

coronavirus

BRIEFING NOTE #1

Aviation and the Economy: Scenarios for Recovery

March 26, 2020

Coronavirus Briefing Note #1: Scenarios for Recovery

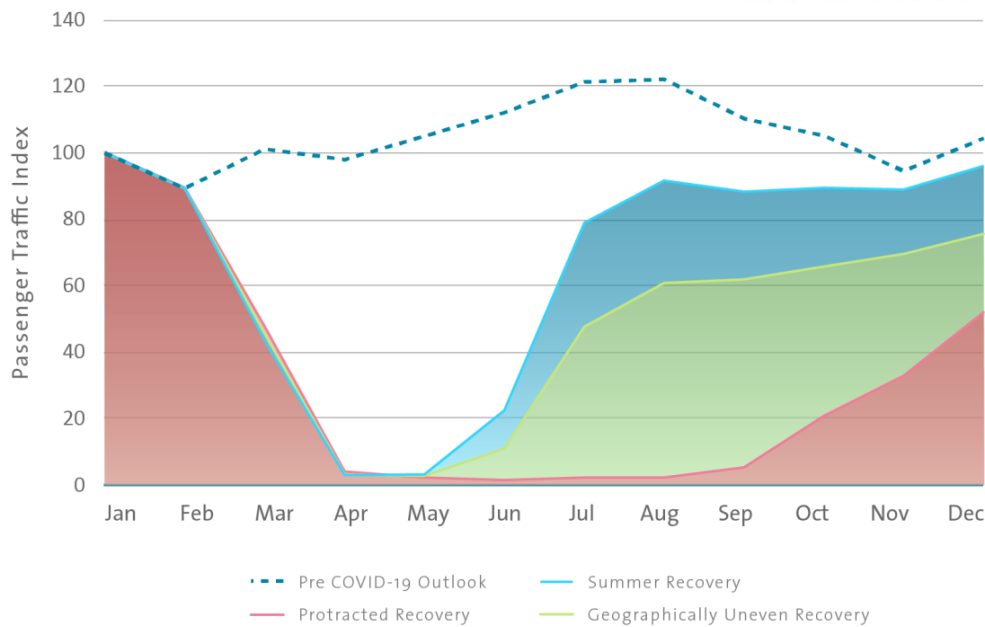
25 March 2020

The spread of COVID-19 (the illness associated with this new strain of coronavirus) is having an unprecedented impact on not just the aviation industry, but the global economy. While the immediate and most pressing concern is human cost in terms of people’s health and the tragedy of escalating fatalities, COVID-19 has some profound implications for nearly all businesses and industries.

This briefing note examines the impact of the COVID-19 outbreak to date and considers the outlook for economic and traffic recovery when the outbreak is contained. Historical experience suggests that there will be a recovery at some stage and, depending on how events develop, the “bounce back” may be quite rapid. While grappling with rapidly changing events, the aviation industry, regulators and policy makers also need to be considering scenarios for how traffic will develop over the rest of 2020 and beyond, and strategies that can be put in place.

How and when recovery occurs for an airport will depend on the characteristics of the market that airport serves and the carriers that operate there. Nevertheless, we have developed some initial scenarios to examine the potential impacts this year and going into 2021, and applied to a generic airport, as shown in the chart below.

Scenarios for Traffic Recovery in 2020 at a Generic Airport



Summer Recovery

Global restrictions start to be lifted in June.
 Rapid build-up, but quite a lot of summer traffic lost.
 Closing on full recovery by late 2020/early 2021.
 37% of passenger traffic lost.

Protracted Recovery

Global restrictions remain in place for extended period due to continued flare ups.
 Restrictions not lifted until September – traffic at 50% of normal levels by December.
 71% of passenger traffic lost – full recovery not until 2022 or 2023.

Geographically Uneven Recovery

Some parts of the world control the outbreak and others do not (e.g., airports in North America have service within North America, but not to Europe and Asia).
 50% of passenger traffic lost – full recovery by mid to late 2021.

Source: InterVISTAS Analysis

Introduction

The spread of COVID-19 (the Coronavirus) is having an unprecedented impact on not just the aviation industry but the global economy. While the immediate and most pressing concern is human cost in terms of people's health and the tragedy of escalating fatalities, COVID-19 has some profound implications for nearly all businesses and industries. What started out as looking like a repeat of the SARS outbreak (2002/03) or Swine flu (2009/10), both of which had relatively modest and short-lived impact on aviation and the economy, has escalated to a much larger emergency.

The situation is changing on an hourly basis and there remains considerable uncertainty as to how long this outbreak will last and what will be the final impacts. This briefing note provides a summary of events to date and considers some of the implications for our industry.

Given the changing nature of this event, we will be sending out briefing notes on a regular basis considering different aspects of the crisis.

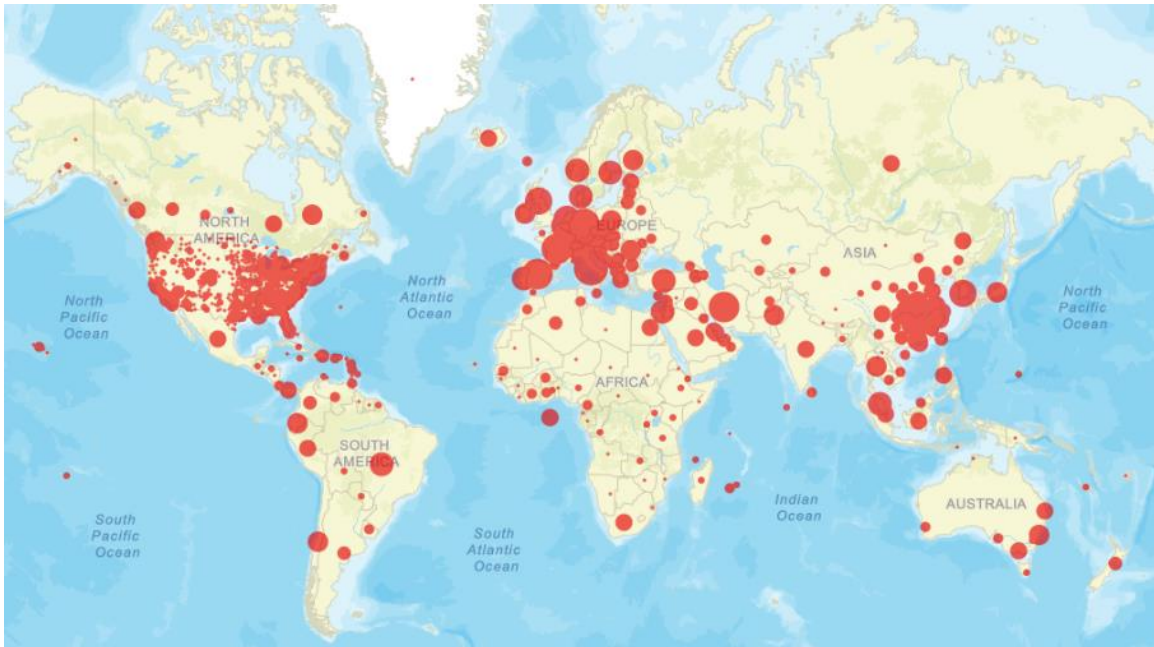
Development of the Outbreak

As has been widely reported, COVID-19 emerged in the Wuhan province of China, with the first cases reported in late December 2019. By January 20, 2020, there were reports of confirmed cases from three countries outside China: Thailand, Japan and South Korea. The first case in the United States was also reported on January 20 and the first case in Canada on January 25 (a man in Toronto recently returned from Wuhan). On January 30, the World Health Organization (the WHO) declared this first outbreak of novel coronavirus a "public health emergency of international concern". The number of cases has been growing rapidly since then, with the highest number of cases in Europe where Italy and Spain in particular have been badly impacted. The WHO declared COVID-19 a global pandemic on March 11.

As of March 24, there were 372,757 confirmed cases and 16,231 deaths globally, with 52% of the cases and 63% of the deaths occurring in Europe.

Of particular concern is that while Asian countries appear to have managed to "flatten the curve", in Europe cases are increasing at an exponential rate. China reported no additional cases of local infection since March 18, although there were cases "imported" from other countries.

Countries, territories or areas with reported confirmed cases of COVID-19, March 24, 2020



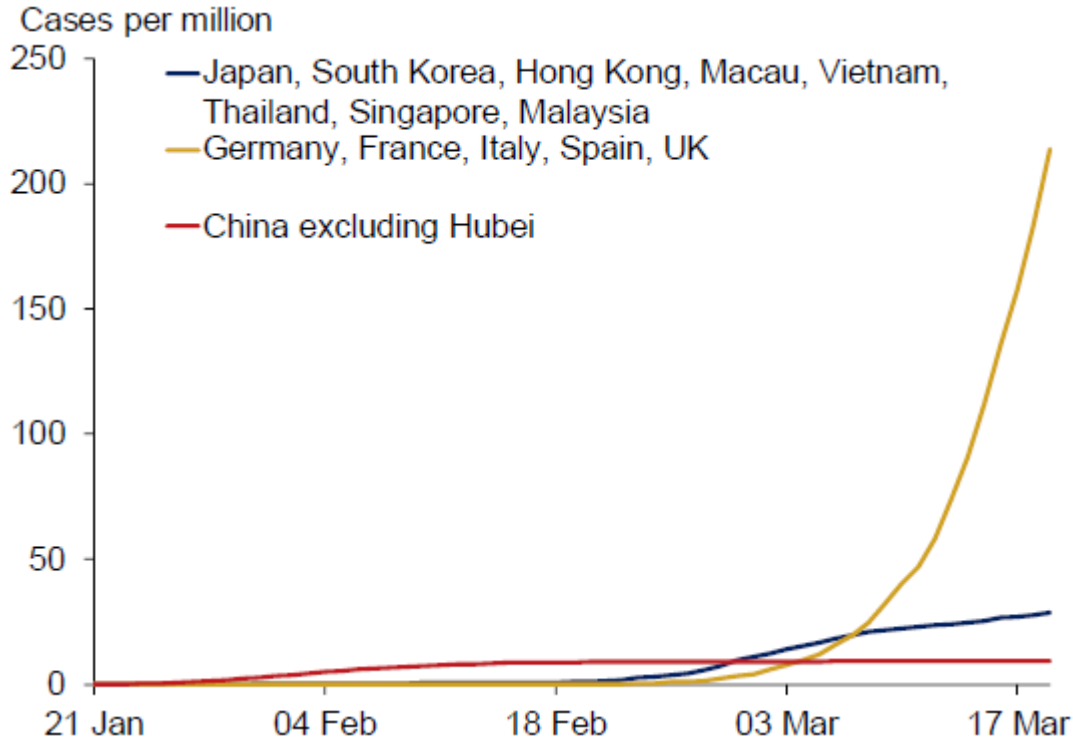
Source: Johns Hopkins University

Reported confirmed cases of COVID-19 in North America, March 24, 2020



Source: Johns Hopkins University. U.S. reported by city, Canada by province/territory, other countries by national total.

Rate of Reported Cases in Asia and Europe



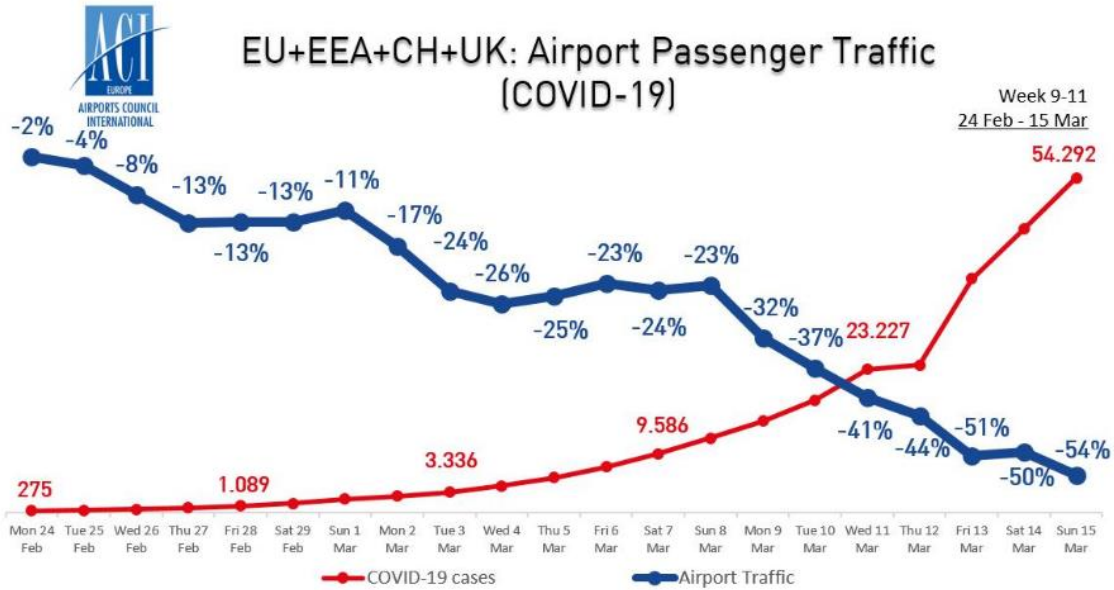
Source: Oxford Economics.

The Impact on Aviation

In an effort to stop or slow the spread of the outbreak, governments have responded with wide-ranging restrictions on international travel of the sort that has not been seen during peace time. The U.S. has barred the entry of foreign nationals who have travelled to China, Iran and the EU (including the UK and Ireland) and advised U.S. citizens to avoid non-essential travel. Similarly, the U.S. borders with Canada and Mexico have been closed to non-essential travel. The EU and many other countries globally have placed similar restrictions on both inbound and outbound travel.

The impact on aviation has been predictably catastrophic; ACI Europe reports that passenger traffic at European airports has declined over 54% since late February, as of March 15. Often the data has not been able to keep up with events – we have been using flight tracking data to get real time information on the traffic declines, as shown in the charts below. As can be seen, European and Asian airports have seen aircraft operations decline by as much as 97%. Major Chinese airports, which began seeing reductions to operations in January and February, experienced downturns of 90% or more compared to scheduled activity one year prior. In North America, Australia and New Zealand, the declines have ranged from 28% to 72% but are expected to drop further as nearly all countries have imposed restrictions of international travel and even travel within countries.

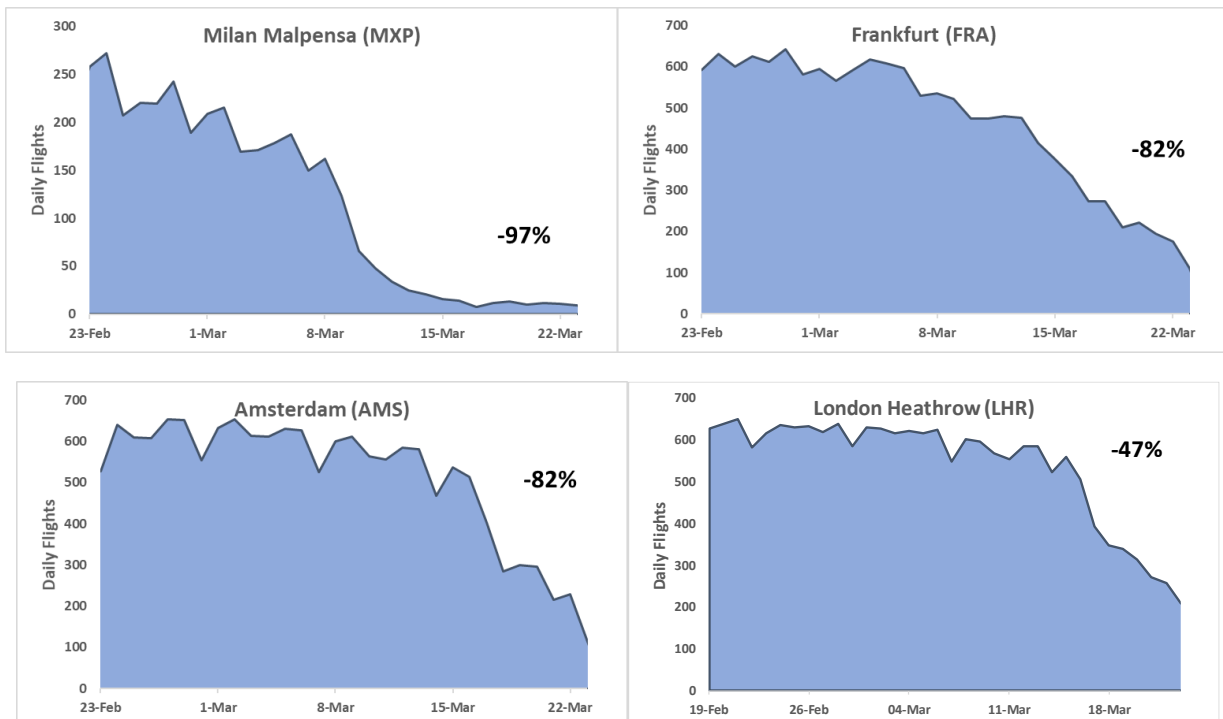
Passenger Traffic at European Airports



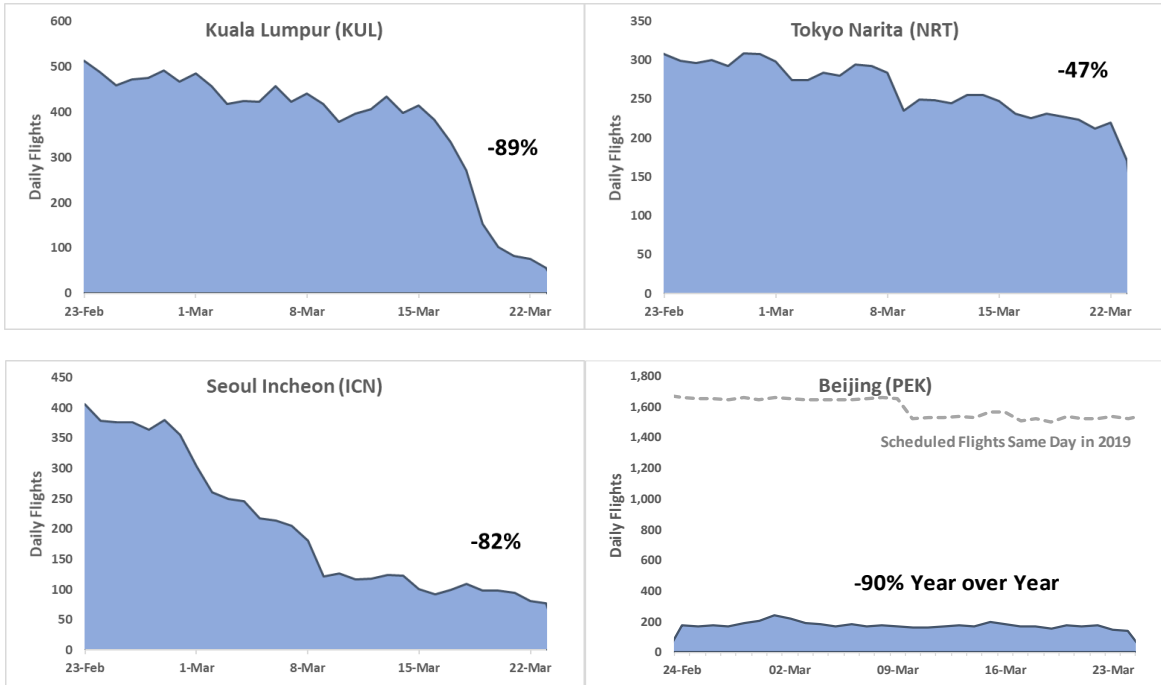
Source: ACI Europe

Flight Tracking Data: European Airports

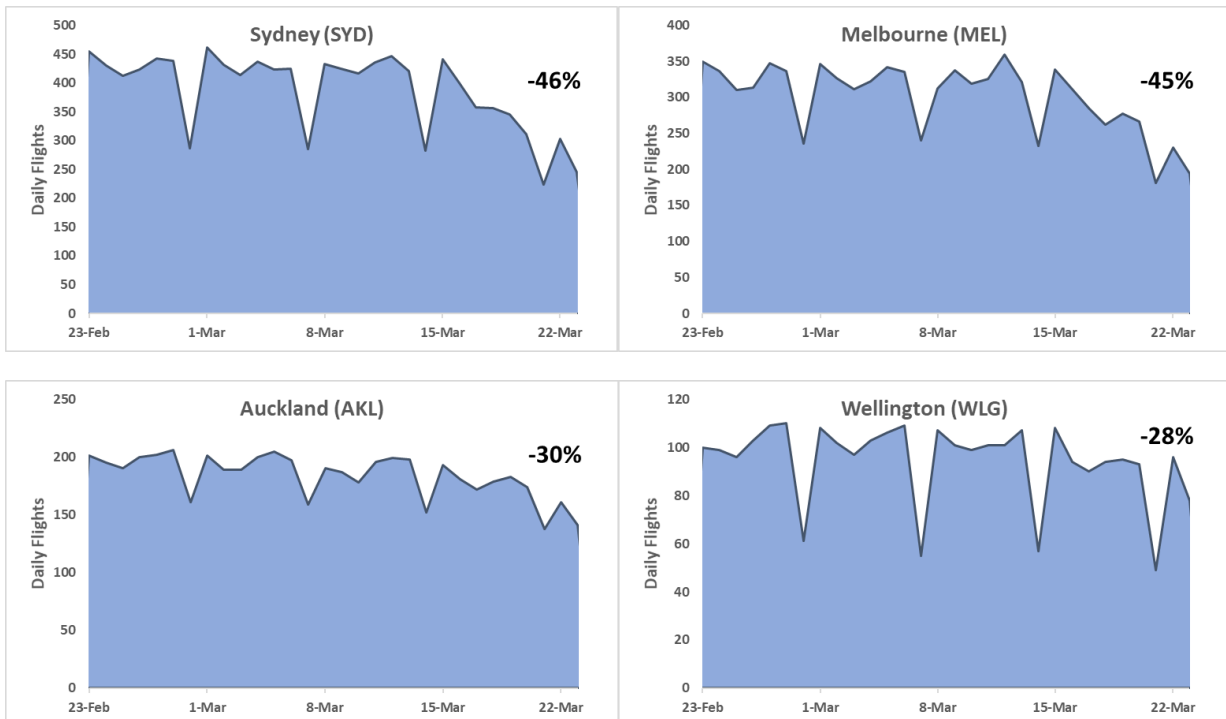
Source: FlightRadar24



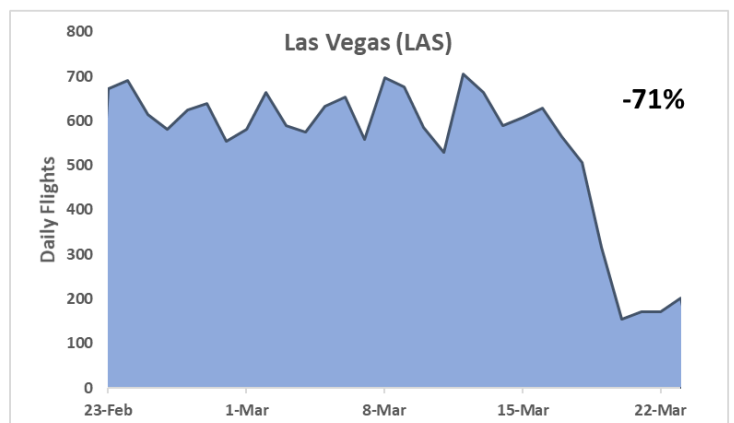
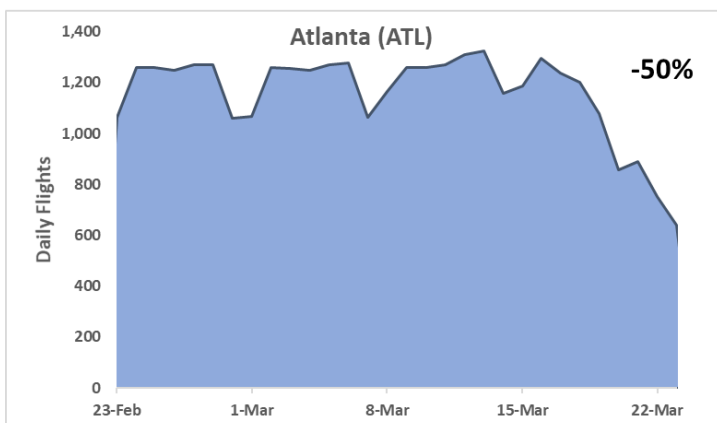
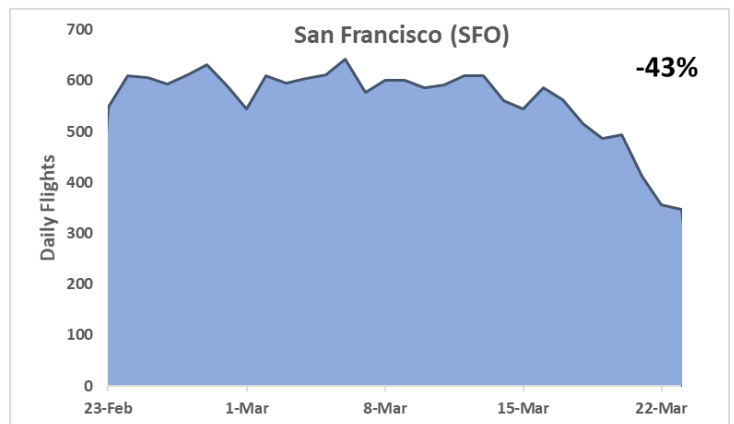
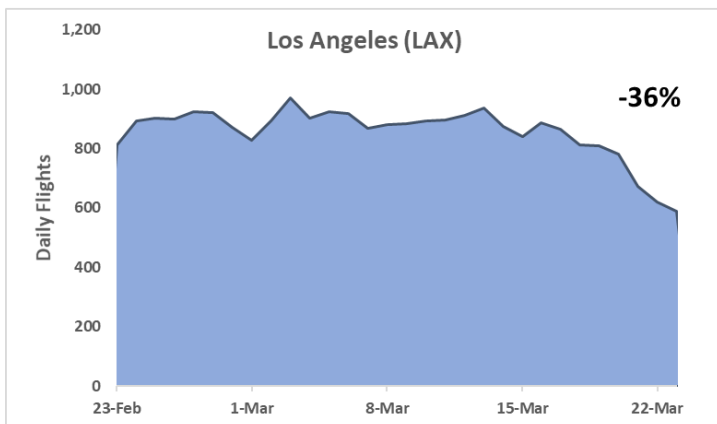
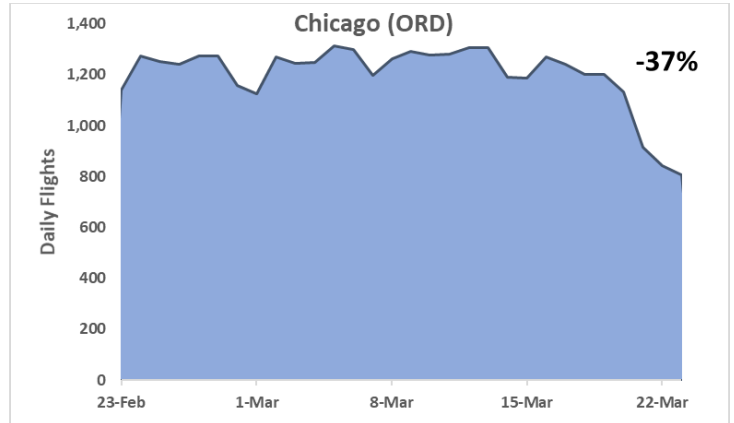
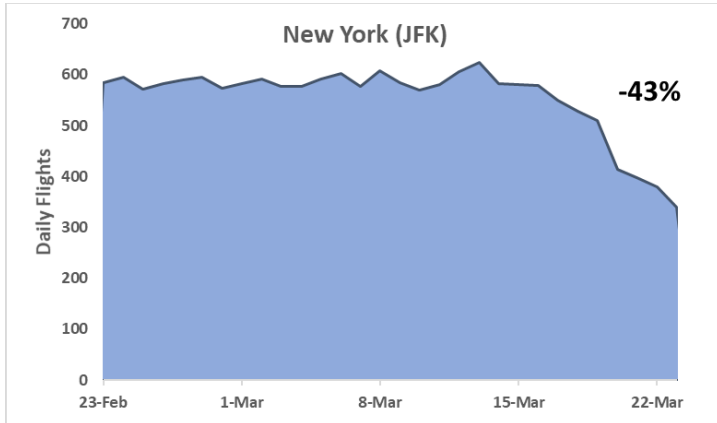
Flight Tracking Data: Asian Airports
 Source: FlightRadar24



Flight Tracking Data: Australia/New Zealand Airports (Sydney, Melbourne, Auckland, and Wellington)
 Source: FlightRadar24

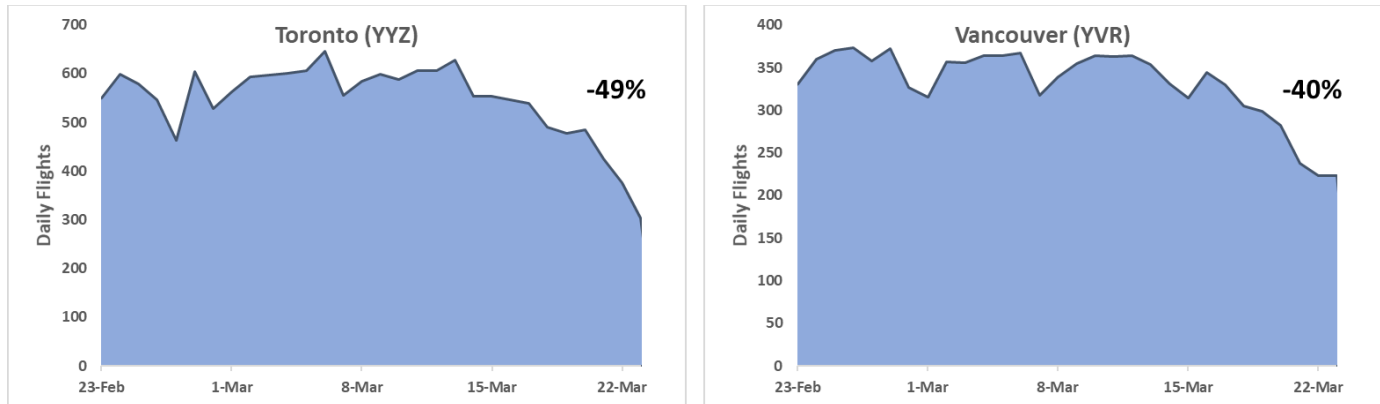


Flight Tracking Data: U.S. Airports
 Source: FlightRadar24



Flight Tracking Data: Canadian Airports

Source: FlightRadar24



As of March 24, as the pandemic continues to evolve, it is important to highlight the extreme fluidity of the situation in terms of understanding and forecasting capacity changes over the next few months. Each airline will have different strategies of implementing their capacity reductions. In one case, if an airline has announced a full shutdown of operations, these schedule changes should be properly reflected in industry sources (such as OAG or Innovata) within a week of announcement. The airline’s website will also reflect the service cancellations.

However, if the airline chooses to continue operations, but at a reduced capacity, industry schedule sources may not properly reflect these changes, especially in the near term. For example, at the time of writing, an airline’s capacity reduction plan for April 2020 may not be fully reflected in OAG and/or Innovata schedules at all. An airline may choose to leave in an “overbuilt” schedule, one that has intentionally more flying than needed, so that the airline can tactically cancel additional low-demand flights closer to the flying date. In this case, while OAG and/or Innovata may reflect a drop of 30% in capacity for a particular airline, the reality may be that the airline will choose to reduce its capacity much further.

As an example, below (overleaf) is a snapshot of the upcoming April 2020 schedule capacity for select major airlines in Canada and U.S., as of March 23, compared with the same schedule as of a few weeks earlier, on March 2. These are publicly filed schedules, sourced from Innovata via Diio/Cirium.

**Changes in Scheduled Seat Capacity of Major North American Carriers for April 2020
 (Schedule as of March 23 vs March 2)**



Source: Innovata via Diio/Cirium

As can be seen, in the past 3 weeks Air Canada has implemented a large reduction in their April schedules, while U.S. carrier show only a small reduction for the same time period. However, these carrier's true capacity levels for April 2020 are not being properly reflected above as the airline 1) continues to make network and fleet reduction decisions over the coming days and weeks and/or 2) the airline chooses to maintain flying in their filed schedules for the time being, and may decide to remove the flights later on an ad-hoc basis.

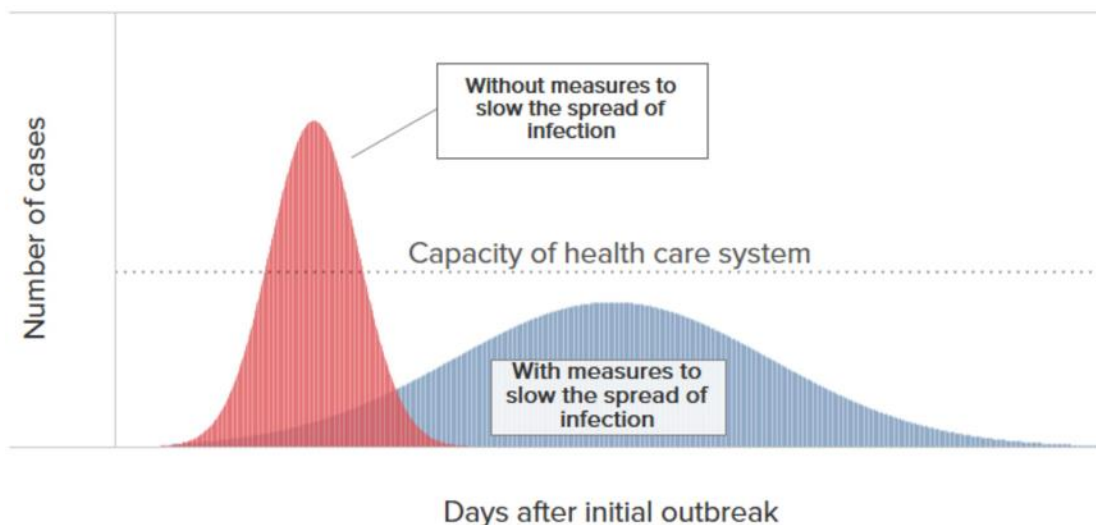
As airlines continue to react to the worldwide pandemic, their capacity will continue to fluctuate based on each carrier's tactical strategy of capacity reduction. As airline network planners continue to respond to daily changes in travel restrictions and falling demand, they will be busy continuously analysing the drop in demand and adjusting their flying capacity accordingly. As such, air carriers will continuously adjust their flying in April, May, and the upcoming summer months by either removing flights in advance and/or cancelling further flights closer to the flying date. For airports, it is best to keep abreast of airline capacity by following carrier announcements closely and keeping in touch with local airline station managers, in addition to checking industry sources. One thing that is certain – no matter which data source is referenced, an airline's planned flying capacity for the rest of 2020 will be continuously changing in the days, weeks and months ahead.

Government Response and Broader Economic Implications

As COVID-19 has spread within countries, governments have taken to other measures to slow the spread of the disease. The aim is to “flatten the curve” – the rate and extent to which the infections arise – to avoid overwhelming the health care system and to reduce deaths.

As we are all experiencing, this has involved requiring non-essential personnel to work at home, closing schools and colleges, closing gathering places such as bars and restaurants, and even enacting stay-at-home orders.

Flattening the Curve



Source: CDC and CNBC

Governments are recognising that economic damage that these measures will entail and are developing rescue packages involving direct payments to employees who lose their jobs, government loans and guarantees to businesses and deferral of tax and other payments. The exact nature of these packages has yet to be determined but likely to be huge. The UK government announced a £350 billion package of support for businesses on March 17 (about 1% of GDP), but is now considering a package of employee income support in range of 15% of GDP. Similarly, the U.S. is considering a US\$2 Trillion stimulus package of aid for employees and businesses, which include direct payments to every U.S. citizen. In Canada, the federal government is providing \$107 billion in support, of which \$52 billion is in direct support for Canadian workers and businesses and \$55 billion to meet the needs of liquidity for Canadian households and businesses through tax deferrals to help stabilize the economy.

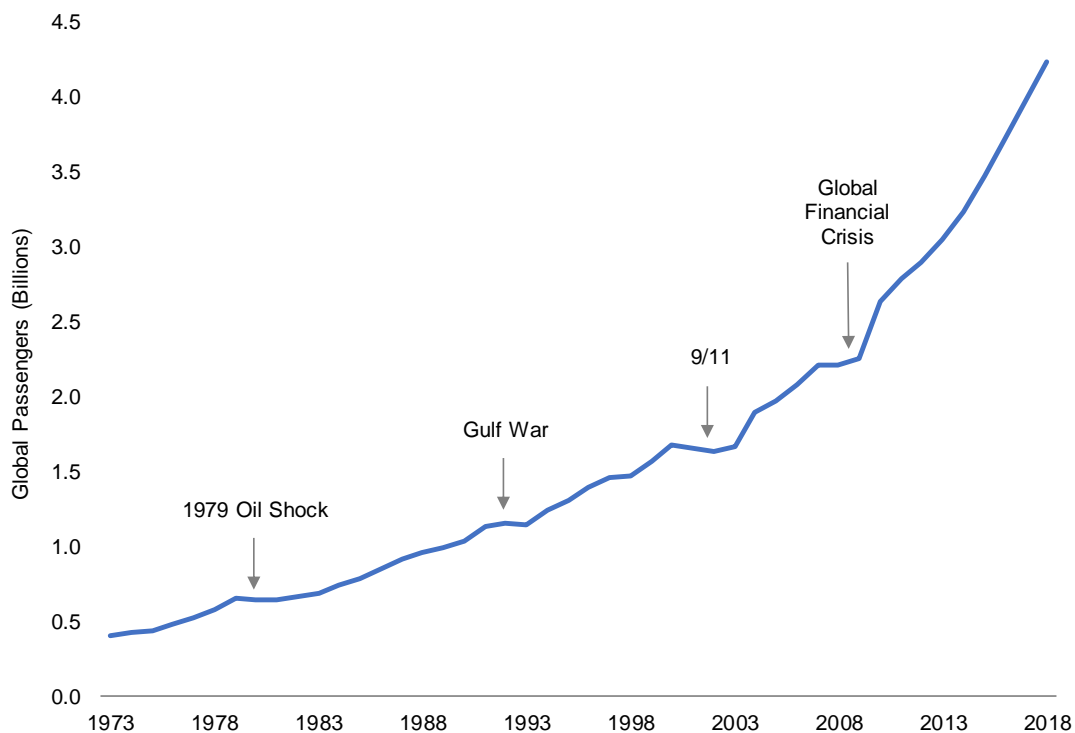
Central banks have also responded to this crisis by cutting interest rates to near zero, restarted quantitative easing measures and ensuring liquidity within the financial markets to try to avoid the “seizing up” that occurred during the 2008/09 recession (e.g., bank refusing short term lending to other banks).

How much aid is directed to the aviation industry is not yet clear. The U.S. package provides US\$50 billion in aid to airlines in the form of loans or loan guarantees. Governments in Europe, Canada, New Zealand and elsewhere are also developing packages for airlines. Any sort of rescue package is likely to be conditional on reducing layoffs and restricting payments to shareholders and executives.¹ Many airlines have reduced their cash reserves in recent years through share buybacks and dividend payments, and governments will not be inclined to reward these decisions, particularly with many industries (and households) also asking for assistance.

Scenarios for Recovery

It is important to remember that the aviation market is resilient and has reverted to trend from previous shocks such as 9/11 and recessions, as illustrated in the charts below.

Global Aviation has Reverted to a Growth Trend After Previous Shocks

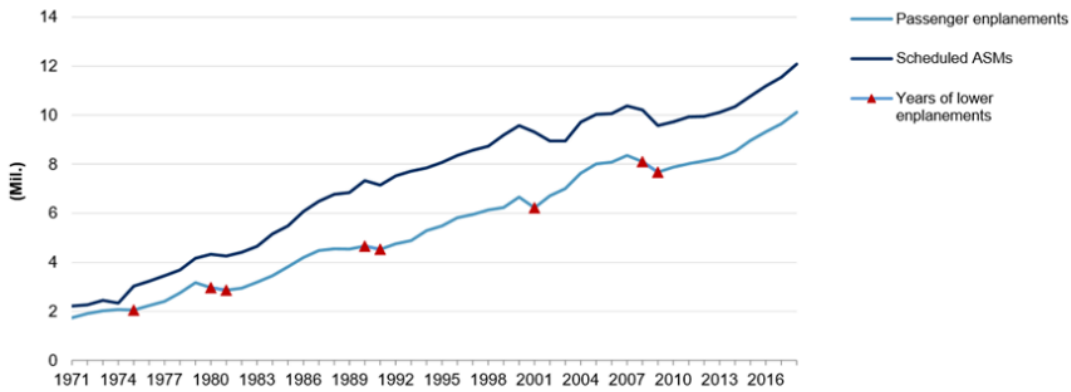


Source: The World Bank

(International Civil Aviation Organization, Civil Aviation Statistics of the World and ICAO staff estimates), 1973-2018

¹ <https://www.ft.com/content/27bb17e2-6ac7-11ea-800d-da70cff6e4d3>.

Instances of Decline in U.S. Airport Enplanements, 1971-2018

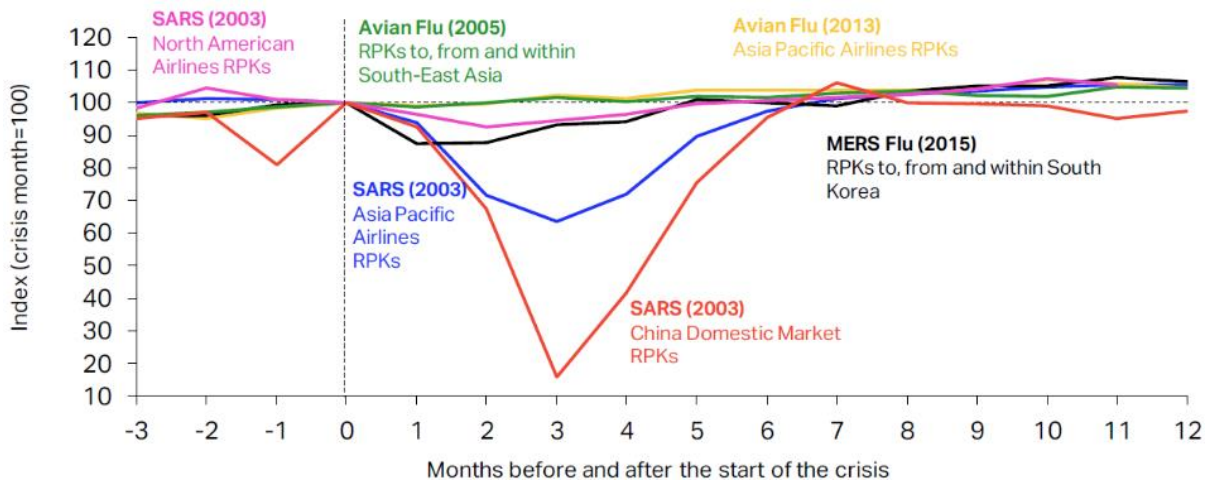


Source: S&P Global Ratings. ASM--Available seat miles.
 Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Source: S&P Global Ratings

However, the extent of the damage and speed of recovery for the industry are still hard to predict. In recent weeks, countries around the world have adopted a set of drastic measures aimed at curbing down the spread of COVID-19. However, these measures have been implemented without global coordination and the aviation and tourism industries are left with a patchwork of border and travel ban policies. This patchwork is likely to affect the scope and speed of industry recovery. IATA has examined the impact of previous disease outbreaks on aviation, most notably SARS, and found that previous outbreaks lasted 1-3 months and traffic levels recovered in 6-7 months.

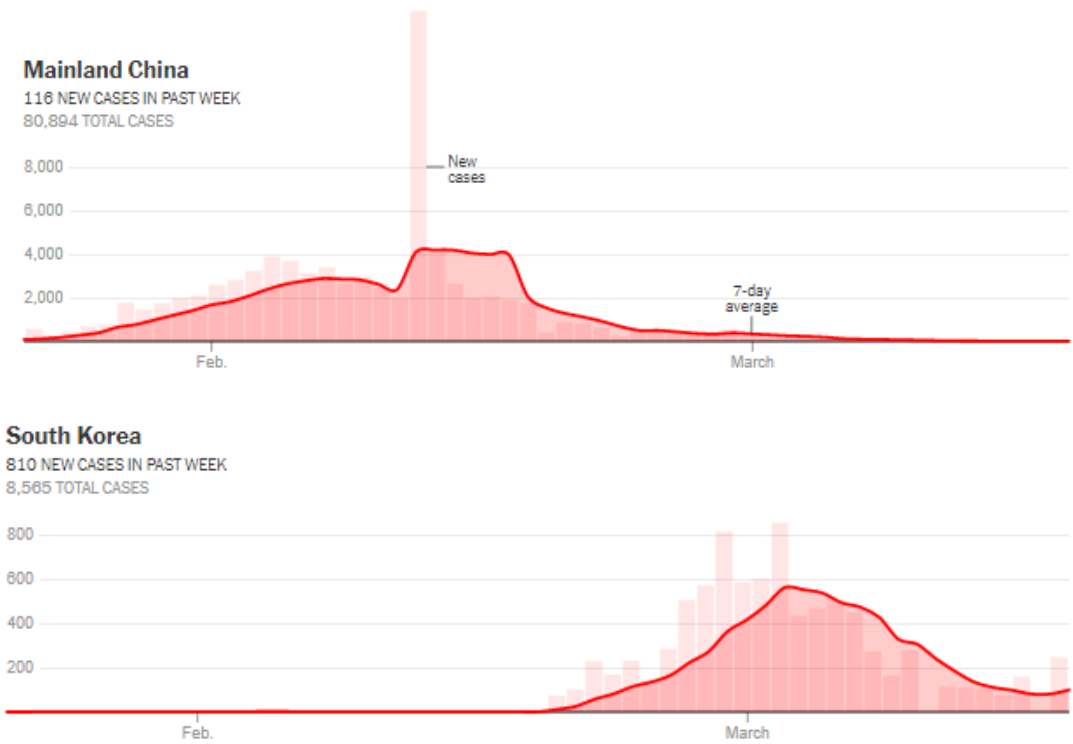
Impact of Past Disease Outbreaks on Aviation



Source: IATA

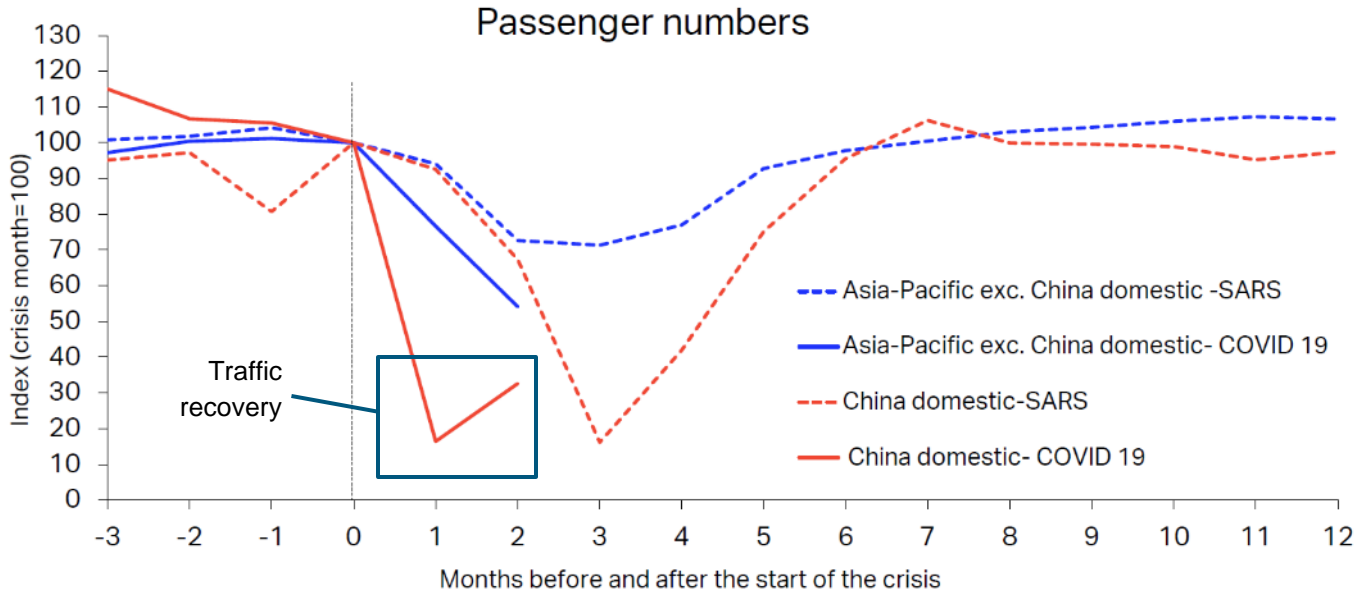
Clearly, we have moved well beyond the sort of impacts experienced in past events, with many airlines stopping all operations and traffic at airports down over 95%. Recovery will come. Some of the first countries affected, such as China and South Korea, appear to have got the outbreak under control and are seeing a decline in new cases. As a result, there is some evidence of a traffic recovery. IATA reports that domestic air traffic is starting to grow (although still well below pre-outbreak levels) and that yields in Chinese domestic air market are starting to improve.

China and South Korea Appear to be on the Other Side of the Pandemic



Source: New York Times

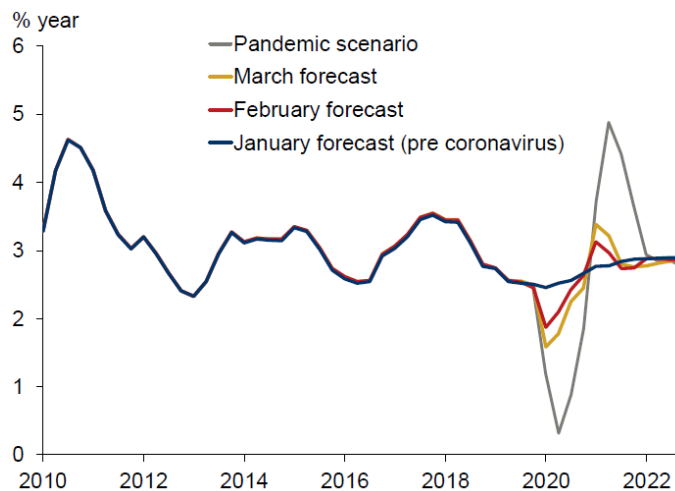
Start of a Recovery in Chinese Domestic Air Traffic?



Source: IATA

The recovery when it comes will depend considerably on how the economy recovers. Economic forecasters Oxford Economics have examined how the global economy may bounce back from this event. They suggest that once the pandemic is under control, uncertainty will subside quickly. Households will begin raising discretionary spending back to more typical levels, while firms will also increase output as supply constraints lift. In addition, money saved because planned discretionary spending in 2020 did not occur, along with stimulus money from government and central banks, will lead to heightened spending, accelerating the return-to-normality rebound.

World GDP Bouncing Back from the Pandemic Scenario



Source: Oxford Economics

How and when recovery occurs for an airport will depend on the characteristics of the markets that airport serves and the carriers that operate there. To date, only one carrier has failed due to COVID-19 – Flybe, a UK regional carrier that was already struggling. Other carriers will likely follow, depending on the nature of the government protection provided (some governments have indicated that they want to avoid propping up carriers that were already failing). Where carriers do fail, we would expect other carriers to fill some or all of that capacity, as we have seen before. However, the nature of the traffic may change - when Hungarian flag carrier Malev failed 2012, low cost carriers such as Ryanair and Wizz rapidly grew traffic volumes at Budapest Airport, and traffic recovered in less than a year, but services to long haul destinations took a lot longer to return. Previous shocks have also precipitated industry consolidation and airport de-hubbing, and there remains the potential for this to occur again. These topics will be considered in more detail in future briefing notes.

We have developed some initial scenarios to examine the potential impacts this year and going into 2021, and applied to a generic airport, as shown in the chart below.

1. **Summer Recovery**

Restrictions on air traffic and economic activity remain in place for much of April and May for most parts of the globe but start to be lifted in June as cases subside. This would roughly match the timeline for case reduction seen in China and South Korea to date. Traffic begins to recover in the summer, with carriers offering last minute flights deals in order to generate cash (many carriers are already offering free cancellation or ticket changes in order to encourage customers to make bookings now).

However, considerable summer traffic is lost due to passengers not making bookings earlier in the year as well as an economic “hangover” from the government restrictions. Traffic and services gradually recover over the balance of the year as confidence returns.

2. **Protracted Recovery**

Restrictions remain in place for an extended period as the outbreak continues to flare up in parts of the world. Traffic levels do not start to recover until September when restrictions to some parts of the world are lifted (e.g., domestic travel is permitted). There is a gradual traffic recovery as restrictions are lifted, with traffic reaching around 50% of pre-event levels.

3. **Geographically Uneven Recovery**

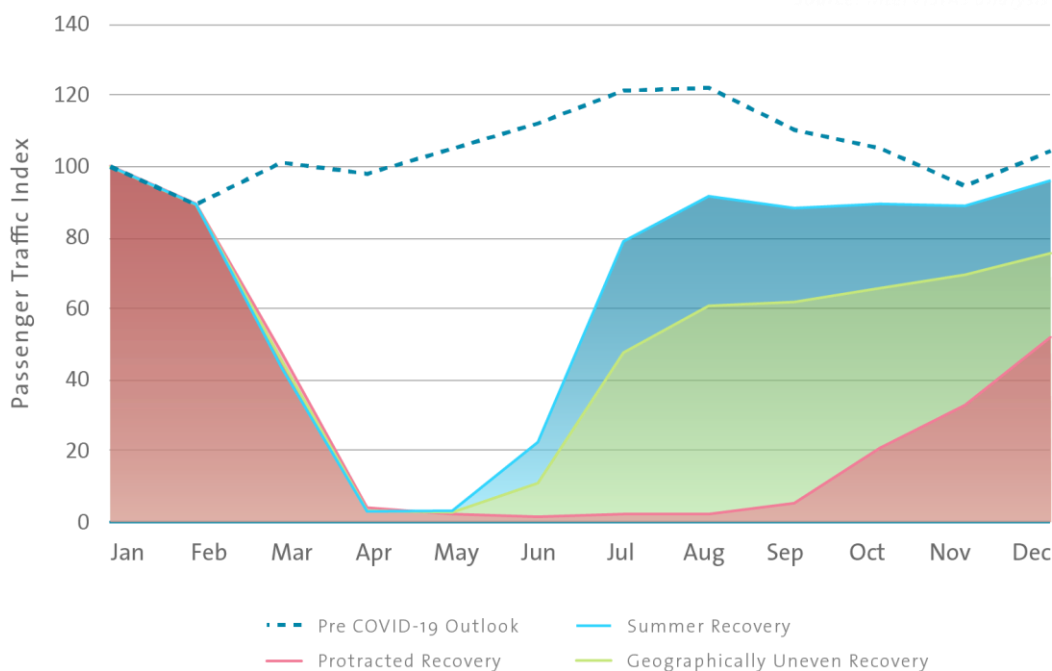
Some parts of the world control and minimize the outbreak in a few months while other parts take considerably longer. As a result, air service to some regions are resumed by flights, while others are tightly restricted. For example, an airport in North America sees services resumed for flights within North America but restricted to/from Europe and Asia.

The scenarios are outlined in the chart below for a generic airport with some traffic seasonality. Under the *Summer Recovery* scenario, passenger traffic in 2020 is 37% lower than expected traffic before the outbreak, with traffic reverting to trend at some point in 2021. Under the *Protracted Recovery* scenario, the loss in passenger traffic is 71% in 2020, with recovery to trend not occurring until 2022 or 2023. In the *Geographically Uneven Recovery*, the loss of passenger traffic is 50% with full recovery not occurring until the later part of 2021.

Clearly, these scenarios are supposition, and not reflective of all eventual outcomes or individual airports. ACI North America has also been examining this issue – their preliminary estimates for 2020 are that U.S. Airports will lose 244 million passengers in 2020 compared with pre-COVID-19 forecasts, a decline of 37%, with traffic down by 73% between March and June.² As a result, operating revenues are forecast to decline by nearly US\$ 14 billion or 49%.

These scenarios focus on passenger traffic. The outlook for cargo is quite different – governments have not placed the same restrictions on cargo, as the risk of COVID-19 transmission is very low and there is a compelling need to keep supply chains open (not least for food and medicine). However, much of cargo is transported in the bellyhold of passenger aircraft, many of which are now grounded. Carriers are planning to use their passenger aircraft for cargo operations in the short term, American Airlines announced on March 19 that it will operate all-cargo flights to help keep business moving.³ We will examine air cargo in a later briefing.

Scenarios for Traffic Recovery at a Generic Airport



Source: InterVISTAS Analysis

² <https://airportsCouncil.org/wp-content/uploads/2020/03/Economic-Impact-of-Coronavirus-on-U.S.-Commercial-Airports.pdf>.

³ <http://news.aa.com/news/news-details/2020/American-Airlines-Announces-Cargo-Only-Flights-to-Help-Keep-Business-Moving-OPS-DIS-03/default.aspx>

Summary

The impact of COVID-19 on aviation is profound and unprecedented. Events are unfolding rapidly and there is massive uncertainty which is challenging to us all. Airlines and airports will have to take drastic steps to ensure the continuity of their business and to ensure that they are well positioned when the recovery occurs.

Airports should be focused on financial contingency planning related to the potential scenarios for the airline traffic activity. There are a variety of aspects of financial operations that need to be considered, including: ability to temporarily reduce monthly operating expenses, terms of key leases and contracts that produce airport revenue, flexibility with regard to debt repayment, and access to government aid. A less severe scenario may be addressed with temporary adjustments, while a more severe scenario may require more significant structural changes. And, of course, the regulatory, economic, and financial backdrop will be different for different regions of the world. We plan to expand on these thoughts in an upcoming briefing note.

At InterVISTAS and NACO, we want to support your business in any way we can, and as part of that will be sending regular updates which we hope you find of value. In future briefings, we plan to look at other aspects of this crisis – airport financials, air cargo, potential structural changes to the industry, and implications for policy.



Prepared by

InterVISTAS Consulting and NACO

CANADA

Vancouver, British Columbia
1200 West 73rd Avenue,
Suite 550
Vancouver, BC V6P 6G5
Tel: +1-604-717-1800
Fax: +1-604-717-1818
info@InterVISTAS.com

NETHERLANDS

The Hague
Schenkkade 49
2595 AR
The Hague
NL
Tel: +31-88-348-1423

UNITED KINGDOM

London
2 Abbey Gardens
Great College Street, Westminster
London, UK SW1P 3NL
Tel: +44 (0)207-222-2115
Fax: +44 (0)207-222-2659

UNITED STATES

Washington, D.C.
1150 Connecticut Avenue, NW
Suite 611
Washington, DC 20036
Tel: +1-202-688-2220
Fax: +1-202-688-2225

Boston, Massachusetts
One Liberty Square
Suite 920
Boston, MA 02109
Tel: +1-617-229-6471
Fax: +1-617-229-6482

San Francisco/San Mateo
66 Bovet Road
Suite 370
San Mateo, CA 94402
Tel: +1-650-597-3867