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Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis

Montréal, Canada

16 April 2020



- **Situation overview**
- **Scenario analysis of economic impact on passenger traffic**
- **Impacts on airports, cargo and tourism**
- **Appendix: Route-group level analysis**

The preliminary estimates indicate the COVID-19 impact on scheduled international passenger traffic during first half 2020, compared to Baseline (originally-planned):

- Overall reduction of **47 to 58% of seats offered by airlines**
- Overall reduction of **503 to 607 million passengers**
- Approx. **USD 112 to 135 billion potential loss** of gross operating revenues of airlines

Biggest overall impact is expected in Europe and Asia/Pacific, followed by North America and Middle East.

If the current-level of contraction continues to September 2020, airlines would lose USD 35 to 40 billion gross operating revenues every month in the 3rd quarter 2020, hitting summer travel peak season, especially in Europe and North America.

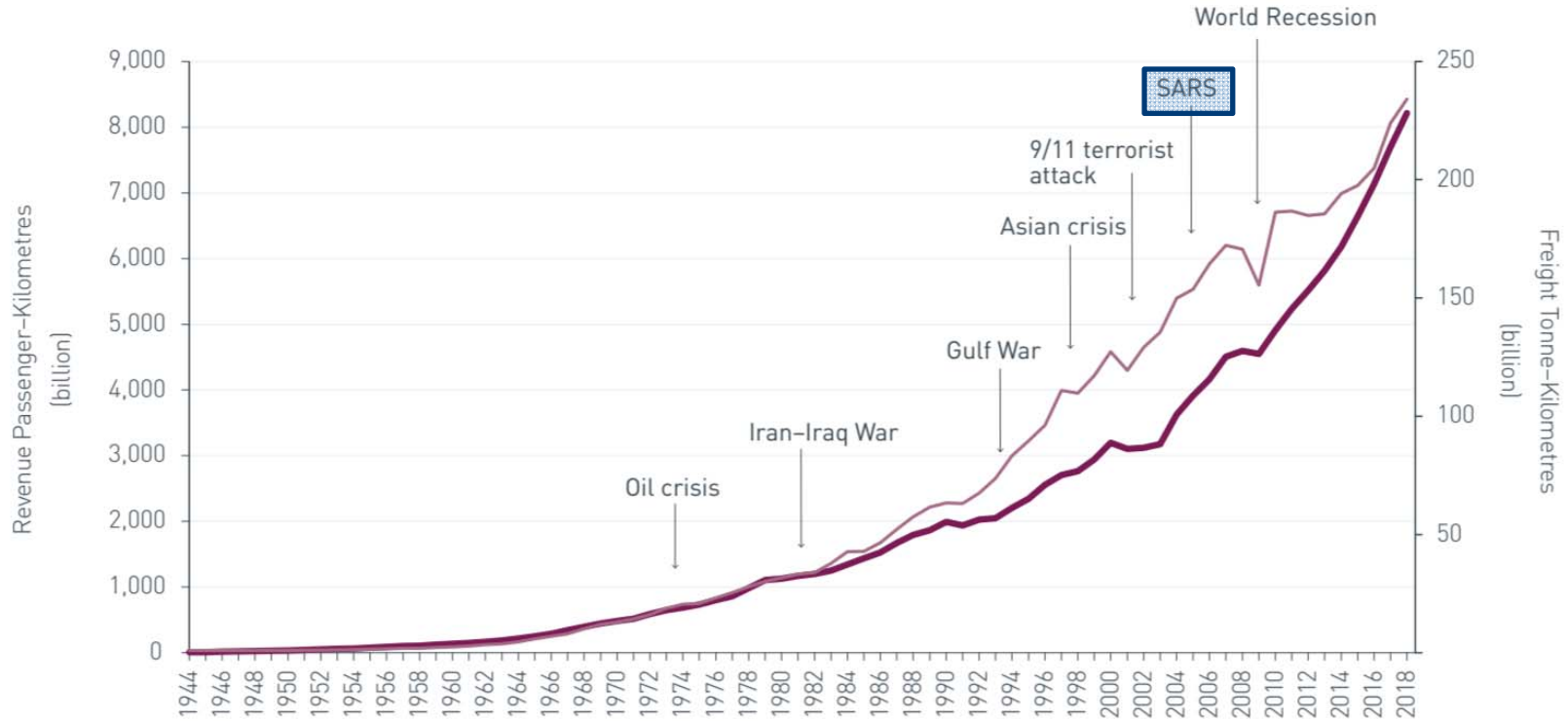


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Situation Overview

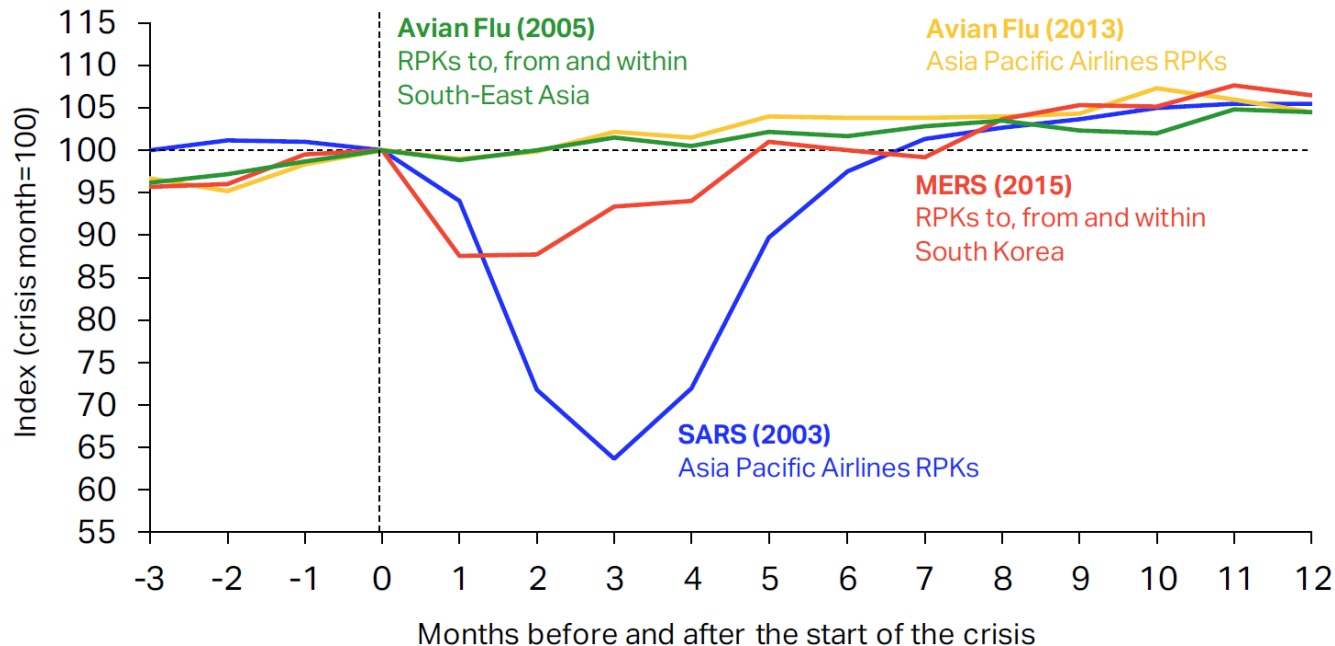
Air traffic has been vulnerable to external factors including disease outbreaks



Note: Total (international and domestic) scheduled services

Previous outbreaks/pandemics had a V-shaped impact on aviation

Impact of past outbreaks on aviation

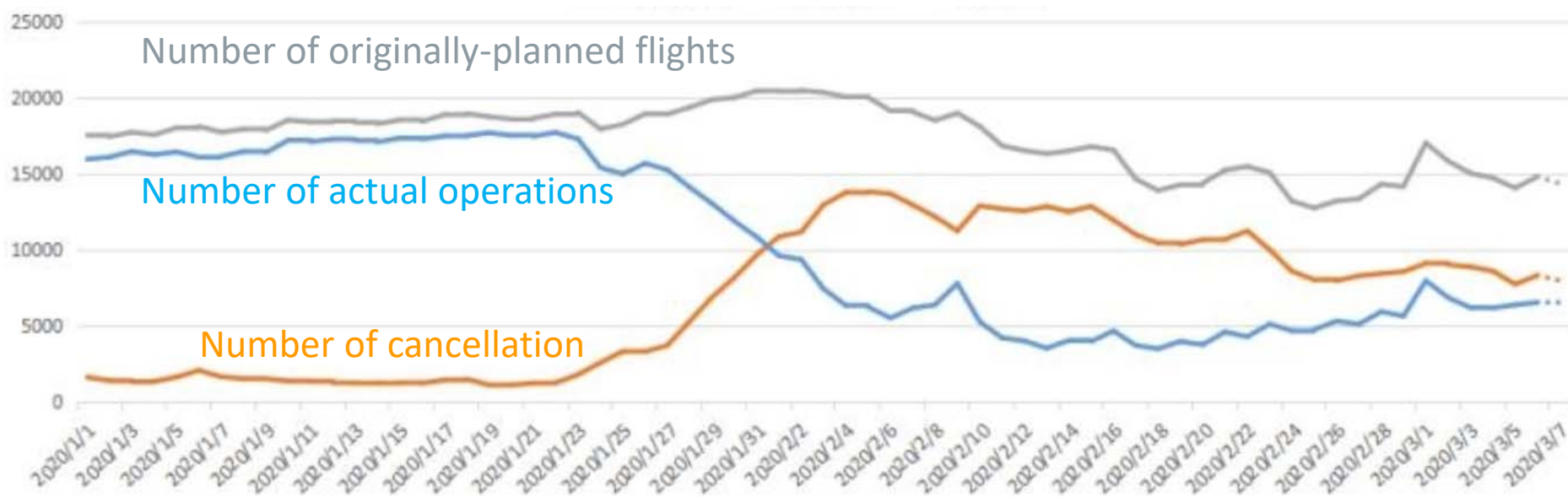


History shows that SARS has the most serious impact on traffic. At the height of the outbreak (May 2003), monthly RPKs of Asia-Pacific airlines were 35% lower than their pre-crisis levels. Overall in 2003, Asia-Pacific airlines lost **8% of annual RPKs** and **\$6 billion of revenues**.

Source: IATA Economics



COVID-19 outbreak has impacted air traffic for China starting from late January 2020



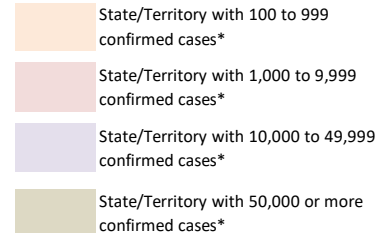
Note: The above includes a) international from mainland China, Hong Kong SAR of China, Macao SAR of China, Taiwan, Province of China; b) domestic within mainland China, and c) regional between mainland China and Hong Kong SAR, Macao SAR and Taiwan Province

A surge of COVID-19 confirmed cases occurred in several States by late February 2020

January 2020 International passenger seat capacity			
Country/Territory	Capacity change from originally-planned		
Russian Federation	-	89,020	-2%
Turkey	-	48,383	-1%
Morocco	-	33,828	-2%
Iraq	-	29,326	-4%
United Arab Emirates	-	25,639	0%
South Africa	-	21,328	-1%
United Kingdom	-	19,017	0%
France	-	17,126	0%
Poland	-	16,736	0%
Romania	-	15,141	-1%
United States	-	14,323	0%
India	-	9,710	0%
Bulgaria	-	9,636	-1%
Bahamas	-	9,588	-2%
Malaysia	-	9,472	0%
Denmark	-	9,058	0%
Indonesia	-	7,554	0%
Bahrain	-	7,123	-1%
Switzerland	-	6,615	0%
Lebanon	-	6,462	-1%
Uzbekistan	-	6,419	-1%
Viet Nam	-	6,129	0%
Georgia	-	5,630	-1%
Jordan	-	5,587	-1%
Czechia	-	5,178	0%
Algeria	-	5,168	-1%
Canada	-	5,087	-2%
Israel	-	5,036	0%
Tunisia	-	4,762	-1%
Niger	-	4,756	-5%

February 2020 International passenger seat capacity			
Country/Territory	Capacity change from originally-planned		
China	-	10,532,219	-61%
Hong Kong SAR of China (CN)	-	2,363,320	-36%
Republic of Korea	-	1,717,147	-19%
Japan	-	1,592,429	-15%
Thailand	-	1,452,478	-15%
Taiwan, Province of China (CN)	-	1,446,686	-23%
Singapore	-	807,608	-12%
Viet Nam	-	731,936	-16%
Macao SAR of China (CN)	-	721,489	-64%
Philippines	-	646,104	-18%
United States	-	620,296	-3%
Malaysia	-	448,172	-8%
Indonesia	-	426,102	-10%
Russian Federation	-	317,890	-5%
Cambodia	-	307,968	-4%
Turkey	-	277,868	-21%
Italy	-	268,846	-3%
United Arab Emirates	-	253,548	-2%
Australia	-	241,284	-5%
United Kingdom	-	188,864	-1%
Iran Islamic Republic of	-	169,782	-18%
France	-	157,998	-1%
Myanmar	-	147,487	-21%
Germany	-	145,561	-1%
India	-	116,823	-2%
Morocco	-	108,186	-5%
Qatar	-	99,338	-2%
Canada	-	96,231	-1%
Lao People's Democratic Republic	-	71,910	-21%
Finland	-	71,413	-4%

In February 2020, international passenger capacity **reduced by 13%**, mainly related to traffic from/to States experiencing an early outbreak and countries deeply interconnected to China.



*: Coronavirus Disease 2019 (COVID-19) Situation Report by WHO (29 February 2020)

COVID-19 Pandemic was declared and accelerating in March 2020

March 2020 International Passenger Capacity

Country/Territory	Capacity change from originally-planned
China	- 14,841,792 -82%
Italy	- 6,860,837 -60%
Republic of Korea	- 6,536,917 -70%
Japan	- 5,837,894 -51%
Germany	- 5,771,162 -31%
Hong Kong SAR of China (CN)	- 5,352,855 -77%
United Kingdom	- 4,965,296 -22%
United States	- 4,950,969 -19%
Thailand	- 4,587,421 -46%
Taiwan, Province of China (CN)	- 4,074,431 -62%
Spain	- 3,792,140 -26%
United Arab Emirates	- 3,400,833 -26%
Singapore	- 3,297,434 -45%
France	- 3,216,482 -25%
Turkey	- 2,879,271 -35%
Viet Nam	- 2,599,336 -55%
Malaysia	- 2,500,355 -42%
India	- 2,077,578 -29%
Saudi Arabia	- 1,747,385 -31%
Switzerland	- 1,691,017 -28%

Country/Territory	Capacity change from originally-planned
Philippines	- 1,669,456 -45%
Indonesia	- 1,466,518 -34%
Netherlands	- 1,292,472 -17%
Canada	- 1,218,383 -16%
Austria	- 1,200,864 -30%
Russian Federation	- 1,177,704 -19%
Australia	- 1,119,345 -25%
Portugal	- 1,118,941 -26%
Belgium	- 1,060,572 -31%
Qatar	- 1,041,439 -21%
Denmark	- 980,211 -28%
Israel	- 972,061 -44%
Poland	- 967,520 -24%
Macao SAR of China (CN)	- 954,453 -80%
Egypt	- 818,043 -28%
Morocco	- 762,145 -31%
Sweden	- 761,425 -24%
Ireland	- 733,678 -21%
Greece	- 635,039 -34%
Czechia	- 610,048 -37%

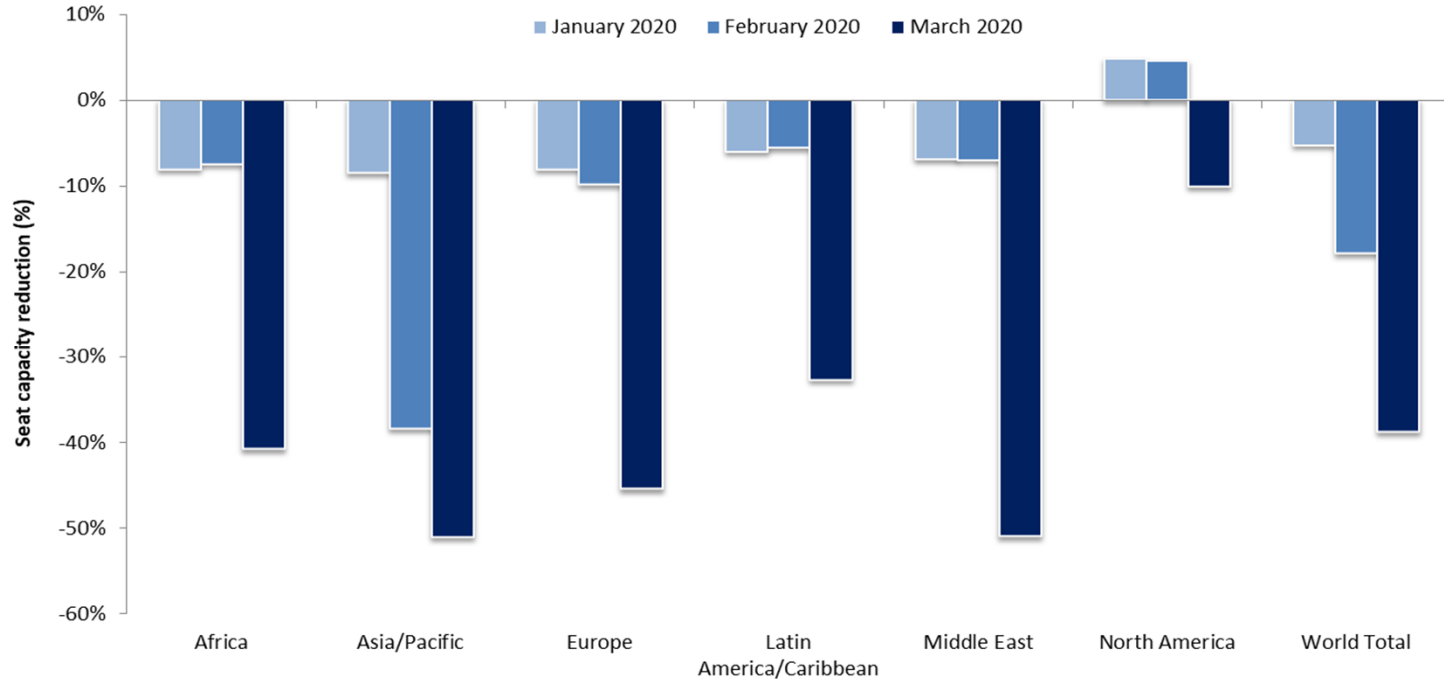
In March 2020, international passenger capacity reduced by 49% (estimated), with significant reduction not only in States experiencing an early outbreak but also worldwide.

	State/Territory with 100 to 999 confirmed cases*
	State/Territory with 1,000 to 9,999 confirmed cases*
	State/Territory with 10,000 to 49,999 confirmed cases*
	State/Territory with 50,000 or more confirmed cases*

*: Coronavirus Disease 2019 (COVID-19) Situation Report by WHO (31 March 2020)

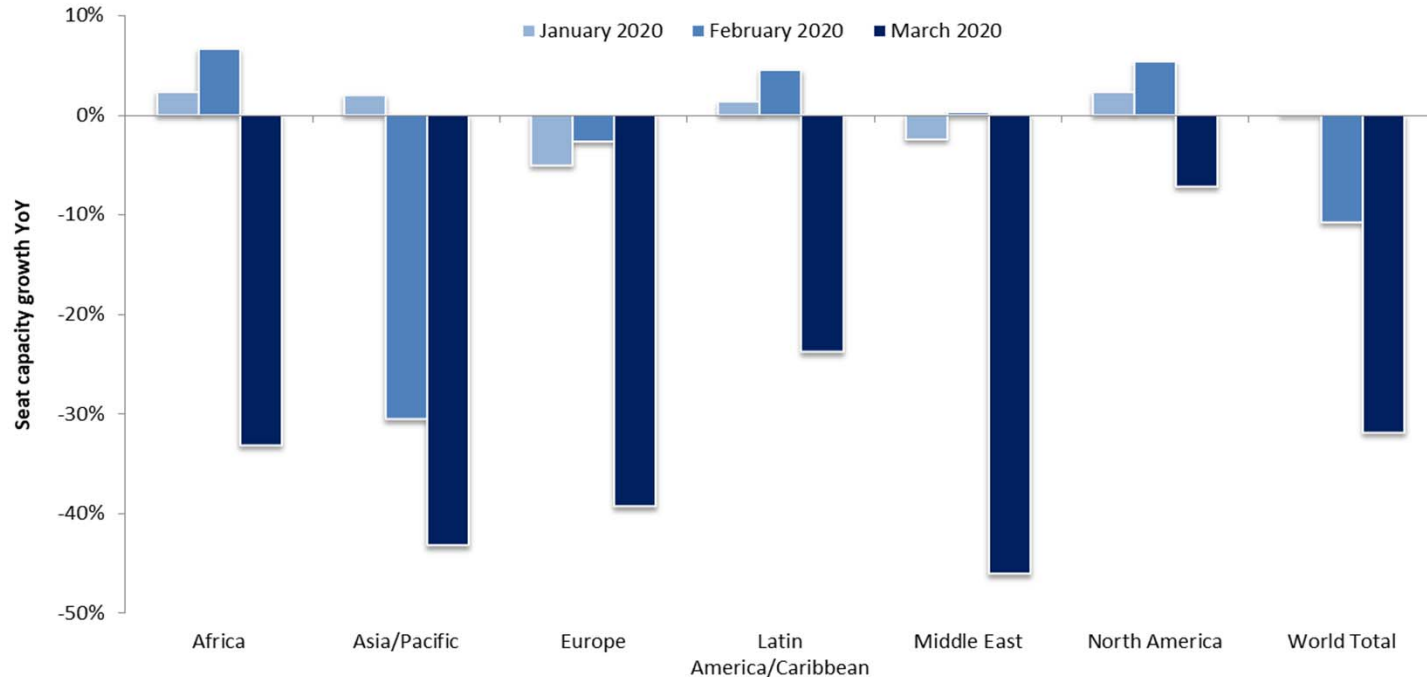
Air traffic reduction no longer limited to initial outbreak countries

Monthly seat capacity change compare to originally-planned by region (total international and domestic)



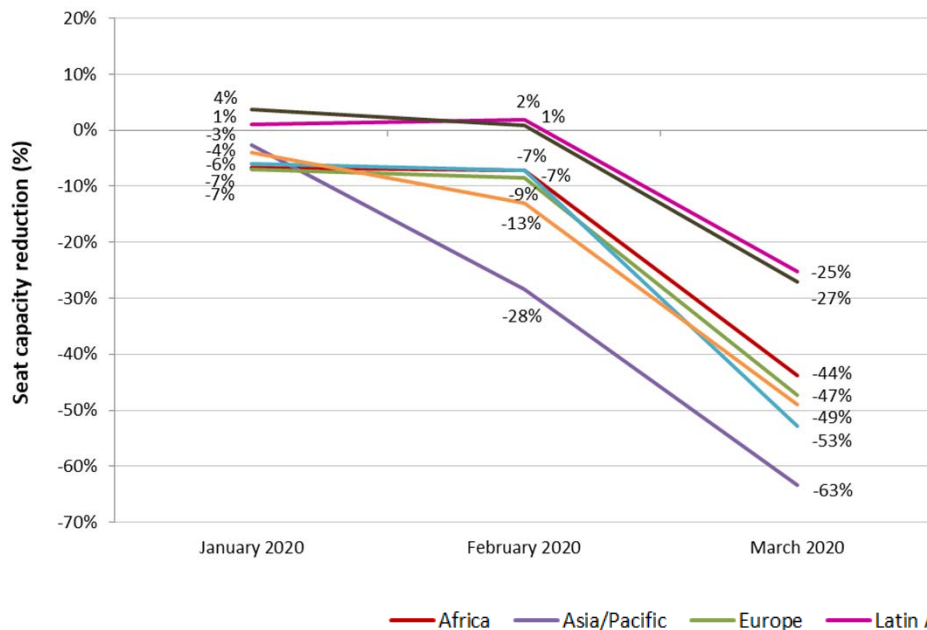
Air traffic reduction no longer limited to initial outbreak countries (2)

**Monthly seat capacity change compared to 2019 by region
(total international and domestic)**

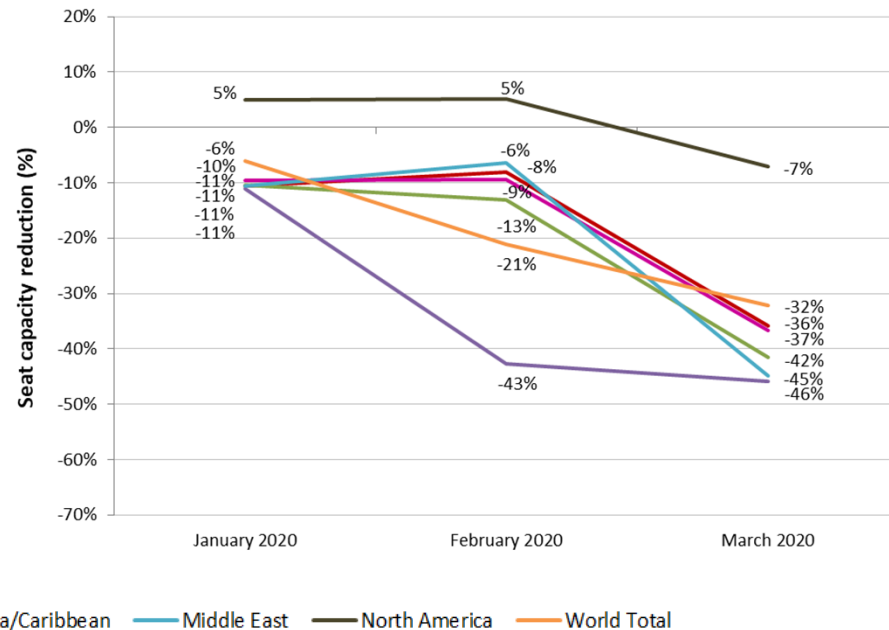


Not only international but also domestic air transport has been impacted significantly

Monthly seat capacity change compared to originally-planned by region (international)

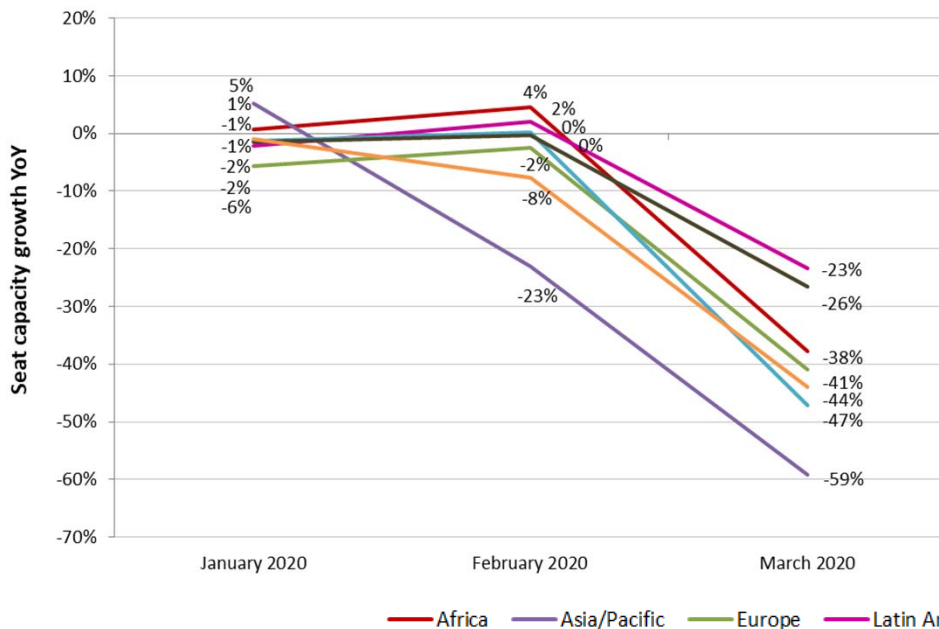


Monthly seat capacity change compared to originally-planned by region (domestic)

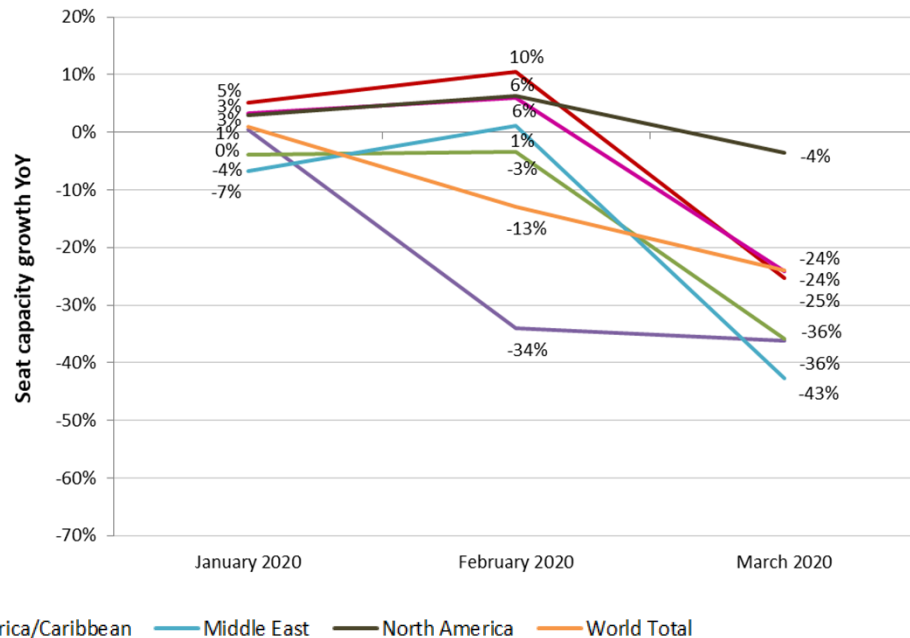


Not only international but also domestic air transport has been impacted significantly (2)

Monthly seat capacity change compared to 2019 by region (international)



Monthly seat capacity change compared to 2019 by region (domestic)



The world reached 1 million confirmed COVID-19 cases in April 2020

April 2020 International Passenger Capacity

Country/Territory		Capacity change from originally-planned	
United States	-	22,625,408	-87%
United Kingdom	-	22,016,160	-89%
Germany	-	18,979,763	-90%
Spain	-	16,814,653	-93%
China	-	16,736,861	-95%
France	-	13,207,151	-89%
Italy	-	12,773,521	-94%
United Arab Emirates	-	10,697,361	-86%
Japan	-	9,207,611	-85%
Turkey	-	8,719,066	-93%
Thailand	-	8,036,581	-92%
Republic of Korea	-	7,693,465	-86%
Hong Kong SAR of China (CN)	-	6,865,671	-93%
Netherlands	-	6,800,724	-87%
Singapore	-	6,488,199	-92%
Canada	-	6,242,425	-90%
India	-	5,836,644	-83%
Switzerland	-	5,732,233	-92%
Russian Federation	-	5,622,809	-85%
Taiwan, Province of China (CN)	-	5,525,036	-86%

Country/Territory		Capacity change from originally-planned	
Malaysia	-	4,924,675	-84%
Portugal	-	4,891,024	-94%
Australia	-	4,098,536	-92%
Mexico	-	4,013,041	-76%
Saudi Arabia	-	3,870,987	-71%
Viet Nam	-	3,772,957	-88%
Austria	-	3,720,456	-89%
Indonesia	-	3,680,057	-86%
Qatar	-	3,630,757	-77%
Ireland	-	3,400,102	-87%
Belgium	-	3,201,882	-84%
Poland	-	3,058,893	-70%
Greece	-	3,014,886	-92%
Philippines	-	2,976,778	-85%
Denmark	-	2,963,162	-81%
Sweden	-	2,420,630	-77%
Brazil	-	2,208,177	-92%
Norway	-	2,153,303	-78%
Israel	-	2,133,199	-88%
Morocco	-	2,042,937	-83%

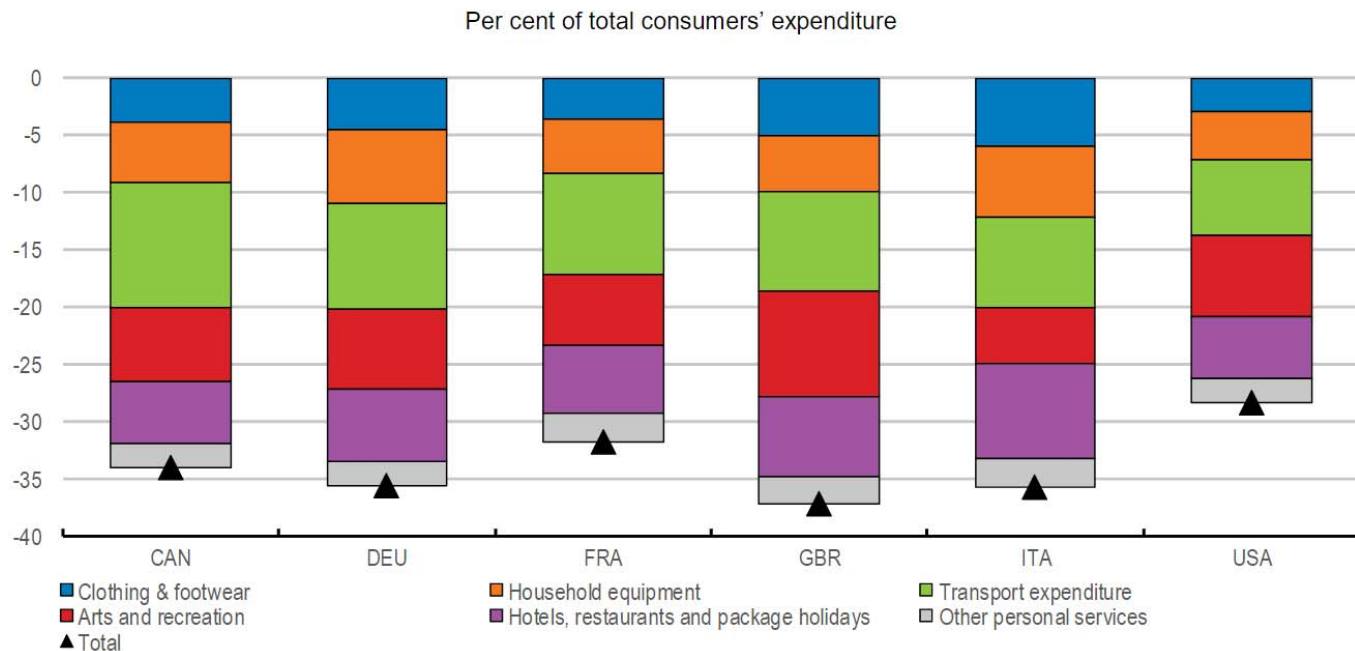
In April 2020, international passenger capacity so far experienced by **unprecedented 89% reduction** (estimated)

	State/Territory with 100 to 999 confirmed cases*
	State/Territory with 1,000 to 9,999 confirmed cases*
	State/Territory with 10,000 to 49,999 confirmed cases*
	State/Territory with 50,000 or more confirmed cases*

*: Coronavirus Disease 2019 (COVID-19) Situation Report by WHO (12 April 2020)

Sharp decrease in consumers' expenditures for air travel due to containment measures

The potential initial impact of partial or complete shutdowns on private consumption in selected G7 economies



Global economy is projected to contract sharply by -3% in 2020

The Projections assume that the pandemic fades in the second half of 2020 and containment efforts can be gradually unwound

(real GDP, annual percent change)	2019	2020	2021
World Output	2.9	-3.0	5.8
Advanced Economies	1.7	-6.1	4.5
United States	2.3	-5.9	4.7
Euro Area	1.2	-7.5	4.7
Germany	0.6	-7.0	5.2
France	1.3	-7.2	4.5
Italy	0.3	-9.1	4.8
Spain	2.0	-8.0	4.3
Japan	0.7	-5.2	3.0
United Kingdom	1.4	-6.5	4.0
Canada	1.6	-6.2	4.2
Other Advanced Economies	1.7	-4.6	4.5

(real GDP, annual percent change)	2019	2020	2021
Emerging Markets and Developing Economies	3.7	-1.0	6.6
Emerging and Developing Asia	5.5	1.0	8.5
China	6.1	1.2	9.2
India	4.2	1.9	7.4
ASEAN-5	4.8	-0.6	7.8
Emerging and Developing Europe	2.1	-5.2	4.2
Russia	1.3	-5.5	3.5
Latin America and the Caribbean	0.1	-5.2	3.4
Brazil	1.1	-5.3	2.9
Mexico	-0.1	-6.6	3.0
Middle East and Central Asia	1.2	-2.8	4.0
Saudi Arabia	0.3	-2.3	2.9
Sub-Saharan Africa	3.1	-1.6	4.1
Nigeria	2.2	-3.4	2.4
South Africa	0.2	-5.8	4.0
Low-Income Developing Countries	5.1	0.4	5.6

<https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020>

Scenario Analysis of Economic Impact on Passenger Traffic

Figures and estimates herein is preliminary and subject to substantial changes.
The analysis will be updated with the situation evolving and more information available.

COVID-19 impact scenarios: Indicative V- and U-shaped paths

Three scenarios to measure the possible impact of COVID-19 outbreak on scheduled **international passenger** traffic worldwide for **first half of the year 2020 (1Q and 2Q 2020)**:

- ❑ **Baseline:** hypothetical situation without COVID-19 outbreak, i.e. originally-planned
- ❑ **Scenario 1:** V-shaped path, quick recovery from May 2020
- ❑ **Scenario 2:** U-shaped path, prolonged contraction to June 2020

Assumptions used for each scenario are summarized in next page

- Given a rapidly changing environment, Scenarios 1 and 2 are merely indicative of two possible paths out of many. The exact path will depend upon various factors, inter alia, duration and magnitude of the outbreak and containment measures, availability of government assistance, consumers' confidence, and economic conditions.
- Scenarios 1 and 2 are differentiated in terms of **supply (output)** and **demand (spending)** conditions, mainly, a) the timing and scale of airline capacity decline and recovery, and b) the degree of consumers' confidence for air travel that can be translated into demand or load factor.

Assumptions (Global)	Baseline (Originally-planned)		Scenario 1 (V-shaped)		Scenario 2 (U-shaped)	
	Seat capacity reduction from originally-planned	Passenger load factor	Seat capacity reduction from originally-planned	Passenger load factor	Seat capacity reduction from originally-planned	Passenger load factor
January 2020	January 2019 results by route group	January 2019 results by route group	actual	January 2020 results by route group	actual	January 2020 results by route group
February 2020	February 2019 results by route group	February 2019 results by route group	actual	February 2020 results by route group	actual	February 2020 results by route group
March 2020	0%	March 2019 results by route group	actual	15 to 25 percentage points lower than Baseline	actual	25 percentage points lower than Baseline
April 2020	0%	April 2019 results by route group	airlines' schedules filed in early April minus 1 to 4 percentage points, subject to update by actual	15 percentage points lower than Baseline	airlines' schedules filed in early April minus 1 to 4 percentage points, subject to update by actual	25 percentage points lower than Baseline
May 2020	0%	May 2019 results by route group	65 to 75 percentage points lower than Baseline, subject to update by actual	10 percentage points lower than Baseline	80 to 90 percentage points lower than Baseline, subject to update by actual	25 percentage points lower than Baseline
June 2020	0%	June 2019 results by route group	35 to 45 percentage points lower than Baseline, subject to update by actual	10 percentage points lower than Baseline	80 to 90 percentage points lower than Baseline, subject to update by actual	25 percentage points lower than Baseline

The preliminary estimates indicate the impact in terms of **scheduled international passenger traffic during first half 2020** compared to **Baseline (originally-planned)**:

Scenario 1 (V-shaped path)

- Overall reduction of **47% of seats offered by airlines**
- Overall reduction of **503 million passengers**
- Approx. **USD 112 billion potential loss** of gross operating revenues of airlines

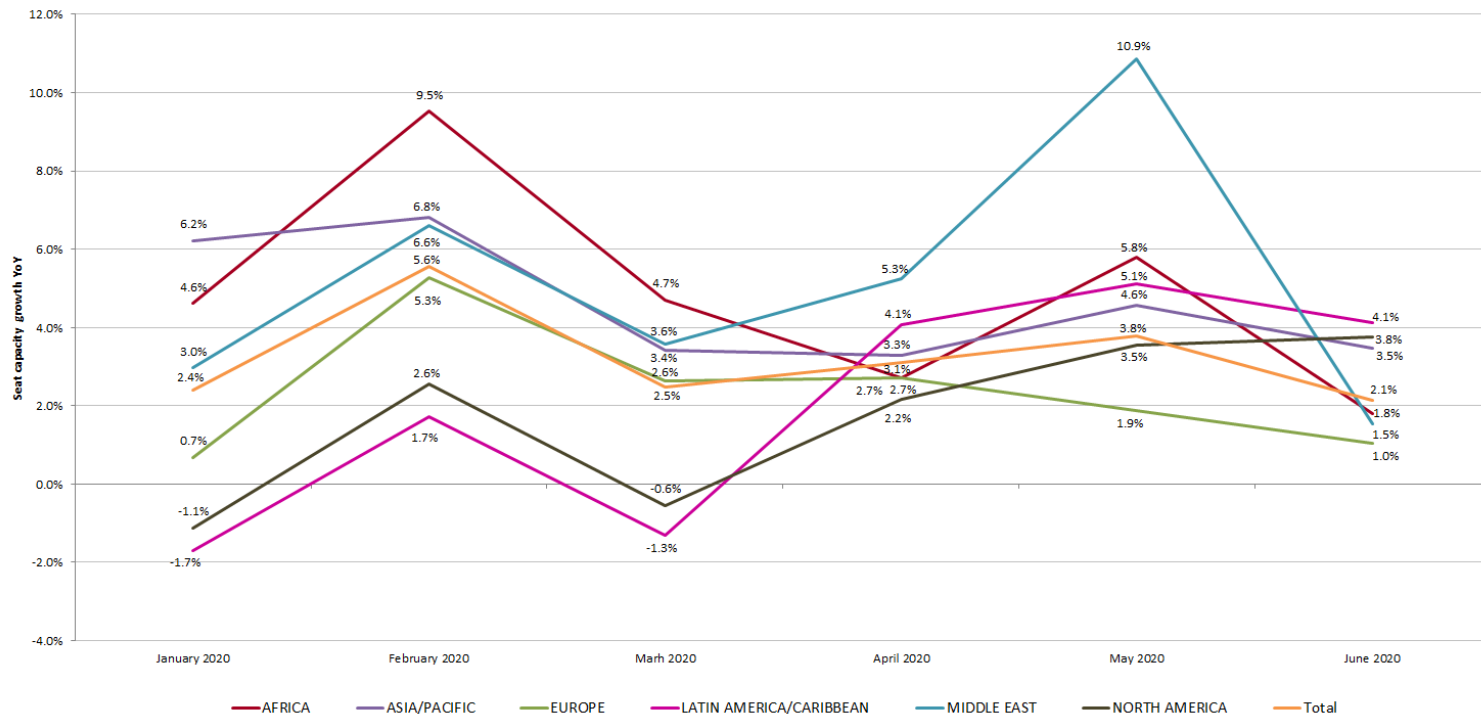
Scenario 2 (U-shaped path)

- Overall reduction of **58% of seats offered by airlines**
- Overall reduction of **607 million passengers**
- Approx. **USD 135 billion potential loss** of gross operating revenues of airlines

Biggest overall impact in Europe and Asia/Pacific, followed by North America and Middle East

	Scenario 1 (V-shaped) compared to Baseline (originally-planned) for first half 2020			Scenario 2 (U-shaped) compared to Baseline (originally-planned) for first half 2020		
Region	Seat Capacity (%)	Passenger number (million)	Gross passenger revenue (USD, billion)	Seat Capacity (%)	Passenger number (million)	Gross passenger revenue (USD, billion)
AFRICA	-40.2%	-17.71	-5.54	-50.6%	-21.98	-6.99
ASIA/PACIFIC	-51.8%	-153.71	-38.61	-61.2%	-178.00	-44.42
EUROPE	-49.0%	-231.47	-39.48	-60.7%	-281.13	-48.20
LATIN AMERICA/CARIBBEAN	-35.4%	-26.03	-6.28	-45.0%	-33.33	-7.98
MIDDLE EAST	-41.4%	-37.53	-10.02	-51.6%	-45.76	-12.36
NORTH AMERICA	-39.6%	-37.03	-12.02	-50.2%	-46.79	-15.11
Total	-47.0%	-503.48	-111.95	-57.7%	-607.00	-135.06

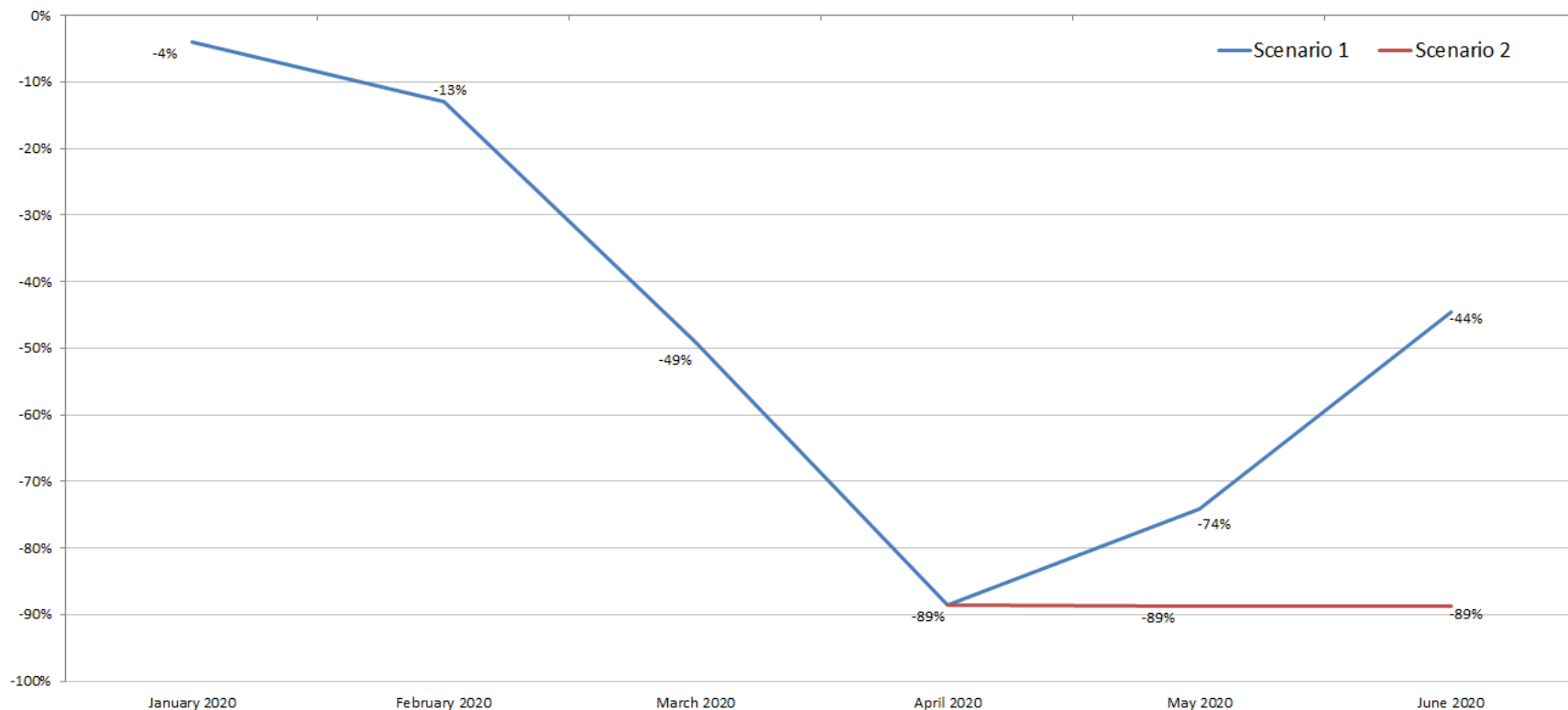
Baseline: 3% seat capacity increase (year-on-year) globally for first half 2020



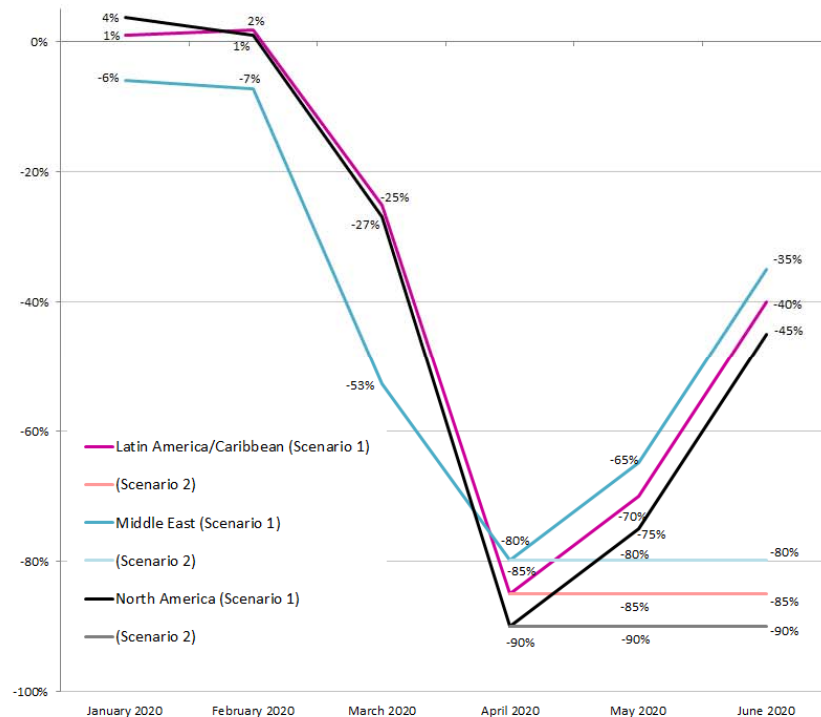
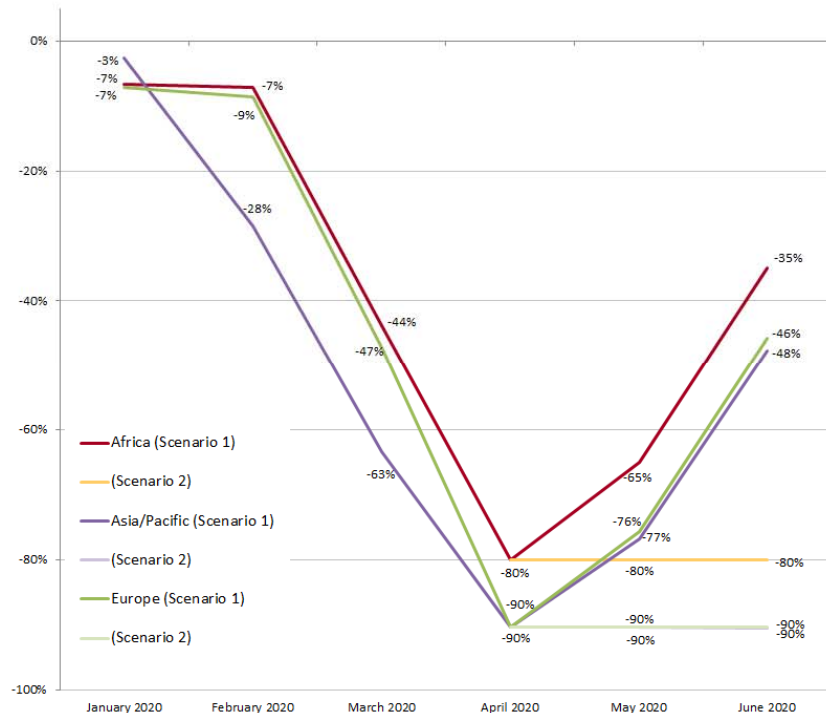
A total of YoY 3.2% seat capacity increase originally - planned for 1Q 2020 compared to the same period of 2019 (scheduled international passenger set number)



Scenarios 1 & 2 show 47 to 58% seat capacity reduction in first half 2020 from Baseline

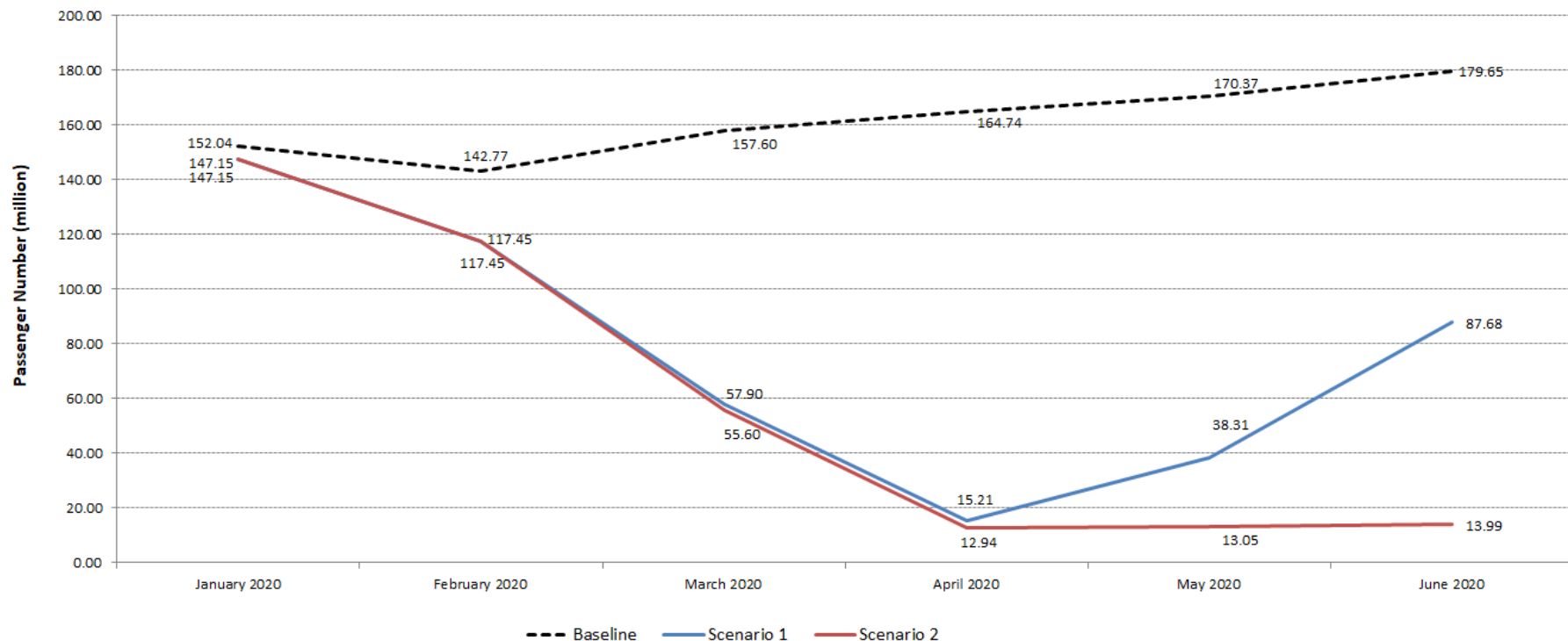


Break-down of seat capacity by region



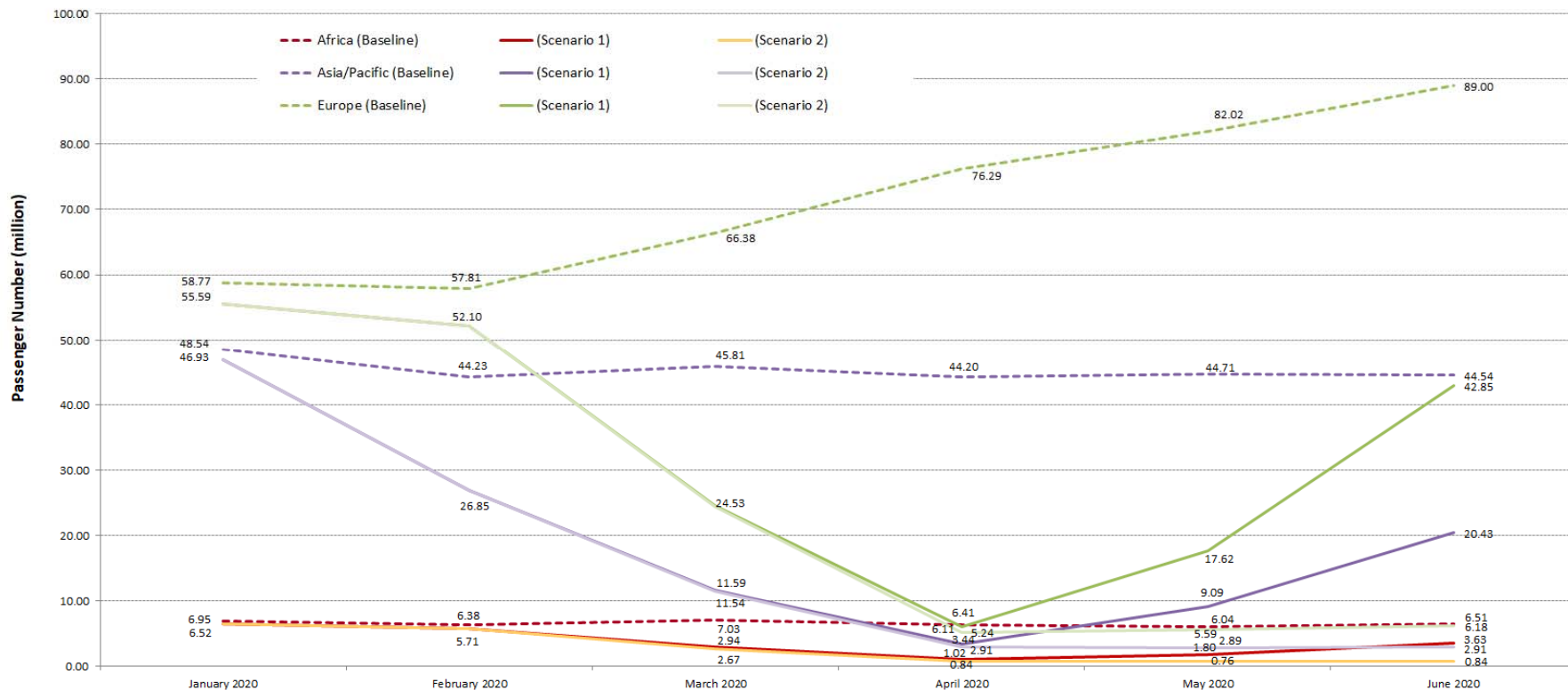


A total of 503 to 607 million passenger reduction in first half 2020 compared to Baseline

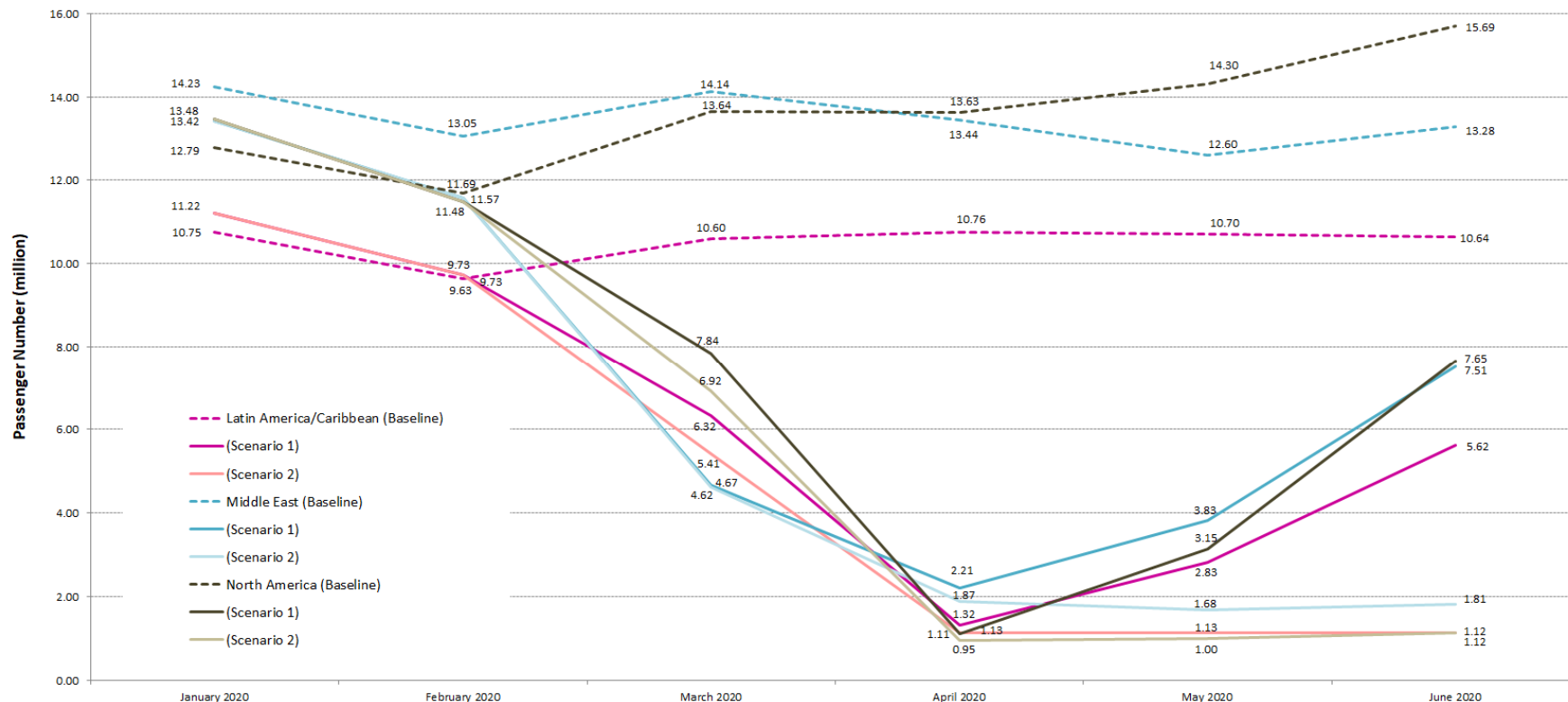


Note: Number of international passengers departing from each country and territory, which are aggregated at the regional level to avoid double counting

Break-down of passenger number by region (1)



Break-down of passenger number by region (2)





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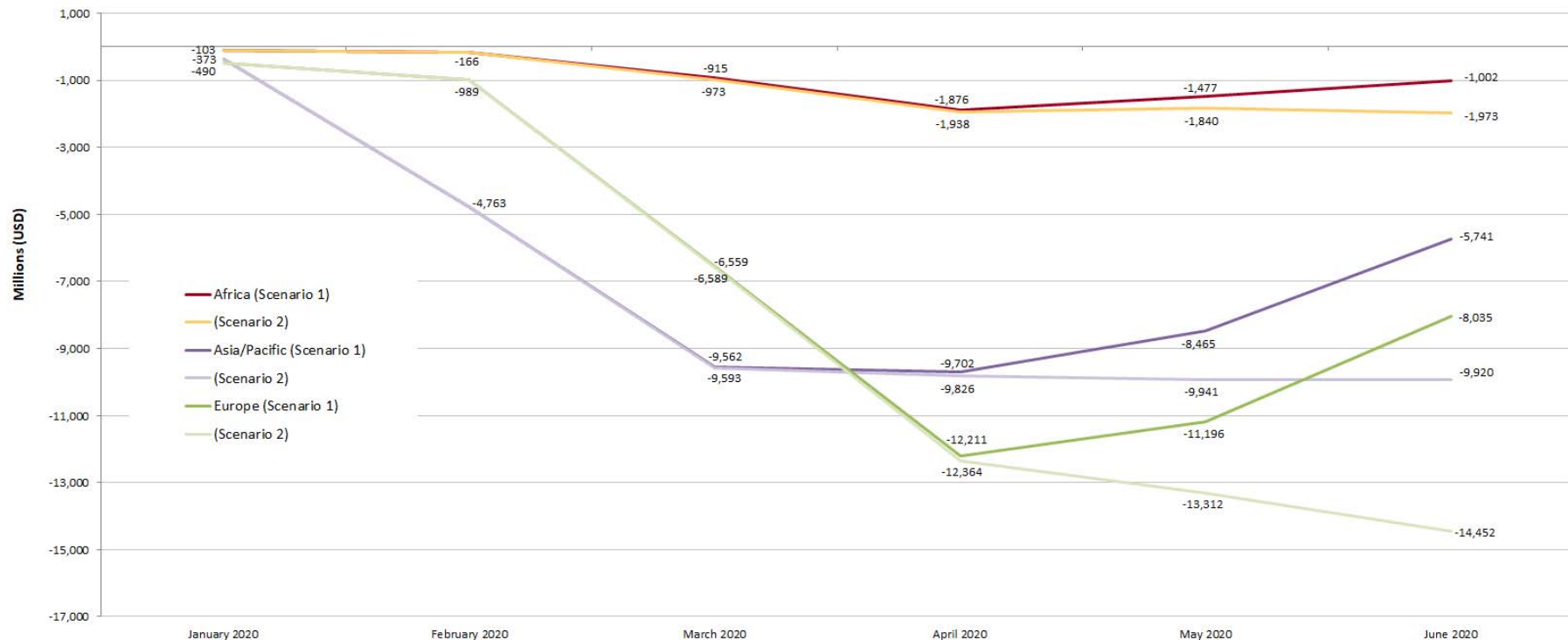
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Approx. USD 112 to 135 billion loss of airline revenues in first half 2020 compared to Baseline

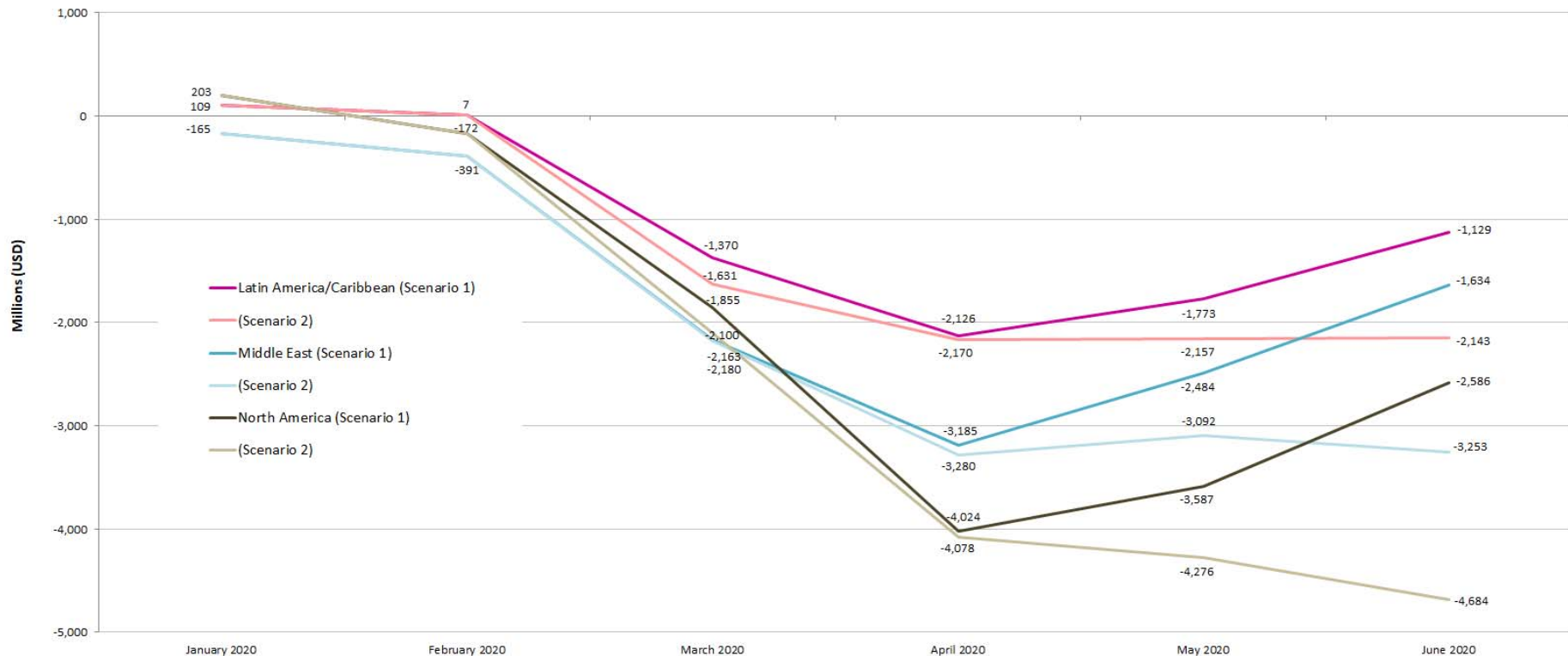


Note: The above revenues are gross passenger operating revenues of all airlines serving international routes from each country and territory, which are aggregated at the regional level (revenues of international routes to each country and territory were removed to avoid double counting).

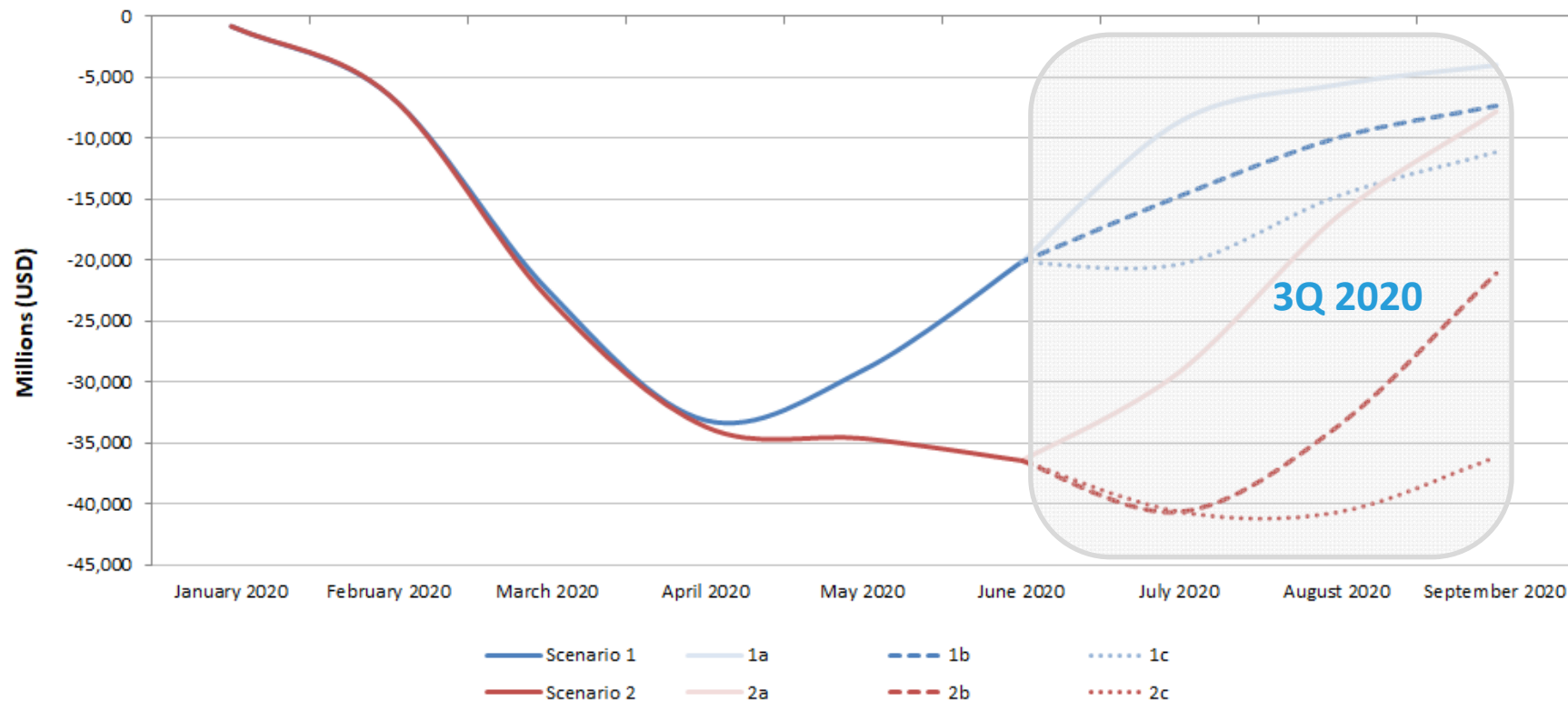
Break-down of revenue reduction by region (1)



Break-down of revenue reduction by region (2)



Possible paths for 3Q 2020 although recovery prospects are still very uncertain



If Scenario 2 contraction continues to 3Q 2020, USD 35 to 40 billion would be lost every month

The exact path (depth, length and shape) depends on various factors, inter alia, duration and magnitude of the outbreak and containment measures, availability of government assistance, consumers' confidence, and economic conditions.

Scenario	Gross passenger revenue (USD, billion)		Description
	from Jul to Sep (3Q 2020)	Total from Jan to Sep (1Q to 3Q 2020)	
1a	-18.20	-130.16	Strong rebound of capacity growth but no full return of consumers' confidence in travel during 3Q 2020
1b	-31.99	-143.94	Deceleration of capacity recovery without full return of consumers' confidence in travel during 3Q 2020
1c	-46.15	-158.11	A minor dip in July 2020, followed by slow progression of capacity recovery and return of consumers' confidence in travel
2a	-53.28	-188.34	Quick recovery from July 2020 by following the recovery path similar to but even faster than 2Q 2020 of Scenario 1 because of summer season
2b	-95.28	-230.34	Downturn (lock-down) continuing to July 2020 but quick recovery starting from August 2020 by following the path similar to 2Q 2020 of Scenario 1
2c	-117.42	-252.48	Downturn (lock-down) continuing to September 2020, i.e. the same situation as 2Q 2020 and hitting summer travel peak season, especially in Europe and North America

Comparison with full year estimates by IATA: “3-month lock-down + recession” scenario

The analytical difference between ICAO and IATA estimates:

- **Period:** first half 2020 (ICAO) and full year 2020 (IATA)
- **Traffic:** international only (ICAO) and both international and domestic (IATA)
- **Regional break-down:** by all traffic from/to States in each region (ICAO) and region of airline registration (IATA)
- **Baseline:** originally-planned i.e. 2020 business as usual scenario (ICAO) and 2019 level with 2020 airline schedules (IATA)

Region of airline registration	Revenue Passenger Kilometres (RPKs) - both international and domestic for full year 2020	Gross passenger revenue - both international and domestic for full year 2020
	year-on-year % change from 2019 level	USD billion, compared to 2019 level
AFRICA	-51%	-6
ASIA/PACIFIC	-50%	-113
EUROPE	-55%	-89
LATIN AMERICA/CARIBBEAN	-49%	-18
MIDDLE EAST	-51%	-24
NORTH AMERICA	-36%	-64
Total	-48%	-314

<https://www.iata.org/en/iata-repository/publications/economic-reports/covid-fourth-impact-assessment/>



Impacts on Airports, Cargo and Tourism

Figures and estimates herein are quoted from the analyses of the Airport Council International (ACI), ICAO and the World Tourism Organization (UNWTO).

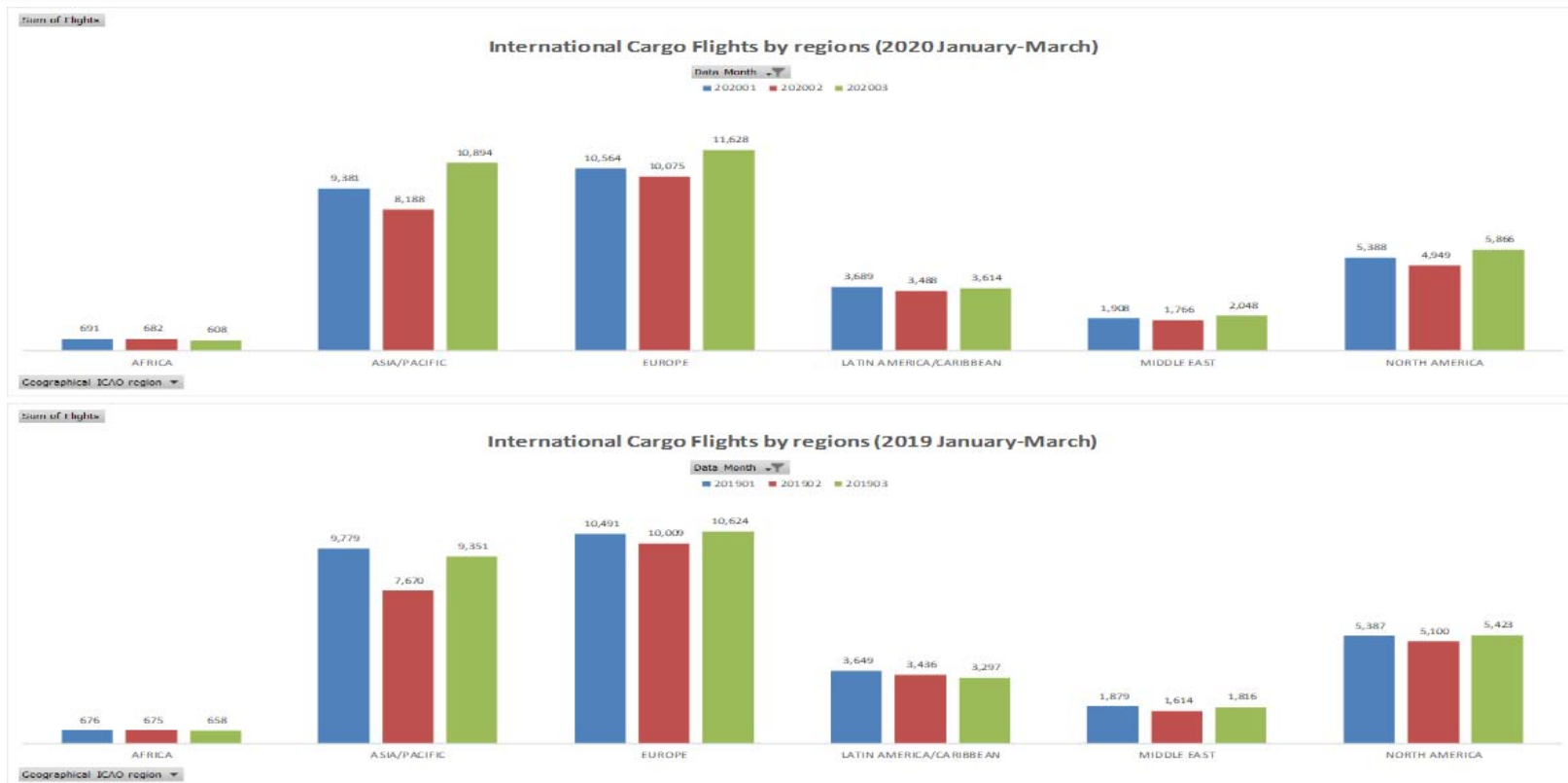


Airport may lose approx. USD 76 billion for full year 2020 (estimated by ACI)

Region	Passenger number - both international and domestic for full year 2020		Airport revenue - both aeronautical and non-aeronautical for full year 2020	
	million and % change from 2020 "business as usual" baseline scenario		USD billion and % change from 2020 "business as usual" baseline scenario	
AFRICA	-77	-32.5%	-1.5	-35%
ASIA/PACIFIC	-1,465	-42.1%	-23.9	-48%
EUROPE	-894	-35.0%	-24.6	-42%
LATIN AMERICA/CARIBBEAN	-244	-34.0%	-4.0	-38%
MIDDLE EAST	-157	-36.5%	-5.7	-43%
NORTH AMERICA	-790	-37.7%	-16.9	-49%
Total	-3,627	-38.1%	-76.6	-45%

<https://aci.aero/about-aci/priorities/health/covid-19/>

Economic impact on air cargo under preparation



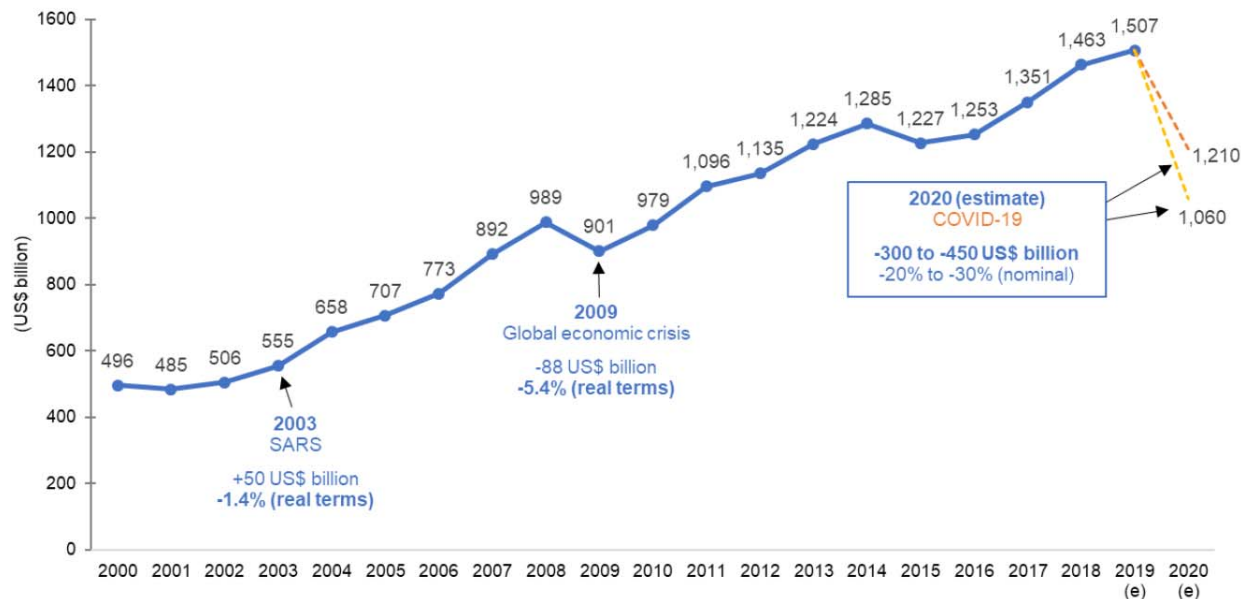
Air cargo throughput has decreased a total of 19% in March 2020 due to the withdrawal of passenger aircraft belly capacity while cargo freighters have provided additional, offsetting capacity

Millions of Tons Transported			
	March 2019	March 2020	Change
Belly Cargo	3.49	2.40	-31%
Freighter Cargo	1.48	1.61	9%
Net	4.97	4.01	-19%

Preliminary analysis indicates air cargo revenues have dropped 22% from USD 8.3 to 6.5 billion in March 2020 over the same period

A loss of USD 300 to 450 billion in international tourism receipts for 2020 (estimated by UNWTO)

2020 forecast - international tourism receipts, world (US\$ billion)



Source: UNWTO (e) Estimate

- 290 to 440 million	International Tourist Arrivals
5 to 7 years	lost in number of tourists
- 300 to 450 US\$ bn	Tourism Exports (receipts)
1/3 of 1.5 US\$ trillion	lost in Tourism Exports

<https://www.unwto.org/news/international-tourism-arrivals-could-fall-in-2020>



Appendix: Route Group Level Analysis

**The analysis will be updated and expanded
with the situation evolving and more information available.**

Estimated results by route group for Jan/Feb 2020 (compared to originally-planned)

Route Group	DOM/INT	Seat capacity			Scheduled passenger (thousand)			Gross revenue (USD, million)		
		Jan 2020	Feb 2020	Mar 2020	Jan 2020	Feb 2020	Mar 2020*	Jan 2020	Feb 2020	Mar 2020*
Africa	Domestic	-11%	-8%	-36%	-447	-472	-2,258	-44	-47	-224
Africa - Asia/Pacific	International	4%	-19%	-46%	15	-123	-260	6	-47	-99
Africa - Middle East	International	-6%	-7%	-56%	-177	-218	-1,919	-43	-53	-467
Africa - North America	International	-9%	-3%	-26%	-18	-10	-102	-6	-4	-37
Africa & Middle East - Central America/Caribbean	International	-	-	-	0	0	0	0	0	0
Africa & Middle East - South America	International	2%	5%	-18%	2	-9	-58	1	-5	-30
Central America/Caribbean	Domestic	-8%	-7%	-25%	-442	-366	-2,565	-41	-34	-240
Central America/Caribbean - Europe	International	-2%	0%	-20%	14	-13	-657	5	-5	-239
Central America/Caribbean - North America	International	5%	4%	-18%	608	263	-3,799	146	63	-909
Central America/Caribbean - South America	International	5%	10%	-24%	120	100	-545	47	39	-214
China	Domestic	-13%	-76%	-62%	-10,181	-48,337	-39,169	-693	-3,291	-2,667
China - Europe	International	-4%	-54%	-75%	-63	-995	-1,620	-25	-391	-636
China - Middle East	International	5%	-57%	-77%	28	-353	-519	14	-176	-259
China - North America	International	3%	-45%	-66%	42	-702	-1,133	23	-377	-608
China & South West Asia - North Asia	International	-1%	-44%	-84%	-124	-3,516	-6,072	-40	-1,134	-1,958
China & South West Asia - Pacific South East Asia	International	-2%	-47%	-72%	-373	-5,788	-8,410	-93	-1,449	-2,106
Europe	Domestic	-11%	-13%	-42%	-2,273	-3,436	-16,273	-327	-494	-2,340
Europe - Middle East	International	-11%	-11%	-48%	-705	-859	-5,074	-173	-210	-1,244

Estimated results by route group for Jan/Feb 2020 (compared to originally-planned)

Route Group	DOM/INT	Seat capacity			Scheduled passenger (thousand)			Gross revenue (USD, million)		
		Jan 2020	Feb 2020	Mar 2020	Jan 2020	Feb 2020	Mar 2020*	Jan 2020	Feb 2020	Mar 2020*
Europe - North Africa	International	0%	1%	-38%	39	-27	-2,013	5	-4	-280
Europe - North America	International	3%	3%	-36%	296	109	-3,532	88	32	-1,043
Europe - North Asia	International	-2%	-1%	-43%	-8	-66	-596	-4	-35	-312
Europe - Pacific South East Asia	International	-13%	-10%	-21%	-221	-278	-754	-91	-115	-311
Europe - South America	International	-8%	-8%	-39%	-73	-107	-794	-34	-51	-376
Europe - South West Asia	International	-15%	-14%	-46%	-270	-353	-1,206	-69	-91	-309
Europe - Sub Saharan Africa	International	-9%	-10%	-35%	-137	-188	-1,017	-47	-65	-353
Intra Africa	International	-10%	-11%	-44%	-294	-380	-1,696	-61	-78	-350
Intra Central America/Caribbean	International	4%	4%	-26%	122	43	-667	18	6	-96
Intra China & South West Asia	International	-10%	-61%	-79%	-548	-3,099	-4,128	-105	-591	-787
Intra Europe	International	-7%	-8%	-49%	-2,619	-4,315	-33,320	-317	-523	-4,036
Intra Middle East	International	-6%	-6%	-68%	-268	-248	-3,221	-40	-37	-480
Intra North America	International	3%	3%	-24%	108	21	-1,400	19	4	-248
Intra North Asia	International	-2%	-3%	-79%	-36	-224	-1,104	-4	-24	-119
Intra Pacific South East Asia	International	-1%	-6%	-46%	-165	-1,640	-5,135	-36	-360	-1,129
Intra South America	International	-10%	-7%	-40%	-104	-122	-995	-40	-47	-385
Latin America/Caribbean - China	International	5%	-	-	0	0	0	0	0	0
Latin America/Caribbean - North Asia & Pacific South East Asia	International	3%	0%	-18%	3	-9	-33	2	-8	-29
Middle East	Domestic	-11%	-6%	-45%	-220	-206	-2,178	-23	-21	-225
Middle East - North America	International	2%	3%	-27%	22	13	-408	12	7	-222

Estimated results by route group for Jan/Feb 2020 (compared to originally-planned)

Route Group	DOM/INT	Seat capacity			Scheduled passenger (thousand)			Gross revenue (USD, million)		
		Jan 2020	Feb 2020	Mar 2020	Jan 2020	Feb 2020	Mar 2020*	Jan 2020	Feb 2020	Mar 2020*
Middle East - North Asia & Pacific South East Asia	International	-2%	-2%	-36%	-57	-358	-1,467	-22	-136	-557
Middle East - South West Asia	International	-3%	-2%	-44%	-202	-679	-3,158	-40	-136	-630
North America	Domestic	5%	5%	-7%	4,856	4,268	-27,162	626	551	-3,504
North America - North Asia	International	5%	5%	-24%	64	-101	-637	38	-59	-374
North America - Pacific South East Asia	International	4%	6%	-18%	29	-52	-312	16	-28	-170
North America - South America	International	5%	5%	-23%	106	50	-623	49	23	-289
North America - South West Asia	International	4%	5%	-28%	7	-15	-98	4	-8	-53
North Asia	Domestic	-2%	-4%	-21%	-69	-1,202	-5,585	-5	-82	-380
North Asia - Pacific South East Asia	International	0%	-8%	-64%	-54	-1,071	-3,523	-20	-402	-1,322
Pacific South East Asia	Domestic	-11%	-11%	-33%	-2,645	-3,680	-15,360	-180	-251	-1,046
South America	Domestic	-10%	-10%	-41%	-1,591	-1,752	-9,571	-149	-164	-897
South West Asia	Domestic	-14%	-14%	-38%	-2,488	-2,480	-8,993	-169	-169	-612
Domestic		-6%	-21%	-32%	-15,501	-57,662	-129,115	-1,006	-4,003	-12,137
International		-4%	-13%	-49%	-4,889	-25,321	-102,004	-820	-6,473	-23,067
Total		-5%	-18%	-39%	-20,390	-82,983	-231,119	-1,826	-10,475	-35,204

*: Scenario 2 estimates

Estimated results by route group for Jan/Feb 2020 (compared to Jan/Feb 2019)

Route Group	DOM/INT	Seat capacity		Scheduld passenger (thousand)		Gross revenue (USD, million)	
		Jan 2020	Feb 2020	Jan 2020	Feb 2020	Jan 2020	Feb 2020
Africa	Domestic	5%	10%	140	129	14	13
Africa - Asia/Pacific	International	18%	-1%	66	-51	25	-19
Africa - Middle East	International	7%	10%	184	167	45	41
Africa - North America	International	8%	22%	16	27	6	10
Africa & Middle East - Central America/Caribbean	International	-	-100%	0	0	0	0
Africa & Middle East - South America	International	-6%	2%	-9	-13	-5	-7
Central America/Caribbean	Domestic	8%	12%	397	462	37	43
Central America/Caribbean - Europe	International	-3%	2%	6	18	2	7
Central America/Caribbean - North America	International	0%	4%	271	263	65	63
Central America/Caribbean - South America	International	4%	8%	103	87	40	34
China	Domestic	-4%	-73%	-4,949	-42,659	-337	-2,905
China - Europe	International	-2%	-51%	-21	-884	-8	-347
China - Middle East	International	6%	-56%	38	-350	19	-174
China - North America	International	-6%	-48%	-98	-785	-52	-421
China & South West Asia - North Asia	International	22%	-32%	1,234	-2,340	398	-754
China & South West Asia - Pacific South East Asia	International	7%	-46%	644	-5,374	161	-1,346
Europe	Domestic	-4%	-3%	-409	-867	-59	-125
Europe - Middle East	International	-7%	-6%	-392	-399	-96	-98

Estimated results by route group for Jan/Feb 2020 (compared to Jan/Feb 2019)

Route Group	DOM/INT	Seat capacity		Scheduld passenger (thousand)		Gross revenue (USD, million)	
		Jan 2020	Feb 2020	Jan 2020	Feb 2020	Jan 2020	Feb 2020
Europe - North Africa	International	-1%	6%	44	142	6	20
Europe - North America	International	-3%	2%	-19	85	-6	25
Europe - North Asia	International	-2%	1%	-11	-49	-6	-25
Europe - Pacific South East Asia	International	-5%	-4%	-62	-156	-26	-64
Europe - South America	International	-5%	-2%	-27	-32	-13	-15
Europe - South West Asia	International	-23%	-19%	-457	-459	-117	-118
Europe - Sub Saharan Africa	International	-11%	-8%	-168	-145	-58	-50
Intra Africa	International	2%	5%	26	-11	5	-2
Intra Central America/Caribbean	International	1%	4%	82	50	12	7
Intra China & South West Asia	International	-2%	-57%	-112	-2,670	-21	-509
Intra Europe	International	-6%	-1%	-1,325	-764	-160	-93
Intra Middle East	International	-2%	0%	-85	-15	-13	-2
Intra North America	International	-4%	-1%	-80	-60	-14	-11
Intra North Asia	International	-32%	-31%	-623	-714	-67	-77
Intra Pacific South East Asia	International	7%	2%	531	-1,057	117	-232
Intra South America	International	-9%	-4%	-93	-54	-36	-21
Latin America/Caribbean - China	International	-66%	-100%	-6	-8	-4	-6
Latin America/Caribbean - North Asia & Pacific South East Asia	International	3%	1%	3	-8	3	-7

Estimated results by route group for Jan/Feb 2020 (compared to Jan/Feb 2019)

Route Group	DOM/INT	Seat capacity		Scheduld passenger (thousand)		Gross revenue (USD, million)	
		Jan 2020	Feb 2020	Jan 2020	Feb 2020	Jan 2020	Feb 2020
Middle East	Domestic	-7%	1%	-62	36	-6	4
Middle East - North America	International	5%	7%	45	41	24	22
Middle East - North Asia & Pacific South East Asia	International	0%	3%	-21	-229	-8	-87
Middle East - South West Asia	International	3%	9%	126	-168	25	-34
North America	Domestic	3%	6%	3,765	5,242	486	676
North America - North Asia	International	4%	5%	47	-99	28	-58
North America - Pacific South East Asia	International	6%	13%	50	-7	27	-4
North America - South America	International	-8%	-3%	-81	-41	-37	-19
North America - South West Asia	International	20%	24%	35	14	19	7
North Asia	Domestic	6%	6%	776	-128	53	-9
North Asia - Pacific South East Asia	International	16%	9%	671	-359	252	-135
Pacific South East Asia	Domestic	6%	8%	1,781	999	121	68
South America	Domestic	2%	4%	580	475	54	44
South West Asia	Domestic	1%	7%	109	694	7	47
Domestic		1%	-13%	2,128	-35,619	371	-2,142
International		-1%	-8%	529	-16,404	529	-4,500
Total		0%	-11%	2,657	-52,023	900	-6,642



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