital leases, Spirit is the later and better allows them to adjust their fleet as necessary.



**Earnings Before Interest Taxes Depreciation  
Amortization and Rent (EBITDAR) Margin (in %)**



The 400 unexploited markets have a predominance of higher cost carriers or very low presence of low cost carriers that prospectively enable Spirit to extract customers who are otherwise willing to pay less for less for whom that option is currently unavailable. Alternatively, as Spirit's flight system expands they can create more efficient flight plans for customers who currently face one or more stops. By holding a presence in a few key markets such as Ft. Lauderdale, FL and Dallas, TX they are able to attract a large client base and then route them to cities less traveled by larger competitors who focus significantly more on business travel.

Spirit looks for customers who are highly price sensitive. These tend to be individuals who pay for their own tickets and as such business travel is not a large part of the target market. These individuals, who are price sensitive, may be currently taking other travel methods such as bus or train. When Spirit enters a market that allows them to sell a ticket at 75% of their competitors price, they stimulate demand by opening a market up that was previously shunned by the high cost and cheaper alternatives.

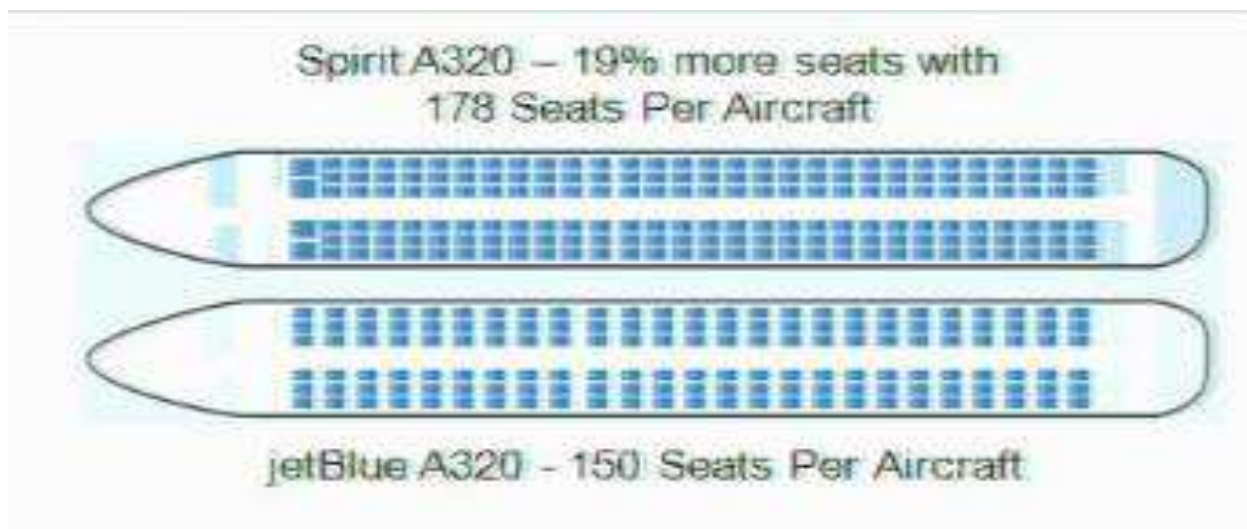
Keeping prices low is another strategy for continued growth. Most companies accomplish this through headcount reductions, benefit slashing, and reduction in CapEx. Spirit accomplishes this feat through, amongst many methods, charging for using outsourced call centers and third party travel agents. Distribution costs are more than 100% covered by the distribution fees that Spirit charges its customers. At the heart of it, Spirit passes onto the customer every charge they consume. Spirit is not in a willing position to absorb charges, they simply will offer the service at or above the cost of that service to them.

This sort of innovative revenue generation is vital to the continued growth and sustained margins of the company. Charging for checked bags is another example of a pass through distribution expense. The extra bag causes more weight to the plane which in turn uses more fuel which in turn creates a drag on the system. While on a bag to bag level this is highly insignificant but overall, over the entire course of the year, it reduces costs to Spirit as it incites consumers to be more mindful of the drag they create on the system by informing them of it through price.

## EFFICIENCY BY AIRBUS A320-FAMILY

Cost reductions are realized through many methods such as distribution cost pass through and automation technologies. A significant driver of cost reduction which allows growth by scale is the use of the Airbus A320 line. Spirit operates 42 Airbus planes within the A320-family consisting of 26 A319s, 14 A320s, and two A321s with the intention to receive 2 additional A320s by the end of 2012. All of these are under operating leases. The A319s are the same thing as the A320s but smaller in size and intended for more regional travel.

Compared to the nearest competitor the Airbus A320 Family is 4% more efficient and can fly 4% faster for the same efficiency. Additionally, the jetliner's higher bypass ratio jet engines provide better fuel efficiency and lower maintenance costs. The A320 reduces emissions and improves fuel consumption. By Flying a young fleet of airplanes where fleet is average 4.5 yrs old, Spirit experiences less maintenance costs and can run them pretty hard. Essentially the logic is to rent new expensive airplanes and 'fly the hell out of them' according to CEO Ben Baldanza.



The above graph shows the difference between the Spirit A320 and JetBlue's A320. This is the same plane which has the same fuel burn but Spirit manages to sit 178 while JetBlue only 150.

This is a perfect example of the efficiency dynamics that Spirit employs. In addition Spirit enjoyed approximately 85.2% load factor while JetBlue only 84.4% resulting in Spirit flying 152 passengers compared to JetBlue flying only 127 passengers. This reduces the per passenger cost for Spirit and allows them to further reduce the price of their ticket. This configuration allows Spirit to burn less fuel per seat and get more passenger miles per gallon than any other airline in the US. There are many consumers that will find this strategy off-putting. These are the very customers that Spirit is uninterested in. For those who require more leg room, it is better they either purchase 'The Big Seat' or revert to another airliner.

The crux of growth comes for the continued expansion into new markets by creating demand. Spirit's management is committed to continuing to lower fares such that they can resurrect price sensitive customers that were otherwise expunged from flying. By stimulating air traffic you raise non ticket sales. This will allow for the continued leveraging of their brand name and additionally help grow revenues through their \$9 club and continued low cost pricing. As long as Spirit can maintain discipline in fleet and network growth by not entering markets that are not profitable they will hence find themselves profitable. .

Frequent flyer programs aren't unique to any airline but are fundamental in building brand loyalty and strengthen the habitual tendency of individuals to use the same airline based on cumulative experiences regardless of what other airlines may offer. Spirit's \$9 Fare Club is a subscription based club that costs \$60 per annum and on average members save \$75 per booking. The more you fly the more you save and these savings are realized in the form of reduced ticket prices, discounts on checked baggage, discount for family members, and other means to spur travel.

-[Please see Part 4 for a detailed discussion on Risk]-

Competition is fierce within the Airline industry. Most carriers find RASM v CASM so difficult because they focus on being the premier airliner ensuring the 7am flight from Fort Lauderdale to New York City. Spirit's CEO says "Screw That." Spirit has no interest in flying particular times if they prove to not be profitable above the 20% margin they hold themselves to. Spirit chooses not to engage the business class nor do they attempt to fly peak times. The thesis is that the price sensitive consumer will be less time sensitive than the price flexible consumer.

Spirit also seeks to target overpriced markets. Spirit's largest overlap competitor is American Airlines which has the worst comps in the industry and hasn't been profitable in over four years despite their high prices. Spirit exploits these markets by identifying where price sensitive travelers are, where they are going, and why they don't have low cost alternatives. If the economics of the disenfranchised demographic, Spirit will enter.

# The Economics of the Consumer

As previously mentioned, Spirit believes its customers are those who primarily pay for their own tickets which exclude business travelers whose companies pay for the ticket and thus they are more likely to fly a higher premium airliner. Spirit focuses on individuals who are very price sensitive. Often these price-sensitive consumers are individuals who have been priced out of the market. Spirit believes they attract budget leisure travel and those visiting friends and relatives by proof that the bulk of their air travel (in ratio to everyone else's) occurs during the holidays and school timed breaks. The consumer is price sensitive but also flexible in departure times allowing Spirit to fly when most optimal for its flight portfolio, often only offering a single flight per destination per day per airport.

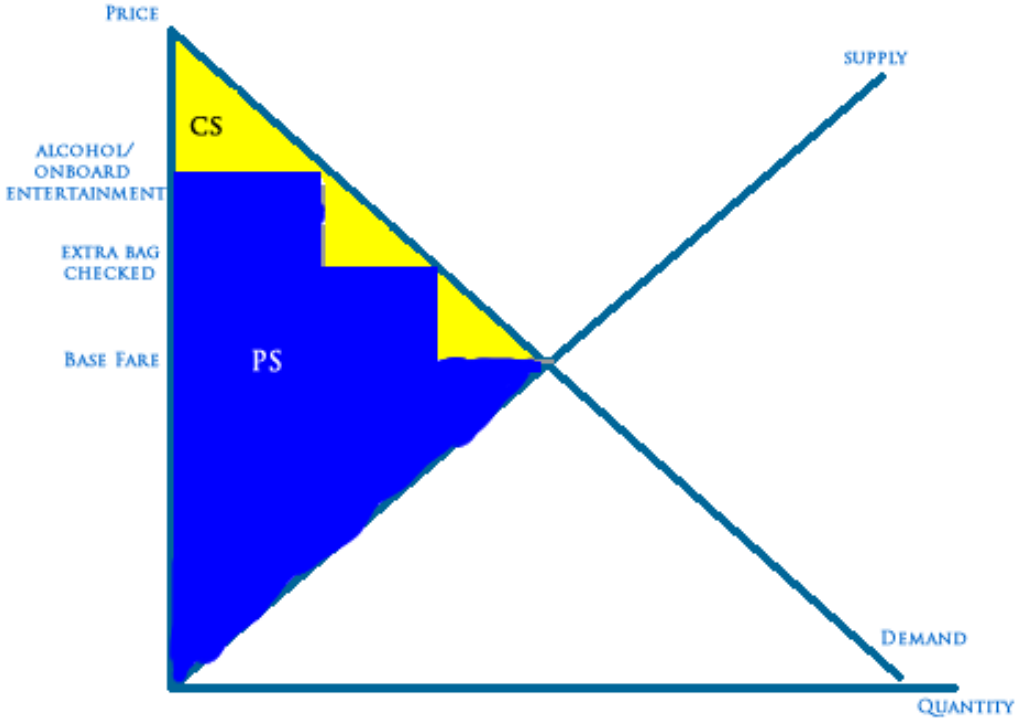
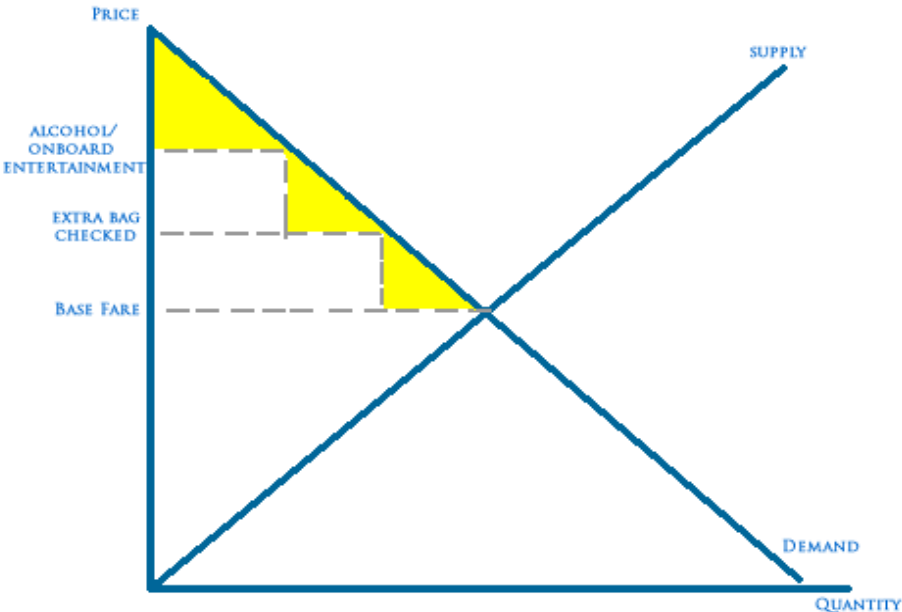
Spirit enters markets for which it can cut the average fare by at least 25% and still maintain margins. This strategy allows Spirit to price consumers back into the market who were previously priced out of it. Spirit seeks to capture those who took alternative forms of transportation as airfare was too expensive. By stimulating this demand, Spirit creates a new market and introduces consumers to the airline market for exclusive capitalization by Spirit themselves.

When a firm sells goods to a market it doesn't assume that all members of the market are equal. Different consumers have different preferences and different price points for which the elasticity of those preferences are stretched. By unbundling the ticket, Spirit is able to capture more of the consumer surplus. By charging a low base fare and exploiting each pricing point of a variety of different consumers. This is known as price discrimination. Price discrimination is a bit misleading and a better terminology would be optimal pricing. The firm just identifies different customers and charges them the price they are willing to pay. Businesses will make more money if they treat everyone as individuals and that is accomplished in Spirit's model.

Why should the consumer have to pay for servicing convenience if they don't require that convenience? During the 1980s, the predominate hub-and-spoke airline model sought to service the customers who desired multiple flight per day options. Assessing changes in convenience requires one to measure the advantages of multiple departures, flight timing, and connectivity patterns. These conveniences cost airlines and thus push that cost back onto the individual.

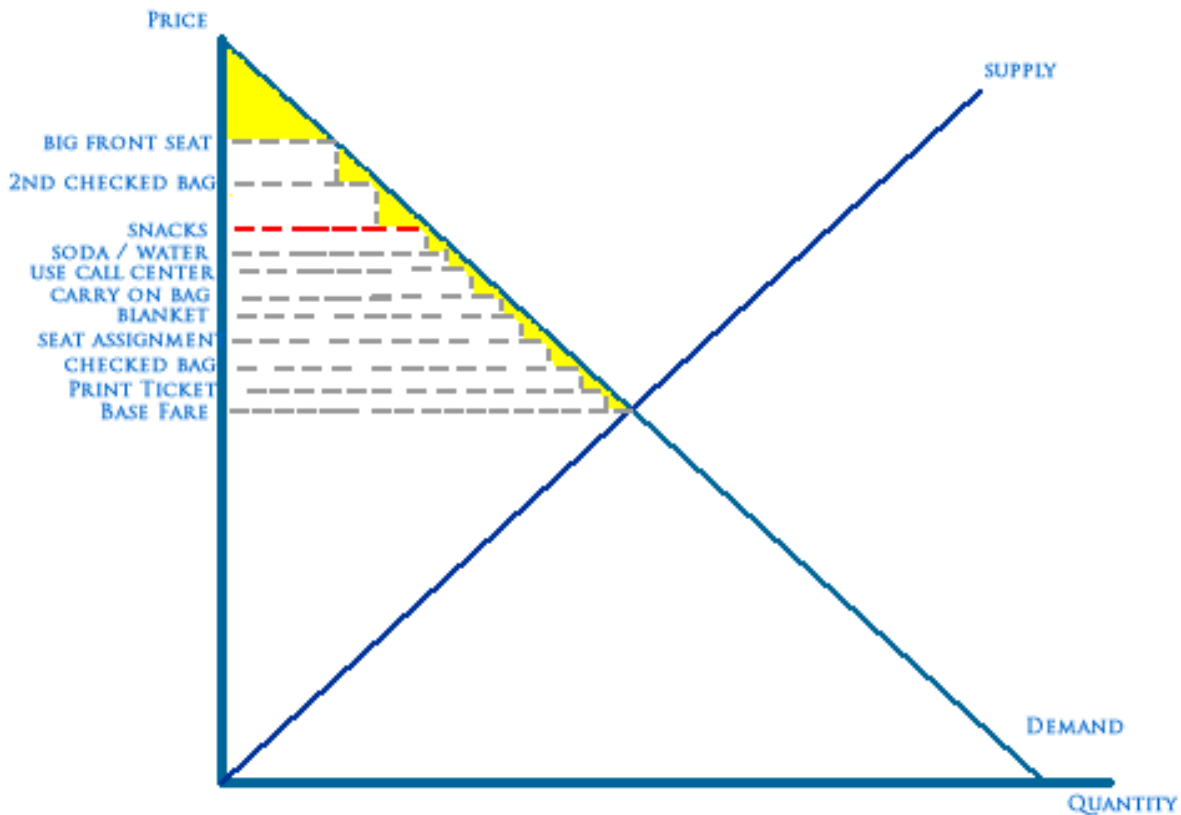
You can see from the below graph the standard airliner's model. They charge a base fare price and may be able to secure revenues in excess of that price like alcoholic drinks or checking extra bags. The yellow represents consumer surplus that the average airliner has been able to exploit with ancillary revenues. .

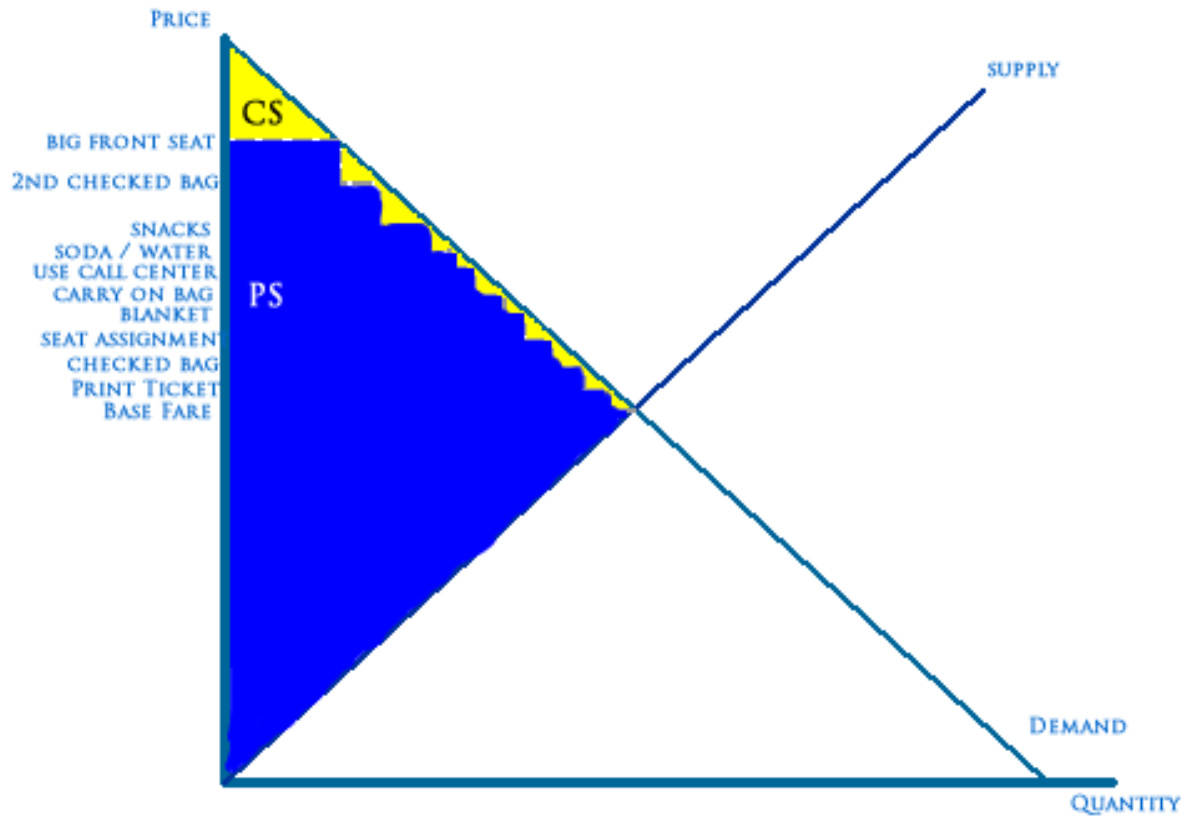
Breakdown of Producer and Consumer Surplus  
For the Industry Average Airliner



The next exhibit represents Spirit Airline. By unbundling they are able to identify much more specifically the extent of consumer willingness to spend on the frills of travel. Everything south of the red line is what would be considered complimentary in a normal fare. Spirit will charge you for everything from printing your ticket to using pillow. However, they are best able to provide the consumer with the optionality they may desire. If you are not going to use a pillow or check a bag why should you, the consumer, be subject to the implicit charge within the ticket? This is the theory and approach that Spirit takes. Economic Theory suggests that perfect price discrimination is Pareto efficient and thus is an efficient allocation of resources on both the consumer and producers behalf. While Spirit’s model isn’t pure price discrimination, it is as close as it gets, in theory, within the airline industry.

**Breakdown of Producer and Consumer Surplus  
For the Spirit Airline**



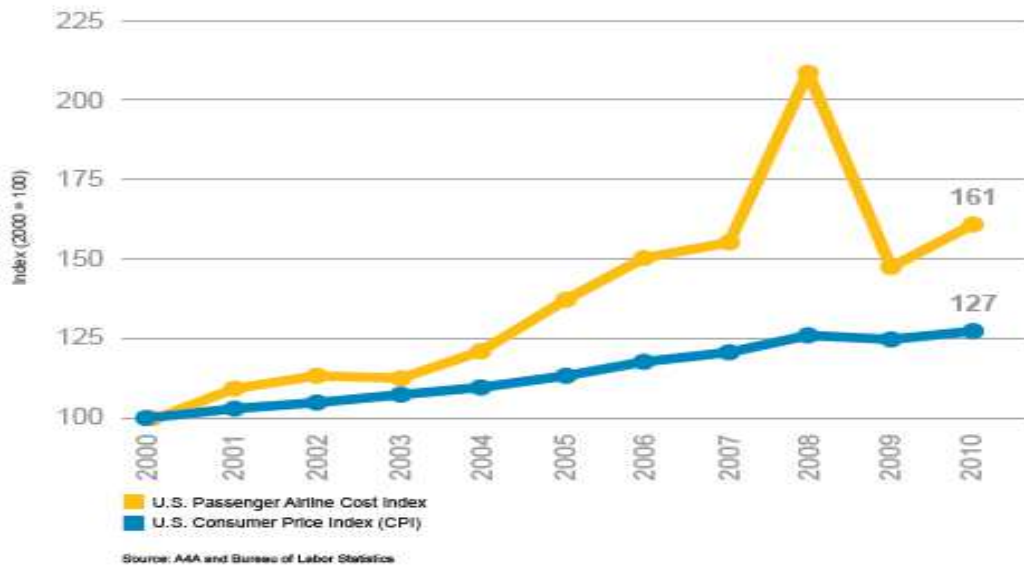


With the cost of travel becoming disproportionately large as opposed to the standard rate of inflation, there is more and more need for low cost carriers to enter the market and stimulate demand.

-[Please see [Appendix B](#) for information on price competition with standard carriers]-



## CPI index and Passenger Airline Cost



By adopting the unbundling strategy Spirit is able to increase total revenue and profits by achieving a higher level of producer surplus. As long as the marginal revenue is equal to or exceeding marginal cost, Spirit will continue to unbundle and exploit the varying consumer preferences and price elasticity's.

## Select Personnel and Insider Interests

Ben Baldanza became the CEO and president of Spirit in 2006 and is a member of the board of directors. He received a Masters Degree from Princeton's Woodrow Wilson School in public affairs with a specialization in transportation. He has over twenty-five years of experience having worked in a variety of senior positions at US Airways. Prior to US Airways, Baldanza was the COO of an airline based in Latin America. Mr. Baldanza owns 455,838 shares as of the last DEF 14A filing.

Ted Christie joined Spirit in 2012 as the CFO. Prior to Spirit Mr. Christie was the CFO of Pinnacle Airlines, an airline holding company that flew Delta, United, and US Airways. Previous to that he worked for Frontier airlines as the VP of Finance where he restructure the company and improve its competitive advantage. Mr. Christie owns 47,500 shares.

Tony Lefebvre came to Spirit in 2005 and is SVP and COO. Mr. Lefebvre's responsibilities entail the efficient running of the Airline. Prior to Spirit Mr. Lefebvre was the Managing Director,

Europe at US Airways. Lefebvre has 21 years of experience with flight operations in over 40 countries. Mr Lefebvre owns 101,248 shares.

H. McIntyre Gardener has been a board member since 2010 and retired from Merrill Lynch as Head of Americas Region. Mr. Gardener serves on the board and audit committee for his corporate finance experience. Mr. Gardener should prove to be advantageous for his financial knowledge as, notably his experiences in Latin America. Mr. Gardener owns 3408 shares.

Robert Johnson has been a board member since 2010 and was former CEO of Dubai Aerospace Enterprises. He was also the Chairman and CEO of Honeywell, prior to that he served on the board of several other private companies in the aerospace sector. Mr. Johnson has a strong business and industry experience that will be advantageous to Spirit. Mr. Johnson owns 3408 shares

The most significant and exciting individual in Spirit's upper management is Bill Franke. Franke has been Chairman of the Board and since 2006. Mr. Franke is also Managing Partner at Indigo, a private equity firm focused on air transportation as well as a Managing Partner at Newbridge Latin America, a private equity fund focused on Latin America. Aside from being a member of several other boards in the insurance and airline industries, he was CEO of America West Airlines from 1993-2001. His private equity fund owns 16.% of the outstanding common shares of Spirit Airlines. Mr. Franke owns 12,070,920 shares as of the latest DEF 14A filing.

I view this significant ownership as a very strong catalyst for future growth as it not only defines strong interest from the PE space but also strongly aligns corporate incentives with shareholder incentives. Another 18% of the outstanding shares are owned by Oak Tree Capital presumably in their Latin America fund. Both funds are in the start of the harvesting phase of their investment.

Manning & Napier Advisors, LLC has in the last month taken a 7% stake in the company. It is unclear how much they had previous to passing the 5% threshold that required the execution of a 13G.

While Spirit isn't currently a Latin America play, it's clear that they are a derivative play on the geography and possibly will expand their presence. When you have two private equity funds holding one third of the outstanding shares, you can be sure the primary focus of the company will be profitability and enhancing shareholder value.

There are currently no legal or regulatory concerns that could materially affect Spirit Airlines.

–[Please see Appendix C for more information on private equity] –

# - Part 2: The Valuation -

## Pro Forma Income Statement

The operating effectiveness of a business is ultimately realized by additions to the bottom line, or otherwise, to generate earnings.

As the investment horizon is three years it's relevant to project out only to that period. The below Pro Forma Income Statement is very conservative assuming a decline in non-ticket revenues of 5% per year despite a three year and 9 month over 9 month growth of approximately 40% as well as corporate growth targets to bring ancillary revenues to 50% of total revenue. Most expenses are projected to grow at approximately 20% per year.

-[Please see Appendix D for information on assumptions ]-

	Pro Forma Income Statement (in millions)						
	2009	2010	2011	2012*	2013	2014	2015
<b>Operating Revenue</b>							
Passenger	536	538	690	786	896	1022	1165
Non-Ticket	163.86	243.30	381.55	553.24	802.20	1082.97	1353.71
<b>Total Operating Revenue</b>	<b>700.04</b>	<b>781.27</b>	<b>1071.20</b>	<b>1339.44</b>	<b>1698.47</b>	<b>2104.72</b>	<b>2518.50</b>
<b>Operating Expenses</b>							
Aircraft Fuel	181.11	248.21	388.05	465.66	558.79	670.54	804.65
Salaries & Wages	135.42	156.44	181.74	218.09	261.71	314.05	376.86
Aircraft Rent	89.97	101.35	116.49	145.61	182.01	227.51	284.39
Landing Fees & Other Rent	42.06	48.12	52.79	68.63	89.22	115.99	150.78
Distribution	34.07	41.18	51.35	61.62	73.94	88.73	106.48
Maintenance	27.54	28.19	35.55	44.44	55.55	69.44	86.80
D&A	4.92	5.62	7.76	9.31	11.17	13.41	16.09
Other Operating	72.92	82.59	89.64	112.05	140.06	175.07	218.84
Loss on Disposal of Assets	1.01	0.08	0.26	0.50	0.30	0.30	0.30
Special Charges	-0.39	0.62	3.18	-8.35	0.00	0.00	0.00

<b>Total Operating Expenses</b>	588.63	712.39	926.80	1117.56	1372.75	1675.04	2045.19
<b>Operating Income</b>	111.41	68.87	144.39	221.89	325.72	429.68	473.31
<b>Other Expenses</b>							
Interest Expense	46.89	50.31	24.78	1.30	1.00	1.00	1.00
Capitalized Interest	-0.95	-1.49	-2.89	-1.34	0.00	0.00	0.00
Interest Income	-0.35	-0.33	-0.58	-0.77	-0.25	-0.25	-0.25
Extinguishment of Debt	-19.71	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.30	0.19	0.24	0.30	0.30	0.30	0.30
<b>Total Other Expenses</b>	26.18	48.69	21.55	-0.51	1.05	1.05	1.05
<b>EBT</b>	85.23	20.19	122.84	222.40	324.67	428.63	472.26
<b>Provision for Income Taxes</b>	1.53	-52.30	46.38	82.29	120.13	158.59	174.74
<b>Net Income</b>	83.69	72.48	76.46	140.11	204.54	270.03	297.53
<b>Shares Outstanding</b>	25.91	26.16	53.09	72.27	72.27	80.00	85.00
<b>EPS</b>	3.23	2.77	1.44	1.94	<u>2.83</u>	<u>3.38</u>	<u>3.50</u>
<b>EPS Diluted</b>	3.18	2.72	1.43	1.92	2.68	3.20	3.20

At first glance one might be disinclined to believe that a three year decline in EPS will result in a sudden multi-year increase, however I would direct you to the expansion of shares outstanding. The IPO in 2011 significantly expanded the shares within the firm while eliminating all debt. The delevering of Spirit took a cost that is visible in 2009-2010 decrease in EPS as a result of share expansion. However, once delevered, earnings flattened out in 2011. With no debt and what is assumed to be a steady share base from this moment forth, Spirit is well positioned to grow cash and retained earnings while giving back to shareholders in the form of capital appreciation and possibly special dividends.

Some sensitivity analysis around the pro forma income statement can be seen as follows. Keep in mind that this analysis doesn't assume an EPS above what it trades today. It's my belief that Spirit will simultaneously obtain a larger P/E.

## Sensitivity Analysis

Base Case Scenario				
EPS	2013	2014	2015	Avg Ann Growth
	<u>2.83</u>	<u>3.38</u>	<u>3.50</u>	
9	25.47	30.38	31.50	16.35%
10	28.30	33.75	35.00	20.51%
11	31.13	37.13	38.50	24.40%
12	33.96	40.51	42.00	28.06%
17	48.11	57.38	59.51	43.83%

Best Case Scenario				
EPS	2013	2014	2015	Avg Ann Growth
	<u>3.26</u>	<u>4.71</u>	<u>7.03</u>	
9	29.30	42.35	63.26	46.79%
10	32.56	47.05	70.29	52.04%
11	35.81	51.76	77.32	56.94%
12	39.07	56.46	84.35	61.56%
17	55.35	79.99	119.49	81.45%

Worst Case Scenario				
EPS	2013	2014	2015	Avg Ann Growth
	<u>2.12</u>	<u>2.20</u>	<u>1.77</u>	
9	19.05	19.78	15.95	-7.27%
10	21.16	21.98	17.72	-3.95%
11	23.28	24.17	19.49	-0.85%
12	25.40	26.37	21.27	2.07%
17	35.98	37.36	30.13	14.63%

- Note that average annual growth is representative of yearly increases in the stock price

The possibility for special dividends is validated by significant ownership by two asset management and private equity firms. It is logical that they will seek to enhance their own value as shareholders by enforcing dramatic returns of capital. It is unlikely this will occur in a nominal dividend and is more likely to manifest itself in the form of share buybacks, special dividends, or a possible LBO.

## Ratio Analysis

The choice of comparable firms by which assumptions of fair value are based were not chosen lightly. Allegiant and Southwest are Spirit's two closest competitors in terms of value airline pricing with Allegiant being the most comparable company. A thorough discussion on Allegiant will be explored in the following section. United Continental and Delta were chosen due to air traffic volume and well represent the airline industry as a whole. American Airlines was chosen because it has been a poorly run airline. JetBlue was chosen because it is a well run airline that finds itself in between Spirit and Delta in terms of size and pricing.

-[Please see Appendix E for the mathematics behind the ratios]-

Liquidity Ratios					
Company	Current Ratio	Quick Ratio	Average Collection Period	Days Payable Outstanding	
Spirit	2.01	1.49	8.76	9.17	
American	0.76	0.44	22.38	24.89	
JetBlue	0.98	0.70	13.20	14.68	
Allegiant	2.07	1.70	8.81	14.67	
United Continental	0.83	0.51	23.89	28.58	
Delta	0.62	0.24	23.21	32.34	
Southwest	0.94	0.65	12.15	33.60	
US Airways	1.10	0.70	14.63	14.53	
Average	1.16	0.80	15.88	21.56	
How Spirit Ranks	2nd	2nd	1st	Varies	

Liquidity ratios are useful in clarifying the firm's ability to cover liabilities. The quick ratio is the most revealing as it looks much more purely into the firm's ability to cover immediate liabilities by backing out accounts receivables and other not so liquid assets. Normally an average

collection period that is significantly lower than the average would suggest the firm isn't extending enough credit. Because the Airline industry is a pay upfront business, I would view the average collection period values very favorably. The days payable outstanding values are more up to the individual to decipher. I prefer prompt payments and low outstanding debts. However, a low 'days payable' would suggest the firm isn't earning a return on their cash by delaying payments as long as possible.

Solvency Ratios (Leverage Ratios)					
Company	Debt Ratio	LT Debt to Capital Ratio	Debt to Equity	Financial Leverage	
Spirit	0.37	0.09	0.58	1.58	
American	1.31	1.51	n/a	n/a	
JetBlue	0.85	0.70	3.18	3.75	
Allegiant	0.48	0.31	0.94	1.94	
Delta	1.00	1.00	n/a	n/a	
Southwest	0.63	0.49	1.69	2.69	
How Spirit Ranks	1st	1st	1st	1st	

n/a suggests negative earnings

Solvency ratios seek to shed light on the capital structure of the firm and is a measurement of the extent of the firms financing of debt. The debt to equity ratio is the most telling ratio here as it defines the riskiness of the firm's capital structure. Having a debt to equity ratio at 1/9th of the industry average ensures solvency and strong capital position.

Activity Ratios					
Company	Accounts		Fixed Asset Turnover	Total Asset	
	Receivables Turnover	Payables Turnover		Turnover	
Spirit	41.67	39.78	38.14	1.12	
American	16.31	14.66	1.39	0.79	
JetBlue	27.65	24.86	0.75	0.53	
Allegiant	41.41	24.88	1.94	0.84	
United Continental	15.28	12.77	1.69	0.75	



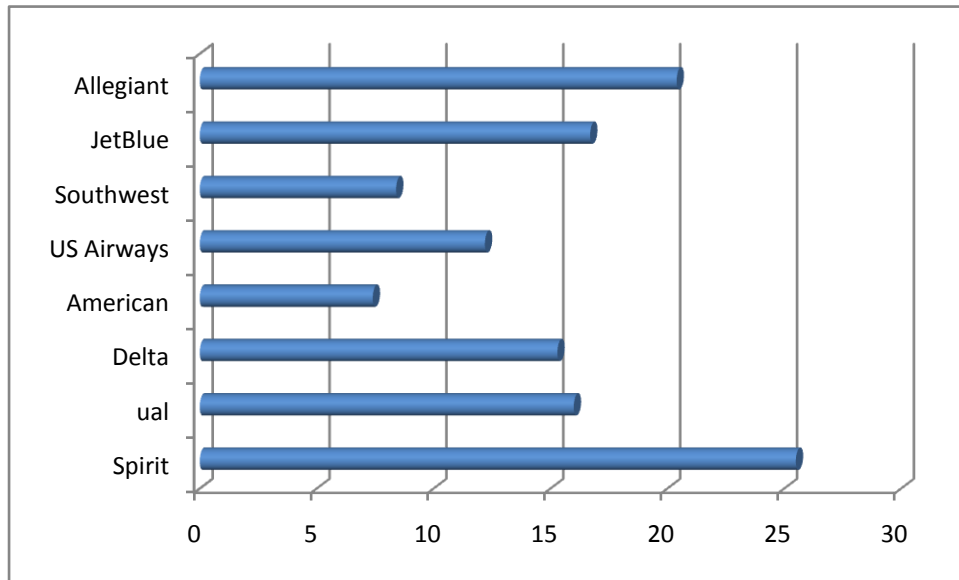
Delta	15.72	11.29	1.36	0.63
Southwest	30.03	10.86	1.03	0.69
US Airways	24.95	25.12	2.42	1.13
Average	26.63	20.53	6.09	0.81
How Spirit Ranks	1st	1st	1st	1st

These activity ratios aren't very relevant to the airliner industry and are included here as a novelty. It is advisable that instead of activity ratios, the reader diverts their attention to the industry specific ratios. The fixed asset turnover and total asset turnover ratios explain the investment required to generate sales. The higher the ratios the better. Because Spirit leases all its planes, it is able to realize significantly higher turnover ratios than its peers and (from a comparative analysis perspective) uses those assets more efficiently than its peers do.

Profitability Ratios				
Company	Gross Profit Margin	Net Profit Margin	ROA(ROI)	ROE
Spirit	14.35%	8.98%	10.05%	15.89%
American	0.55%	-11.31%	-8.94%	N/A
JetBlue	8.76%	3.35%	1.78%	6.67%
Allegiant	15.59%	9.30%	7.77%	15.07%
United Continental	1.77%	-0.36%	-0.27%	-5.64%
Delta	6.50%	3.57%	2.26%	N/A
Southwest	4.12%	2.66%	1.82%	4.90%
US Airways	6.93%	5.69%	6.44%	18.71%
Average	7.32%	2.73%	2.61%	9.27%
How Spirit Ranks	2nd	2nd	1st	2nd

Return on assets and return on equity are good values to note as they represent the profit earned relative to the level of investment in the asset or equity. Traditionally the increase in ROE is greater than the increase in ROA due to the increased use of debt, however, Spirit has been able to maintain strong ROE despite having no debt.

**Earnings Before Interest Taxes Depreciation  
Amortization and Rent (EBITDAR) Margin (in %)**



MVIC is defined as the market value of invested capital which attempts to take into account other claims to the net income, revenue, or whatever you are comparing it to. The table defines MVIC as shareholder equity plus long term assets for simplicities sake and covers the 9 month period ending Sept 30 2012. You would prefer to see smaller values as the market value of invested capital would ideally be small and generate massive profits as opposed to large and generating smaller profits.

**Invested Capital Ratios**

	Spirit	American	Jetblue	Allegiant	United Cont	Delta	Southwest	US Airways
MVIC/Rev	0.62	0.76	1.70	0.89	0.87	1.11	1.07	0.55
MVIC/EBITDA	0.73	0.76	1.86	1.05	0.89	1.19	1.12	0.60
MVIC/NI	6.94	n/a	50.60	9.56	n/a	31.03	40.36	9.75

**Airline Specific Ratios**

Company	CASM (in cents)	Average Breakeven Fare	Load Factor	RASM (in cents)
Spirit	10.20	58.00	85.90	11.52
American	14.45	194.06	85.50	12.20
JetBlue	12.55	133.12	84.80	12.21
Allegiant	10.90	64.00	87.40	11.86
United Continental	12.65	n/a	86.40	13.96
Delta	13.83	171.96	86.40	13.96
Southwest	11.05	102.63	82.10	12.30
US Airways	12.70	n/a	86.20	11.85
<b>Average</b>	<b>12.29125</b>	<b>120.628333</b>	<b>85.59</b>	<b>12.48</b>

n/a denotes data that was either not available or the methodology was inconsistent

The above table conveys popular industry specific ratios that allow analysts within the field to better understand the nature of the firm and the industry as a whole.

-[ Please see [Appendix A](#) for industry terminology]-

RASM stands for Revenue per average seat mile and represents a per seat revenue per mile and is measured in cents. CASM is cost per average seat mile and represents the cost per seat per mile. CASM and RASM in of themselves are not informative but when combined, tell a story similar to operating profit margin. Where RASM is like revenues or sales and CASM is similar to COGS. While load factor must be considered as well as volume, netting RASM and CASM obtains a much clearer representation of the profitability of the airline.

Company	RASM-CASM
Spirit	1.32
American	-2.25
JetBlue	-0.34
Allegiant	0.96
United Continental	1.31
Delta	0.13
Southwest	1.25
US Airways	-0.85

Average	0.191
How Spirit Ranks	1 <sup>st</sup>

Spirit has roughly a roughly 600% RASM-CASM value north of the industry average. While there is a scaling factor to be considered, Spirit on the back of this metric shows an inspiringly productive business model. Amongst low cost carriers Spirit has the best CASM. The two primary reasons for this would be related to the pass-through of distribution costs and the single model fleet. .

Company	CASM average 2010Q3 - 2011Q4
Spirit	9.34
Frontier	14.78
Southwest	12.02
Airtran	11.38
Allegiant	10.38
JetBlue	10.74
Virgin America	10.36
Average	11.28571429
How Spirit Ranks	1st

Another alternative metric worth exploring is the percentage change increase in baggage collection. This shows how airlines are or are not pushing ancillary revenue possibilities as well as their success in that venture.

Company	Percentage change increase in baggage collection from 2011Q3 to 2012Q3
Spirit	61.1
American	1.1
JetBlue	12.3
Frontier	37.4
united continental a)	-6
Delta	-10.4

Air-Tran	12.3
US Airways	-2.3
Average	13.1875
How Spirit Ranks	1 <sup>st</sup>

a) united and continental were averaged as the data was pre merger

Company	Ancillary Revenue percentage change 2011Q3 to 2012Q3
Spirit	62.4
American	2.9
Jetblue	9.7
United Continental a)	2
Delta	17.5
AirTran	53.5
US Airways	-1.6
Average	18.3
How Spirit Ranks	1 <sup>st</sup>

a) united and continental were averaged

Spirit is remarkably successful at increasing their baggage fees and as such expands the ancillary revenue portfolio. From a more holistic perspective, we can see that in total ancillary revenue growth Spirit is still best in breed.

In addition to RASM and CASM there are four other popular airline specific ratios worth observing. These values aren't really comparable and are more informative than anything else. This clarifies the type of revenue structure particular firms in the industry are targeting. It also demonstrates their ability to manage fuel prices and wages. Please see the table below

Airline Specific Ratios					P/E	P/E
Company	Flights as % of Revenue	Ancillary/other as % of Revenue	Fuel as % of Revenue	Wage as a % of Revenue	trailing 4 quarter	forward 4 quarter
Spirit	60.00%	40.00%	41.39%	18.93%	12.50	11.50
American	87.28%	12.72%	34.84%	28.39%	n/a	n/a

JetBlue	91.37%	8.63%	39.47%	22.63%	12.20	10.50
Allegiant	65.08%	34.92%	49.50%	17.16%	19.00	14.40
United						
Continental	88.05%	11.95%	35.94%	21.32%	13.00	10.00
Delta	86.82%	13.18%	29.56%	20.72%	6.70	5.60
Southwest	93.90%	6.10%	37.27%	28.68%	19.70	13.30
US Airways	89.11%	10.89%	27.07%	19.22%	5.52	5.22
<b>Average</b>	<b>82.70%</b>	<b>17.30%</b>	<b>36.88%</b>	<b>22.13%</b>	<b>12.66</b>	<b>10.07</b>

n/a values are due to negative earnings

What is important is that you turn your attention to the price to earnings ratios. At an industry average of 12.66 trailing and 10.07 forward, Spirit finds itself trading at the average. Given all the evidence of superior performance in the graphs above, why might Spirit trade at such a discount to Allegiant which commands a 19x current and 14.4x forward? The firm doesn't have a beta (although I created one for it), nor does it have very much historical data, It's gone through a three year deleveraging period which has distorted the earnings trends, fear by investors who have been burned by airlines before, and they are not covered extensively by analysts. A more detailed discussion on this is to follow.

From a multiples perspective, Spirit seems priced incorrectly. They should experience multiples expansion in their near future. Applying an 18x multiple which is approximately what Allegiant, their next closest competitor, and an 2012 4Q trailing EPS (per prediction about Q4) gives ... 25% premium to today.

		Sensitivity Analysis Around EPS Multiple						
		8	10	12	14	16	18	20
EPS	1	8	10	12	14	16	18	20
	1.2	9.6	12	14.4	16.8	19.2	21.6	24
	1.4	11.2	14	16.8	19.6	22.4	25.2	28
	1.6	12.8	16	19.2	22.4	25.6	28.8	32
	1.8	14.4	18	21.6	25.2	28.8	32.4	36
	2	16	20	24	28	32	36	40
	2.2	17.6	22	26.4	30.8	35.2	39.6	44
	2.4	19.2	24	28.8	33.6	38.4	43.2	48

## Allegiant specific model

Allegiant Airlines is the most comparable firm to Spirit. Its difference exists in its target geographies but the business model is the same. Allegiant has the second highest ancillary revenues in the business behind Spirit. Allegiant seeks to service smaller cities while Spirit focuses on larger domestic cities and south American travel. There is very little overlap between these two firms as Spirit is uninterested in competing in the ultra low cost carrier markets. Spirit seeks to be the dominant low fare choice in its market and if it must discount beyond its 20+ percentage EBITDAR margin target, it will abandon the market.

Allegiant’s stock has grown at an average of 22% per year over the last five years. 15% over the last three years, and 30% in the last year. Allegiant doesn’t have the growth potential that Spirit does and is starting to find itself mature within the industry as well s they have a different model by which they buy old planes and fix them up as opposed to Spirit which rents new planes and fly’s them like crazy. By examining Allegiant over the last ten years we can develop a fairly comparable model for where Spirit is heading.

Operating revenue	42.7%
Operating expenses	40.5%
Cash and cash equivalents c)	76%
Operating income b)	45.6%
CASM	8.42
EPS a)	32%

- a) Took average of 2002 and 2003 values and found average over 9 years due to negative earnings in 2002
- b) Only values from 2003-2011
- c) Only values 2004-2011

Below you can see the performance of Allegiant over the last year and last five years. Where Allegiant is the blue line and the S&P500 is the red line. This is a testament to the ULCC business model.

1 year

5 years





While Allegiant continues to enjoy superior profitability in relation to the airline industry as a whole, it's becoming evident by the revenue highs in 2010/2011 that they have hit a point in their business where expansion and growth comes at the cost of margin contraction. Spirit on the other hand can move into 400 new markets without compromise of margins according to their CEO.

## The Qualitative

### A Discussion on Liquidity

A company's market value, broadly, is a factor of the expected after tax operating cash flows and the risks associated with producing them. One step further, the price of a stock are the per share claim to the net income of the firm multiplied by the ambition of future earnings. When valuing companies in this way it's often forgotten that liquidity must play a role!

Attention is paid to current and quick ratios as well as interest coverage ratios but these aren't traditionally factored into the modeling of security prices. What happens when markets don't react as we predict them to? There is an inherent liquidity risk that is overlooked in the valuation of securities. This should discount the present value of future cash flows as they might be called to respond to a violent debt market.

As Spirit doesn't have any long term debt (excusing capital leases), thus it is less an issue for the firm and more so a concern for the rest of the airline industry which is traditionally dependent on debt financing. When markets fail to be as liquid as they have traditionally, one might see bond prices decline and bid asked spreads widen. Look no further than the recent credit crisis in

the US to see how the severity and extent of liquidity disruption affects corporate bond prices and asset liability management practices within a firm.

A study published in 2007 in the Journal of Finance found that, over time, the changes in liquidity costs for bonds led to yield changes in those bonds. While intuitive, it validates the claim that there is a liquidity risk to the future cash flows

-[ Please see [Appendix G](#) for a model on liquidity ]-

## Behavioral Finance:

An explanation as to Why Investors and Analysts Ignore Spirit

Loss Aversion & Investor/Analyst Paralysis

The airline industry is the widow maker of stock sectors. Millions of people over the years have gambled on airliners only to find their equity wiped out as the companies approach zero or enter into bankruptcy. When bad things happen time and time again it is easy to become skeptical and fearful of the cause and effect.

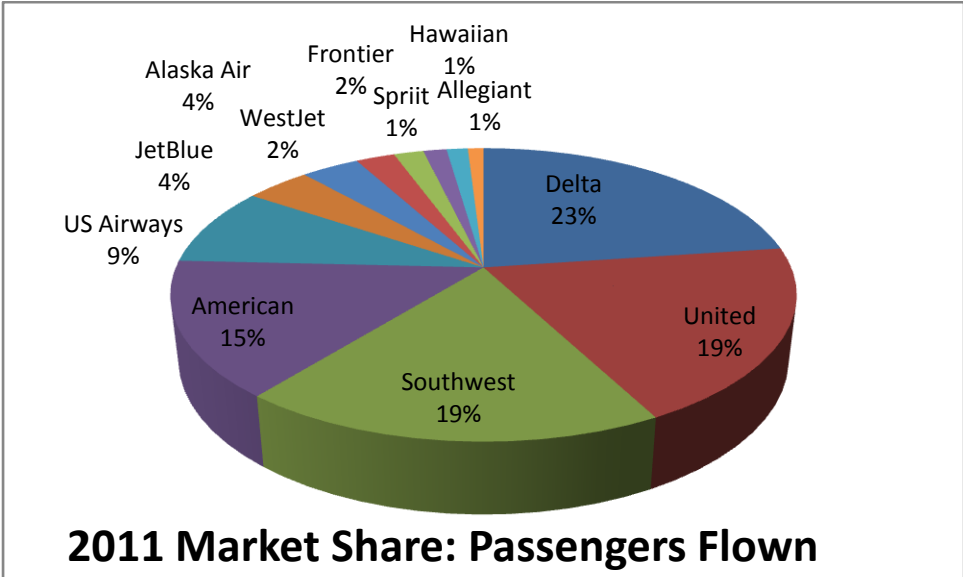
Conservatism is a common perspective that better ensures return of capital but often tends to ignore opportunity. When things change people tend to under-react to such a change. The twice or thrice burned investor & analyst are less inclined to accept the new business model as a fear it is simply a wolf in sheep's clothing. The intuitive mind is quick to react and bases its judgments on past experiences and current emotions. The reflective mind is slower and considers over time and with data the nature of things, It is often the case the intuitive mind drives the decision process of the individual according to Shlomo Benartzi, PhD. Professor at UCLA Anderson School of Management and Chief Behavioral Economist at Allianz Global Investors. He explains this is a result of an error in the intuitive mind followed by a failure of the reflective mind which results in the conservative bias, personified in this case, by the fearful investor and analyst. We are not as rational as we might think.

“the evidence that investor emotions are influencing prices of securities is becoming overwhelming” – Kent Daniel Graduate School of Business at Columbia University

Markets aren't inefficient; rather, market prices don't always represent a rational assessment of fundamental values.

## Discussion on Growth

Spirit management has learned that capital is a scarce and costly resource and that delivering high returns is a key part of adding value. However, high returns are not long term reasonable. The tenets of US growth theory are not consistent with the teachings of traditional corporate finance. Linear production models are not reflective of the real world and over the long term almost never good predictors of long term growth according to Nobel Lureate Robert Solow. Instead, growth is an evolutionary process that is neither continuous nor stable. Oxford economist Edith Penrose opines on this reality by noticing that those who achieve sustainable returns that are above the required rate of return (WACC), should have a market price that rises creating value for investors. But this will not last forever.



There is a horrible assumption built into the capital markets that all companies are expected to improve their performance in the future. Terminal growth is a reality and at some point the tool box will be fully used. Spirit still has many growth triggers and thus is just now starting what will easily be a multi-year cycle of strong margins and growth. While sustainable competitive advantages are not attainable, the true drivers of value are short term competitive advantages and Spirit has these in spades. It would be incredibly costly and noticeable for another firm to attempt the low cost carrier model.

Furthermore, mature growth companies like United Continental and Southwest (who acquired AirTran) will grow by acquisition which is external growth not internal growth, and is a clear sign of the inability to grow beyond their natural means. These mature companies cannot innovate like Spirit because they are not risk takers. Spirit is a risk taker because its management are risk takers and they are than more likely to innovate in a large way to excite growth. Research by Jeanne Liedtka finds growth initiatives are largely successful when spearheaded by management who approach prospects like entrepreneurs.

Spirit employs what the Darden School of Business calls “learning launches”. Learning launches are experimental processes based on the premise that the most cost effective method for developing new growth ideas is to test them quickly and cheaply. Learning launches are a customer centric process that involves learning by doing. If Spirit is unhappy with the return denominated in EBITDAR margins north of 20% than they will exit just as quickly as they entered. Many other airlines cannot move this quickly.

-[Please see [Appendix F](#) for a discussion on market efficiency ]-

# - Part 3: Risks -

There are risks to any business. Risk isn't bad as it sets the foundation for reward, but the treatment and maintenance of risk is an incredibly important part of a business, especially an airliner.

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Risk 1: Industry Competition

Risk 2: Fuel Cost variations

Risk 3: Government intervention

Risk 4: The Economy

Risk 5: Availability of Financing, Credit, and Liquidity Maintenance

Risk 6: Uncontrollable External Risks

Risk 7: Adverse Changes in Contracts or Operating Policies

Risk 8: Risk to the Core Business Model

Risk 9: Large Private Equity Ownership

Risk 10: Reputational Risk

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## Risk 1: Industry Competition

Many investors over the years have lost significant amounts of money in the airline market. It's commonly joked about, that an airliner isn't mature until it has gone through bankruptcy. There are many mature players who compete over very similar routes, fares, and services. In addition to competition in key markets like Ft. Lauderdale and Dallas, Spirit may face new competition in markets they currently dominate. Other airline industries may begin to unbundle their services more aggressively than expected or outright create ultra low cost carrier subsidiaries.

The ultra low cost carrier model is the primary competitive advantage that Spirit has. There would be a phasing in period from other airlines who were to attempt to replicate this model and investors would be afforded sufficient time to reevaluate the quality of an investment in Spirit. As such, serious changes in the market will hardly cost unforeseen losses, instead, it will beget long term price competition and slow and steady profit declines. Spirit is less susceptible to price discounting pressures due to the business model. Please see Appendix B for more information on this matter.

## Risk 2: Fuel Cost Variations

The price of fuel to power the planes could change very quickly in unforeseen manners and cause large swings in profitability as it accounts for approximately 40% of operating costs. Often times the price of fuel is affected by meteorological events, political factors, war, and other non predictable occurrences. Furthermore, Spirit's primary source of aircraft fuel is from the Gulf Coast region. Many of their peers with more diversified fuel source contracts might weather a catastrophic event in that area better than Spirit. There is no assurance that fuel hedging contracts will cover all price variation or fully absorb the risk in oil pricing.

Spirit was profitable in 2008 during \$140 oil prices. This shows strong reactionary management on behalf of the company's senior members as well as a solid hedging strategy. By entering into fuel derivatives contracts a firm can mitigate some of the volatility in fuel prices. The following quote is from Spirit's 2011 10-k "As of December 31, 2011, we had fuel hedges using U.S. Gulf Coast jet fuel collars in place for approximately 40% of our estimated fuel consumption for the first quarter of 2012. Additionally, during hurricane season (August through October), we use basis swaps using NYMEX Heating Oil indexes to protect the refining price risk between the price of crude oil and the price of refined jet fuel." Spirit passes on fuel costs to customers. While they may have a delay between the rapid rise in fuel costs and the ability to reflect that in the price, Spirit should over the long term have minimal impact on variant pricing unless the cost of fuel is so high that the pass-through of that cost prices individuals out of Spirit and into the hands of a competitor.

## Risk 3: Government Intervention

The airline industry is highly taxed and increases in these taxes may force individuals into alternative forms of transportation. New regulations could also harm the business. The US Department of Transportation (DOT) has set strict standards on ancillary revenues and airline advertising, that, if worsened, could cause material declines in revenues. Restrictions on or increased taxes applicable to fees or other charges for ancillary products and services paid by airline passengers and burdensome consumer protection regulations or laws could harm our business, results of operations and financial condition.

The FAA, DOT, and other government agencies tend to lobby for law under the premise that it is in the best interest of the consumer. This offers insight into how they might pass new law and thus is very predictable on behalf of the airline industry. Furthermore, new legislation doesn't happen overnight. There would be sufficient time for investors to react and rally to change new legislation.

#### Risk 4: Economic conditions

If the United States were to experience another recession, significant reductions in airline travel could occur as lower levels of discretionary income could result from any number of economic triggers. Additionally, changes in consumer preferences for where they choose to travel and vacation could cause an impact. If the economy were to get dramatically better there could be a decrease in preference for low cost carriers.

It's unlikely that in an improved market all US citizens will participate in wealth expansion to the extent that they no longer favor low cost alternatives toward the traditionally high priced costs of travel. If the economy worsens, Spirit may receive a larger portion of airline travel as those who must travel, will now choose to do it more cheaply. Spirit, by being a low cost carrier, is well insulated from broader macro conditions, however, ancillary revenues could take a hit.

#### Risk 5: Availability of Financing, Credit, and Liquidity maintenance

There are fixed obligations that Spirit has with their aircraft suppliers that could effect and are affected by the liquidity and financial condition of the firm. Spirit has future operating leases of close to 1.5 billion. If operating performance or, more succinctly, cash flow is compromised, these leases could go into default and for Spirit to raise funds through debt or new issuances of equity diluting current shareholder claims. Strains on cash flows could limit the ability to obtain new financing for working capital. Liquidity concerns could cause Spirit to have to dial back on non-essential operating programs such as hedging their fuel risk.

While this is a concern, it is important to note that Spirit has yet to use debt to drive ROE. Thus, Spirit has access to a form of fundraising that every other airline has already tapped. This is a significant cushion of safety that helps validate the investment in Spirit.

#### Risk 6: Uncontrollable External Events

Air traffic congestion, adverse weather, new security measures, or even the outbreak of disease could affect the way in which the airline must operate. Delays onset by factors beyond Spirit's control could result in the loss of customers or decrease the productivity of the average plane flight hours. External events could cause delays but also cause damage to expensive machinery and infrastructure resulting in larger insurance premiums in the future.

All airlines are subject to these risks and there is little anyone can do to mitigate them. This is a systematic risk to business and investors must be willing to absorb it.



#### Risk 7: Adverse changes to key contracts and operating policies

Third party revenue generation profits could be affected if there are future changes in the contracts that are a negative for Spirit. Furthermore, there is significant labor cost related risks that may arise. Labor represents 20-25% of the operating costs and roughly half of the workforce is represented by a labor union and thereby covered by collective bargaining agreements.

In 2010 there was a 5 day pilot strike before a tentative agreement between the union and Spirit was made. Despite this strike, Spirit maintained EBITDAR margins and revenue growth. New bargaining agreements were decided upon in July 2012 and as such, Spirit has normality period until they become renegotiable in a few years.

#### Risk 8: Risks to the Core business Model

Spirit may not be able to maintain high daily aircraft utilization rates which allow for the low cost structure to work. Maintenance costs will increase as the fleet ages and as the fleet size expands. The implementation of Spirit's growth strategy may not work due to lack of access to new aircrafts, remodeling the inside of those aircrafts, expanding into new over priced markets, and benefit from scale. Spirit could also suffer from a failure in technology and automated systems. A slowdown in growing non-ticket revenues and the inability to expand efficiently out of Fort Lauderdale, FL. Changes in the air-traffic policies of south American countries as well as changes in consumer preferences to travel to these countries could cause unforeseen material changes.

The above concerns are merely comments on what could happen and there is currently no catalyst in play, nor any foreseen, that would allow the above concerns to be realized realities.

#### Risk 9: Large Private Equity Ownership

Over 30% of the outstanding shares of Spirit are owned between three investment firms; Oaktree Capital Management, Indigo, and Manning & Napier Advisors. If these three firms were to suddenly liquidate their positions or effect material changes within the firm that hurt shareholders, there could be unforeseen losses.

-[ Please see Appendix C for private equity participation in the public markets]-

#### Risk 10: Reputational Risk

If there were to be a plane crash, especially from a ULCC, there may be some damaging reputational risk that could hinder Spirit's growth. Furthermore, public opinion of Spirit is that

they are penny-pinchers attempting to rip you off by offering you hidden fees. If the public were to become more hostile toward this sort of business model, it could hurt growth on the top and bottom line

Odds are that the Spirit Airline business model will not be fully understood by the consumer. However, they do maximize given their budget constraint and if Spirit is the only service that appeals to that constraint, than Spirit is thusly the only airliner that can be flown. The begrudging customer in the short run (1-3 years) isn't a large concern. Reputational damage from the perspective of a crash is something that's inherent to all airlines and Spirit complies with all FAA regulations.

# - Part 4: Appendix -

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Appendix A: Industry Terminologies

Appendix B: Price Competition for Standard Carriers

Appendix C: Private Equity Investment and Shareholder Wealth

Appendix D: Details of how estimates were formed for the pro forma income statement

Appendix E: Mathematics for Ratio Analysis

Appendix G: Discussion of Disaster in the Airline Industry

Appendix I: A Comment on Market Efficiency

Appendix K: A model for Liquidity

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## Appendix A: Industry Terminologies

The below abridged information was copied from Spirit's third quarter 2012 10-Q.

"Adjusted CASM" means operating expenses, excluding special charges (credits) and mark-to-market gains or losses, divided by ASMs.

"Adjusted CASM ex fuel" means operating expenses less aircraft fuel expense and excluding special charges (credits) and mark-to-market gains or losses, divided by ASMs.

"Air traffic liability" or "ATL" means the value of tickets sold in advance of travel.

"Available seat miles" or "ASMs" means the number of seats available for passengers multiplied by the number of miles the seats are flown, also referred to as "capacity".

"Average aircraft" means the average number of aircraft in our fleet as calculated on a daily basis.

"Average daily aircraft utilization" means block hours divided by number of days in the period divided by average aircraft.

"Average economic fuel cost per gallon" means total aircraft fuel expense, excluding mark-to-market gains and losses, divided by the total number of fuel gallons consumed.

"Average non-ticket revenue per passenger flight segment" means the total non-ticket revenue divided by passenger flight segments.

“Average ticket revenue per passenger flight segment” means total passenger revenue divided by passenger flight segments.

“Average stage length” represents the average number of miles flown per flight.

“Average yield” means average operating revenue earned per RPM, calculated as total revenue divided by RPMs.

“Block hours” means the number of hours during which the aircraft is in revenue service, measured from the time of gate departure before take-off until the time of gate arrival at the destination.

“CASM” or “unit costs” means operating expenses divided by ASMs.

“CBA” means a collective bargaining agreement.

“DOT” means the United States Department of Transportation.

“EPA” means the United States Environmental Protection Agency.

“FAA” means the United States Federal Aviation Administration.

“FCC” means the United States Federal Communications Commission.

“Into-plane fuel cost per gallon” means into-plane fuel expense divided by number of fuel gallons consumed.

“Into-plane fuel expense” represents the cost of jet fuel and certain other charges such as fuel taxes and oil.

“Load factor” means the percentage of aircraft seats actually occupied on a flight (RPMs divided by ASMs).

“Operating revenue per-ASM,” “RASM” or “unit revenue” means operating revenue divided by ASMs.

“Revenue passenger mile” or “RPM” means one revenue passenger transported one mile. RPMs equals revenue passengers multiplied by miles flown, also referred to as "traffic".

“TSA” means the United States Transportation Security Administration.

“ULCC” means “ultra low-cost carrier.”

## Appendix B: Price Competition for Standard Carriers

The airline industry tends to follow a price setting pattern where a price leader will initiate a price and the rest of the industry will decide to match or sink below that price, for all things being equal, if they do not they are certain to lose the fare. This beckons the questions, why doesn't Spirit grab all the customers (or have a 100% load factor)? Well, frankly it is because they are not real competitors with the standard airliners. The rest of the airline industry plays the price game with each other as Spirit sits in a league of its own.

Airlines will attempt to estimate each others' moves by the regression model

$$Fare_{i,t} = \alpha + \beta_1 Fare_{i,t-1} + \dots + \beta_n Fare_{i,t-n} + \gamma_1 Fare_{j,t-1} + \dots + \gamma_n Fare_{j,t-n}$$

Where i and j refer to airlines and t denotes time. We cannot reject the null hypothesis  $\gamma_1 = \gamma_2 = \dots = \gamma_n = 0$  because this would suggest that the marginal cost of matching Spirit's discounted prices would not be less than the marginal revenue. See the table on breakeven fares and the table on RASM-CASM.

Once  $MR < MC$  the venture is unprofitable and the firm should disengage in that enterprise. Thus airline j's fares are not said to cause airline l's fares and by implication Spirit can engage in enterprise unique of the pricing pressures of its peers because their prices don't have as substantial an effect on Spirit's and vice versa

The pricing independence serves not just as a form of autonomy within the airline industry, but also is an active fight against tacit collusion amongst airliners that may choose to raise prices. In fact, basic price theory shows that for the highly price elastic consumer, small changes in consumer costs will have significant changes for Spirit.

A price elastic market will offer opportunities for Spirit as low fare carriers with a sustainable cost advantage will focus on price elastic markets and enjoy the benefits of low price elasticity for air travel but high cross price elasticity within the market itself. Below is a table from Jong Ho Kim's paper Price Dispersion in the Airline Industry: The Effect of Industry Elasticity and Cross-Price Elasticity

		Number of Airlines Competing on A Route After SW's Entry						
		2	3	4	5	6	7	8
Airline	1	-1.16 <sup>‡</sup> (0.39) <sup>†</sup>	-1.30 (0.09)	-0.80 (0.15)	-1.11 (0.08)	-0.89 (0.09)	-0.85 (0.12)	-0.87 (0.12)
	2	-2.60 (1.46)	-1.21 (0.18)	-0.99 (0.31)	-1.05 (0.14)	-0.76 (0.14)	-0.94 (0.16)	-0.56 (0.15)
	3		-1.71 (0.08)	-1.16 (0.32)	-1.15 (0.13)	-1.05 (0.13)	-1.18 (0.18)	-0.67 (0.19)
	4			-1.64 (0.25)	-0.91 (0.17)	-0.86 (0.16)	-0.75 (0.17)	-0.68 (0.15)
	5				-1.63 (0.06)	-0.69 (0.22)	-0.86 (0.16)	-0.88 (0.16)
	6					-1.60 (0.06)	-0.01 (0.27)	-0.69 (0.20)
	7						-1.14 (0.02)	-0.81 (0.21)
	8							-1.09 (0.01)

As you can see, When Southwest entered the industry in the mid 90s as a lower cost carrier it benefited very well from cross-price elasticity as is denoted by the highlighted values.

## Appendix C: Private Equity Investments

### Enhance Shareholder Wealth

In 2011 we saw the largest PE backed IPO ever with HCA Holdings and in fact eight of the ten largest IPOs were PE backed. Private equity goes through four phases; organization and fundraising, investment, management, and harvest. The time frame for this process tends to average approximately five-ten years. The harvest phase is when they liquidate (over time) their position to realize the value of their investment. The benefit of their initial capital injections and expertise management of the company can be participated on behalf of the public when the harvest form they choose to execute through is an IPO. When Indigo capital entered Spirit in 2006 they turned a standard airliner into something completely new by implementing the ULCC model. Now they have taken the company public, we can all share in their expertise and hard work that took approximately five years to execute on. While they want to take the company public to recognize value, they more over want to ensure they enter the right market. Indigo and Oak Tree Capital collectively felt that this market the 2011-2012 market was ideal for releasing Spirit to the public (which of course pays significant dividends for themselves). Always be mindful of the interests of other parties, especially when they align with yours regardless of collusion.

According to Earnst & Young, the proportion of successful IPOs that had private equity involvement increased to its highest level ever in 2011 raising about 38.3 billion and represented 23% of all IPOs. This was surprising giving the prevalent concerns surrounding the euro zone as well as the knowledge they would be living with high volatility in 2012. Never the less, even after the October market sell-off, 2012 ended up as did most of the IPOs. In fact, VC and PE backed IPOs outperformed non VC and PE backed IPOs.

E&Y also noticed that as the pipeline of Chinese IPOs both dwindles and seems volatile in credibility and value adding, that a considerable amount of additional scrutiny will be given to IPOs in 2012 and 2013. Social media IPOs have certainly captured much of the speculative attention in over the last year or two and most have found questionable success. This is largely because social media, as of yet, doesn't represent a business but instead an idea. I wouldn't suggest shorting ideas or fads, however, I wouldn't suggest long positions otherwise.

While Indigo and Oak Tree plan to harvest their investments, they will not do it all at once nor are they in any hurry. Because there is no immediacy to exit, there is a necessity to ensure predictable earnings growth from Spirit. What is a stock price but the discounted summation of future cash flows? We have to respect the competitive intelligence that private investment brings to the public arena and in this environment, we can count of the self seeking interests to enhance beneficial ownership on behalf of all parties.

However, PE involvement isn't just about the stock and the payout, there is a long term tangible benefit to the company once its mentors have left it. In a study done by the Private Equity Council, businesses backed by private equity (from 2002-2007) increased employment

nine percent as compared to the average in public companies by two percent. In a study done reviewing companies from 1980-2005 the top quartile of private equity firms returned to investors 39.6% annualized returns as opposed to the S&P 500 return of 12.3%

When implementing the private equity model of corporate governance and responsible capital management into a business which was previously ailed by the challenges of both a competitive industry and a challenged management, a new firm can be birthed.

One concern is that private equity just does some financial engineering and leverages up companies to enhance ROE, takes them private, and dumps them before the market is made wise to this conspiracy. This of course, is not the case, and certainly not the case with Spirit which has no leverage as it has zero long term debt.

To conclude, private equity enhances value through deep expertise, performance culture that rewards entrepreneurialism, active ownership, being nimble and adaptive, Private equity creates economic value through fixing what was broken. They go beyond realizing opportunity and value and actually creating that opportunity and value. By transforming potential into tangible. With private equity behind Spirit, its just another catalyst for shareholder minded business executions.

## Appendix D: Details on the Estimates Built into the Pro-Forma Income Statement

For projecting growth rates in particular fields I took the 9 month YoY (2012 and 2011) growth as well as the historical growth and in most cases averaged them. For example. Passenger revenue growth historically for Spirit is 13.14% and over the 9month YoY change was 14%, thus I decided to go with 14% constant revenue growth.

### For the Base Model:

- I assume a constant 14% revenue growth for 2013-2015. This value is consistent with management expectations and the 9 month YoY average as well as the historical average
- For non-ticket revenues, there was a 9 month YoY average increase of 43% and a historical increase of 52.6%. I decided that in 2013 non-ticket revenues would grow by 45%, 35% in 2014, and 25% in 2015 for the sake of conservative modeling.
- Fuel costs grew 9 months YoY by 19.6% and historically 46.38%. the historical value represents large expansion of the fleet size. As fleet size will expand at a predictable pace into the foreseeable future, I assumed a 20% annual increase in fuel prices.

- Salaries and wages increased 20% in the 9 months YoY and by 15.85% historically. For simplicity I assumed wages to increase at 20% annually.
- Aircraft rent in the 9 months YoY was up 23.7% and 13.78% historically. It seems prudent to use the more frequent values and assume a 25% annual increase
- Other rent increased 32% in the 9 months YoY and 12.03% historically. While there is no reason to assume such large continued rent costs, I assume 30% annual increase
- Distribution costs increased in the 9 months YoY by 11.2% and 22.77% historically. The historical costs are slightly elevated given large expansion in 2010 and thus I choose to stick with 20% annual growth in Distribution costs.
- Maintenance costs were 43% increase in the 9 months YoY and 13.63% historically. This recent increase was due to an irregular maintenance problem. As Spirit rents new planes maintenance shouldn't be too high and thus I assume a 25% annual increase.
- D&A was up 80% in the 9 months YoY and 25% historically. This was due to a large write off the company chose to take shortly after they went public. The long term average should subside down to 20%. It should also be pointed out this account is small relative to the overall cost portfolio.
- Other operating I have increasing at 25%

#### Best Case Scenario

- Assume all values are as stated above unless otherwise specified
- Ancillary revenues continue to grow at 45% through 2015
- Wages grow at 15%, this is more in line with the historical average
- Aircraft rent grows at 20% as there is no reason to assume the need to expand beyond current contracts.

#### Worst Case Scenario

- Assume all values are as stated in Base Case Scenario unless otherwise specified
- Passenger revenue takes a sustained 35% decrease down to an annual 9.1%, one could say this is due to bad publicity
- Ancillary revenues grow at 35%, 30%, and 20% in 2013, 2014, and 2015 respectively.
- There are now adjustments made to fixed or variable costs. While not even this would happen, it's an example of a "worst case scenario" when management fails to see what is coming.

## Appendix E: Ratio Analysis Mathematics



Liquidity	current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$
	quick ratio*	$\frac{\text{cash and short term securities}}{\text{Current liabilities}}$
	average collection period	$\frac{\text{Accounts receivable}}{\text{Average daily sales (Sales / 365)}}$
	days payable outstanding	$\frac{\text{Accounts payable}}{\text{Average daily cost of sales (COGS / 365)}}$
leverage ratios	debt ratio	$\frac{\text{Total Liabilities}}{\text{Total assets}}$
	long term debt to capitalization*	$\frac{\text{non-current debt}}{\text{non current debt}}$
	debt to equity	$\frac{\text{Total liabilities}}{\text{Stockholders' equity}}$
	financial leverage	$\frac{\text{Total assets}}{\text{Stockholders' equity}}$
activity ratios	accounts recievables turnover	$\frac{\text{Net Sales}}{\text{Accounts receivable}}$
	payables turnover	$\frac{\text{Cost of goods sold}}{\text{Accounts payable}}$
	fixed asset turnover	$\frac{\text{Net Sales}}{\text{Net property, plant, and equipment}}$
	total asset turnover	$\frac{\text{Net Sales}}{\text{Total assets}}$
profitability ratios	gross profit margin	$\frac{\text{Gross profit}}{\text{Net Sales}}$
	operating profit margin	$\frac{\text{Operating profit}}{\text{Net Sales}}$
	net profit margin	$\frac{\text{Net profit}}{\text{Net Sales}}$
	ROA (ROI)	$\frac{\text{Net profit}}{\text{Total assets}}$
	ROE	$\frac{\text{Net profit}}{\text{Stockholders' equity}}$

## Appendix E: Disasters in the Airline Industry

A disaster is a community event as it tends to pertain to entire groups divided by geography, race, occupation, or preoccupation. Airline disasters are a national event. A disaster has implications for any industry but the Airline industry is particularly susceptible to both poor publicity and high visibility. As with most disasters, such as Hurricane Katrina, most individuals within the affected group will not suffer long term catastrophic loss. However, in the event of an aerial disaster, the expected outcome is death and the entire participating group is long term affected. This may be a reason for fear of investing in, and even participating in the airline industry.

In particular to the airline industry, this tends to be a disaster that cannot be prepared for. Obviously airliners comply with safety standards and make that a priority of their service, but in the event of an impending disaster, there is little preparation that can be done by the participants (except for the pilot) to overcome the expected outcome of death.

After the terrorist attacks on September 11, 2001, terrorist initiated and random event airline crashes are amongst the most feared accidents on behalf of possible participants. This is counterintuitive given the likelihood of an individual to suffer a fatality in an alternate way. The odds of dying in an airline accident is approximately 1 in 724,000. Never-the-less,

Many fear increased control traffic and air traffic control problems, weather, aircraft design problems, failures of the pilot, airline targeted terrorism, and economically inclined airlines to cut corners on safety measures. These fears may force an irrational discount to airline values as the perception that random disaster events will wipe out shareholder equity.

## Appendix F: A quick note on market efficiency

If you abide by the efficiency in markets, either in the immediate momentary term, or in the long term, you should understand the argument you are making. Below I borrow from Lawrence Summer's statement of market efficiency with some modifications;

$$P = P^* = E\left[\left(\sum_{i=t}^{\infty} \frac{CF_i}{(1+r)^{i-t}}\right) \middle| \Omega_t\right]$$

One would read this as price is equal to the expectation of the summation of future cash flows discounted by  $r$  given  $\Omega_t$  which represents all the information that is available. We all abide knowingly by the first part of this assumption as future cash flows is where we derive price from. However, often we forget that we are assuming all this given  $\Omega_t$  is so. one could test market efficiency by adding the repressors drawn from  $\Omega_t$  to  $R_t = r + e_t$  where  $e_t$  is uncorrelated and orthogonal to any element of  $\Omega_t$ . The issue comes into the formulation of  $r$  (or the  $E(r_t)$ ) which is derived from the above equation with an imposed transversality condition intended to rule out speculative bubbles!

Thus we are refining the models to exclude speculative bubbles (which very much do occur) such that we can have a smoother outcome and, my suspicion, to enforce this idea of market efficiency which has significant relevance and importance in fundamental economics.

Logic tells us that  $\Omega_t$  isn't without volatility in accuracy. Are we so sure the markets digest information properly and timely? Is a shock to  $\Omega_t$  only empirical and without noise sufficient to bring about temporary or even permanent variance in market prices? Maybe not over the long term but studies show that markets tend to go through correction periods resulting in 7-12% declines in stock values? I wonder the role of  $\Omega_t$  in that case and if the markets ability to digest information was wrong at the onset of the correction or after the correction? Once the investor truly examines the rationality behind this simple equation they should become concerned, not because there is anything mathematically wrong with it, but that it depends so

highly on the organization and rationality of the human species, an assumption I'm not so bold as to make. I would argue the following

$$P_t = P_t^* + \tau_t$$

$$\tau_t = \alpha u_{t-1} + v_t = \alpha u_{t-1} + \beta v_{t-2} + \gamma w_{t-3} \dots \dots \text{ where } 0 < \alpha, \beta, \gamma < 1$$

This is an adaptation of a Lawrence Summers model but is used in a completely different way than he intended. I simply mean that if the price today is a function of the real price plus some variation. However, if that variation is based on a continuous time series of variations than it seems reasonable to assume price isn't in fact a moment in time certainty but the area about some idea of actuality. Sometimes these become further distorted given different conditions and the price of any security is

$$P_t^* - \tau_t < P_t < P_t^* + \tau_t$$

In most cases the variation in tau isn't wildly large, in Spirit's case, I argue, it is.

## Appendix G: Model on Liquidity

I would propose that one either discount future cash flows of comparable companies by;

-[ Please see Appendix

$$\eta(\iota, \xi, \mu, t)$$

$\eta$  = discounting factor for liquidity risk

$\iota$  = decrease in dividend payments

$\xi$  = decrease in buybacks

$\mu$  = increase in cash due to meet interest payments

t = time

The premise is that when information changes dramatically enough the transaction costs of debt can become high enough to affect the liquidity of the firm's stock, cost of capital, and capital structure in general.

$$P_i^* = \frac{NPV(E(CF_i))}{1 + \eta} \text{ where } i = \text{any airliner}$$

Because Spirit doesn't have a buyback program, doesn't issue dividends and doesn't have debt, it is the only airliner in the US with  $\eta$  such that price  $P_0 = P_0^*$ .

Furthermore, Diamond and Verrecchia found in their 1991 paper published in the Journal of Finance, that high liquidity levels increase the prices of stocks when voluntarily providing more information. Spirit is incredibly transparent and while already enjoying a high liquidity base, could experience multiples expansion on that basis.

Credit ratings for firms, while dependent on many variables, have an undeniable relationship to debt coverage. According to the Standard and Poors Industrial Creditstats published in 2004 the following credit ratings associate with the following total debt / market capitalization values

	AAA	AA	A	BBB	BB	B	CCC
Total Debt/ Market Cap	.5%	8.1%	17.2%	27.2%	43.2%	55.9%	80.8%

In the event that the conditions for the airline become unfavorable, such as sustained high prices in oil, Spirit will be able to finance its debt due to its significantly better credit rating based off its liquidity position and the liquidity trend. Thus, if one were to implement the above model to either discount current airlines, or to appreciate Spirit, the analyst would examine a further dichotomy between Spirit’s risk and its reward potential (as expressed through P/E multiples)