

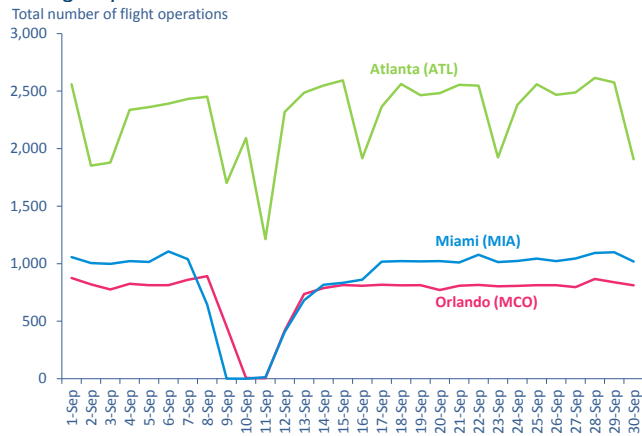
Assessment of Hurricane Irma and Maria's impacts on aviation

- Hurricanes Irma and Maria caused significant disruption for airlines based in the Americas in September. Domestic US revenue passenger kilometres (RPKs) fell by 2.4% in seasonally-adjusted terms in September compared to August – the biggest fall on this basis since late-2008 – while Latin American carriers also saw a fall in volumes.
- At the peak of the disruption, we estimate that airlines lost around US\$75-85m of revenue a day, and will have faced higher costs too. Given that MIA and ATL are major cargo hubs, these operations will also have been affected.
- The economic impact of the 2017 hurricane season is likely to persist for some time – potentially a number of years – in the most badly affected islands who depend heavily on tourism revenues. However, the wider impact on air transport at an industry-wide level is expected to be just temporary.

A devastating 2017 hurricane season in the Caribbean

- Hurricane Irma reached the Caribbean on 6th September, causing catastrophic damage throughout the region before moving north towards Florida and Georgia. Just one week later, Hurricane Maria caused further catastrophic damage throughout the Caribbean – most notably in Puerto Rico.
- A number of major airports were affected by the two Category 5 hurricanes, including Miami (MIA), Orlando (MCO), and Atlanta (ATL) in the US, as well as San Juan (SJU) and other smaller airports in the Caribbean.

Figure 1 – Flight operations from major affected US airports during September 2017



Source: FAA Opsnet

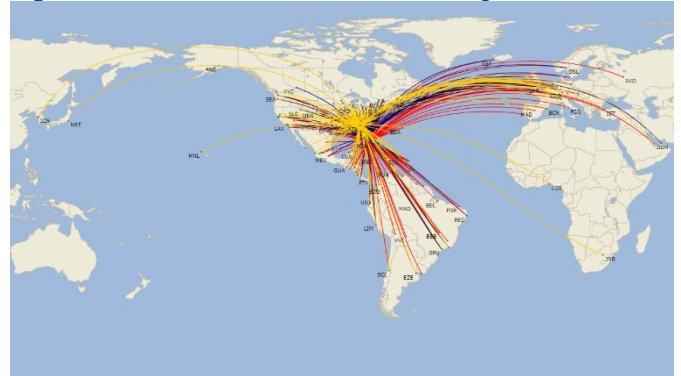
This had a direct impact on passenger traffic...

- The two hurricanes caused substantial disruption to aviation. The most affected airports in the US together account for more around 5.5% of total North American flight departures, and include major hub operations for Delta (ATL) and American Airlines (MIA).
- The direct impact on air passenger traffic flown by airlines based in the Americas was evident in the latest monthly passenger data. (See [link](#).) The impact was most visible in the domestic US market, which is the largest in the world; RPKs flown within the US fell by 2.4% in seasonally-adjusted terms in September

relative to the previous month – the biggest fall on this basis since late-2008.

- There was also a significant month-on-month fall in international RPKs flown by airlines based in Latin America; RPKs fell in month-on-month terms for the second month in a row – the first time this has happened in more than two years.
- There are likely to be significant ongoing impacts on passenger traffic to and from the most affected Caribbean islands. (See section overleaf.) However, the fact that airport operations in the major US airports have since returned largely to normal suggests that the impact at an industry-wide level will largely have been reversed during October.

Figure 2 – MIA, MCO and ATL scheduled flights



Source: SRS Analyzer

...as well as on airline financials

- At the peak of the disruption caused by Irma and Maria, we estimate that the industry lost around \$75-85m in revenues. (This estimate is based on data from PaxIS+ and incorporates estimates for connecting passengers who may have been affected.) In addition to direct revenue losses, airlines are likely to have faced higher costs too, including passengers' re-accommodation, flights diversions and cancellations.
- The paths taken by Irma and Maria meant that they had significantly less impact on oil refining capacity compared to Hurricane Harvey during August. As a

result, and by contrast to the situation post-Harvey, Irma and Maria do not appear to have had a strong direct impact on jet fuel prices in the region.

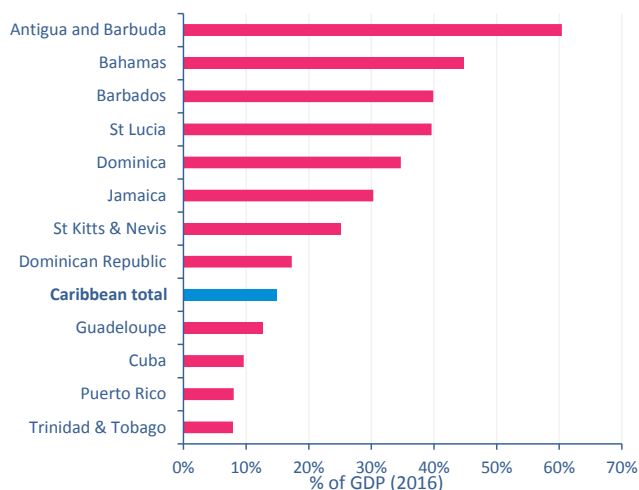
Air cargo will also have been disrupted

- Given that MIA and ATL are major freight hubs, air cargo will have also been disrupted by Irma and Maria. Based on data from the US Census Bureau, MIA and ATL together handle more than 14% of total US trade by air in weight terms, which translates into around US\$89.2bln of goods each year.
- As a result, disruption at the two airports will have affected around US\$245m worth of air cargo per day. (Note, however, that some goods may have been diverted to other less-affected airports so the net disruptive impact of the two hurricanes on air freight may well have been less than this estimate.)

Assessing the lasting impact on Caribbean tourism

- The lasting impact of Irma and Maria on tourism flows remains highly uncertain. Many of the badly affected Caribbean islands depend heavily on tourism. Travel and tourism accounts for 15% of the Caribbean's total economic output, but its share is above 30% in a number of Caribbean islands, and more than 60% in the case of Antigua and Barbuda. (See Figure 3.)
- To the extent that travel-related infrastructure was damaged and/or destroyed, the economic impact of the 2017 hurricane season will persist for some time – potentially a number of years – in the most badly affected islands.

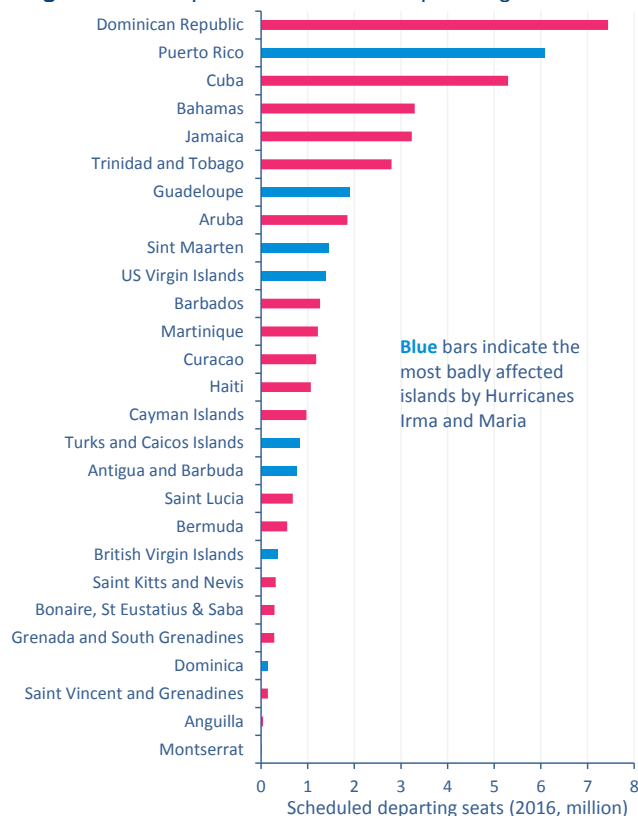
Figure 3 – Travel and tourism's contribution to GDP in selected Caribbean countries



Source: WTTC

However, purely from an air transport perspective, and without downplaying the human impacts of the disasters, the overall impact at an industry-wide level is likely to be just temporary. This relates to the fact that the Caribbean is a comparatively small air passenger market (the number of departing seats are less than 5% of the domestic US, for example), as well as the fact that the biggest air passenger markets in the region were relatively unscathed by Irma and Maria. (See Figure 4.)

Figure 4 – Comparison of Caribbean passenger markets



Source: SRS Analyzer

- You can read additional analysis of the impact of shock events on aviation by IATA Economics [here](#), including a recent report on the impact of Hurricane Harvey.

IATA Economics
November 2017

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