Tracking the Impacts of COVID-19

Updated October 16, 2020
COVID-19 Has Forced Several Airlines Across the Globe to Restructure or Cease Operations
Selected Airline Bankruptcies and/or Shutdowns From March 1 to Present

<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>
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<tr>
<td>Miami Air International</td>
<td>AirAsia Japan (Japan)</td>
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<tr>
<td>RavnAir Group</td>
<td>Alitalia (Italy)</td>
</tr>
<tr>
<td>Trans States Airlines</td>
<td>Avianca (Colombia)</td>
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<td></td>
<td>Comair (South Africa)</td>
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<td></td>
<td>Flybe (UK)</td>
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<td>German Airways (Germany)</td>
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<td>Germanwings (Germany)</td>
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<td></td>
<td>LATAM (Chile)</td>
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<td></td>
<td>South African (S. Africa)</td>
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<td></td>
<td>Thai Airways (Thailand)</td>
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<td></td>
<td>TAME (Ecuador)</td>
</tr>
<tr>
<td></td>
<td>Virgin Australia (Australia)</td>
</tr>
</tbody>
</table>

Source: A4A research

* UK-based Virgin Atlantic filed Chapter 15 in the United States – “a solvent restructuring of an English company”
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
"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 Surged in Mid-June, Peaked on July 24, Rising Since Sept. 12
New Cases Surging in United Kingdom, Especially Since Mid-September

Source: World Health Organization and U.S. Centers for Disease Control and Prevention
For U.S. Airlines, Passenger Volumes* Remain 64% Below Year-Ago Levels
In Most Recent Week – Domestic Air Travel Down 62%, International Down 79%

7-Day Rolling Year-Over-Year Change (%) in Onboard Passengers*

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

* Onboard ("segment") passengers
For U.S. Passenger Airlines, Worldwide Departures Remain 48% Below 2019 Levels
In Most Recent Week – Domestic Flights Down 47%, International Flights Down 65%

Source: A4A member passenger airlines as reported to A4A on a consolidated company basis (including branded code share partners)
DC and Northeast States Are Seeing the Largest Air Service Reductions for October

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

Source: Diio by Cirium published schedules (Sept. 18, 2020) for all airlines providing scheduled service to all destinations

Note: District of Columbia = Washington Reagan (DCA)
Domestic U.S. Load Factor* Averaged 59% in Most Recent Week, Versus 85% 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
U.S. Airline Capacity Cuts Have Not Caught Up With the Severe Drop in Demand

7-Day Rolling Year-Over-Year Change (%) in Systemwide Traffic and Capacity*

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

* RPM = revenue passenger mile; ASM = available seat mile
Since May, Flight Completion Factor Has Consistently Outperformed 2019
In June-August 2020, Completion Factor Averaged One Point Higher Than a Year Earlier

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* Down 64% Year Over Year
Daily Average Bottomed Out at 95K in April 11-17

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

Source: Transportation Security Administration

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

% Change YOY in Traveler Throughput by U.S. State – August 2020

Source: TSA
Travel to the State of Hawaii* Is Almost Nonexistent – Down 95% Year Over Year

Air Travel to Hawaii: 7-Day Moving Average*

On March 26, the State of Hawai‘i initiated a mandatory 14-day self-quarantine for all passengers arriving from out of state. (On April 1, it was expanded to include interisland travel.)

Source: Hawaii Department of Business, Economic Development & Tourism

* Daily passenger counts include returning residents, intended residents and visitors but exclude interisland and Canada passengers.
In September 2020, Mexico Was the Clear Leader for U.S.-International Air Travel*
American Citizens Accounted for 68% of U.S.-Mexico Passengers vs. 56% in September 2019

Top-20 U.S. Country Pairs by Total Nonstop Air Passengers* (000)

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
In September, U.S.-International Air Travel* Fell 88% From Year-Ago Levels
Non-U.S. Citizen Arrivals Fell 90%; U.S. Citizen Departures Fell 85%
The Rapid Decline of Demand – Especially Business Travel – Has Pummeled Airline Revenues

YOY Change (%) in Operating Revenues*

<table>
<thead>
<tr>
<th></th>
<th>1Q20</th>
<th>2Q20</th>
<th>3Q20</th>
<th>4Q20</th>
</tr>
</thead>
<tbody>
<tr>
<td>(17.4)</td>
<td>(86.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: A4A analysis of reports by Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United

* As reported on a consolidated company basis for systemwide operations.
Sales* for Future Air Travel From U.S. Airports Remain Highly Depressed
Net Booked* Revenue Down 80% From 2019 Driven Largely by Evaporation of Business Travel

Source: Airlines Reporting Corporation (ARC) for most U.S. and foreign carriers for any flight to/from/within the United States

* Sales transactions minus refunds, for all future travel up to 330 days out.
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.
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: 755.2</td>
</tr>
<tr>
<td>Change vs. Pre-COVID</td>
<td>(44.9)</td>
<td>(50.7)</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
Over the Past Two Decades, Job Gains/Losses Have Mirrored the Industry’s Financial Health

From March to July, U.S. Passenger Airline Employment Fell by ~45,000 FTEs

Source: Bureau of Transportation Statistics for scheduled U.S. passenger airlines (i.e., all that report scheduled passenger revenue)

U.S. Scheduled Passenger Airline Full-Time Equivalent Employees (000s)

- All-Time High: Jun-01, 545.9
- Lowest Since 1Q 1987
- Pre-COVID Peak: Mar-20, 460.0
- Estimate based on carrier announcements: Dec-20, 370.2

Source: Bureau of Transportation Statistics for scheduled U.S. passenger airlines (i.e., all that report scheduled passenger revenue)
Over 25% of the YE 2019 U.S. Passenger Airline Fleet Has Been Retired or Remains Parked
Twin-Aisle Aircraft Fell From More Than 8% of the Active Fleet to Just 5%

Active* U.S. Passenger Airline Fleet

Source: Global Eagle's masFlight Aviation Platform, controlled for year-end 2019 active tail numbers. * 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

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

Sources: 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*

<table>
<thead>
<tr>
<th>Month</th>
<th>Domestic</th>
<th>International</th>
<th>Systemwide</th>
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<tbody>
<tr>
<td>Jan</td>
<td>2.4</td>
<td>(22.4)</td>
<td>2.5</td>
</tr>
<tr>
<td>Feb</td>
<td>2.5</td>
<td>(65.4)</td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td>66.3</td>
<td>(60.7)</td>
<td></td>
</tr>
<tr>
<td>Apr</td>
<td>50.8</td>
<td>(50.8)</td>
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<tr>
<td>May</td>
<td>47.6</td>
<td>(47.6)</td>
<td></td>
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<tr>
<td>Jun</td>
<td>66.3</td>
<td>(66.3)</td>
<td></td>
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<tr>
<td>Jul</td>
<td>50.8</td>
<td>(50.8)</td>
<td></td>
</tr>
<tr>
<td>Aug</td>
<td>47.6</td>
<td>(47.6)</td>
<td></td>
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<tr>
<td>Sep</td>
<td></td>
<td></td>
<td></td>
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<td>Oct</td>
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<td></td>
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<td>Nov</td>
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<tr>
<td>Dec</td>
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</tbody>
</table>

Source: Bureau of Transportation Statistics F41 Schedule P12A

* Scheduled and nonscheduled passenger and cargo services
U.S. Airlines Are Facing 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>1Q 2019</th>
<th>2Q</th>
<th>3Q</th>
<th>4Q</th>
<th>1Q 2020</th>
<th>2Q</th>
<th>3Q</th>
<th>4Q</th>
<th>1Q 2021</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>77</td>
<td>75</td>
<td>75</td>
<td>76</td>
<td>79</td>
<td>124</td>
<td>104</td>
<td>94</td>
<td>89</td>
</tr>
</tbody>
</table>

Source: Analyst estimates for publicly traded U.S. passenger airlines
Collectively, U.S. Airlines Expect Cash Burn to Persist Through Winter 2020/2021
Given Lack of Demand (Especially Business Travel), Survival Depends Primarily on Cost Reduction

Source: A4A and various airline equity analysts

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

- 1Q20: Weak Asia/EU demand
- 2Q: Surging refunds, Front-loaded CapEx
- 3QE: Sales plunge, refunds peak
- 4QE: Depressed ticket sales, Refunds remain elevated
- 1Q21E: Depressed ticket sales, (Lack of fall biz travel)

* Ticket and cargo sales - cash operating expenses - cash refunds - capital expenditures - interest expense – repayment of debt

Source: A4A and various airline equity analysts
Airlines Are Coping by Taking on Billions in Debt – Up ~66% From YE2019 to YE2020
Annual Net Interest Expense Projected to Exceed $4B Over Next Three Years

“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></td>
<td>108.1</td>
<td>105.4</td>
<td>174.8</td>
<td>163.7</td>
<td>156.1</td>
<td>149.4</td>
</tr>
</tbody>
</table>

Net Interest Expense ($ 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></td>
<td>2.0</td>
<td>1.9</td>
<td>3.5</td>
<td>4.7</td>
<td>4.5</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: A4A, equity analysts and filings of Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United
In 2020, S&P Has Lowered Its Credit Ratings on Eleven U.S. and Canadian Airlines*

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
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 are burning > $5B of cash per month, with cash burn expected to continue through 1Q 2021.

» 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/fores 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 = curtained 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.