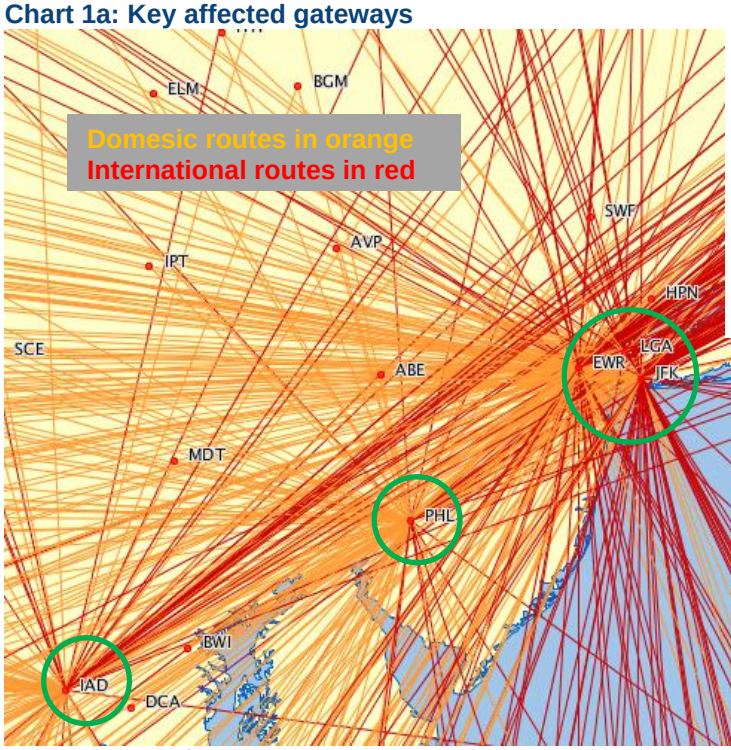
IATA ECONOMIC BRIEFING

NOVEMBER 2012

THE IMPACT OF HURRICANE SANDY

Chart 1a: Key affected gateways



Source: SRSAnalyser

Chart 1b: Reach of operational distruption

Source: SRSAnalyser

Chart 1c: Hurricane Sandy

Source: NASA Earth Observatory

- The passage of Hurricane Sandy across the US east coast at the end of October caused disruption to air transport operations at major gateway airports over the course of a week. In total nearly 17,000 inbound or outbound flights[1] were cancelled, affecting an estimated US$0.5 billion in airline revenues.
- At the peak of the impact on Monday 29th and Tuesday 30th October, the closure of New York airports and severe disruption in Philadelphia and Washington, resulted in over 5,000 flights per day being cancelled, grounding 8-9% of worldwide scheduled passenger capacity or over 1,600 million available seat kilometers.

Table 1: Passenger market impact on Monday 29 October

Normal scheduled capacity at affected gateways 29/10/2012	Flights	% global	ASKs (millions)	% global	Average stage length (km)	Average aircraft size (seats)
JFK	1,040	1.2%	713	3.8%	3,229	157
EWR	1,120	1.3%	352	1.9%	1,930	108
LGA	1,152	1.3%	130	0.7%	1,006	98
IAD	752	0.9%	247	1.3%	1,777	102
PHL	1,168	1.3%	180	1.0%	1,075	92
Total	*5,232*	*6.0%*	*1,623*	*8.7%*		
Global ops (normal day)	86,785		18,712			

Source: IATA Economics, SRS Analyser database[2]

[1] FAA Opsnet data from JFK, EWR, LGA, IAD and PHL
[2] https://srsanalyser.diio.net

- The maps show the significant impact the closure of the east coast gateways had on the US domestic and global air transport network. The analysis in tables 1 and 2 and charts 2 and 3 show the estimated daily impact on Monday 29th October. Chart 4 shows the daily profile of revenue losses from scheduled services over the whole period of major schedule disruptions.
- On Monday 29, airspace closures caused airlines to lose around US$190 million per day from scheduled services as detailed in table 2. This was calculated bottom up from data on passengers and revenues generated on domestic routes as well as dozens of international country-pairs. In terms of overall passenger numbers and revenues, disruptions to the US domestic market operations created the biggest impact. Disrupted domestic operations account for two thirds of affected passengers and over 40% of revenues. However disrupted operations to the UK and Japan, while only representing around 3.5% of passengers, contributed an additional 10% to lost revenues.

Table 2: Country-pair passenger market and airline revenue impact on Monday 29 October

	Market	Passengers	% total	Revenue $US million*	% total
1	United States - United States	215,819	67.0%	55.7	44.4%
2	United States - United Kingdom	9,271	2.9%	8.7	7.0%
3	United States - Japan	1,691	0.5%	3.5	2.8%
4	United States - Canada	8,801	2.7%	2.7	2.2%
5	Brazil - United States	2,507	0.8%	2.6	2.1%
6	United States - China	2,291	0.7%	2.5	2.0%
7	India - United States	3,015	0.9%	2.3	1.9%
8	France - United States	3,966	1.2%	2.3	1.9%
9	Hong Kong - United States	1,102	0.3%	2.2	1.8%
10	United States - Israel	2,647	0.8%	1.9	1.5%
11	South Korea - United States	1,413	0.4%	1.7	1.3%
12	United States - Australia	802	0.2%	1.5	1.2%
13	United States - Singapore	628	0.2%	1.3	1.1%
14	United Kingdom - United States	1,478	0.5%	1.3	1.0%
15	United States - Mexico	3,848	1.2%	1.3	1.0%
16	United States - Italy	2,481	0.8%	1.2	0.9%
17	United States - Switzerland	1,422	0.4%	1.2	0.9%
18	United Arab Emirates - United States	677	0.2%	1.1	0.9%
19	Germany - United States	2,595	0.8%	1.1	0.9%
20	Netherlands - United States	1,693	0.5%	1.1	0.8%
	Other affected routes	53,883	16.7%	28	22.6%
	Total of above	322,032	100.0%	126	100.0%
	Connecting traffic	79,253		30	
	Ancillary revenues			13	
	Cargo revenues			19	
	Total impact on airline revenues per day			187	

* Average scheduled revenue per day in 12 months to August 2012

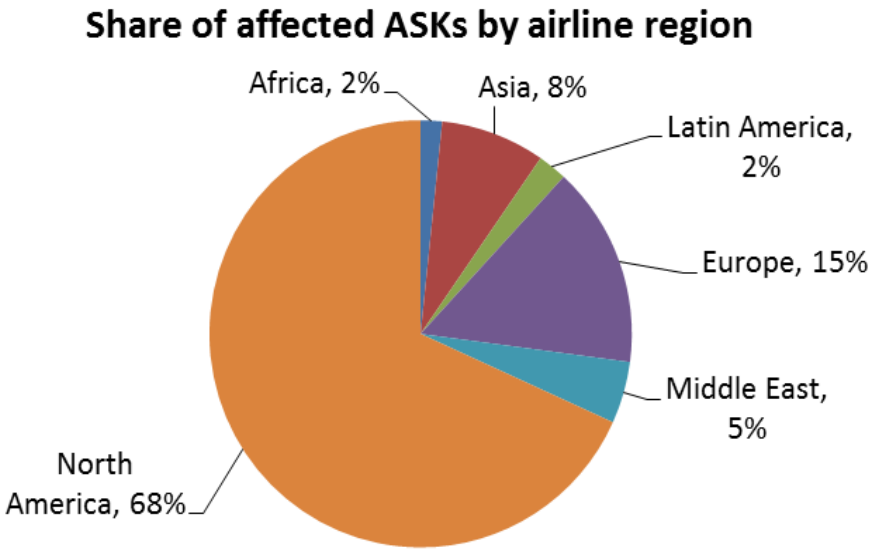
Source: IATA Economics, PaxIS Plus database[3]

- Several of the major airports along the east coast are important hubs for passengers making onward connections to their final destinations. It is estimated that around 79,000 passengers make flight connections at these airports on a normal day. These connections were disrupted, along with about US$30 million in associated airline revenues.
- In total approximately 400,000 scheduled passengers were affected each day at the peak of disruption.

[3] https://pax-is.com

- North American airlines represented 68% of grounded passenger capacity (ASKs) which is likely to be close to their share of lost revenues. Airlines from Europe operating transatlantic routes bore 15% of the impact, with those from Asia and the Middle East next in line (Chart 2).

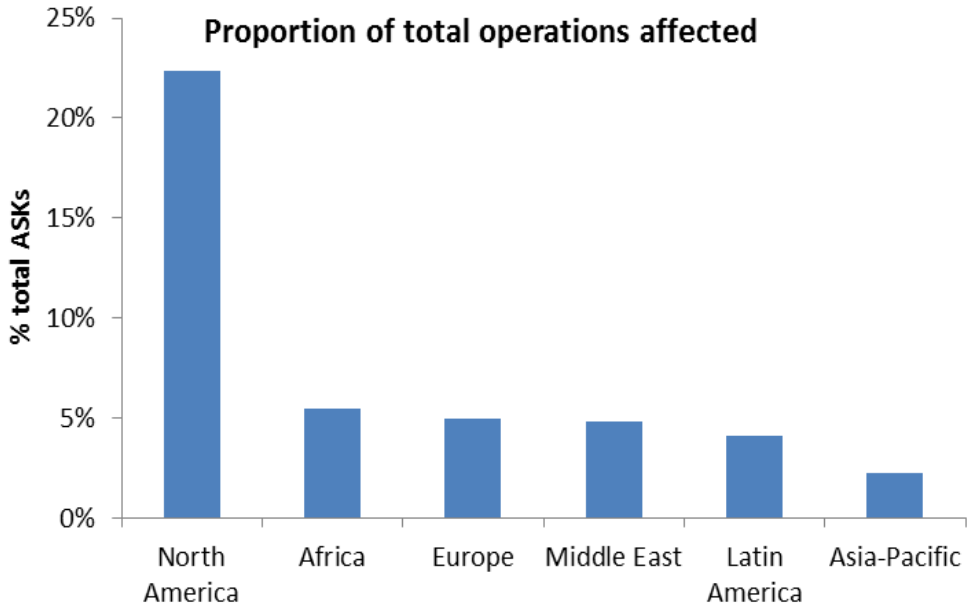
Chart 2: How was the impact spread between airlines?



Source: IATA Economics, SRS Analyser database

- Over a fifth of North American airline operations were affected by the hurricane (Chart 3). However the impact varies markedly airline by airline depending on the proximity of their networks to the storm's epicenter. JetBlue, with its hub at New York JFK suffered disruption to over half of its operations. In contrast, Southwest, with the locus of its operations further west, was able to limit disruption to about 6% of scheduled capacity. While British Airways (at 11%) and Virgin Atlantic (at 20% of capacity) faced greater disruption, overall schedule impact for European airlines was limited to around 5% of capacity. African, Middle Eastern and Latin American airlines faced disruption in the order of 4-5% of total operations. Airlines based in the Asia-Pacific were least affected given the relatively few direct connections to the US east coast.

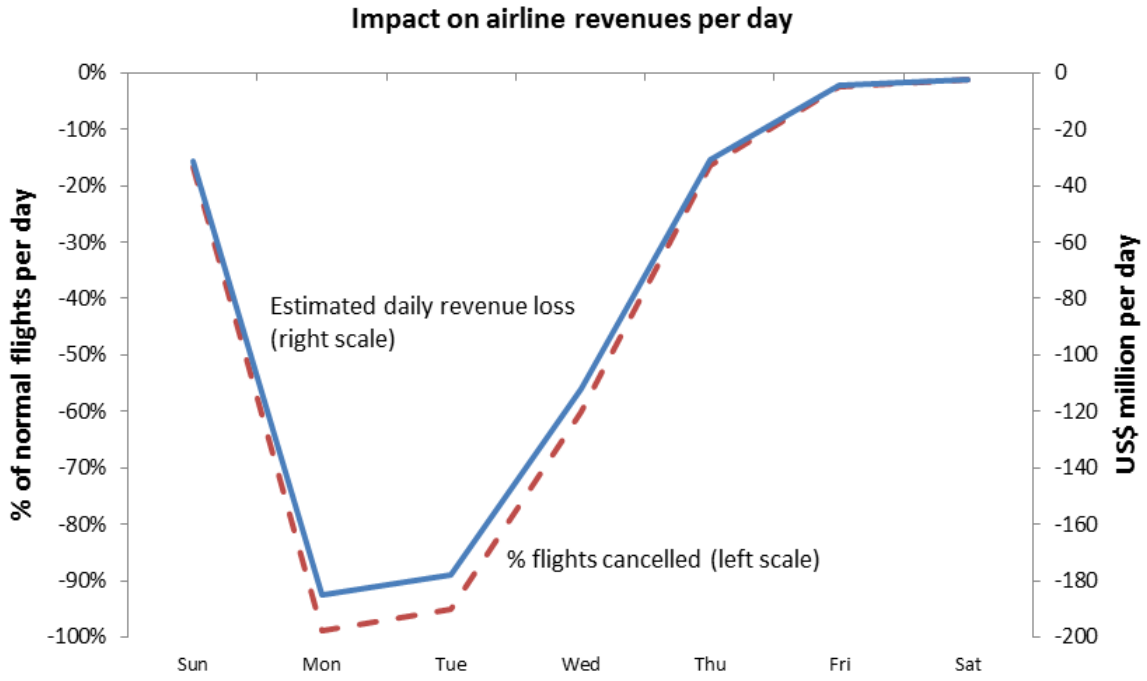
Chart 3: Airlines from which region had their passenger operations most affected?



Source: IATA Economics, SRS Analyser database

- The revenue losses affecting the airline industry varied from day to day according to the extent of airport closures or other operational disruptions. Chart 4 shows our estimate of how those losses developed, from US$30 million a day at the start of the period to around US$190 million at its peak. We estimate that the cumulative losses over this period from scheduled passenger and cargo services were in the vicinity of US$0.5 billion.

Chart 4: Profile of estimated daily revenue losses during 28th October – 3rd November



Source: IATA Economics, FAA Opsnet

- This US$0.5 billion is a conservative estimate of revenue losses, based on the verifiable data available on scheduled services. There may have been some chartered services cancelled rather than just postponed. There were also flight disruptions at airports beyond the five key gateways included in our analysis.
- While there is no industry data yet available, airlines will have also faced the cost of providing hotel accommodation and other assistance to stranded passengers.
- There are some offsetting factors. There would have been some variable or avoidable costs saved, for instance fuel. The commercial airline industry uses around 4.5 million barrels a day of jet kerosene, so at the peak of the hurricane disruption impact fuel demand would have fallen by around 400,000 barrels a day. At current spot prices that would represent a US$50 million a day saving. However, many airlines would have existing price contracts or hedges and so it is not possible to estimate accurately this saving in US$ terms. Some of the revenues will come back as passengers reschedule cancelled trips and delayed cargo gets shipped, but many if not the majority of trips or shipments will just not take place. Again it is just not possible to estimate this at this stage.
- As charts 2 and 3 show, the bulk of the revenue losses and cost will have fallen on North American airlines. Although we cannot accurately assess the impact on their profits it is possible that this demand shock will put drag on the strengthening profitability seen in previous quarters this year.
- The widespread physical damage caused by Hurricane Sandy as well as disruption to activity across a range of sectors could see total economic losses in the wider US economy in the order of US$30-50 billion.[4]

IATA Economics
28th November 2012

[4] IHS Global Insight, EQECAT