The Impact of COVID-19 on the Airline Industry

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ABSTRACT

This paper analyzes the impact of COVID-19 on the airline industry from 2020 through 2022. To answer this question, we compared the financial performance of six airlines from 2015 through 2022. We reviewed the previous five years, from 2015 through 2019, to get baseline performances on the six companies. The financial information was retrieved from the Securities and Exchange Commission (SEC) database, where publicly held companies must file their annual reports. Our findings reveal that all six companies were significantly impacted by COVID-19 from 2020 through 2022, with the most significant impact in 2020. This research emphasizes how detrimental a once-in-a-lifetime pandemic can be to an industry we depend on for various reasons.

Keywords: Airlines, Aviation, Coronavirus, COVID-19, Pandemic

INTRODUCTION

Airline Industry – Its Impact On Global Economics And Lifestyle

The benefits of aviation are apparent, having changed the operation of the global economy and transportation. Air transportation supports employment, economic, and business activities, sustains and improves living standards, and enables tourism and relationships while supporting global growth and development (Air Transport Action Group, 2022). From the birth of the airline industry in the mid-1920s through the beginning of 2020, the industry experienced tremendous growth and development. However, the impact of the Covid-19 pandemic has reset a new path that the industry still needs to experience and resolve. This article reviews the history and significance of the airline industry on global economics and lifestyle. It investigates the financial consequences explicitly and the impact Covid-19 has made on six key airlines.

In short, the introduction and evolution of airline travel and transport have forever changed the lives of modern life. Air transport has impacted most citizens of the globe in some manner, connecting global metropolitan cities to small communities worldwide.

According to pre-covid statistics compiled by Oxford Economics, air transport supports 87.7 million jobs worldwide, provides 11.3 million direct jobs, and enables $3.5 trillion in global GDP (*Covid-19 Analysis Fact Sheet*, 2021).

Air transportation is frequently the mode of travel that enables people to experience the journey in new countries, visit distant friends and family, strengthen business relationships, and allow the global economy to prosper. Statistics show “58% of all international tourists travel to their destinations by air” (Air Transport Action Group, 2022, para. 3).

The Early Days of Air Transport

To fully understand its impact, it is necessary to comprehend the history and origin of air transport. The birth of the U.S. airline industry occurred in the mid-1920s through the ratification of the Civil Aeronautics Act of 1938 by the Roosevelt Administration. Interestingly, the main structure and creation of the industry occurred well before Roosevelt took office. “American commercial aviation was largely the creation of the federal government. Under the Coolidge and, particularly, the Hoover administration, air transport companies were formed to take advantage of lucrative airmail contracts awarded by the Post Office Department. This use of an indirect subsidy to foster a fledgling industry and provide it with a market and a source of capital until it could stand on its own was a typical American response to the traditional antipathy of the public toward direct federal involvement in business.” (van der Linden, 2002, p. viii).

To encourage the emergence of new transportation opportunities provided by aviation, the government stepped in and subsidized a public need (i.e., airmail) with financial backing from market-based profiteers. Naturally, as it evolves, the burgeoning industry would require fair and equitable regulation from the Aeronautics Branch of the Department of Commerce. “Far from restraining and injuring aviation, Hoover's policies actively promoted the new industry through rational regulation and judiciously applied subsidies and incentives, which resulted in a national transportation infrastructure within a remarkably short span of only four years.” (Van der Linden, 2002, p. ix).

The Postmaster General during the Hoover administration, Walter Folger Brown, was by far the most influential figure in the early design and organization of the airline industry. Brown,

an attorney who attended Harvard Law School, was responsible for reorganizing and rationalizing the system when he authored a national network of airlines and awarded airmail contracts to three large, sound-financed aviation holding companies. The visionary Brown fostered the development of this network of airlines until his tenure as the 49th US Postmaster General ended in 1933. (Van der Linden, 2002).

Effects of Deregulation on Air travel (1970s – 1990s)

Air travel from 1940 – the 1960s was focused mainly on business development and expansion of the commercial infrastructure. Passenger travel was perceived as exclusive and expensive to the public. There were also concerns that small markets and communities were being inequitably treated relative to the major cities.

> When Congress and the Civil Aeronautics Board deregulated the nation's airlines in a series of steps during the late 1970s, policymakers expected "travelers" fares to fall, but were apprehensive that small communities would lose airline service as deregulation reshaped the air travel market. Congress was sufficiently concerned that it set up the Essential Air Service Program to provide subsidies to carriers to ensure at least two flights a day for 150 small communities. (Morrison, 1997, p. 42)

The financial effect of deregulation indeed had its intended impact. Travelers have found that prices, adjusted for inflation, have declined such that travel is clearly within the budget of most. Inflation-adjusted airfares between 1976 (just before regulatory reforms) and 1993 decreased by 33%. Deregulation accounted for 60% of this reduction or 20% of the drop in fares. Travelers benefited from the lower fares and better service, notably higher flight frequency. (Morrison, 1997)

Growth and Development Phase (1990s-2020)

As air transport became more efficient and cost-effective, expansion in developed markets and growth into globally developing countries has ensued. Before Covid-19, the impact of aviation on global economics and activities was enormous. Statistics compiled by Oxford Economics for the Air Transport Action Group (September 2020, p. 10-12) confirm aviation's significance: 87.7 million jobs supported by aviation, a $3.5 trillion global economic benefit, representing 4.1% of global GDP (making it the 17th largest country in size, similar to the Netherlands). In 2019, 4.5 billion passengers on 48,044 routes were served globally by 1,478 commercial airlines on 33,299 aircraft. Interestingly, 35% of world trade value was carried by air transport, representing only 1% by volume. "Aviation jobs are, on average, 4.3 times more productive than other jobs. By opening markets and enabling knowledge transfer and other catalytic effects [e.g., tourism-related], aviation also makes jobs in other sectors more productive" (Air Transport Action Group, 2020, p. 11).

Besides investments in vital infrastructure, the benefits of unparalleled connectivity, and the social and relational benefits of air transport, the industry is also focused on the future. Specifically, the industry is evaluating the environmental impact of how it operates and desires responsible growth. The *Waypoint 2050 (2021),* an Air Transport Action group project, described its plan to net zero CO2 emissions by 2050.

Impact of COVID-19 on Air Transport

The impact of Covid-19 throughout the globe is well-documented. The airline industry has been particularly hard hit with far-reaching implications. Passenger traffic plummeted by 94.4% from April 2019 to April 2020, with the expectation that full-year 2021 passenger traffic would drop by 50% from 2019. As of September 2021, there were 2.3 million fewer aviation-related jobs compared to pre-covid levels, and the collective revenue for airlines in 2021 was expected to decline 45% ($380 billion) compared to 2019. Although recovery continues from the fall-out from Covid-19, pre-covid employment supported by aviation is down 50% (through the end of 2021), economic activity supported by aviation has declined 49% ($3.5 trillion to $1.8 trillion – end of 2021), and direct aviation jobs have shrunk 21% (Covid-19 Analysis Fact Sheet, 2021).

LITERATURE REVIEW

The following articles discuss various topics dealing with the impact of COVID-19 on the airline industry related to air travel, losses suffered, delays, finances, challenges, recovery, and more. The title of each article has been included with a summary below the title including relevant quotations.

How Coronavirus Will Change Air Travel

This article focuses on how coronavirus has changed the airline industry. Helane Becker, an analyst with the investment bank Cowen, said that "It could take two to five years before passenger numbers return to the go-go levels of 2019...U.S. airlines are downsizing" Becker expects airlines to be "20% to 30% smaller at the end of the year than at the start."

Bogaisky further wrote that air travel would change by ticket prices declining after the pandemic gets under control, traveling being more inconvenient because of an increase in connecting flights that were once non-stop flights, health screening time at airlines being more prolonged, more automation, airport lounges may be less luxe, cleaner cabins, reduced food service, and more distant flight attendants, more cross-selling, bag privileges may be cut, there may be room for new airlines to be established, price gap may disappear between budget airlines and the majors.

Budget airlines may be pushed out of some markets. The age of the passengers may change- more passengers may be older because "Millennials and Gen-Z had high amounts of debt and low savings heading into the pandemic, and they're likely to have less money to travel coming out of it," (Bogaisky, 2020).

Industry Losses to Top $84 Billion in 2020

According to the International Air Transport Association's (IATA) financial outlook on June 9, 2020, the expectation was that airlines would face a loss of $84.3 billion in 2020 for a net loss margin of 20.1%. Revenues were anticipated to decrease by 50% to $419 billion from $838 billion in 2019. In 2021, losses were expected to be cut to $15.8 billion as revenues rose to $598 billion. IATA Director General and CEO Alexandre de Juniac said, "2020 will go down as the worst year in aviation history". A total loss of $84.3 billion meant that based on an estimate of

2.2 billion passengers in 2020, airlines were expected to lose $37.54 per passenger. "The closure of international borders and country lockdowns caused passenger demand to evaporate because of the pandemic," (IATA, 2020). It was stated that April was a shallow point for the industry as global air travel was roughly 95% below 2019 levels. It is expected that with some countries' borders opening in 2021, the industry is anticipating reducing its losses to $15.8 billion for a net loss margin of 2.6%. Airlines will be in recovery mode on many performance measures but still well below pre-crisis levels.

A rebound of 3.8 million in passenger numbers is expected in 2021; this is still below the pre-pandemic number. Revenues are expected to be 598 billion, a 42% improvement over 2020 but still 29% below 2019's $838 billion. Unit costs are also expected to decrease as fixed costs are spread across more passengers than in 2020. The ongoing implementation of virus safety control measures will hinder progress by decreasing aircraft utilization rates. While losses are expected to decrease significantly in 2021 compared to 2020, the industry is still anticipated to face challenges due to high levels of debt, operational efficiencies, economic recession, and the public's confidence in the industry. However, Juniac affirms that "people want to fly again, but this is dependent on the confidence they have in their finances as well as the airlines' safety protocols." Once the government and airlines take appropriate actions to reassure passengers, the airlines will be off to a good start.

The impact of COVID-19 on aviation

On January 28, 2021, the IATA website gave further insights into the impact of the pandemic on the aviation industry. Executive Director of the cross-industry Air Transport Action Group, Michael Gill, stated that “with the expectation that we will see less than half the passenger traffic this year than we carried in 2019, we know that a lot of jobs in air transport and the wider economy relying on aviation are at risk.”

Gill also stated, “Our analysis shows that up to 4.8 million jobs in aviation may be lost by the beginning of next year, a 43% reduction from pre-COVID levels. When you expand those effects across all the jobs aviation normally supports, 46 million jobs are at risk.” These include highly skilled aviation roles, the broader tourism jobs impacted by the lack of air travel, and employment throughout the supply chain in construction, catering supplies, professional services, and all the other things required to run a global transport system. Approximately 58% of all tourists reach their destination through air travel, and the suspension of air traffic has also created a massive negative effect on that industry. The repercussions include a significant decrease in GDP benefits, amounting to over $630 billion, and the loss of 26.4 million jobs associated with air travel-related tourism. The adverse effects extend beyond air travel, affecting the broader tourism sector as well. Analysis suggests that the pandemic could result in a decline of 850 million to 1.1 billion international tourists, leading to a loss of export revenues from tourism ranging from $910 billion to $1.2 trillion. Consequently, this puts 100 to 120 million direct tourism jobs at risk.

Lastly, the article added that direct aviation jobs (at airlines, airports, manufacturers, and air traffic management) fell by 4.8 million because of the pandemic (a 43% reduction compared with the pre-COVID situation).

Covid-19's impact on air transport

"There have been reductions in passenger traffic caused by shocks in the past, but never a near-total shutdown of the global system. At the peak of the stoppage in mid-April 2020, revenue passenger kilometers fell some 94% compared with April 2019," (Aviation Benefits, n.d).This has had a devastating impact on travel and tourism and on the frontline companies operating the aviation system and the rest of the supply chain.

Most tourists arrive at their destination via air travel; with this being said, if no tourists travel because of the pandemic, airlines will experience a loss directly. Aviation Benefits states, "Around 58% of all tourists arrive at their destination by air and the stop in air traffic has created a massive negative effect on that industry as well." Some airlines benefited from special registered flights that transported citizens back to their home countries after some borders were closed. The article also stated, "Special registration flights by airlines transported over 5 million citizens to their homes after borders were closed around the world in March 2020. Special cargo flights transported some 1.4 million tonnes of cargo, mostly medical equipment, to areas in need during the height of the pandemic response."

The impact of coronavirus (COVID-19) on aviation finance

This article primarily focused on the impact of the Coronavirus on aviation finances. Experts from the Reed Smith Asset Finance team in London and Paris have analyzed the current situation and made general comments. They had predicted that revenues could fall by 70% or more during April and May 2020. Furthermore, the International Air Transport Association (IATA) estimated that global airlines would need up to $US200 billion of government support to help them survive. The IATA stated that if governments failed to step in and provide support, predicted worldwide revenues from ticketing could drop by $US 252 billion if the current restrictions continued. Fortunately for airlines, in March 2020, the U.S. government passed a coronavirus bill that included $US25 billion of assistance for passenger airlines to pay their employees and another $ U.S. 25 billion available for loans or loan guarantees. Cargo airlines received $US8 billion, and industry contractors will get $ U.S. 3 billion.

The New York Times (2021) reported similar information in April 2020 about how the government intervened to alleviate some of the debt and loss airlines faced during the coronavirus pandemic's peak point. The previous Treasury Department said that Alaska Airlines, Allegiant Air, American Airlines, Delta Air Lines, Frontier Airlines, Hawaiian Airlines, JetBlue Airways, United Airlines, SkyWest Airlines, and Southwest Airlines would participate.

The main aim of the relief program was to aid the companies in paying their workers, and it was created as part of the economic stabilization package that Congress had passed. It was established as part of the economic stabilization package approved by Congress. However, there were disagreements regarding this plan, as the Treasury Department insisted that larger airlines repay a portion of the funds once the industry recovered. Under the deal, American Airlines announced it would receive $5.8 billion, comprising over $4 billion in grants and $1.7 billion as a low-interest loan. Additionally, the airline intends to apply for a loan of nearly $4.8 billion from the department, as allowed by the legislation. Delta Airlines stated that it would receive $5.4 billion, including a $1.6 billion loan. As part of the agreement, the company also pledged to provide the government with warrants to acquire approximately 1 percent of its stock at a price of $24.39 per share over a period of five years. JetBlue confirmed it would receive around $936

million, with approximately $251 million in the form of a loan. Southwest Airlines is expected to receive $3.2 billion, with $1 billion of that amount coming from a low-interest loan. The loan agreement is anticipated to include approximately 2.6 million warrants, enabling the Treasury Department to purchase stock in the company. United Airlines and Alaska Airlines took more time to finalize their agreements.

Air travel recovery may come slower than expected, with Southwest Airlines a likely leader

"Goldman Sachs now expects the recovery in air travel to take at least an extra year — to 2023 instead of 2022 — to return to 2019 levels, according to the latest update to the firm's COVID-19 recovery forecast on June 28," (Rusell, 2020). Rusell added, "Domestic travel is still expected to come back first, though that will be led by leisure travelers and not the high-revenue business flyers many carriers depend on." Based on the forecast, it is anticipated that Southwest Airlines and other domestic-focused carriers are expected to recover earlier and faster than their peers. Due to their larger reliance on international and corporate travel, the recovery could take longer for the "Big 3" — American Airlines, Delta Air Lines, and United Airlines. Furthermore, there have been cautionary statements from airline executives and Wall Street analysts expressing concerns about the potential negative impact of the increase in COVID-19 infections on the ongoing recovery. Multiple states in the southern and western regions have reported a significant surge in cases. For instance, the Phoenix area witnessed a higher number of daily cases for one week compared to the worst days experienced in the New York City area. The decline in passenger revenue and air travel has resulted in the unfortunate layoff of numerous airline staff members.

US Airlines Prepare for Takeoff – With Possible Delays

According to research by the experts at Morgan Stanley, "Since March 2020, the coronavirus pandemic has battered U.S. commercial airlines, creating billions in losses, as passengers eschewed air travel. Although small signs of improvement have emerged, the current market consensus believes that passenger traffic recovery will remain slow—with volumes unlikely to recover to pre-COVID levels until late 2023 or early 2024." The research further yields that "thanks to pent-up demand, fewer competitors than in past global crises and a more stable fuel-price outlook...the next 6–12 months contain risks from pandemic uncertainty, historical trends suggest a faster rebound in passenger traffic, which could make the industry's long-term prospects more bullish. However, near-term turbulence and vast operating and financial differences among airlines mean that investors will need to be selective about stock picks. The research also honed in on weighing passenger demand. To predict the trajectory of recovery, Ravi Shanker, an equity analyst, compared the COVID-19 pandemic with historical precedents of disruption and recovery. "After previous demand shocks, such as the 9/11 attacks, SARS and MERS outbreaks (2002 and 2014, respectively), and the Global Financial Crisis in 2008, passenger volumes took about four years to return to pre-crisis levels, which explains the current consensus for a 2024 recovery," (Shanker, 2020).

Moreover, Shanker and his research team forecast that "U.S. revenue-passenger kilometers could return to pre-COVID levels by late 2021 or early 2022—with a bear case of 2024 that's in line with the consensus—and a bull case of early 2021..." Shanker added that "Ultimately, even when we take the second or third wave of the pandemic into account, long

term, we see very limited permanent demand substitution for air travel as a result of COVID, post-vaccine."

How Airlines Are Rewriting the Recession Playbook To Deal With Covid-19's Stop-And-Start Recovery

Spear, Cornwall, and Usman (2020) of Forbes Magazine wrote about how the airlines are rewriting the recession playbook to deal with the Covid-19 pandemic. "Overall industry capacity is down 57% from October 2019, and even the bright spot — short- and mid-haul travel — remains down 46%, according to Oliver Wyman's PlaneStats.com. The second quarter was the worst financially in the history of the airline industry. Third-quarter results are not showing much improvement. And now, the industry once again faces a spike in the number of Covid-19 cases around the world and a series of new lockdowns by major cities." To cope with the pandemic, airlines have had to adopt new strategies and adapt to the change by "adjusting their schedules, operations, and cost structures to capitalize on opportunities, minimize cash-burn, and remain agile enough to respond to a meaningful pick-up in demand."

Spear, Cornwall, and Usman (2020) further wrote that until the vaccine becomes widely available, "survival will depend on how long carriers can tread water and how long their cash holds out." To stimulate demand for air travel, "on-site Covid-19 testing is being tried at a growing number of airports, including London's Heathrow, and on US flights to Hawaii." Additionally, "government support allowed some carriers to defer major layoffs for months, that support has now mostly ended, and airline bankruptcies and large-scale layoffs are back on the table. Four of the largest carriers in Latin America have all filed for bankruptcy protection in recent months. In the US, some 32,000 airline workers were furloughed just after the Coronavirus Aid, Relief, and Economic Security (CARES) Act — which offered payroll protection — expired on September 30…even for carriers that avoid bankruptcy, many will be left with weakened balance sheets and limited capital for expansion." According to a report generated in August 2020 by the United Nations World Tourism Organization, Covid-19 has put up to 120 million tourism-related jobs at risk. "The economic damage is likely to exceed $1 trillion in 2020 alone. The United Nations Conference on Trade and Development predicts the pandemic threatens as much as 2.8 percent of the growth in global gross domestic product."

More parcels, fewer people: how aviation is adapting to COVID-19

Freed, Lampert, and Rabinovitch (2020) wrote about how the aviation industry adapted and is still adapting to the pandemic changes. "Airline firms are rushing to convert passenger jets into freighters, as the value of used planes tumbles amid the pandemic." Moreover, "It's expected the number of passenger-to-freight conversions globally will rise by 36% in 2021." That has created an excellent opportunity for "passenger-to-freighter (P2F) conversion companies, including Singapore Technologies (ST) Engineering Ltd, Israel Aerospace Industries (IAI) and U.S.-based Aeronautical Engineers Inc." Furthermore, "Aviation analytics firm Cirium expects the number of P2F conversions globally will rise by 36% to 90 planes in 2021, and 109 planes in 2022." Additionally, it was stated that "Permanent conversions are a financial bet that air freight demand, which was weak before COVID-19, will remain strong for years to come as shoppers turn to e-commerce[...]the airline industry estimates it will take until 2024 for passenger traffic to recover to 2019 levels.

Coronavirus Could Cost Airlines $30 Billion, but That's Not the Whole Story For Aviation

"The International Air Transport Association has published an initial assessment of the impact of COVID-19, which estimates that the total global lost in airline revenue could be as high as $29.3 billion, with a potential 13% full-year loss of passenger demand and $27.8 billion revenue loss in 2020 for carriers in the Asia-Pacific region.," (Garcia, 2020). Airlines must make difficult decisions on whether to cut capacity and limit routes to certain places. IATA's CEO Alexandre de Juniac emphasized that 2020 would be a very rough year for airlines.

Using traffic data from its proprietary Business Intelligence Service (BIS) tool, the Swiss aviation research agency m1nd-set (specializing in airport concessions) has developed three potential models for the fallout of COVID-19. It forecasts a global traffic decline ranging from 7.1% in the 'mild' scenario to 15.2% in the 'severe' scenario. It also evaluates the impact on airport passenger numbers and percentage decline based on the potential shrinking connection and feeder traffic. It forecasts global passenger numbers could drop by over 30 million in a mild scenario or 65 million in a severe scenario.

Garcia added that according to M1ndset's COVID-19 models, the airports that are set to be the most affected in America are: Guam, Honolulu, and San Francisco, while Los Angeles, San Francisco, Toronto, NY (JFK), and Vancouver will see a huge decline in passenger numbers.

Airline Industry in Crisis Due to the COVID-19 Pandemic

Schmidt (2020) delves into the timeline of the airline industry since the coronavirus pandemic started. "no industry has seen a greater impact than airlines," according to the market research firm GlobalData." Schmidt also adds that "even after travel restrictions [are]lifted, the once-lucrative segment of business travel may be permanently transformed as corporations become accustomed to the cheaper, more efficient, and safer alternative of video conferencing. Surging unemployment levels will also stifle consumer expenditures on travel along with weak passenger confidence and ongoing negative press." Schmidt also mentioned that "due to the impact of COVID-19, some investors have shunned the airline industry altogether." In May, the billionaire investor Warren Buffet famously sold Berkshire Hathaway's entire stake in United, American, Southwest, and Delta, stating, "The world has changed for airlines." Furthermore, before the pandemic, airlines faced challenges in bolstering their revenue despite witnessing increased passenger and cargo traffic. According to IBISWorld, earnings in the global airline industry experienced lackluster growth over the past five years due to various factors such as fluctuating fuel prices, intensifying competition, the prevalence of low-cost airfare options, and a decline in world trade. A recent poll of 574 aviation professionals provided some insights into the recovery of the airline industry. The survey yielded that 60% thought it might take the industry 18 months to 3 years to reach pre-COVID levels. A significant majority (89%) said the industry would recover, but 69% said the industry would be fundamentally changed. This recovery timeline roughly aligns with the market research firm Frost & Sullivan estimate, which predicts that passenger numbers will hit pre-pandemic levels in two years or more.

The Biggest Challenge to Airlines' Recovery in 2021

Russell (2020) reported that "vaccination, barring the unlikely prospect of herd immunity or eradication of Covid-19, is widely agreed as necessary to kick off a broad travel recovery[...]airline executives and Wall Street analysts expect flyers to return with a gusto once the majority of people have the vaccines." Furthermore, business travel is not expected to pick up until the final three months of the year or in early 2022, according to analysts at Raymond James. These lucrative travelers are vital to the resurrection of major carriers like American, Delta Air Lines, and United that rely more on corporate bookings than their budget peers, think Allegiant Air and Spirit Airlines. "Trade group the International Air Transport Association (IATA) only forecasts a 2021 recovery in air travel to about half of 2019 levels. The organization does not expect a full recovery until at least 2024 with the resumption of much international flying lagging domestic by at least a year,"(Russell, 2020).

An economic crisis on top of a medical one: Why airline traffic won't fully recover until the mid-late 2020s

The economic experts at Leeham News believe that "2024 is the earliest possible date for a return to 2019 global passenger traffic – and it could conceivably take until 2028[...]many obstacles lie between the present situation and full recovery: deployment of a successful vaccine (or vaccines), rollback of border restrictions, passenger confidence in the medical safety of air travel, and most importantly, restored willingness to pay by business and leisure travelers,"(Rollins, 2020). "Specific countries or regions – especially those with local vaccine production – may recover sooner, but a global recovery to pre-COVID traffic levels requires all these to happen at a global scale." Additionally, Rollins wrote that "consumer travel requires confidence in personal income, availability of lower fares" and that for business travel to get back to normal, the economy must be intact first."

You Won't Believe How Many Airlines Haven't Survived Coronavirus. How Does It Affect You?

Bloom (2020) mentions that many airlines that have folded or filed for bankruptcy during the coronavirus pandemic due to financial situations. Some notable airlines are Miami Air International, Trans States Airlines, Flybe, and LATAM. Bloom also details what consumers should do with their tickets and travel miles if their airline files for bankruptcy. For refunds, "there's no guarantee that an airline going into bankruptcy will reimburse passengers for their outstanding tickets since investors would be paid back first," and for travel miles, "if an airline goes out of business, so does its loyalty program, since miles are not considered to have cash value and can be devalued or eliminated at any time. In the case of bankruptcy, there might be some hope for hanging onto your miles if the airline merges with another airline. Just don't count on it."

New planes, training and hiring: Airlines are planning for a rebound after dismal pandemic year

Josephs (2021) reported, "U.S. airlines are laying the groundwork for a travel rebound that still looks months, if not years, away...Some carriers are buying new planes, while others are training pilots and even adding staff. Decisions they make now will affect how they will be

positioned to capitalize on an eventual recovery in air travel." Additionally, "U.S. airlines lost more than $35 billion, combined, last year and passenger counts dropped by more than 60% from 2019 to about 370 million, the fewest since 1984, according to the U.S. Department of Transportation." Nick Calio, CEO of Airlines for America, an industry group that represents United Airlines, American Airlines, Delta Air Lines, and Southwest Airlines, said, "We're hopeful that by the end of the year we will break even." In January 2021, the COVID-19 vaccination numbers increased. Josephs suggested that vaccinations and the rise of new COVID-19 infections could possibly contribute to airlines recovering financially. Josephs also stated that discount carriers like "Spirit Airlines and Allegiant Travel Co. were the most optimistic. Spirit plans to start training new pilots and flight attendants this month for the first time since early in the pandemic." Ankit Gupta, United Airlines' vice president of network and schedule planning, said in an interview, "Spring break [spring break 2021] demand has been more robust than we expected [...]summer booking [summer 2021] patterns are looking up."

METHODOLOGY

The authors conducted the study using quantitative research methods and secondary data such as news articles and previous studies on the research topic. The annual financial reports (10Ks) were obtained from the SEC company filings database to gain a better understanding of how the COVID-19 pandemic impacted the six airlines (American Airlines Group, Southwest Airlines, United Airlines, Delta Airlines, Alaska Airlines, and JetBlue Airlines). The airlines' passenger revenues, operating income/losses, net income/losses, basic EPS, and fuel expenses from 2015-2022 were documented and analyzed using line graphs/charts to showcase the pandemic's impact on these airlines and how their financial circumstances changed post-pandemic. The operating cash flows, net income, and EPS were also analyzed and compared to identify which airlines suffered from the most losses and highlight how their earnings increased in the years after the pandemic. Numerous articles were summarized to gather information from experts in the airline industry. These articles were written by experts from CNN, Forbes, CNBC, Leeham News, the IATA (International Air Transport Association), and the SEC. The information collected from these secondary sources of data was used as a guiding point to determine when the airlines would recover from the impact of the pandemic, identify other ways in which the pandemic affected the industry, and highlight how the airlines in the study coped during the season of economic downturn.

FINDINGS

To highlight the impact of Covid-19 on the airline industry, the authors analyzed six major airlines - American Airlines Group, Southwest Airlines, United Airlines, Delta Airlines, Alaska Airlines, and JetBlue Airlines. Overall, the findings reveal that all six airlines experienced a significant decline in their passenger revenues, operating income, net income, and basic EPS. This finding was expected given the pandemic and the issues it caused in the United States and the world.

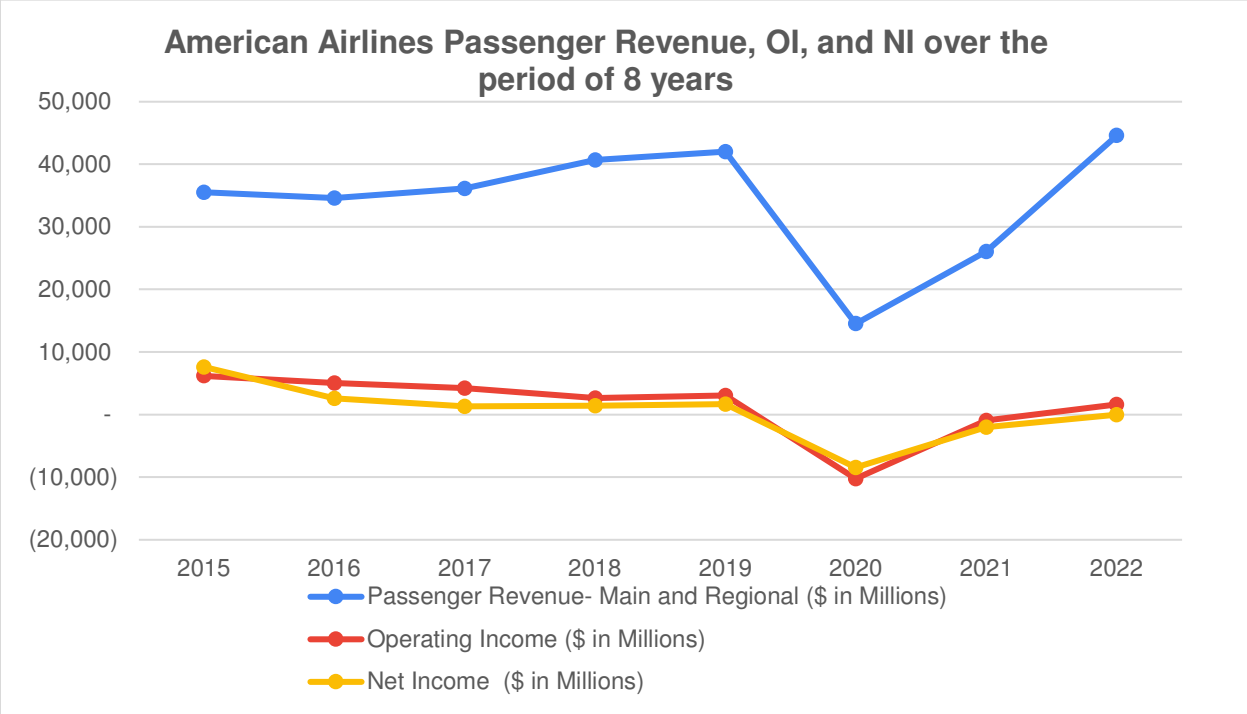
American Airlines

In the following graph, you will see the performance of American Airlines From 2015 to

2022. Notably, the passenger revenues for American Airlines showed a significant increase from 2015 to 2019 of $6.5 billion or 18.3%. The only year passenger revenues did not increase from 2016 to 2019 was 2016 when the company saw a 2.6% decline compared to 2015. However, using 2019 as the base year for 2020, 2021, and 2022, we see that passenger revenues decreased significantly in 2020 by 65.5%, from $42.0 billion to $14.5 billion. In 2021 the decline was less than in 2020, as the revenues decreased by 37.9% from $42.0 billion to $26.1 billion. However, in 2022, there was an increase in passenger revenues to $44.6 billion, representing a 6.2% increase over the 2019 number.

Regarding operating income, from 2016 to 2019, American Airlines showed significant declines compared to 2015, with a decrease in 2019 of 50.0%, from $6.2 billion to $3.1 billion. Using 2019 as the base year, we see that American Airlines continued to experience declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 429.0%, from $3.1 billion to a loss of $10.2 billion. The positive finding is that in 2022 the company was back in the black with an operating income of $1.6 billion, which was still a decrease of 48.4% compared to the 2019 amount of $3.1 billion.

As seen in the graph, net income went in the same direction as the operating income for American Airlines. From 2016 to 2019, the company showed significant declines, with a decrease in 2019 compared to 2015 of 77.6%, from $7.6 billion to $1.7 billion. Using 2019 as the base year, we see that American Airlines continued to experience declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 600.0%, from $1.7 billion to a loss of $8.5 billion. In 2022 the company returned to the black with a net income of $0.1 billion. This net income still represented a decrease of 94.1% compared to the 2019 amount of $1.7 billion.

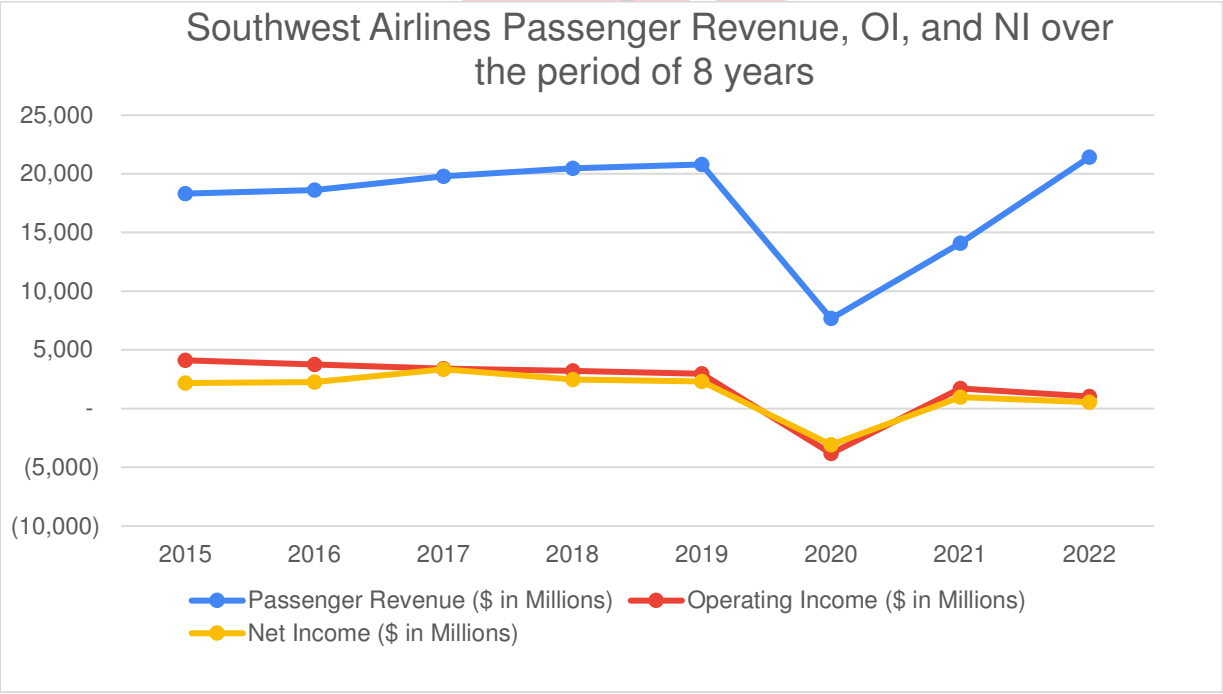


Southwest Airlines

In the following graph, you will see the performance of Southwest Airlines From 2015 to 2022. Notice that the passenger revenues for Southwest Airlines showed a significant increase from 2015 to 2019 of $2.5 billion or 13.5%. Using 2019 as the base year for 2020, 2021, and 2022, we see that passenger revenues decreased significantly in 2020 by 63.0%, from $20.8 billion to $7.7 billion. In 2021 the decline was less than in 2020, as the revenues decreased by 32.2% from $20.8 billion to $14.1 billion. However, in 2022, there was an increase in passenger revenues to $21.4 billion, representing a 2.9% increase over the 2019 number.

Regarding operating income, from 2016 to 2019, Southwest Airlines showed consistent declines compared to 2015, with a significant decrease in 2019 of 26.9%, from $4.1 billion to $3.0 billion. Using 2019 as the base year, we see that Southwest Airlines continued to experience declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 226.7%, from $3.0 billion to a loss of $3.8 billion. The positive finding is that in 2021 and 2022, the company was back in the black with an operating income of $1.7 billion and $1.0 billion, respectively. Though these years experienced positive operating incomes, compared to 2019, the company experienced a decline of 43.3% in 2021 and 66.7% in 2022.

The net income for Southwest Airlines was consistent from 2015 to 2019, except that the company had a significant increase in 2017 over 2016 from $2.2 billion to $3.4 billion, representing a 54.5% increase. However, when the 2019 net income of $2.3 billion is compared to the 2015 net income of $2.2 billion, the result is only a 4.5% increase. Using 2019 as the base year, we see that Southwest Airlines experienced declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 234.8%, from $2.3 billion to a loss of $3.1 billion. In 2021 and 2022, the company returned to the black with net incomes of $1.0 billion and $0.5 billion. These amounts still represented decreases of 56.5% and 78.3%, respectively, when compared to the 2019 amount of $2.3 billion.

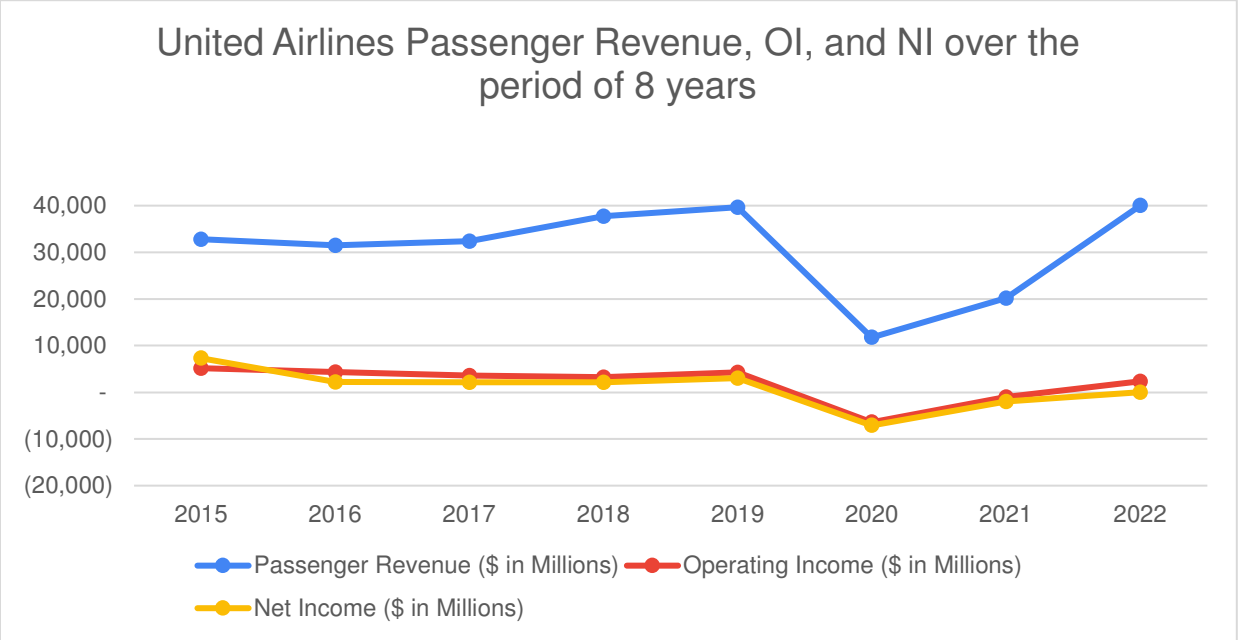


United Airlines

In the following graph, you will see the performance of United Airlines From 2015 to 2022. Notice that the ***passenger revenues*** for United Airlines showed a significant increase from 2015 to 2019 of $6.8 billion or 20.9%. Using 2019 as the base year for 2020, 2021, and 2022, we see that passenger revenues decreased significantly in 2020 by 70.2%, from $39.6 billion to $11.8 billion. In 2021 the decline was less than in 2020, as the revenues decreased by 49.0% from $39.6 billion to $20.2 billion. However, in 2022, there was an increase in passenger revenues to $40.0 billion, representing a 1.0% increase over the 2019 number.

Regarding operating income, from 2016 to 2019, United Airlines experienced declines in 2016 through 2019 compared to 2015, with a decrease in 2019 of 17.3%, from $5.2 billion to $4.3 billion. Using 2019 as the base year, we see that United Airlines continued to experience declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 248.8%, from $4.3 billion to a loss of $6.4 billion. In 2021 the company experienced a lower loss of $1.0 billion or 123.3%. In 2022 the company was back in the black with an operating income of $2.3, representing a decline of 46.5%.

The net income for United Airlines experienced significant declines from 2016 through 2019 compared to 2015. When the 2019 net income of $3.0 billion is compared to the 2015 net income of $7.3 billion, the result is a significant decrease of 58.9%. Using 2019 as the base year, we see that United Airlines experienced declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 336.7%, from $3.0 billion to a loss of $7.1 billion. In 2021 the company experienced a lower net loss of $2.0 billion or 166.7%. In 2022, the company returned to the black with a net income of $0.7 billion or 76.7%.



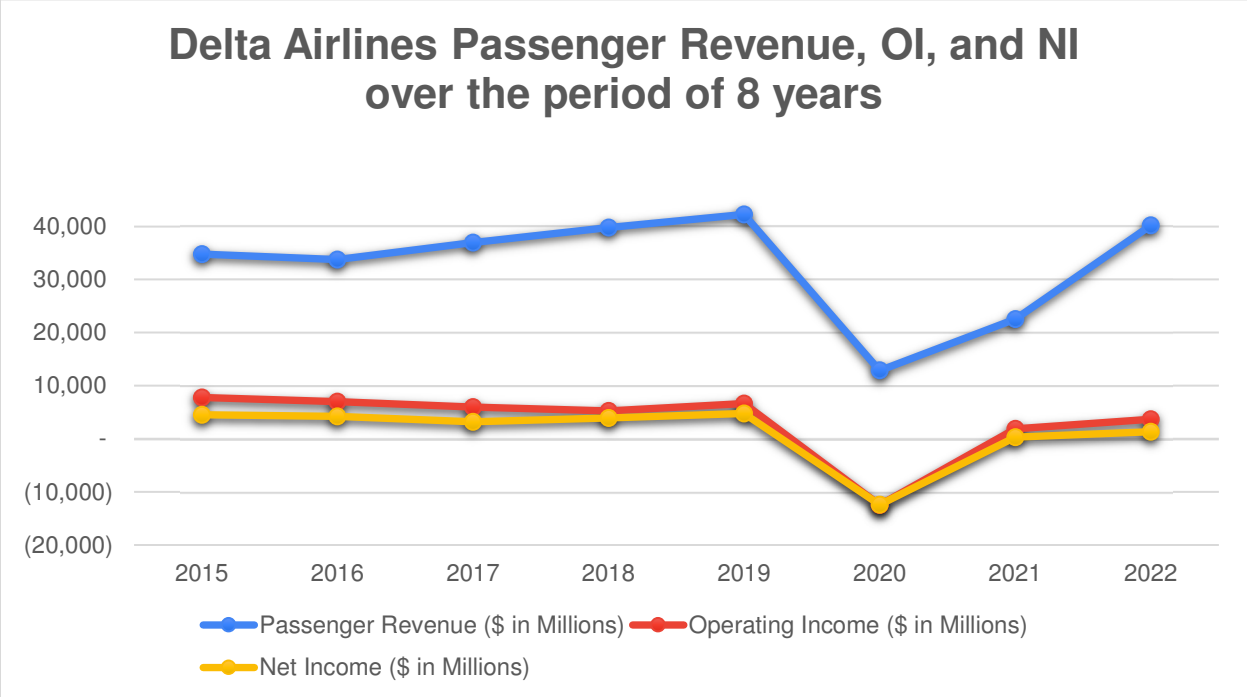
Delta Airlines

In the following graph, you will see the performance of Delta Airlines from 2015 to 2022. The passenger revenues for Delta Airlines experienced a slight decrease in 2016 and

increased in 2017 through 2019. The company showed an increase from 2015 to 2019 of $7.5 billion or 21.5%. Using 2019 as the base year for 2020, 2021, and 2022, we see that passenger revenues decreased significantly in 2020 by 69.5%, from $42.3 billion to $12.9 billion. In 2021 the decline was less than in 2020, as the revenues decreased by 46.8% from $42.3 billion to $22.5 billion. In 2022 the decline was less than in 2021, as the revenues decreased by 5.0% from $42.3 billion to $40.2 billion.

Regarding operating income, from 2016 to 2019, Delta Airlines showed consistent declines compared to 2015, with a rebound in operating profits from 2018 to 2019. Compared to 2015, the company experienced a decrease in 2019 of 15.4%, from $7.8 billion to $6.6 billion. Using 2019 as the base year, we see that Delta Airlines continued to experience declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 289.4%, from $6.6 billion to a loss of $12.5 billion. The positive finding is that in 2021 and 2022, the company was back in the black with an operating income of $1.9 billion and $3.7 billion, respectively. Though these years experienced positive operating incomes, compared to 2019, the company experienced a decline of 71.2% in 2021 and 43.9% in 2022.

The net income for Delta Airlines experienced increases and decreases between 2016 to 2019. The result is a 6.7% increase comparing the 2019 net income of $4.8 billion to the 2015 net income of $4.5 billion. Using 2019 as the base year, we see that Delta Airlines experienced declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 358.3%, from $4.8 billion to a loss of $12.4 billion. In 2021 and 2022, the company returned to the black with net incomes of $0.3 billion and $1.3 billion. These amounts still represented decreases of 94.8% and 72.9%, respectively, when compared to the 2019 amount of $4.8 billion.

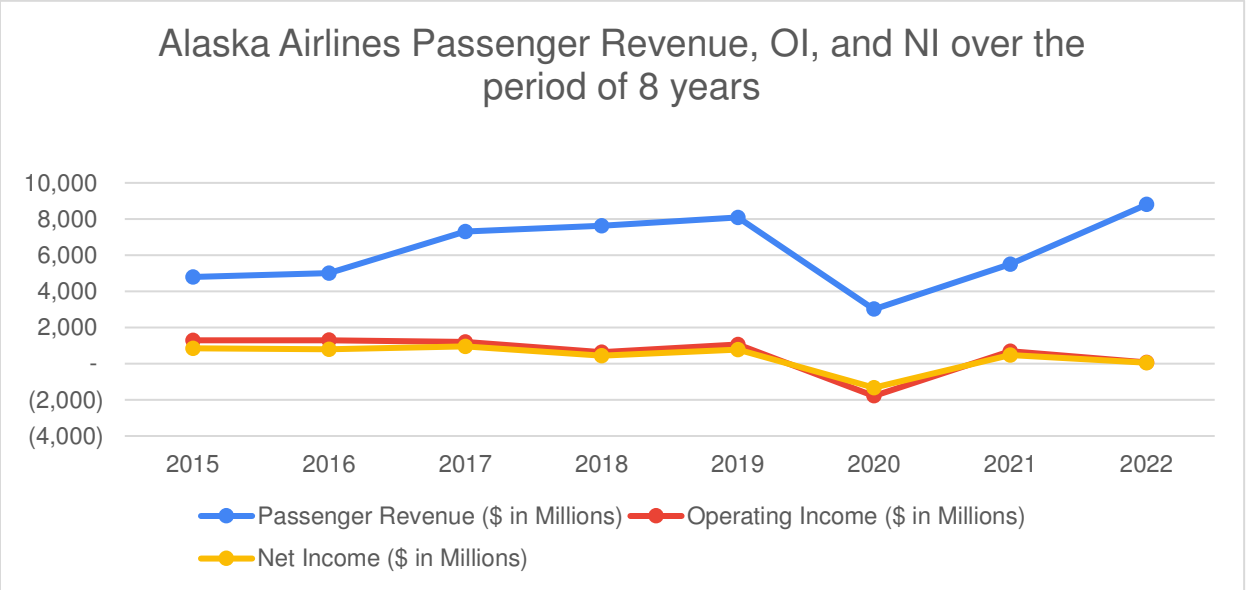


Alaska Airlines

In the following graph, you will see the performance of Alaska Airlines from 2015 to 2022. The passenger revenues for Alaska Airlines increased every year from 2016 through 2019. The company showed a significant increase from 2015 to 2019 of $3.3 billion or 68.8%. Using 2019 as the base year for 2020, 2021, and 2022, we see that passenger revenues decreased significantly in 2020 by 63.0%, from $8.1 billion to $3.0 billion. In 2021 the decline was less than in 2020, as the revenues decreased by 32.1% from $8.1 billion to $5.5 billion. In 2022 the company experienced an increase over 2019 of 8.6% from $8.1 billion to $8.8 billion.

Regarding operating income, from 2015 to 2019, Alaska Airlines showed positive incomes though it experienced a significant decline in 2018. Compared to 2015, the company experienced a decrease in 2019 of 15.4%, from $1.3 billion to $1.1 billion. Using 2019 as the base year, we see that Alaska Airlines continued to experience declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 263.6%, from $1.1 billion to a loss of $1.8 billion. The positive finding is that in 2021 and 2022, the company was back in the black with an operating income of $.7 billion and $.1 billion, respectively. Though these years experienced positive operating incomes, compared to 2019, the company experienced a decline of 36.4% in 2021 and 90.9% in 2022.

The net income for Alaska Airlines experienced increases and decreases between 2016 to 2019. The result is a 12.5% decrease comparing the 2019 net income of $0.7 billion to the 2015 net income of $0.8 billion. Using 2019 as the base year, we see that Alaska Airlines experienced declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 285.7%, from $0.7 billion to a loss of $1.3 billion. In 2021 and 2022, the company returned to the black with net incomes of $0.5 billion and $0.1 billion. These amounts still represented decreases of 28.6% and 85.7%, respectively, compared to the 2019 amount of $0.7 billion.

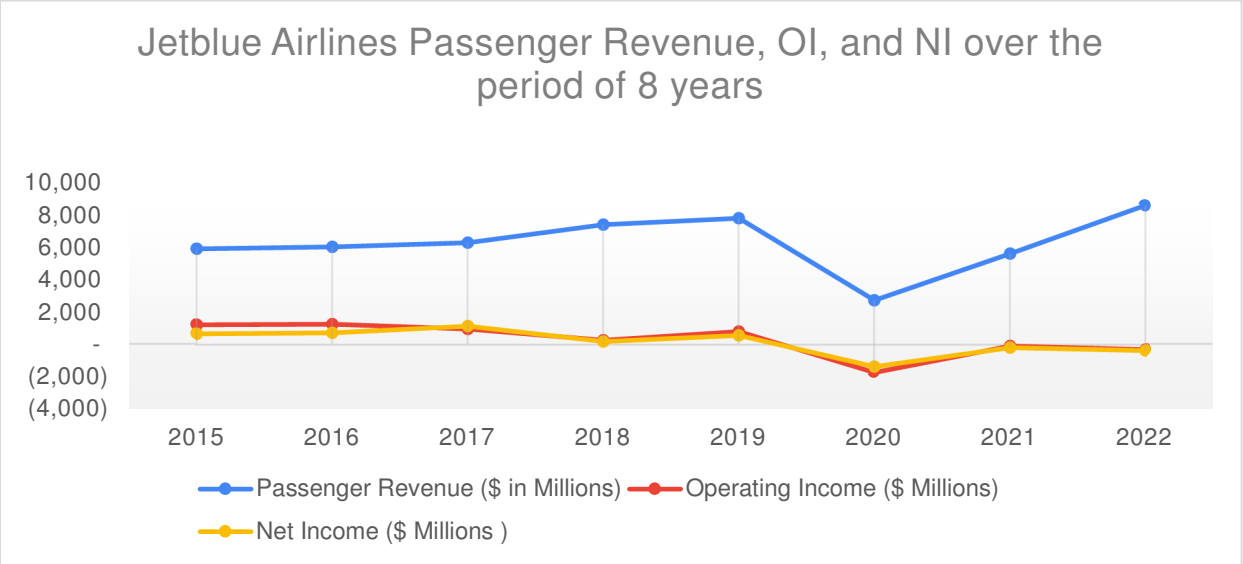


JetBlue Airlines

In the following graph, you will see the performance of JetBlue Airlines From 2015 to 2022. Notice that the passenger revenues for JetBlue Airlines showed consistent increases from 2016 to 2019, with an increase of $1.9 billion or a 32.2% increase 2019 over 2015. Using 2019 as the base year for 2020, 2021, and 2022, we see that passenger revenues decreased significantly in 2020 by 65.4%, from $7.8 billion to $2.7 billion. In 2021 the decline was less than in 2020, as the revenues decreased by 28.2% from $7.8 billion to $5.6 billion. However, in 2022, there was an increase in passenger revenues to $8.6 billion, representing a 10.3% increase over the 2019 number.

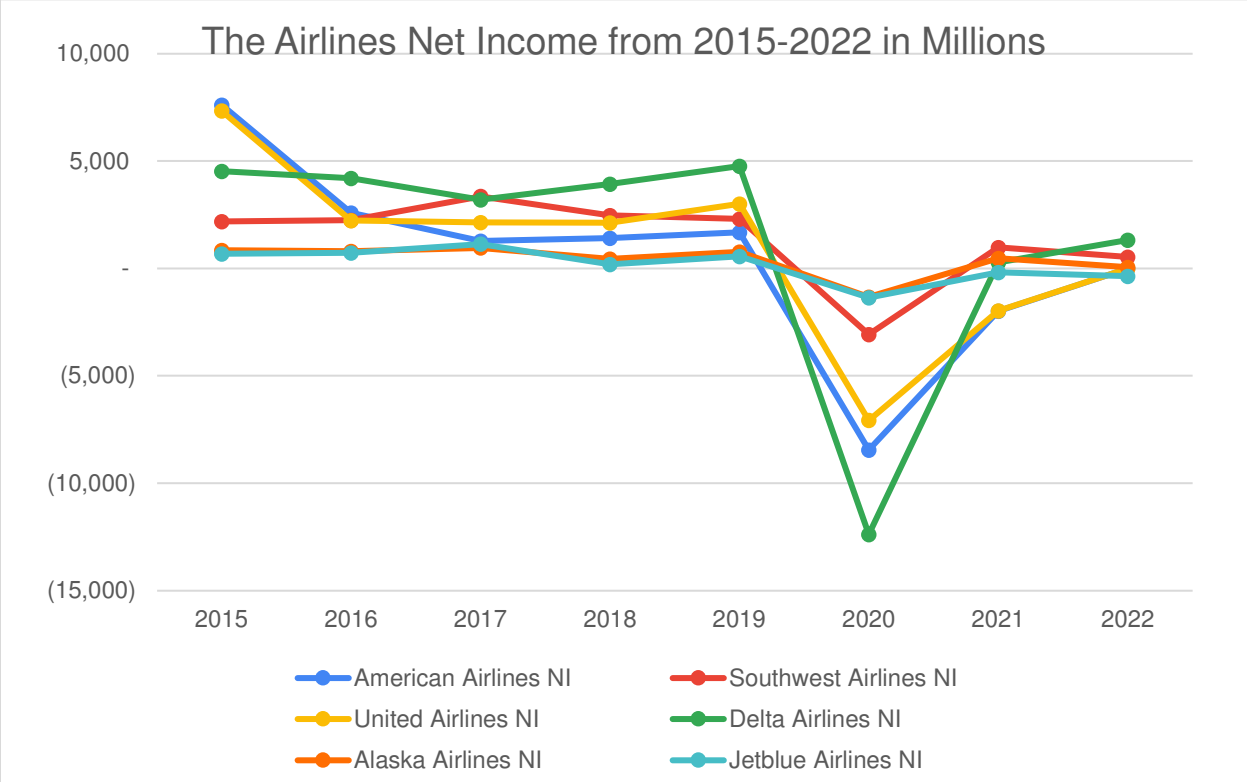
Regarding operating income, from 2016 to 2019, JetBlue Airlines experienced an increase in 2016, declines in 2017 and 2018, and a rebound in 2019, but not up to the 2015 amount. Compared to the 2015 number, the company experienced a decrease in 2019 of 33.3%, from $1.2 billion to $0.8 billion. Using 2019 as the base year, we see that JetBlue Airlines continued to experience declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 312.5%, from $0.8 billion to a loss of $1.7 billion. In 2021 the company experienced a lower loss of $0.1 billion or 112.5%. In 2022 the company experienced another loss, with an operating income of $0.3 billion, representing a decline of 137.5%.

The net income for JetBlue Airlines experienced increases and decreases from 2016 through 2019 compared to 2015. When the 2019 net income of $0.6 billion is compared to the 2015 net income of $0.7 billion, the result is a decrease of 14.3%. Using 2019 as the base year, we see that JetBlue Airlines experienced declines from 2020 to 2022, with the most significant reduction experienced in 2020 of 333.3%, from $.7.0 billion to a loss of $1.4 billion. In 2021 the company experienced a lower net loss of $0.2 billion or 66.7%. In 2022, the company continued its losing ways with a net loss of $0.4 billion or 166.7%.



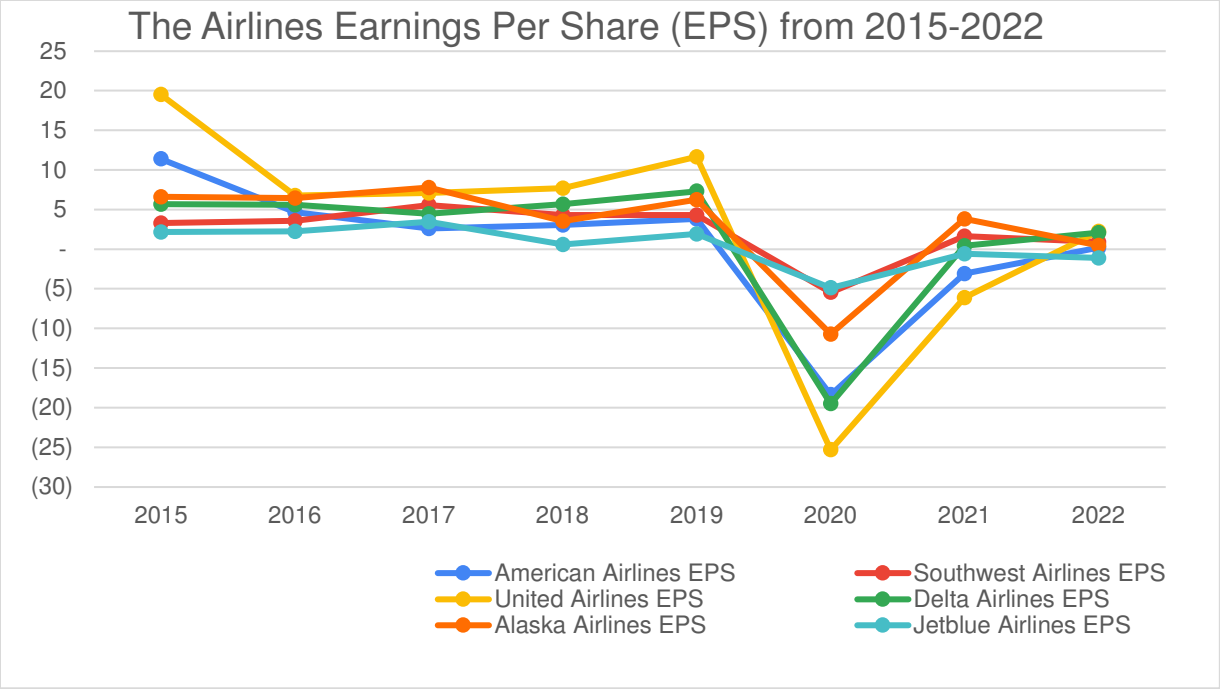
Net Income Comparison

The graph below reveals that all six companies experienced declines in their net incomes from 2019 through 2022. Delta Airlines experienced the most significant decline, which took place in 2020, declining from a $4.8 billion net income in 2019 to a loss of $12.4 billion. All six companies experienced better numbers in 2021 and 2022; however, these amounts were significantly less than the incomes experienced in 2019. American Airlines and United Airlines experienced a $2.0 billion loss in 2021, though they had positive numbers in 2022. JetBlue continued to experience losses in both 2021 and 2022.



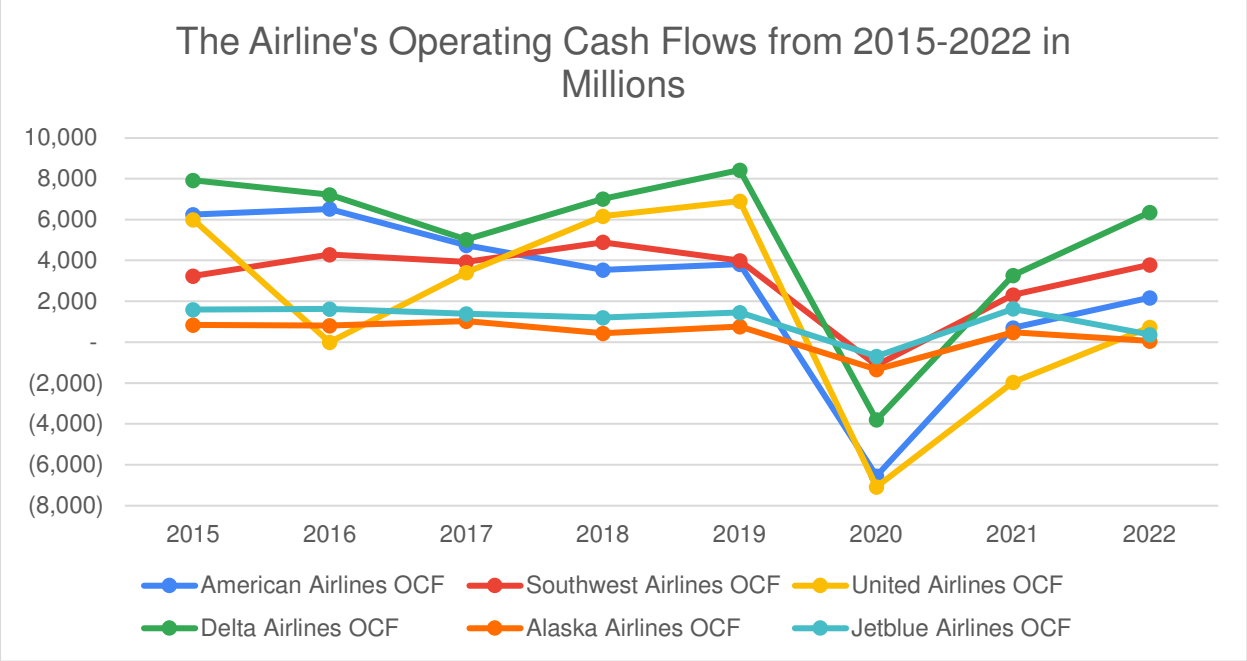
Earnings per Share (EPS) Comparison

The graph below reveals similar experiences to the net income comparison graph, with all six companies experiencing significant decreases in their EPS from 2020 through 2022. The most significant impact was felt by United Airlines, whose EPS fell from $11.63 in 2019 to ($25.30) in 2020. That all companies experienced negative EPS in 2020. In 2021 American Airlines and United Airlines experienced negative EPS; however, both companies were back in the positive in 2022. JetBlue continued to experience negative EPS in 2021 and 2022.



Comparison of Operating Cash Flows

The graph below shows that all the companies experienced negative cash flows in 2020, with American Airlines, United Airlines, and Delta Airlines experiencing the most significant declines. United Airlines was the only company that continued to experience a negative operating cash flow in 2021. In 2022 all companies were back in the black.



CONCLUSION

The impact of Covid-19 on the world from late 2019 through mid to late 2022 has been significant. The airline industry was one of the many industries that were significantly impacted. This impact can be clearly seen from the financial impact that the six airlines in this research experienced from 2020 through 2022, with the most significant impact felt in 2020. The study revealed that all six airlines experienced substantial financial impacts on passenger revenues, operating incomes, net incomes, earnings per share (EPS), and operating cash flows. The research also revealed that all the companies rebounded in the measures previously mentioned, though some fared better than others.

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