

The airline industry is one of the biggest and most crucial players in the travel business. In 2019, the US airline industry totaled an operating revenue of almost \$247.64 billion. Air travel is one of the most expensive and popular forms of consumer travel, making it one of the largest sectors in the transportation industry.

Revenue Breakdown

Who generates the most money for Airlines, and how do they do it?

Airline revenue is broken into two main streams; about 60% comes from selling tickets directly to passengers, and the other 40% comes from selling frequent flyer miles to credit card companies. Those frequent flyer miles serve as an incentive for consumers to buy tickets that would otherwise be out of their price range, making it an indirect form of selling tickets in what can almost be imagined as a secondary market. The type of flyer is typically used when traveling for either business or vacation. 88% of travelers are traveling for either vacation or personal reasons so revenue is both very seasonal and very dependent on disposable income.

The most profitable times for airlines are holidays, specifically the time stretching from Thanksgiving to New Year as people go to visit their loved ones. Mid-summer is also extremely profitable, as that's when most people have set breaks from work and school. It's worth noting that despite only covering 12% of passengers, business travel covers 75% of revenue. That's because business travelers fly more often and travel in the more expensive seats since their firms are covering their travel. Complicated events, like a cultural push towards virtual meetings, can be extremely detrimental to airlines. Economic downturns will especially hurt airlines because both consumers and businesses will want to reduce travel costs as much as possible.

Source:

<https://www.investopedia.com/ask/answers/041315/how-much-revenue-airline-industry-comes-business-travelers-compared-leisure-travelers.asp>

In order to analyze a company and make predictions of its financial health in various scenarios, it's important to understand the revenue breakdown of any company. When you examine a company in the context of the overall economy, you get a better understanding of what will hurt and benefit the company and its stock.

Financial Ratios

What are financial ratios and which ones are important for airlines?

Financial ratios are like “quick formulas” that offer color on aspects of a business.

How all of the numbers of a 10Q or K (aka financial statements) work through the balance sheets, income and cash flow statements, can feel as tangled as a {insert reference/meme of huge amounts of knots/ interactions}. Those statements are the “lens” through which public companies *are obligated* to reveal all their innerworkings. You can’t be a public company, and sell shares of **stock / equity** on through an **IPO** or **Public Listing** and/or on the exchanges without providing these standardized documents. And EVERYONE one and the same, has access to these filings (go ahead, and try for yourself, put in your favorite ticker here and see all their info!! <https://www.sec.gov/edgar/searchedgar/companysearch.html>)

A smart analyst can assess the health of a company, and tell whether their business is actually increasing and executing on what the c level suits (who often get paid on stock price performance) would say (regardless of the actual merits of those claims).

Based on the dynamics of an industry, or what specific events are transpiring, you’ll want to look at different numbers on the company filings. We’ll continue to walk through some examples, and hang out around the airline industry, but we encourage you to read more (especially experts), and to come up with (and test) your own hypothesis on how a company may perform, and what metrics speak to that. A good analyst is always ready to defend his hypothesis and incorporate any/all info.

Airlines typically bring in heavy profits on the back of heavy debt. An analysis of 13 popular, public, US-based airlines show an average {current ratio} of 0.73 and an average {cash ratio} of 0.51. When separated, the most popular/”crowd favorite” airlines produced even worse numbers, with the average current ratio of 0.66 and an average cash ratio of 0.44. The current ratio is the current assets divided by current liabilities. This metric tells us about the company's performance since it shows how much liability they need to take on to produce its assets. Current ratio also measures the company’s financial strength. The higher the ratio, the more current assets the company has. With more assets, there are fewer liabilities, which means that the company has the greatest financial strength for the current year. Cash ratio works the same way; however, current assets are replaced with cash. It’s important to stay within a company’s industry when comparing these metrics because other industries might have much higher or lower standards.

{Return on Assets (ROA)} provides an accurate portrayal of performance and profitability, especially for airlines. The long term and tangible assets (the airplanes) are how airlines produce their revenue. Therefore, ROA is a good measurement to analyze their revenue source. ROA tells the investor how much {net income} they will earn from each dollar of assets the company owns. It's calculated by taking the annual net income and dividing it by all the available assets. Airlines also have high expenses due to flying and maintaining their planes. Therefore, the industry average ROA is 5.6%, or for every \$1.00 dollar of assets, airlines will produce \$0.056 of net income. While the percentage may seem small, when you think about the massive amount of tangible assets that airlines have, the value is pretty substantial. This metric shows which airlines are getting the most profit out of their planes, so if the assets were equal, then the airline with the highest ROA would produce the most profits. When airlines start to grow their assets, you can see which ones will make more profit.

{EBITDA Margin} is another accurate profitability ratio. EBITDA stands for Earnings Before Interest, Taxes, Depreciation, and Amortization. The EBITDA tells the investor how profitable the company is by telling how much the firm made after taking out the costs to operate it. To calculate EBITDA is fairly simple: on an {income statement}, you have the operating income, which is the profit after paying the {COGS} (cost of goods sold) and {operating expenses}. The only expenses before finding the net income would be taxes and interest. So some may even say you have found the EBIT, but we are not trying to find net income. In operating expenses, there is an expense called Depreciation and Amortization. You add the depreciation and amortization, that was subtracted out with operating expense, back and then you have the EBITDA. And finally, now that you have found EBITDA, you divide EBITDA over revenue, to get the EBITDA margin.

You're probably wondering, "Where the hell are we going with this?" Well, the EBITDA margin tells you how much of revenue will turn into EBITDA and what percentage of the revenue will be profitable. This metric also tells you which companies are the most profitable. The company with the highest EBITDA Margin has the least expensive business model, thus turning the most profit. For airlines, the average EBITDA Margin sits at 20.5%, which while it may not seem like much, is actually better than the 15.25% average for all industries.

Why specifically the EBITDA? It cuts through all inconsistencies and tells you how well a company turns a profit. Perhaps one year an airline gets a tax break. Or this year is the first year where interest payments aren't fixed. Maybe American Airlines planes didn't fly as far as Jetblue planes so Jetblue can take out less depreciation. These are all inconsistencies that can mess up your evaluation. EBITDA cuts through all the possible inconsistencies and says how well the business did. It's important to judge in terms of percentages rather than dollars because a big airline may have made billions more in EBITDA than a smaller one, but the smaller one may have turned a profit of 25% EBITDA where the bigger one only got 15%. So when the smaller one grows, it will be making far more. This more accurate portrayal of profitability makes EBITDA highly valued by finance professionals.

Market Cap

What makes an Airline stock a big fish or small guppie

Since the average {market cap} for US airlines stands at about \$8.26 Billion, this means that most airlines are at {mid(cap stocks)} or {large-cap stocks}. Looking at the market cap can help determine the risk and future growth of the company. The smaller the market cap, the more growth potential the company has. However, it may likely also mean the company is more volatile. Market cap is the total value of all the company's stock currently in circulation. That means it's how much other investors have already put in, believing they will get a return. What we can see from airlines is that investors see their business model to be consistently profitable and stable, leading to pretty sizable market caps. Market Cap helps to determine the overall position of the industry and the companies in it. If a majority of companies are mid or large-cap stocks, then the industry is pretty well established. If the majority of companies are small-cap, then the industry is likely still growing. It also can help determine how companies will perform in the future, as small-cap stocks in a mainly large-cap industry might have trouble growing as their competitors are far ahead. This holds especially true during recessions, when the higher volatility of small-cap companies can prove fatal, often leading to mergers and acquisitions by its larger competitors. Eventually, this leads to the consolidation of power by the larger companies. The same goes for big fish in small ponds; if a large-cap company is surrounded by small-cap competitors then the industry may have reached its limit, or the large-cap company may be found as a monopoly.

P/E Comparisons

Which Airline stocks are overvalued and undervalued?

The average {P/E ratio} for US airlines is 11.54, with the most popular airlines holding a P/E ratio of 10.51. P/E ratio stands for Price per Earnings and it is how much investors pay for one dollar of earnings. This is perhaps the most popular metric, especially prevalent in value investing, because it can help determine if a company's stock is over or undervalued. Take the industry average of the P/E of 11.54 and say you found an airline with a P/E of 4.00. Assuming the company is financially stable and sound, you would only be paying 4 dollars for every dollar of earnings on your airline stock, while other investors are paying over 11 dollars for a dollar of earnings from their airline stock. In hindsight, this seems like a retail discount since the investor

is paying a lower price for almost the same product. Profit can be recognized if other investors catch on because others will invest and push the stock up until the P/E reaches about 11.50. The same applies for overvalued stocks because investors do not want to pay more than others. Unlike other metrics, the P/E ratio doesn't mean much when not being compared to other companies or past P/E ratios. There is no universal standard for a good P/E ratio, it all depends on the industry and the specifics/dynamics of the company.

If we cast P/E as the 1 ratio to rule all others, then 'growth' would be the 1 sole number to reign supreme. In any financial analysis, the 'growth rate' you use, can have a massive impact, and can describe why people may find a higher P/E to be acceptable and worth paying for. <<I think adding "growth" into this rounds out some of the basics on financial ratios, and potentially this PE section should come right after financial ratios, or as a subcomponent within it>>

Supply Chain breakdown

Who do Airlines buy from, sell to and how does it affect their share price?

Another important factor to look at, especially in the airline industry, is the supply chain, or the company's suppliers and to whom the airline is a customer. These other entities are known as {stakeholders} because they have an interest in the airline's success, and like shareholders, their attitudes towards the company can affect how it performs. The suppliers are the companies that sell the products, raw materials, machinery, tech, etc. for the company to produce it's product/service. In the case of airlines, one major supplier is Boeing. Boeing manufactures the planes they fly, so a lot of airlines' success is standing on Boeing's shoulders---- or sitting in their planes. If companies, such as Boeing, fall into trouble and aren't able to produce enough planes, then many airlines will be stranded as their fleet won't be able to carry all of their customers.

Another big factor in the supply chain for airlines is oil. How much oil the airlines buy will determine, literally, how far they can take their customers. Therefore, high oil prices can hurt and provide extra costs to airlines. To avoid this, airlines will {hedge} against oil with {futures} and {options} when they speculate oil prices may rise. Some of the hedging practices include:

- Buying oil {futures} contracts. In oil contracts, airlines buy large amounts of oil at a set price rather than buying oil as needed. This way they have the oil at a set price, and the profitability of the airline will be rooted in their operations, not the price of oil. Granted, oil prices may go up or down from the contracted price, so this decision may work for or

against airline profitability, however extracting this variable removes one more wildcard from analysis.

- Buying {call options} has a similar effect. Where they agree to buy the oil in the future at a prearranged price which is (hopefully) lower than oil's current price. Options are not binding however, so if the current price is lower than the airlines just lose the cost of the option, but aren't forced to buy oil at the higher contracted price.
- If the airline is confident that oil will rise they may buy a swap contract which, as a futures contract, is binding. So if the price of oil falls below the price of the contract the airlines are still forced to buy according to the contract.

Customers carry just as much weight in affecting airline performance. Many analysts predict how a company will perform based on previous years and if a company's stock can go up or down based on whether they beat, meet, or miss those predictions. In the case of airlines, if the credit card companies they sell miles too and their consumers fall into financial troubles, they won't be able to buy as much as in previous years. And if the airline isn't able to find new customers or cut costs quickly enough, then they will be forced to miss expectations. Investors need to analyze a company's supply chain, if the companies in the supply chain are not stable then the company will not be able to offer stable returns.

Assets and Accounting

Why tangible long term assets and certain accounting procedures greatly affect airlines.

The transportation industry relies almost entirely on their long term/ tangible assets; simply because that's what they use to transport people. Most airlines have 70% or more of their entire assets allocated to their airplanes. That means airplanes and tangible assets are going to be one of the biggest factors affecting airlines. Like cars, airplanes lose their value over time with use. The normal wear and tear of flying passengers around are obviously going to make the airplane worth less than when it was first bought. This is called {Depreciation} as it represents the firm's loss in financial numbers. It's also known as an intangible cost because there is no specific bill paid or loss of physical value. Since the asset has lost value and would, theoretically, be sold for less than what it was bought at, it is considered to be intangible. Depreciation is the difference between what the asset was worth when it was bought and what the asset is worth now. It's taken as an expense because depreciation really only happens when the planes actually fly. The more flights a plane does, the more depreciation it accumulates.

Another {intangible cost} is called {Amortization}, and like Depreciation, it is attributable to the number of flights a plane does. However, it's a way of distributing the cost of an asset over its

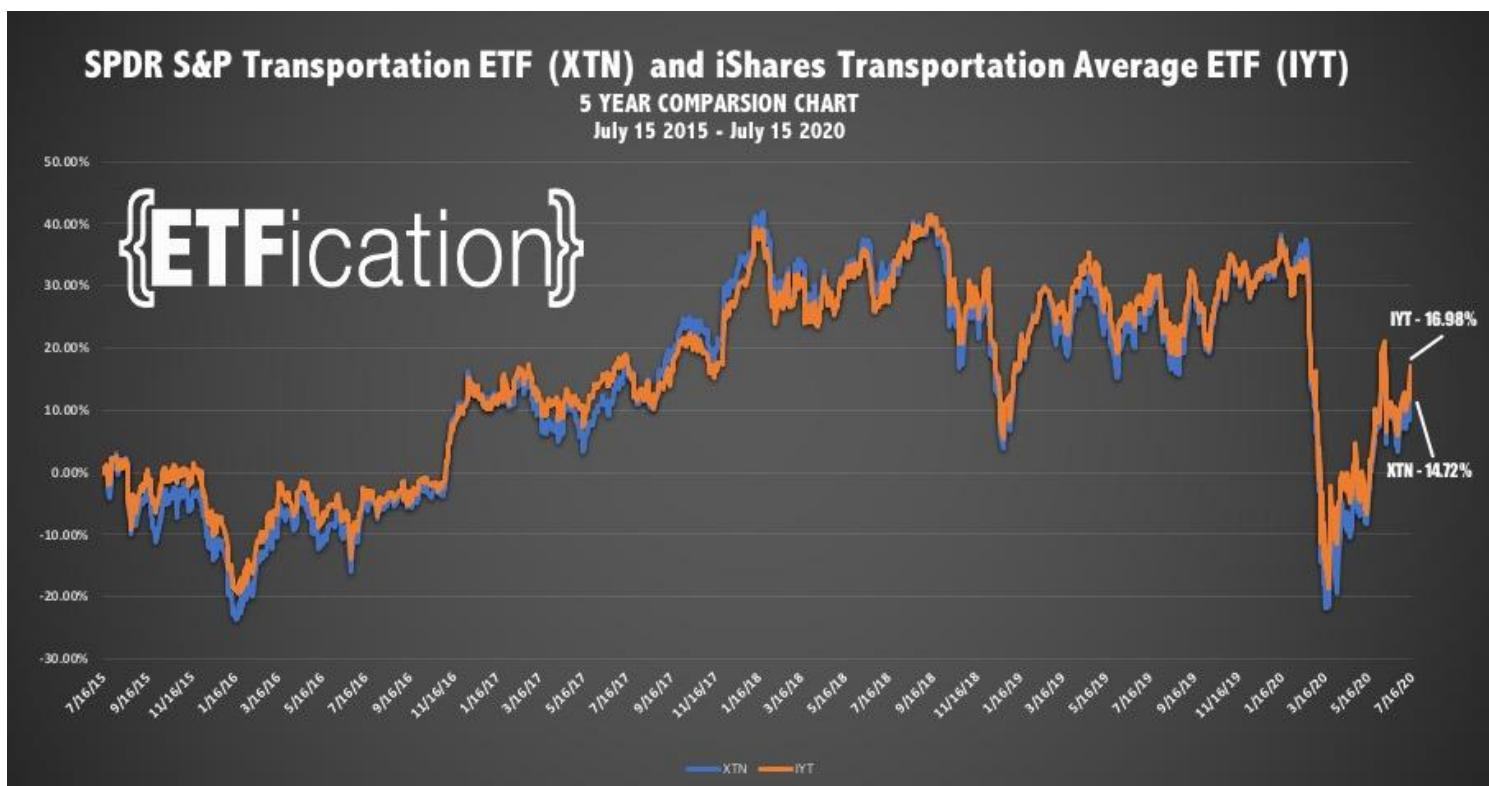
useful life. So let's say an airline buys a plane for \$45 million, and in its useful life, the plane will fly 75 million miles. Instead of saying they paid \$45 million for an airplane, they instead are paying $(45/75 = 0.64)$ a rate of \$0.64 per mile. And by the time the asset completes its useful life they will have paid for miles worth \$45 million.

{Tangible assets} are what airlines use to produce business, so it's normal to see most of their assets falling into that category. If an airline has far more long term, tangible assets than current assets that means the airline is investing their earnings wisely. If their long term assets are growing, it means the airline is buying more planes and looking to bring in more revenue. It's important to analyze how airlines' long term assets are growing. If the long term assets aren't growing but cash is, then the company is treading water rather than making progress.

Performance

A quick glimpse of Airline stocks performance

Investors have been a fan of airlines, as they enjoy their simple business model and ability to produce consistent profits. Despite this, they can still be seen as a risk because they rely on disposable income, have high debt/high operating costs, seasonal business cycle, and extreme volatility in the market or economic crashes. Airlines can offer profitable returns: The SPDR S&P Transportation ETF (XTN), which is 26% made of airlines, is up 14.72% from five years ago. The iShares Transportation Average ETF (IYT), which is 17% airline stocks, is up 16.98% from five years ago.



Both of these figures include the COVID-19 pandemic damage which is one of the most disastrous events ever for airlines. This shows that during good economic times, airlines are a very profitable industry, especially with social trends that push towards international travel for vacation and self-enrichment. Tracking past performance can play a big factor incorrectly predicting a company's future outcome. When evaluating an established industry like airlines, looking at their performance, and seeing previous growth should be a possible indicator of future success. This may not be as true for new companies and new industries, but for something as established as airlines, it should be a good tell.

*All numbers except for the ETFs are from the year ended 2019 balance sheets. Wanted to demonstrate how things are normally/ not during a pandemic