Tracking the Impacts of COVID-19

Updated November 11, 2020
COVID-19 Has Forced Several Airlines Across the Globe to Restructure or Cease Operations

Selected Airline Bankruptcies and/or Shutdowns Since March 1, 2020

<table>
<thead>
<tr>
<th>United States</th>
<th>Outside the USA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compass Airlines</td>
<td>Aeromexico (Mexico)</td>
</tr>
<tr>
<td>ExpressJet</td>
<td>Air Mauritius (Mauritius)</td>
</tr>
<tr>
<td>Miami Air (restarting Dec. 2020)</td>
<td>AirAsia Japan (Japan)</td>
</tr>
<tr>
<td>RavnAir Group</td>
<td>Alitalia (Italy)</td>
</tr>
<tr>
<td>Trans States Airlines</td>
<td>Avianca (Colombia)</td>
</tr>
<tr>
<td></td>
<td>Comair (South Africa)</td>
</tr>
<tr>
<td></td>
<td>Flybe (UK)</td>
</tr>
<tr>
<td></td>
<td>German Airways (Germany)</td>
</tr>
<tr>
<td></td>
<td>Germanwings (Germany)</td>
</tr>
<tr>
<td></td>
<td>LATAM (Chile)</td>
</tr>
<tr>
<td></td>
<td>South African (S. Africa)</td>
</tr>
<tr>
<td></td>
<td>Thai Airways (Thailand)</td>
</tr>
<tr>
<td></td>
<td>TAME (Ecuador)</td>
</tr>
<tr>
<td></td>
<td>Virgin Australia (Australia)</td>
</tr>
</tbody>
</table>

* UK-based Virgin Atlantic filed Chapter 15 in the United States – “a solvent restructing of an English company”

Source: A4A research
Aviation Is in the Early Innings of a Multiyear, Multistage Recovery

- Contain the Virus
- Stabilize the Economy
- Increase Efficiency

Aviation-Government Collaboration on Health/Facilitation/Safety/Technology

- Traffic Recovery
- Revenue Recovery
- Financial Recovery

Cost-Reduction Initiatives + Business Model Adaptation + Debt Reduction

- Reduce Cash Burn
- Restore Profitability & Rebuild Margins
- Repair Balance Sheets
Airlines Are Making an Unprecedented Level of Investment in the Safety and Wellbeing of Their Customers and Workers, Instituting Multiple Layers of Protection Throughout the Experience

- Requiring face coverings
- Offering touchless check-in
- Using HEPA filtration systems
- Sterilizing w/electrostatic sprayers & foggers
- Sanitizing counters, kiosks & gate areas
- Disinfecting surfaces (e.g., tables, buckles)
- Reducing touchpoints (e.g., beverage service)
- Partnering With Premier Medical Institutions

Source: AirlinesTakeAction.com
“When the use of masks is implemented in combination with other measures built into aircraft operations, such as increased ventilation…and disinfection of surfaces, these layered NPIs offer significant protection from acquiring COVID-19 through air travel.”

“The use of face masks is critically important throughout the air travel process, from entering the airport for departure to leaving the destination airport…”

COVID-19 and transmission
COVID-19 is an infectious disease caused by a new type of coronavirus called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). It was first identified in China in late 2019 and has spread around the world, resulting in millions of illnesses and severe economic hardship.1,2 It has also understandably resulted in a reluctance to engage in activities that involve proximity to other people. Transmission of SARS-CoV-2 is similar to influenza (“flu”) and other respiratory viruses: It may be spread directly through contact with respiratory particles from an infected individual or indirectly by touching highly contaminated surfaces and then touching one’s face.1,2,3 The virus generally enters through the nose and mouth and then deposits on the lining of the nasal passages or throat.1,4 It can also enter through the mucous membranes surrounding the eye.6

If the immune system does not counteract SARS-CoV-2 during this initial phase, the virus moves down the trachea to attack the lungs and cause inflammation.4 Symptoms include fever, cough, persistent extreme fatigue, difficulty breathing, congestion, nausea and vomiting, and new loss of smell or taste.1,3,4 In most cases people are either asymptomatic or have mild symptoms (>50% of the infected population), but others develop more severe disease that can be fatal.1,2,3,4,5 However, there are several actions that the air travel industry and passengers can take to significantly reduce the risk of infection during air travel, including the use of face masks.

Face masks: An essential protective measure while traveling
Face masks are an essential part of a comprehensive set of measures to reduce transmission of COVID-19 throughout air travel. Passengers and airport/airline employees should be required to wear face masks throughout their air travel journey—including time spent in the airport, boarding, in-flight, and deplaning. Since different masks offer different protection and understanding of proper use may vary, it is of critical importance that consistent requirements of proper mask selection and use be applied and clearly communicated for everyone throughout air travel.

The role of face masks in preventing COVID-19 infection during air travel
During air travel, passengers and crew are in a very well-ventilated space but in close proximity to one another for an extended period of time. SARS-CoV-2 infections can occur through the emission of virus-containing respiratory particles that are aerosols (<5 μm in diameter) and droplets (>5 μm in diameter) exhaled by infected people when coughing, sneezing, speaking, and even through normal breathing.1,3,4 While big particles fall quickly to the ground, smaller particles are lightweight and can remain suspended in the air.2 Face masks help block respiratory particles, yielding added protection in the aircraft environment.

If symptomatic individuals are coughing or sneezing, other people frequently try to distance themselves to avoid transmission. However, individuals who are infected but do not develop symptoms (asymptomatic) and those who are early in disease course and have not yet developed symptoms (pre-symptomatic) can still spread the virus by normal breathing and speaking, and they may be unaware that they are infected and contagious.1 Pre-symptomatic or asymptomatic individuals cause an estimated 50% of the
“The most important driver of this variable speed recovery is also the most unpredictable one and that, of course, is the virus itself. When it comes to key developments and medical advances, we leave the forecasting of the precise timing to epidemiologists and experts best suited to the task. Our baseline expectations reflected in our latest forecast are predicated upon the rough framework that we get a reasonably effective vaccine within the next year and that enough people are willing to take it that the virus case counts decline over time.”

Wells Fargo Forecasts for 2021 Real GDP Growth (%)
New U.S. Cases of COVID-19 Surging Again, Surpassing 115,000 per Day
New Cases Also Surging in Europe, Trending Down in India and Brazil

Source: World Health Organization and U.S. Centers for Disease Control and Prevention
COVID-Related U.S. Hospitalizations Are at an All-Time High of ~62,000
Approximately 12,000 Patients Are in Intensive Care

Source: The COVID Tracking Project

*Hospitalizations with confirmed or probable COVID-19 cases per the expanded CSTE case definition of April 5th, 2020 approved by the CDC.
In Most Recent Week, U.S. Airline Passenger Volumes* Were 65% Below Year-Ago Levels
Domestic Air Travel Down 64%, International Air Travel Down 74%

Source: A4A member passenger airlines as reported to A4A on a consolidated company basis (including branded code share partners)

* Onboard ("segment") passengers
In Most Recent Week, U.S. Passenger Airline Departures Were 47% Below 2019 Levels
Domestic Flights Operated Down 46%, International Flights Operated Down 57%

7-Day Rolling Year-Over-Year Change in Aircraft Departures (%)

Source: A4A member passenger airlines as reported to A4A on a consolidated company basis (including branded code share partners)
In November, DC/NY/HA/MA/NJ Seeing Largest Air Service Reductions; MT Flights Up YOY

% Change in Scheduled Passenger Flights: November 2020 vs. 2019 – All Airlines and Destinations

Source: Diio by Cirium published schedules (Oct. 23, 2020) for all airlines providing scheduled service to all destinations
Domestic U.S. Load Factor* Averaged 54% in Most Recent Week, Versus 84% a Year Earlier

Weekly Average Domestic U.S. Load Factor* (%)

Source: A4A member passenger airlines as reported to A4A on a consolidated company basis (including branded code share partners)

* Revenue passenger miles divided by available seat miles
In Most Recent Week, Domestic U.S. Flights Averaged 71 Passengers*
Domestic Flights Averaged ~99 Passengers per Departure Over the Course of 2019

Source: A4A member passenger airlines as reported to A4A on a consolidated company basis (including branded code share partners) * Onboard (“segment”) passengers

7-Day Moving Average Onboard Passengers* per Flight

Source: A4A member passenger airlines as reported to A4A on a consolidated company basis (including branded code share partners)
Since June 1, Flight Completion Factor Has Averaged 99%, Consistently Outperforming 2019

U.S. Passenger Airline Flight Completion Factor* (7-Day Moving Average)

Source: Global Eagle's masFlight Aviation Platform

* Departures performed as a percent of those scheduled.
TSA Checkpoint Traveler Throughput* Is Running 65% Below Year-Ago Levels
Daily Average Bottomed Out at 95K in April 11-17

Source: Transportation Security Administration

*TSA Traveler Throughput: 7-Day Moving Average (in Thousands)

Jan 5.5%
Feb 2.1%
Mar (50%)
Apr (95%)
May (90%)
Jun (81%)
Jul (73%)
Aug (70%)
Sep (67%)
Oct (63%)
Nov (TBD)
Dec (TBD)

Source: Transportation Security Administration

* U.S. and foreign carrier customers traversing TSA checkpoints; 2019 is year-ago same weekday
October: TSA Checkpoint Volumes Declined Most in HA/NY/MA/VT/DC; Least in VI/WY/MT/SD/ID

% Change in Traveler Throughput by U.S. State – October 2020 vs. October 2019

Source: Transportation Security Administration
Conditional Lifting of Hawaii Inbound Quarantine on Oct. 15 Is Boosting Volumes*
Recent Week Is 76% Below Year-Ago Levels Versus 94-95% Previously

On Mar. 26, the State of Hawai‘i initiated a mandatory 14-day self-quarantine for all passengers arriving from out of state. Beginning Oct. 15, subject to specific COVID-19 negative test results, passengers can avoid quarantining.

* Daily passenger counts include returning residents, intended residents and visitors but exclude interisland and Canada passengers.
In October, U.S.-International Air Travel* Fell 84% From Year-Ago Levels
Non-U.S. Citizen Arrivals Fell 88%; U.S. Citizen Departures Fell 79%

% Change YOY in Total* U.S.-International Air Passengers: 2020 vs. 2019

Source: U.S. Department of Commerce National Travel and Tourism Office using DHS I-92 / APIS data

* Gateway-to-gateway passengers on U.S. and foreign scheduled and charter airlines and general aviation
Of the 20 Largest U.S.-Country Pairs in October 2019, 14 Saw YOY Declines Exceeding 90%
U.S.-Mexico and U.S.-Dominican Republic Fell the Least

Top-20 U.S. Country Pairs: % Change in Passengers* From October 2019 to October 2020
Sorted left to right by highest volume in October 2019

Source: U.S. Department of Commerce National Travel and Tourism Office using DHS I-92 / APIS data
* Gateway-to-gateway passengers on U.S. and foreign scheduled and charter airlines and general aviation

Source: Airlines for America
We Connect the World

airlines.org
In October 2020, Mexico Was the Clear Leader for U.S.-International Air Travel
Top Five U.S. Country Pairs Propelled by Beach Seekers and Those Visiting Friends/Relatives

October 2020: Top-20 U.S. Country Pairs by Total Nonstop Air Passengers* (000)
Corporate Air Travel* Has Yet to Recover From the Steep Declines That Began in March

Source: Airlines Reporting Corporation (ARC)

* Results do not include sales of tickets purchased directly from airlines and are not net of refunds or exchanges.
The Rapid Decline of Demand – Especially Business Travel – Has Pummeled Airline Revenues

YOY Change (%) in Operating Revenues

<table>
<thead>
<tr>
<th>Quarter</th>
<th>1Q20</th>
<th>2Q20</th>
<th>3Q20</th>
<th>4Q20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change</td>
<td>(17)</td>
<td>(86)</td>
<td>(74)</td>
<td></td>
</tr>
</tbody>
</table>

Total Operating Revenues (Cents) per ASM

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q</td>
<td>14.71</td>
<td>12.82</td>
</tr>
<tr>
<td>2Q</td>
<td>15.58</td>
<td>9.96</td>
</tr>
<tr>
<td>3Q</td>
<td>15.06</td>
<td>9.25</td>
</tr>
<tr>
<td>4Q</td>
<td>15.30</td>
<td></td>
</tr>
</tbody>
</table>

Source: A4A analysis of reports by Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United on a consolidated company basis for systemwide operations
First Nine Months of 2020: U.S. Passenger Airline Operating Revenues Down 61.5% YOY
Pre-Tax Losses Exceeding $36 Billion Through September

Change (%) in Operating Revenues and Expenses
YTD 3Q20 vs. YTD 3Q19

<table>
<thead>
<tr>
<th>Category</th>
<th>Change (%)</th>
<th>YTD 3Q20</th>
<th>YTD 3Q19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psgr. (1)</td>
<td>(65.3)</td>
<td>1Q20</td>
<td>2Q20</td>
</tr>
<tr>
<td>Cargo</td>
<td>(6.4)</td>
<td>($6.8)</td>
<td>($14.2)</td>
</tr>
<tr>
<td>Other (2)</td>
<td>(21.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total OpRev</td>
<td>(61.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td>(47.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel</td>
<td>(61.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td>(39.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airports</td>
<td>(17.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft</td>
<td>(1.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (3)</td>
<td>(32.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total OpExp</td>
<td>(3.3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Traffic = revenue passenger miles (down 63.5%); yield = revenue per passenger-mile flown (down 5.0%)
2. Sale of frequent flyer award miles to airline business partners, transportation of pets, in-sourced aircraft and engine repair, flight simulator rentals, inflight sales, etc.
3. Aircraft rents, professional fees, food/beverage, insurance, commissions, GDS fees, communications, advertising, utilities, office supplies, crew hotels, payments to regionals

Quarterly Pretax Income/Losses ($Billions)

- 1Q20: ($6.8)
- 2Q20: ($14.2)
- 3Q20: ($15.3)
- YTD: ($36.3)

Source: A4A analysis of reports by Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United on a consolidated company basis for systemwide operations
Domestic U.S. Air Cargo Demand Continues to Outperform U.S.-International Trade With Asia Continues to Lead the Recovery for U.S.-International Air Cargo

% Change YOY in Air Cargo* Between the United States and World Areas – U.S. and Foreign Airlines

Source: Bureau of Transportation Statistics, T1 (U.S. carriers) and T-100 International Market (U.S. and foreign flag carriers)

* Pounds of freight and mail enplaned in scheduled and nonscheduled services
Airlines Are Taking a Wide Variety of Self-Help Actions to Reduce Cash Burn
Selected Examples of Actions to Improve Cash Flow From Operations, Investing and Financing

» Making historic capacity cuts, parking and/or retiring older aircraft (and, in some cases, entire fleet types)
» Utilizing passenger planes on cargo-only missions, either belly-only or belly and main cabin
» Cutting executive compensation and implementing voluntary leave and early retirement programs
» Freezing hiring and non-essential spending (e.g., employee travel, consultants, events, marketing, training)
» Consolidating footprint at airport facilities (e.g., concourses); shuttering lounges; halting real estate projects
» Simplifying onboard product (e.g., food and beverage)
» Negotiating with vendors: cobranded credit cards, airports (i.e., zero-interest rent deferrals), regional airline partners (i.e., reduced block hours), fuelers, caterers, etc. to achieve relief on payment terms/timing
» Deferring aircraft deliveries and reducing non-aircraft (e.g., ground equipment, IT) capital expenditures
» Raising funds via capital markets: borrowing funds via unsecured or secured loans and/or selling stock
» Selling/mortgaging aircraft/engines/other assets
» Suspending capital return programs, including share repurchases and the payment of future dividends

Source: A4A and member companies
## The Pandemic Has Taken a Material Toll on U.S. Airline Employment

Voluntary Reductions, Retirements, Job Changes, Employer Shutdowns and Other Factors at Play

<table>
<thead>
<tr>
<th>Carrier Universe</th>
<th>Scheduled U.S. Passenger Airlines</th>
<th>All U.S. Passenger and Cargo Airlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure</td>
<td>FTEs* (000)</td>
<td>Headcount (000)</td>
</tr>
<tr>
<td>All-Time High</td>
<td>Jun-2001: 545.9</td>
<td>May-2001: 760.8</td>
</tr>
<tr>
<td>Post-2000 Low Point</td>
<td>Apr-2010: 376.7</td>
<td>Apr-2010: 562.3</td>
</tr>
<tr>
<td>Pre-COVID Peak</td>
<td>Mar-2020: 460.0</td>
<td>Feb-2020: 757.0</td>
</tr>
<tr>
<td>Latest Available Data Point</td>
<td>Aug-2020: 411.2</td>
<td>Sep-2020: 702.1</td>
</tr>
<tr>
<td>Change vs. Pre-COVID</td>
<td>(48.9)</td>
<td>(54.9)</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics based on payroll near the 15th of the month

* Full-time equivalents (FTE) = full-time workers plus 0.5 * part-time workers
CARES Act Payroll Support Program Kept Airline Workers Employed But Left a $3.7B Shortfall
PSP Enabled Airlines to Maintain Full Payroll and Accelerate the U.S. Economic Recovery

» CARES Act PSP was a pass-through to airline workers – a combination of grants and loans (to be repaid with interest to U.S. Treasury) – for the period April 1-Sept. 30, 2020.

» The law required that airlines: 1) not conduct involuntary furloughs or reduce benefits or rates of pay, 2) comply with minimum air service obligations 3) abide by restrictions on executive compensation, 4) repay ~29% of the funds (plus interest) to Treasury and 5) issue warrants to Treasury.

» For the nine largest passenger airlines – after deducting the amount repayable to U.S. Treasury – PSP awards covered just 82% of payroll expenses, leaving them with a $3.7B shortfall for the applicable six-month period.

» Economic consulting firm Compass Lexecon estimated that, by keeping their workers employed through Sept. 30, PSP awards to U.S. passenger carriers saved U.S. Treasury $6.0-10.2B and state treasuries $3.2-5.5B.

Sources: U.S. Treasury, A4A, carrier reports, equity analysts and Compass Lexecon

* Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United for April 1-Sept. 30, 2020

PSP Tally ($ Billions) for Large U.S. Passenger Carriers*

<table>
<thead>
<tr>
<th>Total PSP Awards</th>
<th>Repayable to Government</th>
<th>Payroll Expenses</th>
<th>PSP Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>$22.8</td>
<td>$6.6</td>
<td>$19.9</td>
<td>($3.7)</td>
</tr>
</tbody>
</table>

($3.7)

Airports and Airlines for a Better California - We Connect the World
Over the Past Two Decades, Job Gains/Losses Have Mirrored the Industry’s Financial Health
From March to December, U.S. Passenger Airline Employment Will Have Fallen by ~90,000 FTEs

Source: Bureau of Transportation Statistics for scheduled U.S. passenger airlines (i.e., all that report scheduled passenger revenue)
One-Fourth of the U.S. Passenger Airline Fleet Has Been Inactive for at Least 30 Days

Number of Active Aircraft*

<table>
<thead>
<tr>
<th>Days Inactive</th>
<th>Number of Aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td>7+</td>
<td>5,856</td>
</tr>
<tr>
<td>30+</td>
<td>4,449</td>
</tr>
<tr>
<td>60+</td>
<td>22</td>
</tr>
<tr>
<td>90+</td>
<td>20</td>
</tr>
<tr>
<td>180+</td>
<td>19</td>
</tr>
</tbody>
</table>

Consecutive Days Inactive as of 11/1/2020

Source: Global Eagle's masFlight Aviation Platform, based on tail numbers that were active at any point in 1Q 2020. * Active defined as operated in any of the previous seven days.
Lower Jet-Fuel Prices Have Provided Some Cost Relief, But Rising Again With More Flying

Source: Energy Information Administration (EIA) Weekly Petroleum Status Report

Price of Jet Fuel (U.S. Gulf Coast, $ per Gallon)

Source: Energy Information Administration (EIA) Weekly Petroleum Status Report
Decline in Air-Transport Demand Has Translated to Sharply Reduced Jet-Fuel Consumption
Fewer Operations (Especially Long-Haul) and Smaller Payloads + Retirement of Older Aircraft

% Change YOY in U.S. Airline Industry Fuel Consumption*

Source: Bureau of Transportation Statistics F41 Schedule P12A

* Scheduled and nonscheduled passenger and cargo services
U.S. Airlines Have Faced a Highly Elevated Breakeven Load Factor in 2020
Expected to Remain Elevated Through First Quarter of 2021 on Low Yield and High Unit Cost

Breakeven Load Factor* (%)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q</td>
<td>77</td>
<td>79</td>
<td>Estimate 77</td>
</tr>
<tr>
<td>2Q</td>
<td>75</td>
<td>124</td>
<td>Estimate 75</td>
</tr>
<tr>
<td>3Q</td>
<td>75</td>
<td>100</td>
<td>Estimate 75</td>
</tr>
<tr>
<td>4Q</td>
<td>76</td>
<td>93</td>
<td>Estimate 76</td>
</tr>
</tbody>
</table>

Source: Analyst estimates for publicly traded U.S. passenger airlines

* Includes interest expense and non-operating costs but excludes special items (e.g., CARES Act Payroll Support Program receipts) and cargo revenue
Collectively, U.S. Airlines Expect Cash Burn to Persist Through Winter 2020/2021
Given the Dearth of Demand (Especially Business Travel), Cost Reduction Is Paramount

Estimated Average Daily Cash Burn* (in Millions), U.S. Passenger Airlines

<table>
<thead>
<tr>
<th>Month</th>
<th>Cash Burn (in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov</td>
<td>($182)</td>
</tr>
<tr>
<td>Dec</td>
<td>($177)</td>
</tr>
<tr>
<td>Jan</td>
<td>($149)</td>
</tr>
<tr>
<td>Feb</td>
<td>($140)</td>
</tr>
<tr>
<td>Mar</td>
<td>($136)</td>
</tr>
</tbody>
</table>

Source: A4A and various airline equity analysts

* Ticket and cargo sales - cash operating expenses - cash refunds - capital expenditures - interest expense – repayment of debt
Airlines Are Coping by Taking on Billions in Debt – Up ~65% From YE2019 to YE2020
Annual Net Interest Expense Projected to Exceed $14.5B in 2021-2023

“For 2021 and beyond, we anticipate a major deleveraging cycle as the industry will have no choice but to address its significant debt load.” (Deutsche Bank, “Airline Industry Update,” July 1, 2020)

**Year-End Total Debt ($ Billions)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020F</th>
<th>2021F</th>
<th>2022F</th>
<th>2023F</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Billions</td>
<td>108.1</td>
<td>105.4</td>
<td>173.5</td>
<td>167.5</td>
<td>161.4</td>
<td>155.5</td>
</tr>
</tbody>
</table>

**Interest Expense, Net ($ Billions)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020E</th>
<th>2021F</th>
<th>2022F</th>
<th>2023F</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Billions</td>
<td>2.0</td>
<td>1.9</td>
<td>3.7</td>
<td>5.2</td>
<td>4.9</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Source: A4A, equity analysts and filings of Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United

airlines.org
In 2020, S&P Has Lowered Its Credit Ratings on Eleven U.S. and Canadian Airlines*

<table>
<thead>
<tr>
<th>Airline</th>
<th>Rating Actions Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>BBB+</td>
</tr>
<tr>
<td>Allegiant</td>
<td>BBB+</td>
</tr>
<tr>
<td>American</td>
<td>BBB+</td>
</tr>
<tr>
<td>Delta</td>
<td>BBB+</td>
</tr>
<tr>
<td>Hawaiian</td>
<td>BBB+</td>
</tr>
<tr>
<td>JetBlue</td>
<td>BBB+</td>
</tr>
<tr>
<td>Southwest</td>
<td>BBB+</td>
</tr>
<tr>
<td>Spirit</td>
<td>BBB+</td>
</tr>
<tr>
<td>United</td>
<td>BBB+</td>
</tr>
<tr>
<td>Air Canada</td>
<td>BBB+</td>
</tr>
<tr>
<td>WestJet</td>
<td>BBB+</td>
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Ratings Actions Taken to Reflect Weakened Financial Condition and Heightened Risk

Source: Standard & Poor's

* Publicly traded U.S. carriers in S&P Global coverage universe
After 9/11 and the Global Financial Crisis, it took years for air-travel demand to recover. Passenger volumes took more than seven years to recover from the Financial Crisis/Oil Spike.

Source: A4A Passenger Airline Cost Index and Bureau of Transportation Statistics (Form 41 Schedule T1)

* Passengers enplaned systemwide on U.S. airlines in scheduled and nonscheduled services.
We Are Unlikely to See a Return to 2019 Passenger Volumes Before 2023-2024
2021-2022 Clouded by Uncertainty re: State of Pandemic, Vaccination/Therapeutics, Economy

Estimated U.S. Airline Industry Passenger Traffic Change (%) vs. 2019 Levels

Source: A4A and various airline equity analysts
After 9/11 and the Global Financial Crisis, It Took Years for Air-Cargo Demand* to Recover
Cargo Volumes Took 10 Years to Recover From the Financial Crisis/Oil Spike

Source: Bureau of Transportation Statistics (Form 41 Schedule T1)

* Cargo revenue ton miles (RTMs) flown on U.S. passenger and cargo-only airlines in scheduled and nonscheduled services
Developments in the Marketplace Are Driving Important Changes in Airline Strategy

- Enhanced cleaning measures and PPE
- Widespread elimination of change fees
- Expansion of mobile app self-service functionality
- Map-based flight searches (simultaneous comparisons across multiple destinations)
- Efforts to deploy preflight COVID testing in key transoceanic corridors (incl. Lower 48-Hawaii)
- Rethinking of fleets (gauge, range, types) and routes (points, timings, frequencies, connections)
- Initiatives to capitalize on air-cargo opportunities amid reduced capacity but newer technology
- Acceleration of selected airport projects
- Focus on retaining talent, boosting morale

- Evaporation of corporate travel
- Gradual, growing interest in getaways and VFR
- “WFH” affording leisure travelers more flexibility
- Most bookings within 30 days of departure
- Aversion to connecting / layovers
- Stockpiling of travel credits (e.g., e-wallets)
- International restrictions/quarantines/recession

- Domestic leisure fares down > 10% YOY
- Materially higher breakeven load factor
- Higher-than-historical Thurs/Mon share of travel
- Non-U.S. point of sale down ~90% YOY
- U.S.-Mexico/Caribbean/C. America faring better

- Stockpiling of travel credits (e.g., e-wallets)
- International restrictions/quarantines/recession

Airlines for America
We Connect the World
Key Points

» In the first two months of 2020, operating revenues grew more than 5% – we were on our way to another record.

» U.S. passenger airlines will likely experience a high rate of cash burn into the second half of 2020.

» Air travel took 3 years to recover from 9/11 and 7+ years from the global financial crisis. Air cargo took 10 years post-GFC.

» When traffic returns, low-yield (VFR, then vacationers) is likely to return faster than high-yield (corporate) and international, with implications for the pace of revenue recovery, the need for cost reduction/containment, and the return to profitability.
  ▪ Businesses first cut back hiring and travel and entertainment; in a recovery, those are the last things they restore. These travelers are essential due to how often they fly and the cabins/fares they purchase, among other reasons.

» People will be reluctant to travel – or even to book travel – until there is a strong degree of confidence that the health crisis and associated risks are behind us. The COVID-19 global pandemic constitutes a black-swan public health crisis that will only be solved once an effective vaccine is developed, but vaccines usually take a year or longer to develop.

» In addition to concerns about the spread of the virus and the associated restrictions on the movements of citizens, businesses and consumers are facing a sharp global economic downturn of unknown duration.
  ▪ The economic and consumer psychology effects of COVID-19 are deep and global.
  ▪ High unemployment and reduced HHNW worth + strained government coffers = curtailed travel budgets for households and organizations.

» Once demand has recovered, it will take years for airlines to retire the newly accumulated billions of dollars of debt and to address the sizable associated interest expense, limiting their wherewithal to rehire and reinvest.