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

Montréal, Canada

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**Air Transport Bureau**



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## Executive Summary: Economic Impact in Brief

Previous two (2) scenarios and six (6) different paths were restructured with new two (2) scenarios and four (4) different paths for scheduled passenger traffic till December 2020.

Figures and estimates herein are **subject to substantial changes**, and will be updated with the situation evolving and more information available.

The latest estimates indicate that the possible COVID-19 impact on world scheduled passenger traffic for the full year 2020, compared to Baseline (business as usual, originally-planned), would be:

- Overall reduction ranging from **42% to 52% of seats offered by airlines**
- Overall reduction of **2,344 to 2,978 million passengers**
- Approx. **USD 308 to 391 billion potential loss** of gross operating revenues of airlines

The impacts depend on duration and magnitude of the outbreak and containment measures, the degree of consumer confidence for air travel, and economic conditions, etc.

## **International passenger traffic** for 2020, compared to Baseline

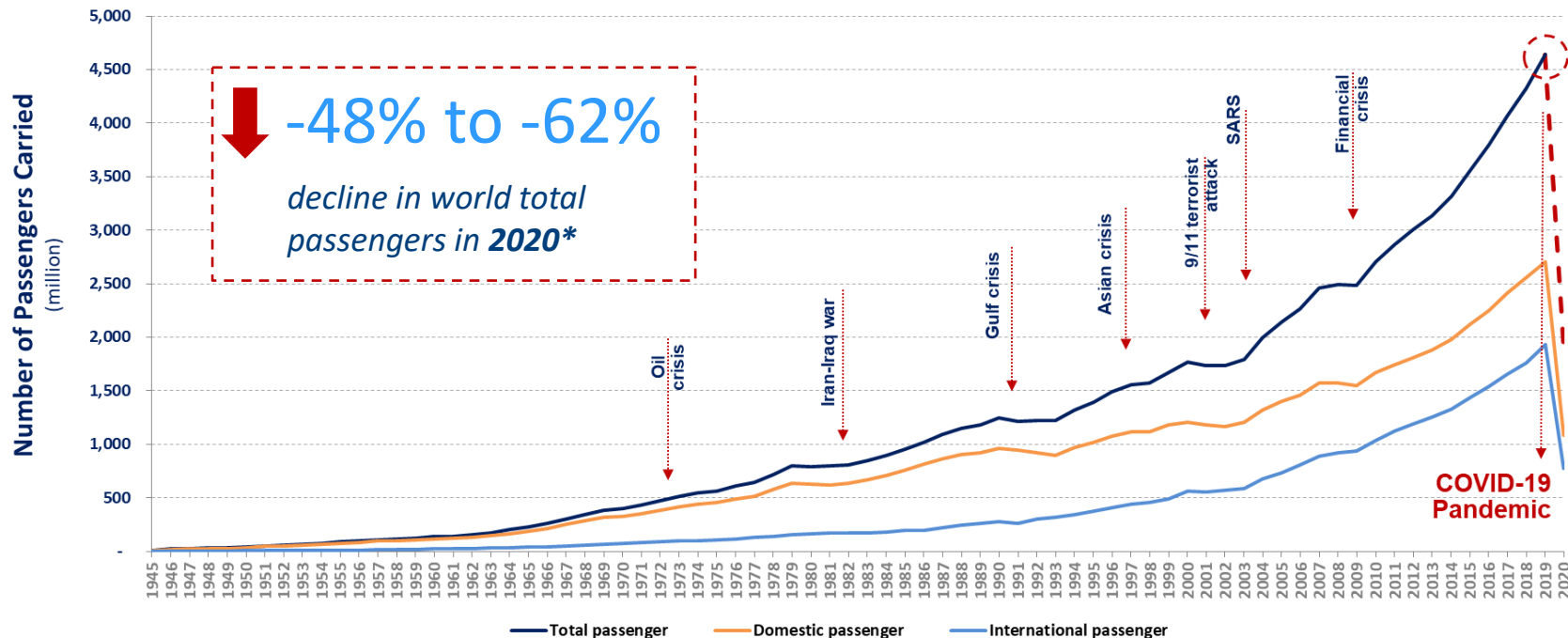
- Overall reduction ranging from **55% to 67% of seats offered by airlines**
- Overall reduction of **1,194 to 1,457 million passengers**
- Approx. **USD 207 to 256 billion potential loss** of gross operating revenues of airlines

## **Domestic passenger traffic** for 2020, compared to Baseline

- Overall reduction ranging from **32% to 42% of seats offered by airlines**
- Overall reduction of **1,150 to 1,524 million passengers**
- Approx. **USD 101 to 135 billion potential loss** of gross operating revenues of airlines

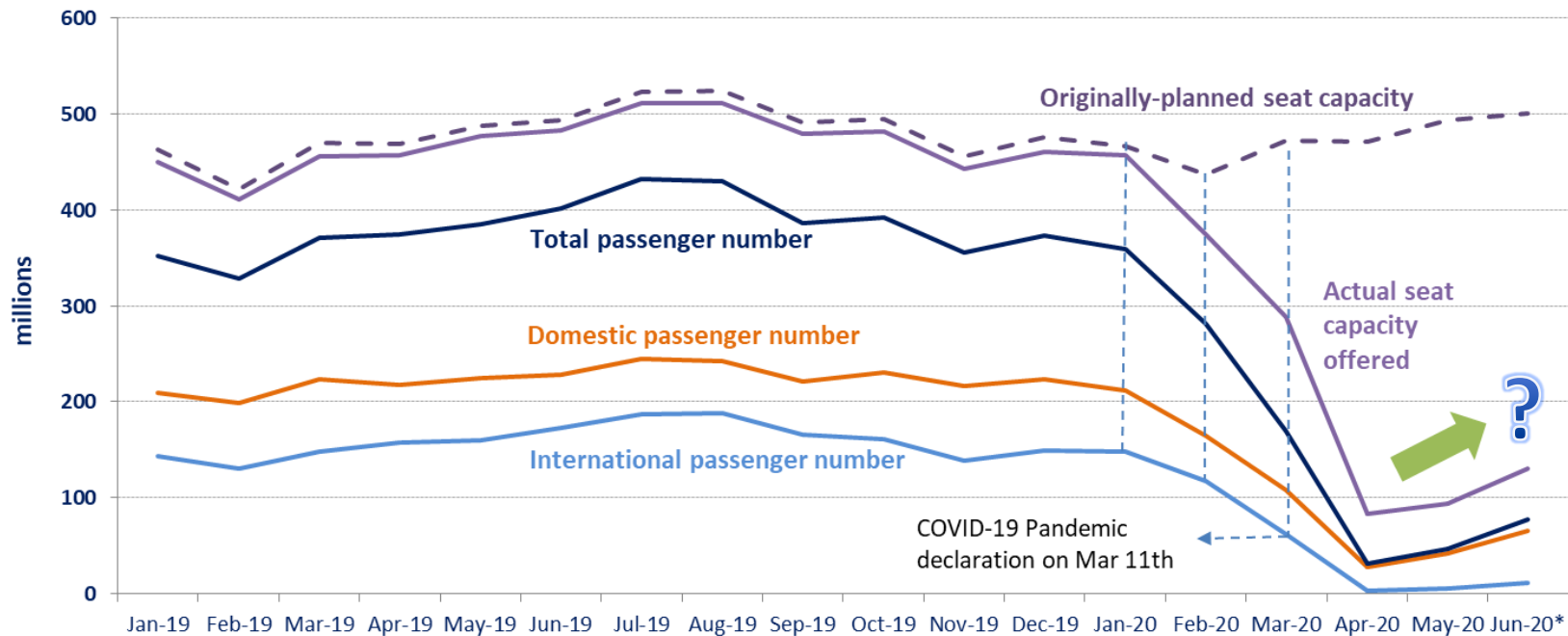
# World passenger traffic collapses with unprecedented decline in history

## World passenger traffic evolution 1945 – 2020\*

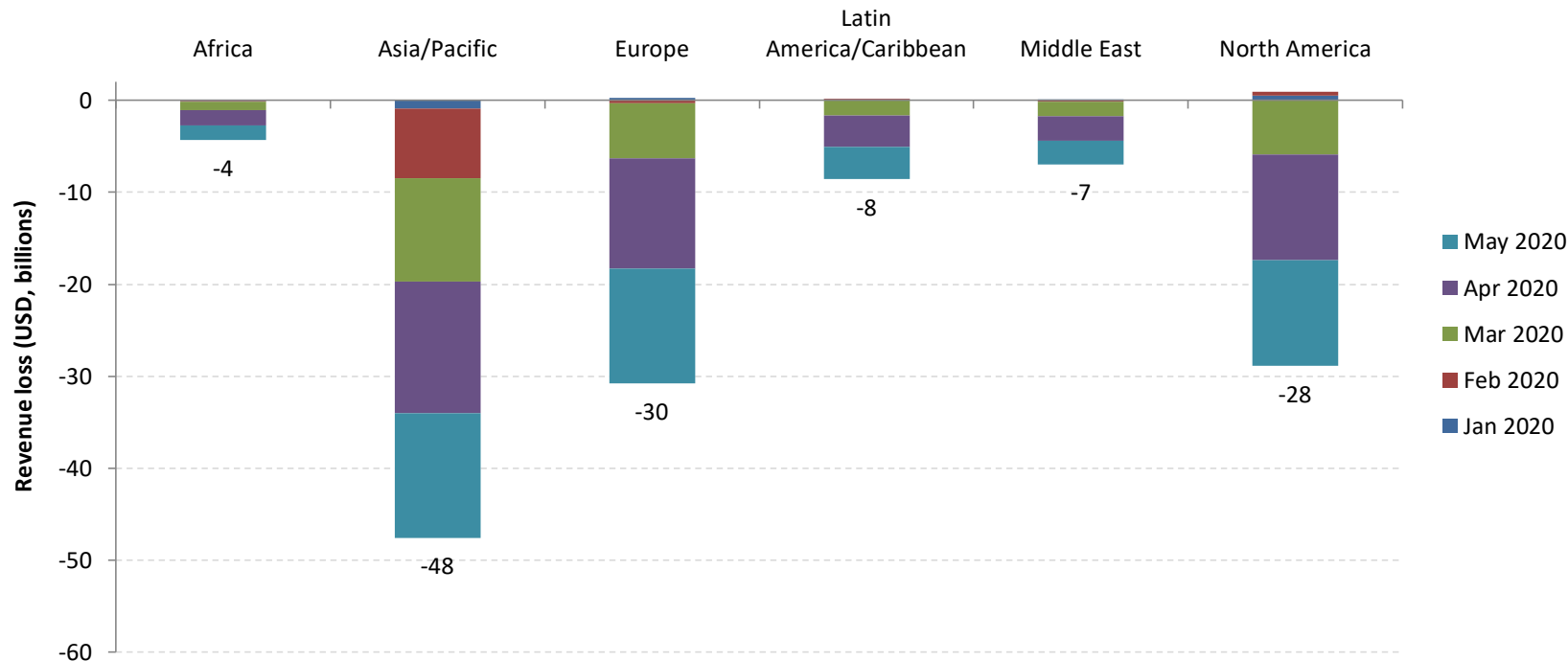


# Drastic capacity cut along with dramatic drop in demand

## Comparison of passenger numbers and capacity (Green shoot recovery for domestic while international remains stagnant)



# Approximately USD 126 billion passenger revenue loss from Jan to May 2020

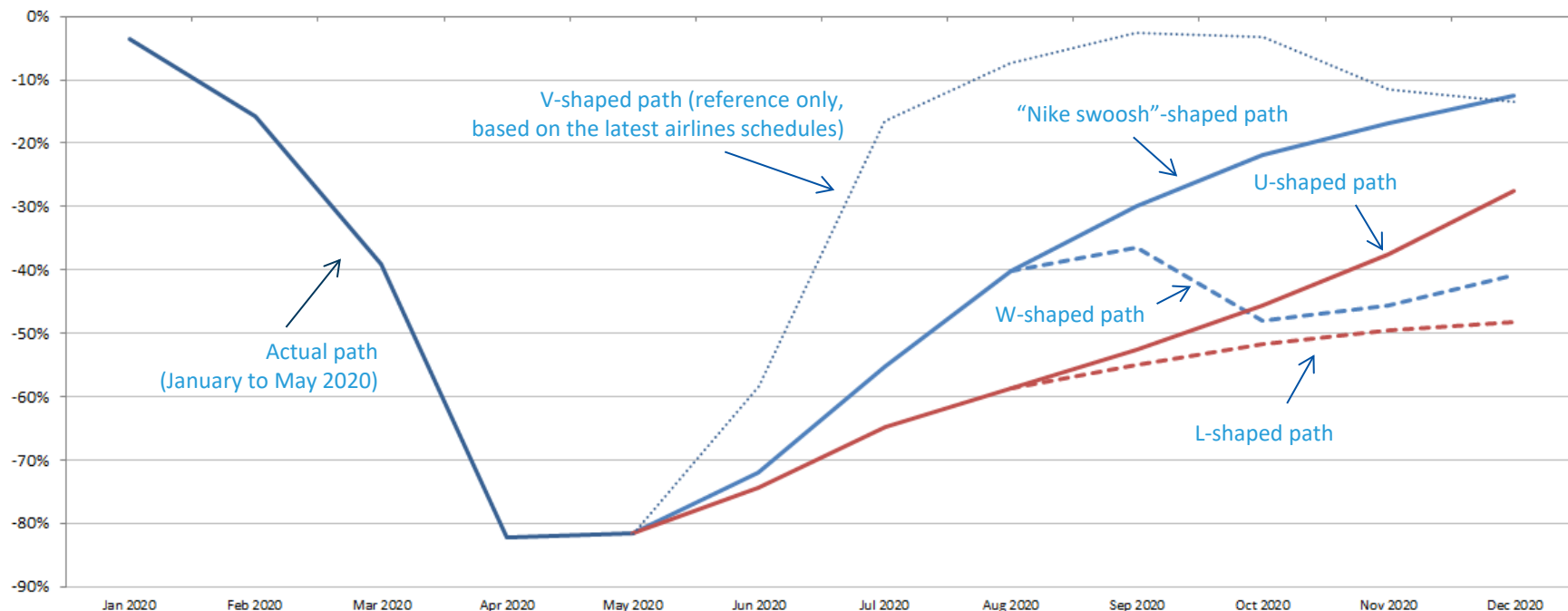


Note: Compared to Baseline (business as usual, originally-planned)

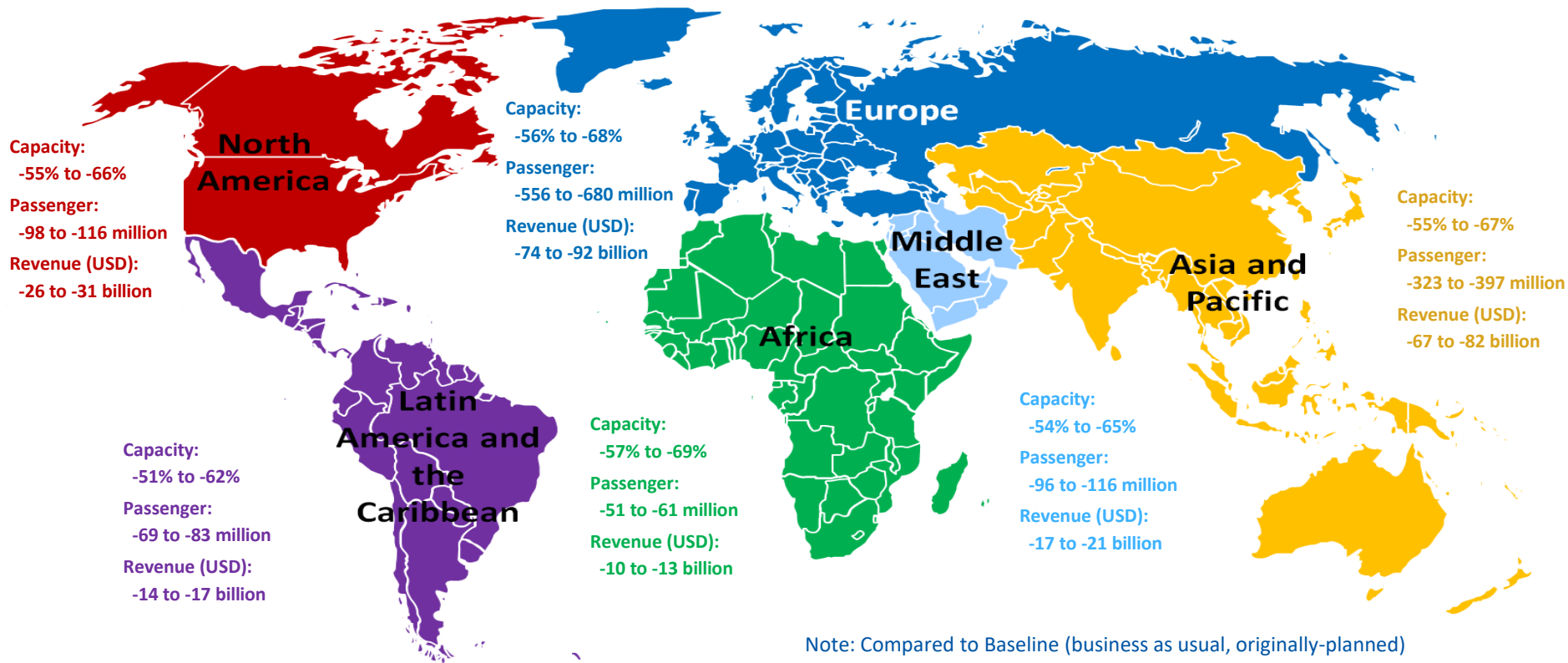


**Due to extreme uncertainty,  
4 different paths are considered**

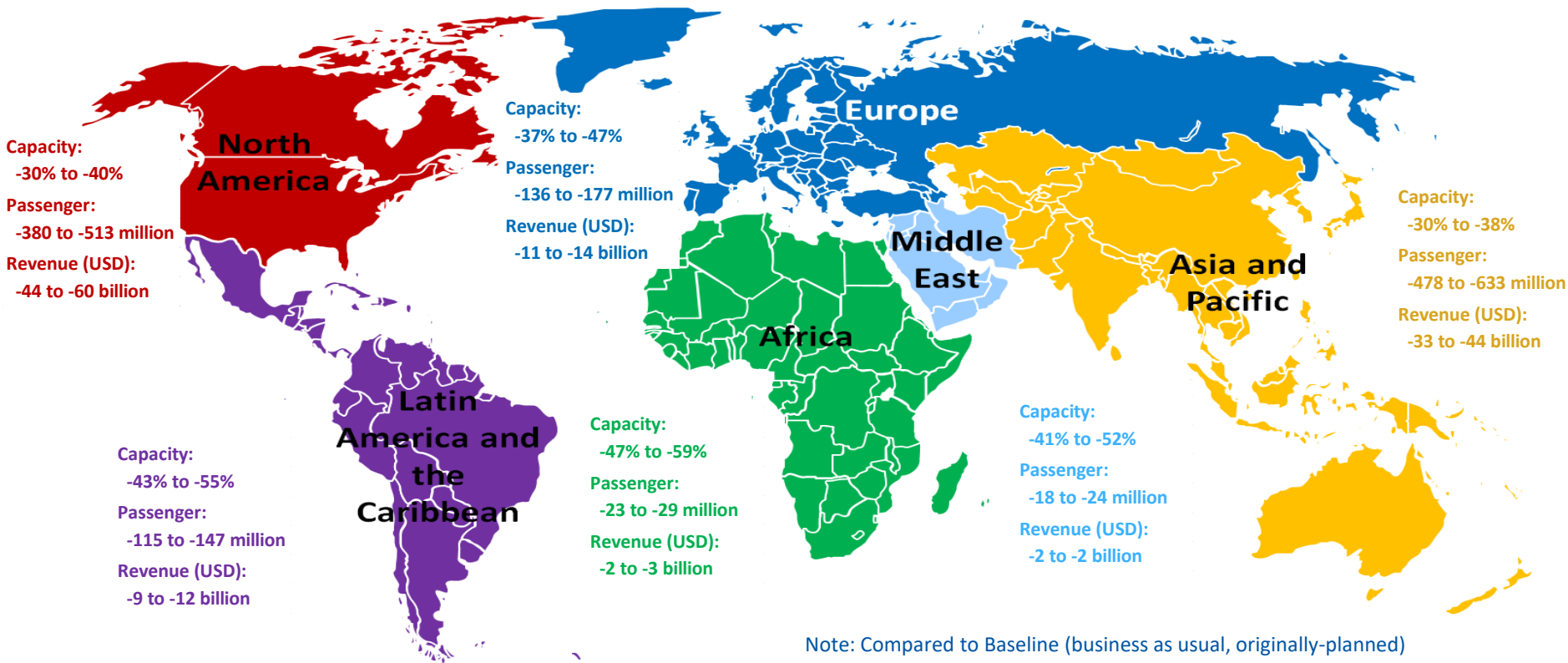
## Scenarios for passenger seat capacity compared to Baseline (business as usual)



# Estimated impact on international passenger traffic and revenues by region for 2020



# Estimated impact on domestic passenger traffic and revenues by region for 2020





## Global impact of COVID-19 on aviation, tourism, trade and economy

- **Air passenger traffic**: An overall reduction of air passengers (both international and domestic) ranging from 48% to 62% in 2020 compared to 2019 (by **ICAO**)
- **Airports**: An estimated loss of over 50% of passenger traffic and 57% or over USD 97 billion airport revenues in 2020 compared to business as usual (by **ACI**)
- **Airlines**: A 54.7% decline of revenue passenger kilometres (RPKs, both international and domestic) in 2020 compared to 2019 (by **IATA**)
- **Tourism**: A decline in international tourism receipts of between USD 910 to 1,170 billion in 2020, compared to the USD 1.5 trillion generated in 2019, with 100% of worldwide destinations having travel restrictions (by **UNWTO**)
- **Trade**: A fall of global merchandise trade volume by between 13% and 32% in 2020 compared to 2019 (by **WTO**)
- **Global economy**: A projected -3% to -5.2% contraction in world GDP in 2020, far worse than during the 2008–09 financial crisis (by **IMF and World Bank**)



## Scenario Building

Previous two (2) scenarios and six (6) different paths were restructured with new two (2) scenarios and four (4) different paths for scheduled passenger traffic till December 2020.

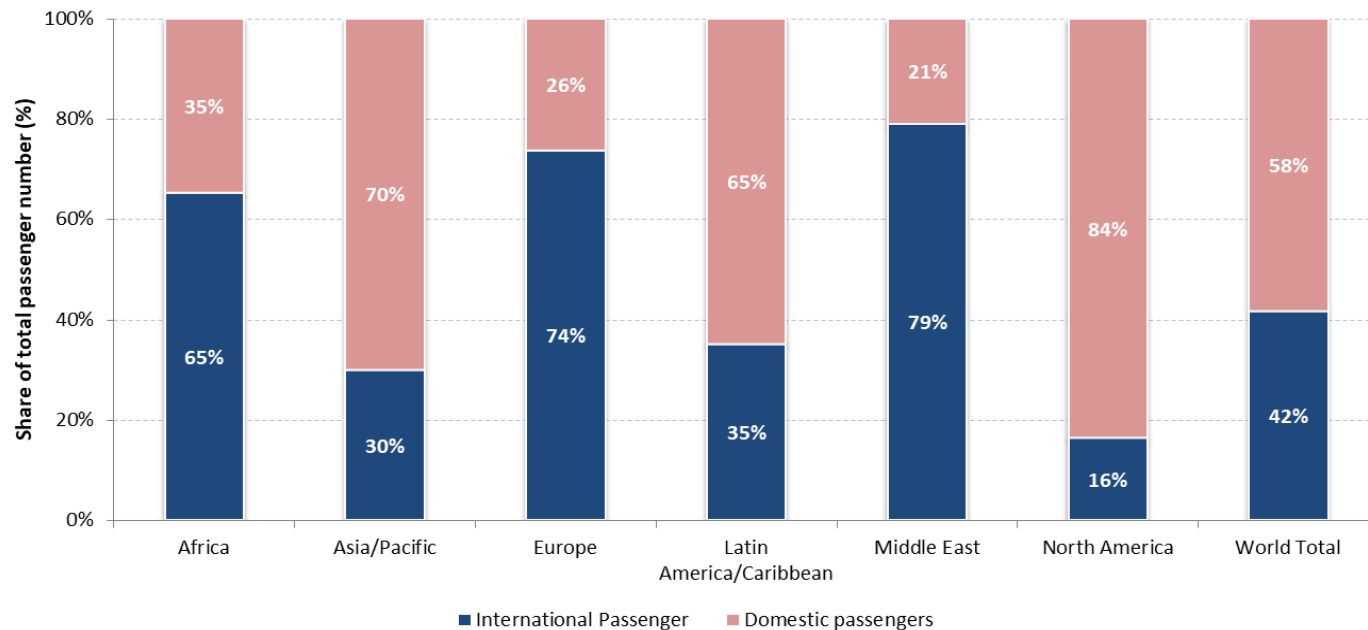
- Analysis focuses on simultaneous supply shock and drop in demand
  - in a near-term, i.e. monthly profile **from January to December 2020**
  - in terms of scheduled **passenger traffic** globally
- Taking into account the heterogeneity, distinction is made:
  - between international and domestic
  - by six (6) geographical region and/or 50 route groups used in ICAO's long-term traffic forecasts (LTF)
- Analysis is based on forward-looking scenarios, which will be continuously adjusted and updated

## Analytical Consideration

- Geographical disparity of international-domestic passenger traffic mix
- Difference in market size among regions
- Potential difference in resilience and speed of recovery
- Outbreak timing that impacts when traffic would bottom out
- Gap between what is scheduled and actual operations

## International-domestic passenger traffic mix exhibits significant geographical disparity

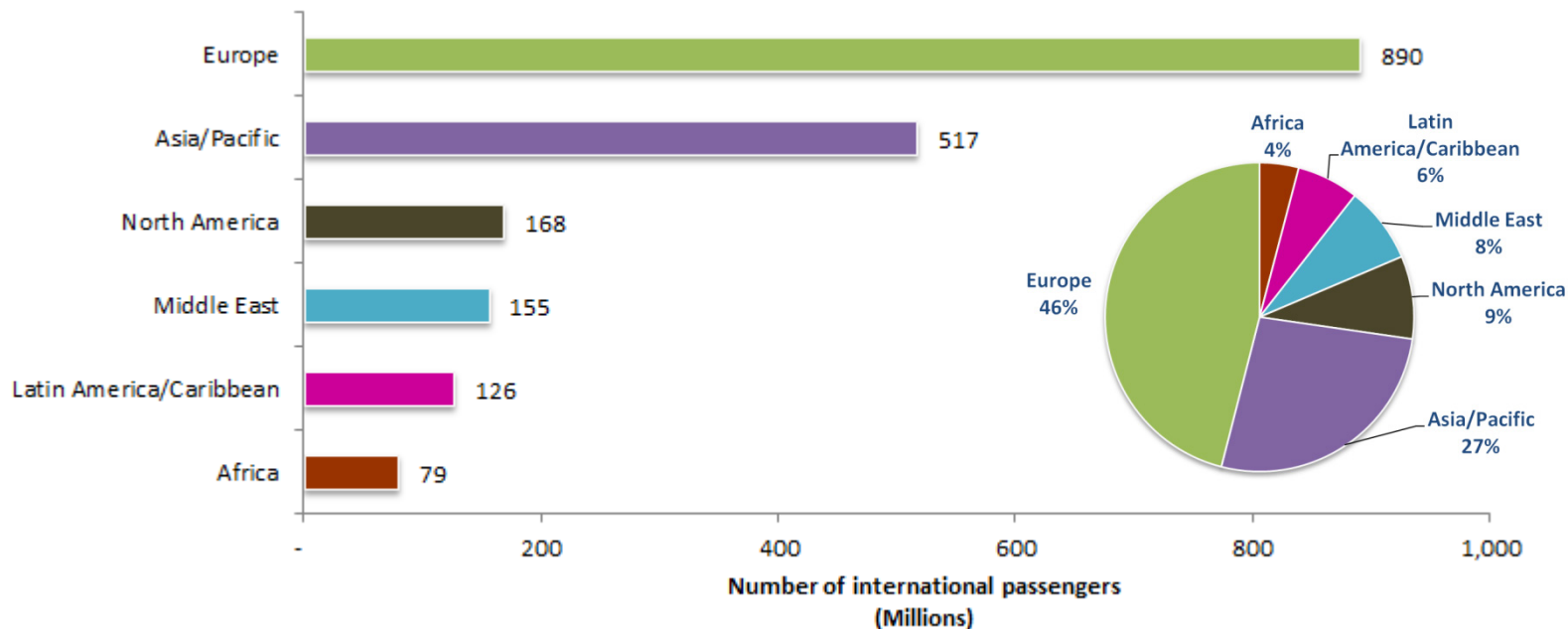
### Share of international-domestic passenger traffic by region (2019)





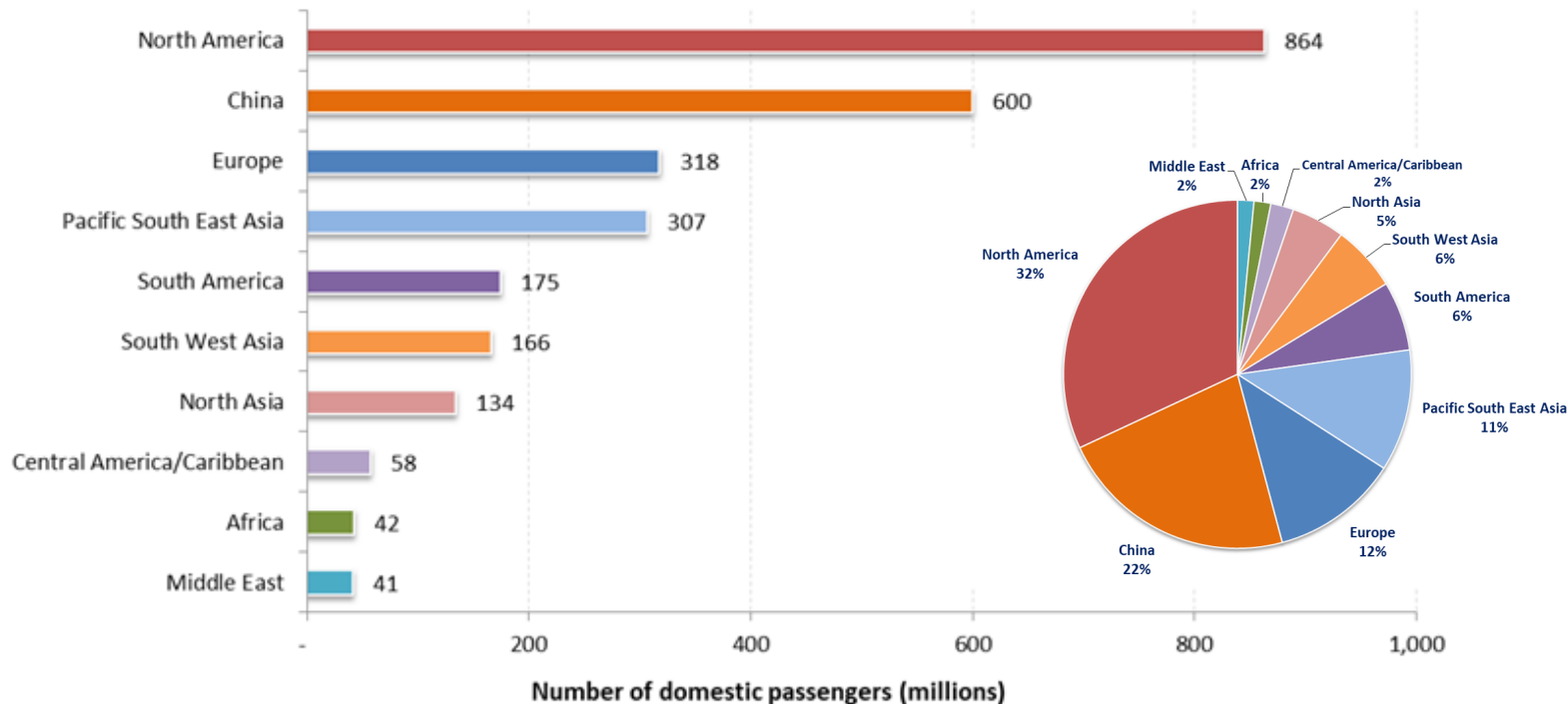
**Europe and Asia/Pacific accounted for over 70% of the world international traffic pre-COVID-19**

## Number of International Passengers by Region (2019, based on from/to State)



# North America and China account for over half of world domestic passenger traffic

## Number of Domestic Passengers by Route Group (2019)



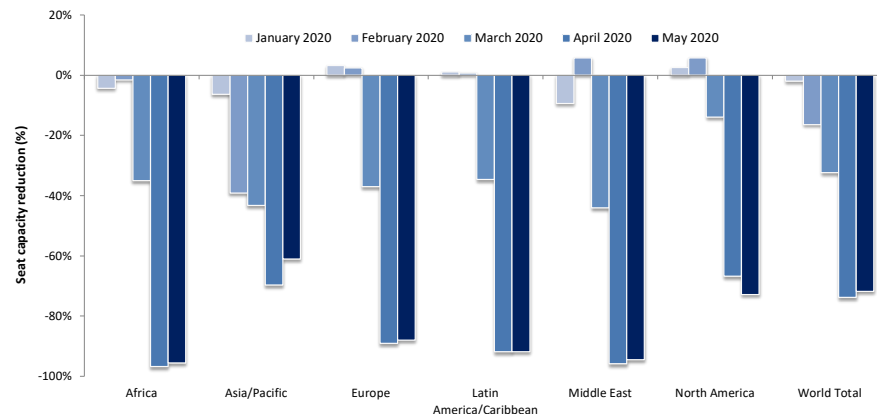
# Domestic passenger traffic may be more resilient than international in some markets

**Asia/Pacific and North America have experienced 20% to 25% less decline in domestic passenger traffic than international**

**International seat capacity reduction  
(compared to baseline)**

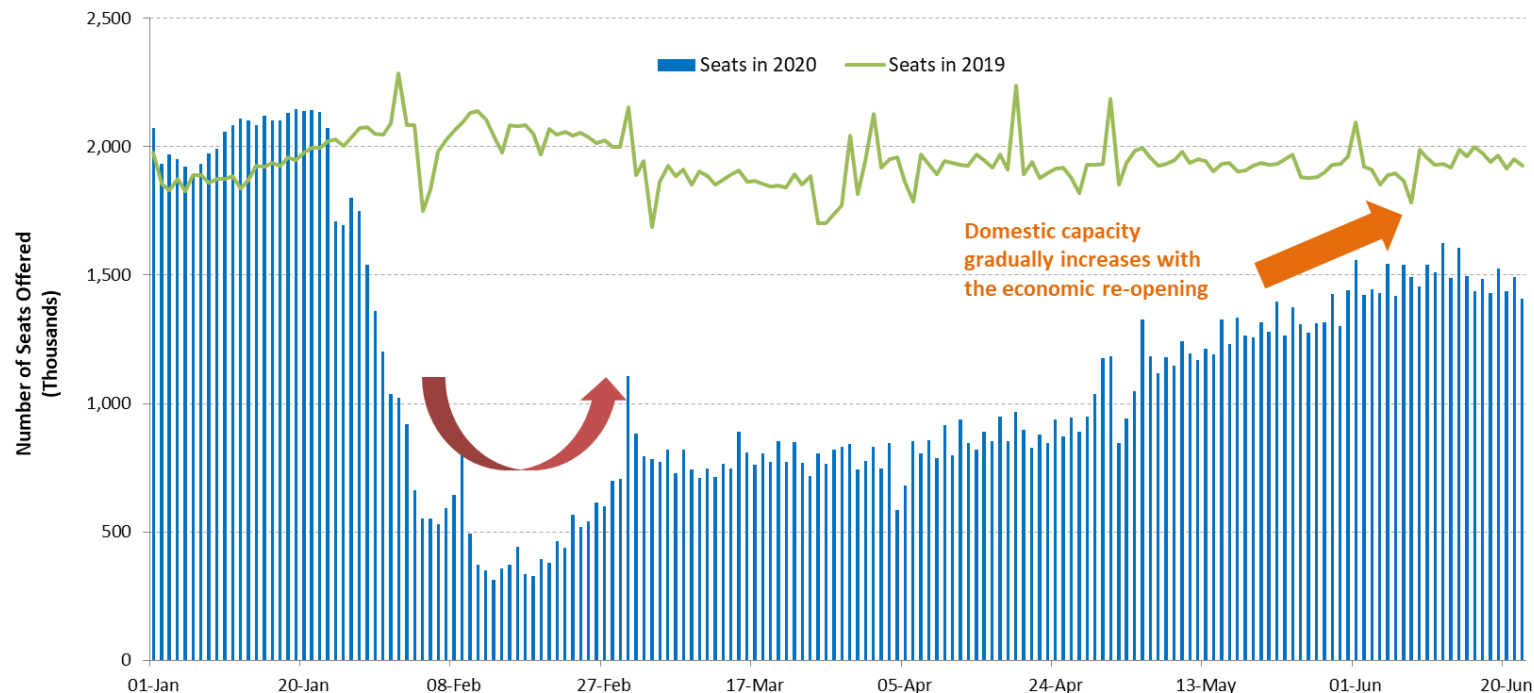


**Domestic seat capacity reduction  
(compared to baseline)**



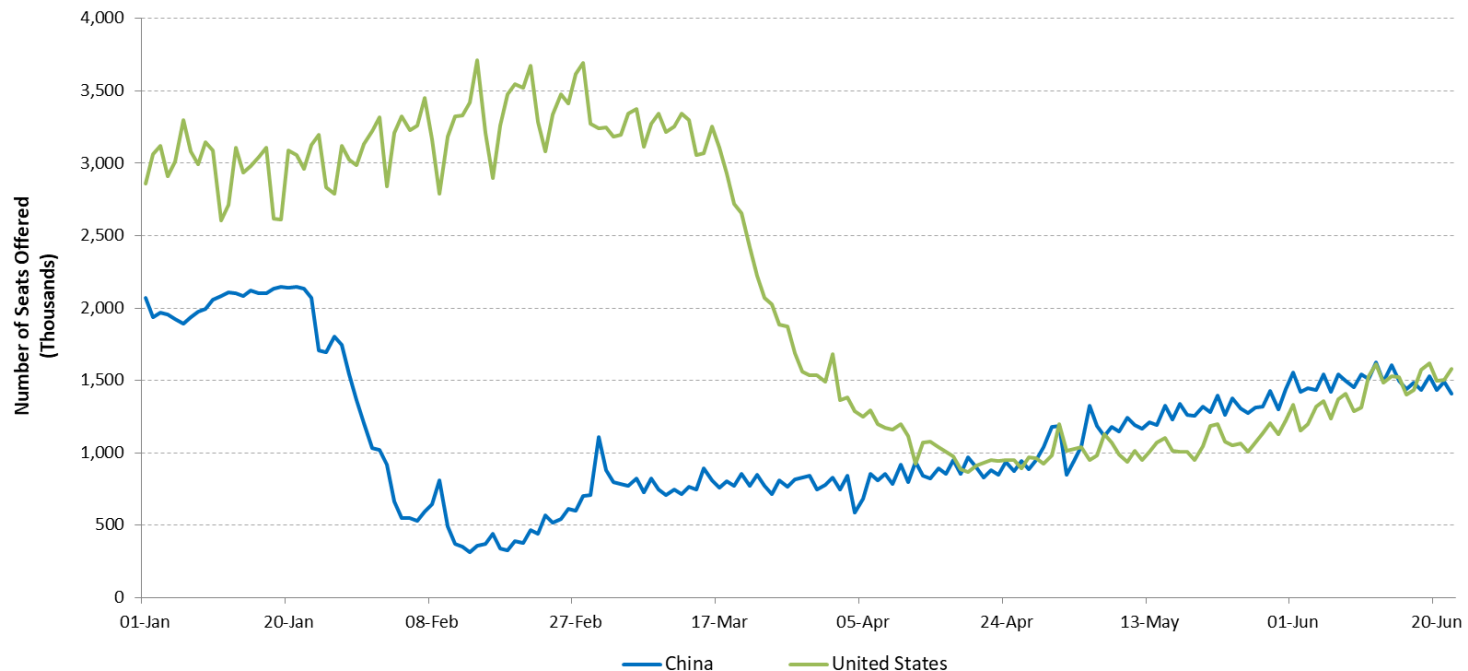
# Domestic passenger traffic may recover ahead of international

**Domestic passenger traffic in China already bottomed out in mid-February, and capacity offered in June was recovered to around 78% of last year**



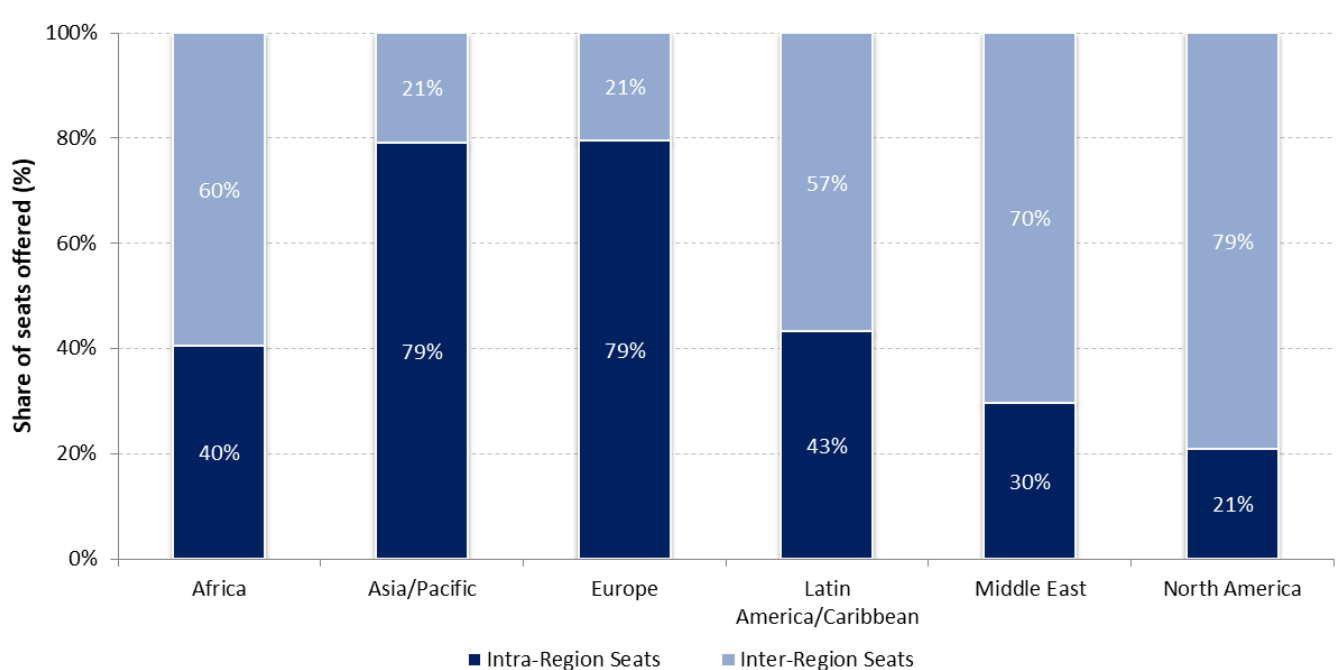
**The outbreak timing impacts when domestic traffic would bottom out in each region**

## Capacity evolution of two largest domestic markets China and United States since January 2020



**Regions with higher share of intra-region traffic are expected to recover faster**

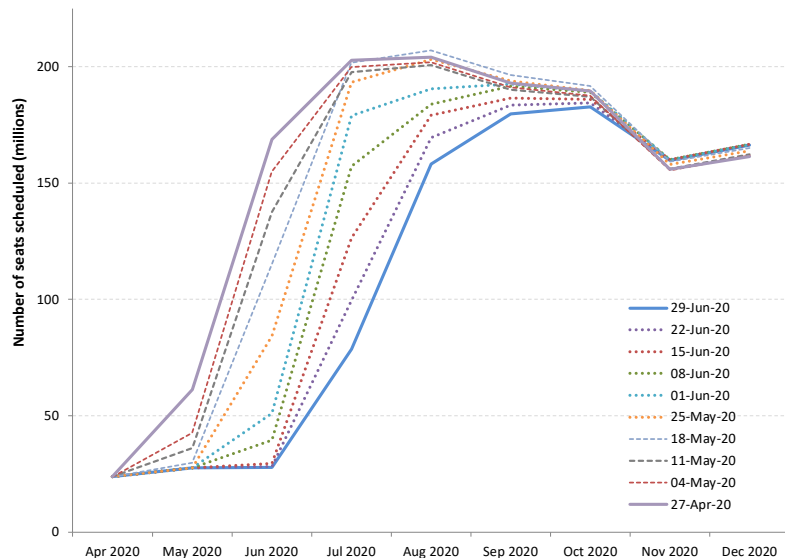
**Almost 80% of international seats offered in Asia/Pacific and Europe were for intra-regional traffic (2019)**



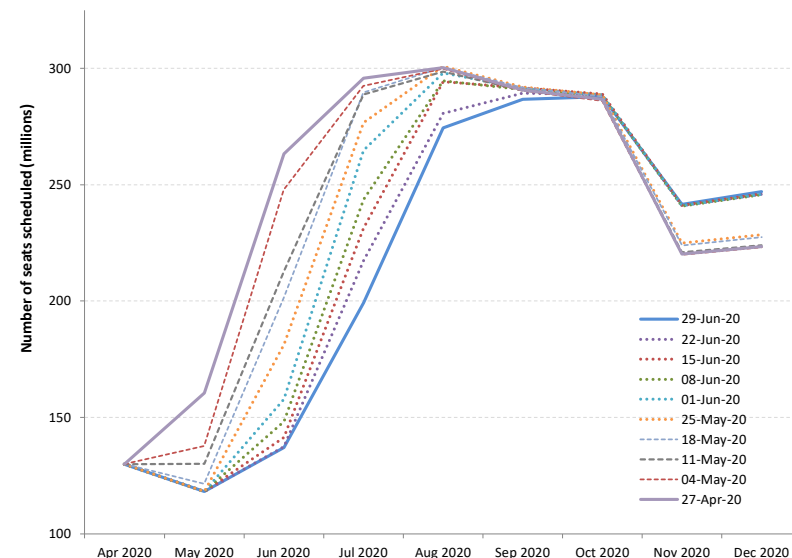
# A gap exists between what is scheduled and actual operations

Airlines announced/planned resumption of flights in early May, however, over half of which were subsequently withdrawn

International schedules



Domestic schedules



## Shapes of Economic Recession and Recovery

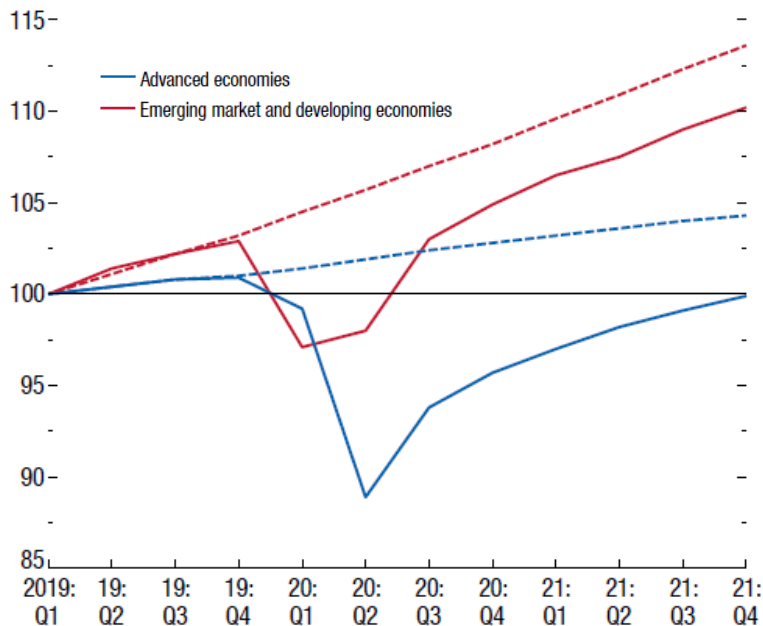
Informal classification to describe different types of recessions:

- **V-shaped**: normal shape for recession, a brief period of sharp economic decline followed by quick/smooth recovery
- **U-shaped**: prolonged contraction and muted recovery to trend line growth
- **L-shaped (depression)**: long-term downturn in economic activity, steep drop followed by a flat line with possibility of not returning to trend line growth
- **W-shaped**: a double-dip recession, “down up down up” pattern before full recovery
- **“Nike swoosh”-shaped\***: bounce back sharply but blunt quickly (\* Brookings Institution/WEF)



## What “recession shape” can be assumed given uncertainties surrounding the outlook?

World's GDP Projections (by IMF)



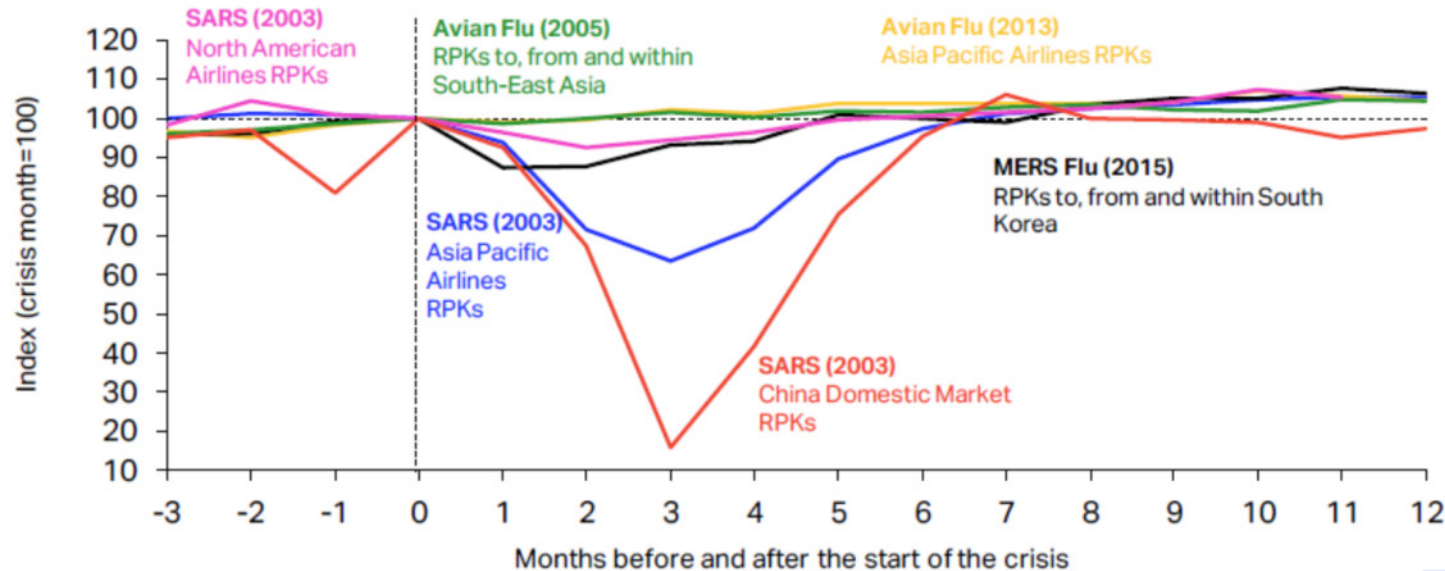
(2019:Q1 = 100; dashed lines indicate estimates from January 2020 World Economic Outlook Update)

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

- How long will the pandemic last and what will be the severity levels?
- How deep and how long will the global recession be?
- How long will lockdowns and travel restrictions continue?
- How fast will consumer confidence in air travel be restored?
- Will there be a structural shift in industry and consumers' behaviors?
- How long can the air transport industry withstand the financial adversity?

## Previous outbreaks/pandemics had a V-shaped impact on air transport in Asia/Pacific

Impact of past disease outbreaks on aviation



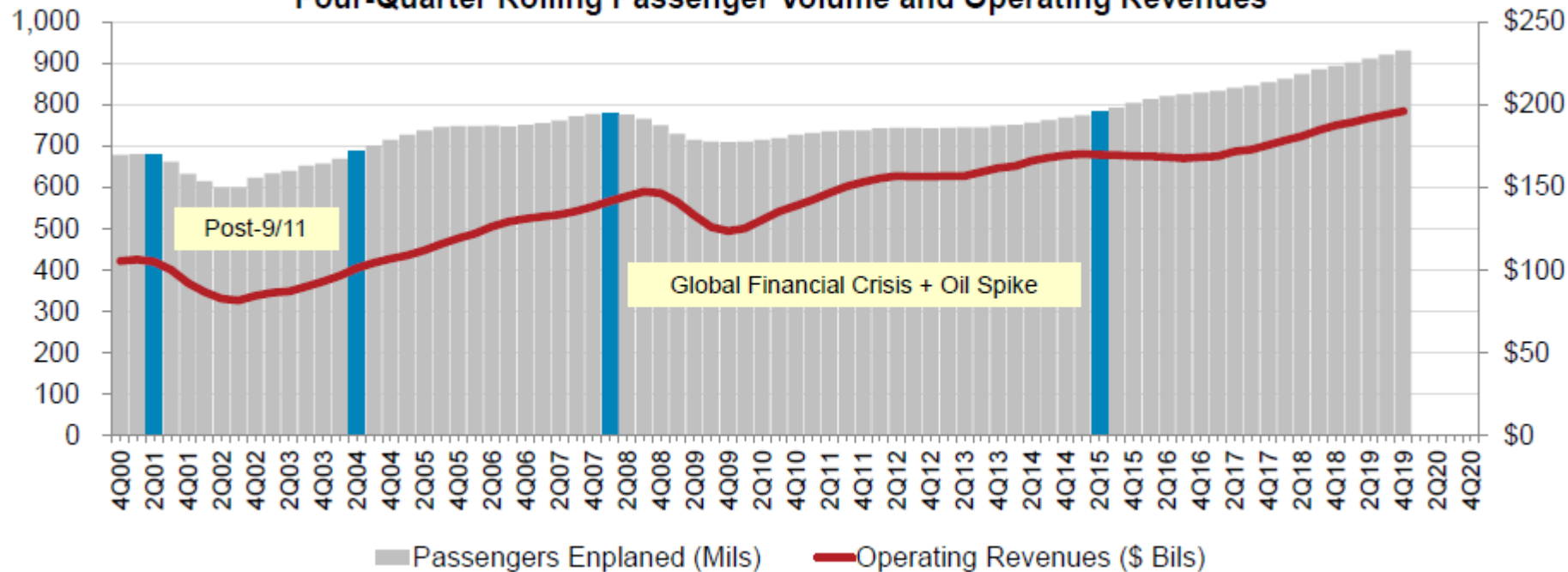
The impact of COVID-19 has already surpassed the 2003 SARS outbreak which had resulted in reduction of annual RPKs by 8% and USD 6 billion revenues for Asia/Pacific airlines. **The 6-month recovery path of SARS might not apply to today's situation.**

Source: IATA Economics using data from IATA Statistics

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

# 9/11 and global financial crisis had a U/L-shaped impact on air transport in United States

## Four-Quarter Rolling Passenger Volume and Operating Revenues



\* Passengers enplaned systemwide on U.S. airlines in scheduled and nonscheduled services

Source: A4A Passenger Airline Cost Index and Bureau of Transportation Statistics (Form 41 Schedule T1)

<https://www.airlines.org/dataset/impact-of-covid19-data-updates/>

## Indicative Scenarios and Paths Forward

As overall severity and duration of the COVID-19 pandemic are still uncertain, four (4) different recovery paths under two (2) indicative scenarios are developed:

- **Baseline:** counterfactual scenario, in which the COVID-19 pandemic does not occur, that is, **originally-planned** or **business as usual**
- **Scenario 1:** two (2) different paths (similar to **Nike swoosh- and W-shaped**)
- **Scenario 2:** two (2) different paths (similar to **U- and L-shaped**)
- **Reference:** information only, based on latest airline schedules (similar to **V-shaped**)

- Notwithstanding the elevated uncertainty surrounding the outlook, a scenario analysis could help gauge potential economic implications of the COVID-19 pandemic
- Scenarios are **not forecasts** of what is most likely to happen. Given rapidly changing circumstances, they are merely indicative of **possible paths or consequential outcomes out of many**
- The exact path (depth, length and shape) will depend upon various factors, inter alia, duration and magnitude of the outbreak and containment measures, availability of government assistance, consumer confidence, and economic conditions
- With the situation evolving and more information available, scenarios will be adjusted as necessary

- International and domestic passenger traffic has separate scenarios/paths
- Scenarios/paths are differentiated in terms of supply and demand, i.e.
  - Scale of output or seat capacity change
  - Degree of consumer confidence that can be translated into demand or load factor as a proxy
- Supply and demand are influenced by:
  - Different timing and speed of recovery by region, international/domestic, and intra-/inter-region
  - Global economic contraction
- No consideration is made to social distancing requirements on aircraft, etc.
- Detailed scenario assumptions are summarized in **Appendix B**

- **Baseline: originally-planned or business as usual**
  - Counterfactual hypothesis that are expected to occur in the absence of COVID-19 pandemic
  - Supply: airlines' originally-planned schedules supplemented by trend line growth
  - Demand: trend line growth of demand from 2019 level
- **Reference: V-shaped**
  - Information-only scenario that reflects airlines' most recent expectation or a "signal" of airlines' plan to the market (not necessarily realistic)
  - Supply: based on latest update of airline schedules filed up to December, which are adjusted weekly by airlines according to the expectation of the evolving situation (quite often managing capacity for a short period due to the uncertainties)
  - Demand: quickly returning to Baseline level

## Scenario 1: Nike swoosh- and W-shaped

- International
  - **Path 1:** Smooth capacity recovery to two thirds of Baseline level by December with pent-up demand
  - **Path 1a:** Capacity to start with smooth recovery but then turn back down due to over-capacity
- Domestic
  - **Path 1:** Swift capacity rebound to 93% of Baseline by December pushed by pent-up demand
  - **Path 1a:** Capacity to start with smooth recovery but then turn back down due to over-capacity

## Scenario 2: U- and L-shaped

- International
  - **Path 2:** Slow progression of capacity recovery to 50%, picking up more demand in 4Q
  - **Path 2a:** Recovery to 30% at diminishing speed due to respite and continuous demand slump
- Domestic
  - **Path 2:** Gradual capacity recovery to 85%, picking up more demand in 4Q
  - **Path 2a:** Capacity recovery to two thirds at diminishing speed due to sluggish demand growth

In the following analysis, international and domestic scenarios having the same path number are linked with each other, although different combination of scenarios/paths would be possible





## Scenario Estimates

Figures and estimates herein are subject to substantial changes, and will be updated with the situation evolving and more information available.

- Three (3) key impact indicators under four (4) paths of two (2) scenarios:
  - Impact on passenger seat capacity (supply, % change)
  - Impact on passenger numbers (demand)
  - Impact on gross passenger operating revenues of airlines
- Comparison to:
  - Baseline scenario
  - 2019 level (year-on-year)
  - Reference scenario
- Break-down by:
  - International and domestic
  - Six (6) geographical regions

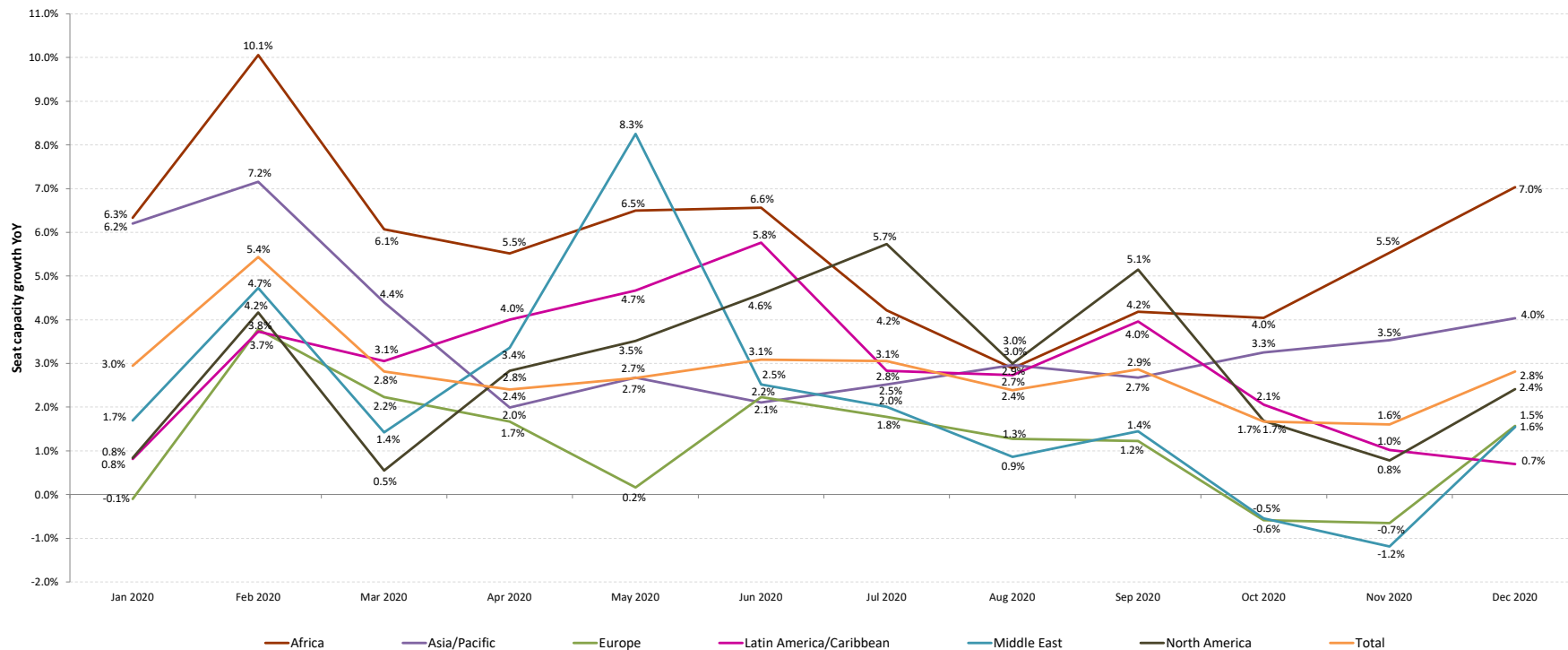
Estimation based on actual results of January to May 2020 are used for the key impact indicators.

**Appendix C** details the key impact indicators while **Appendix D** presents estimation based on actual results by route group.

## Impact on Passenger Seat Capacity (Supply)

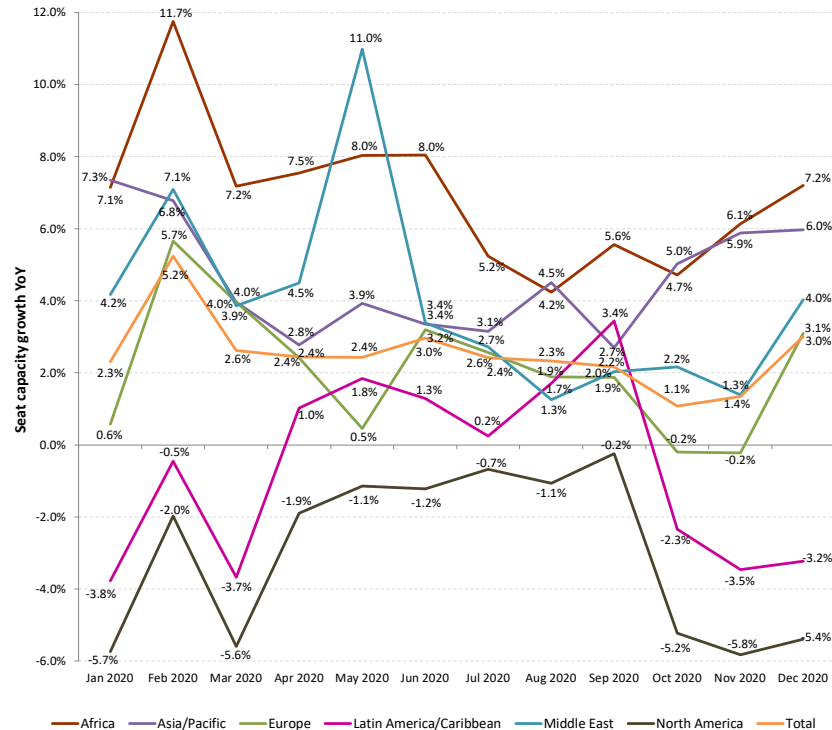
- Prior to the outbreak, airlines had planned to increase seat capacity in 2020 by **2.8%** (international by **2.5%** and domestic by **3.0%**), compared to 2019.
- According to the latest estimates, passenger seat capacity could instead drop from the above Baseline by **42% to 52%** (international by **55% to 67%** and domestic by **32% to 42%**).
- This capacity level would be **40% to 51%** (international **54% to 66%** and domestic **30% to 40%**) below the 2019 level.
- Biggest capacity reduction (%) is expected to be in Middle East, followed by Africa and Europe.

## International + Domestic (+2.8% YoY)

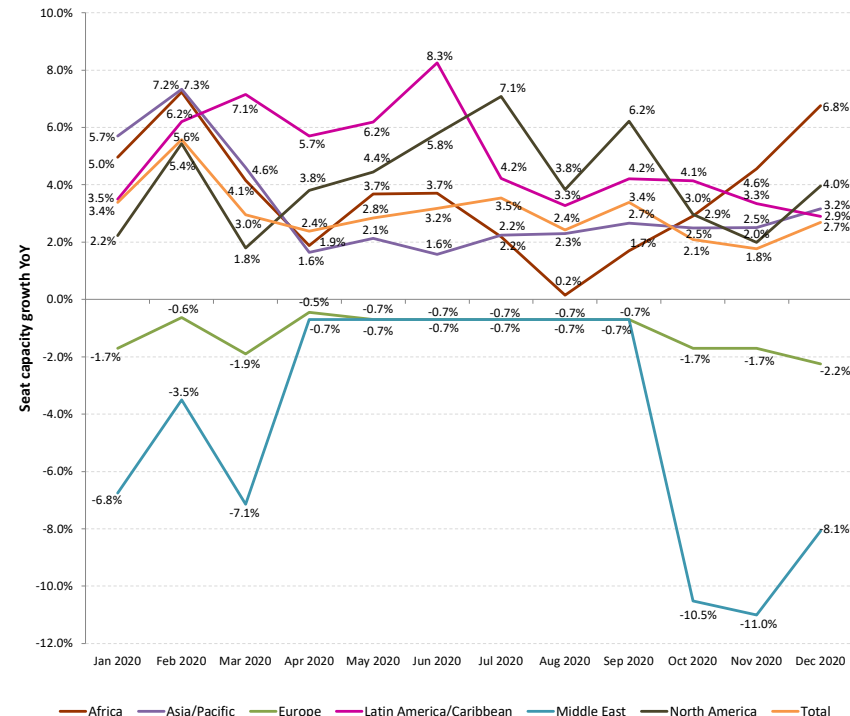


# Baseline seat capacity compared to 2019

## International (+2.5% YoY)



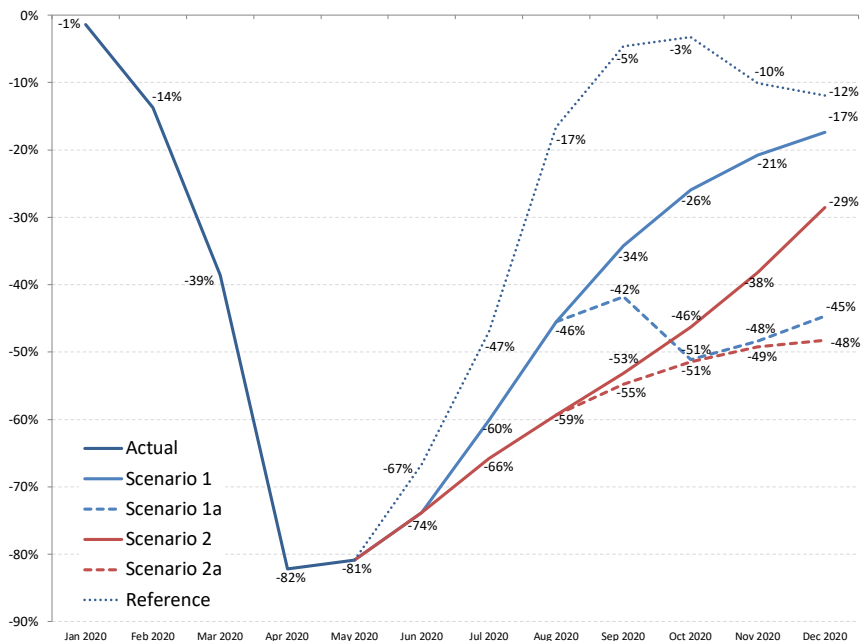
## Domestic (+3.0% YoY)



# Scenarios 1 & 2 (World total): Seat capacity change compared to Baseline & 2019

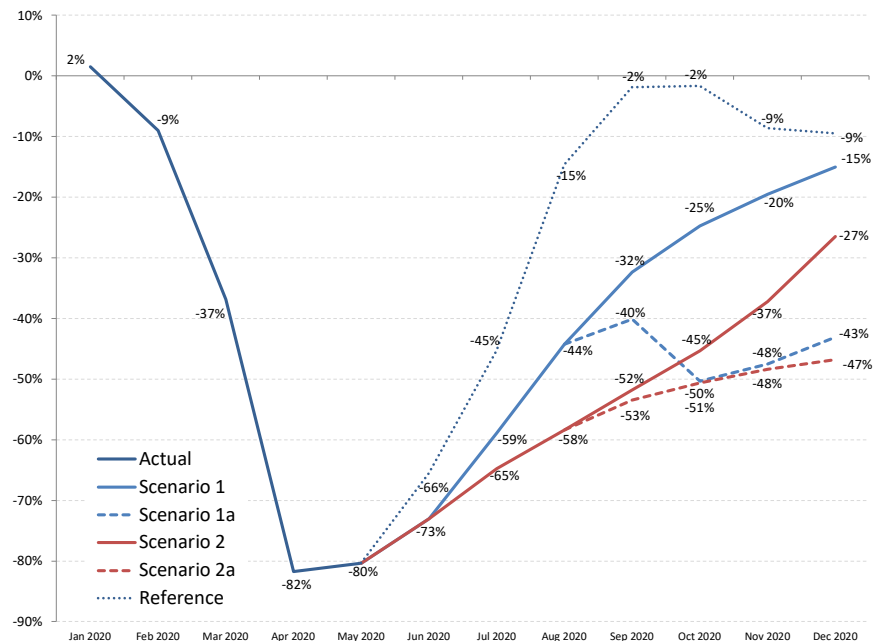
## International + Domestic

(-42% to -52% from Baseline)



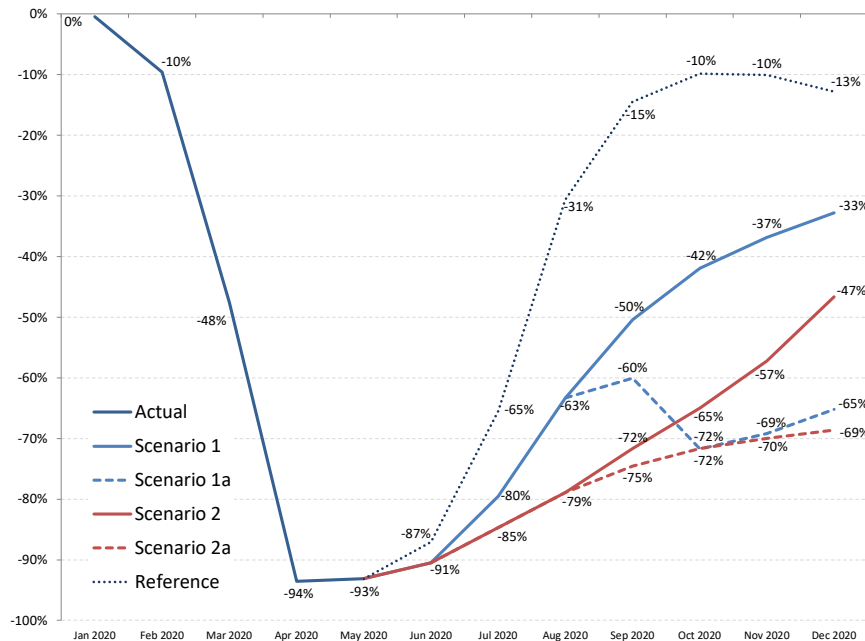
## International + Domestic

(-40% to -51% YoY)

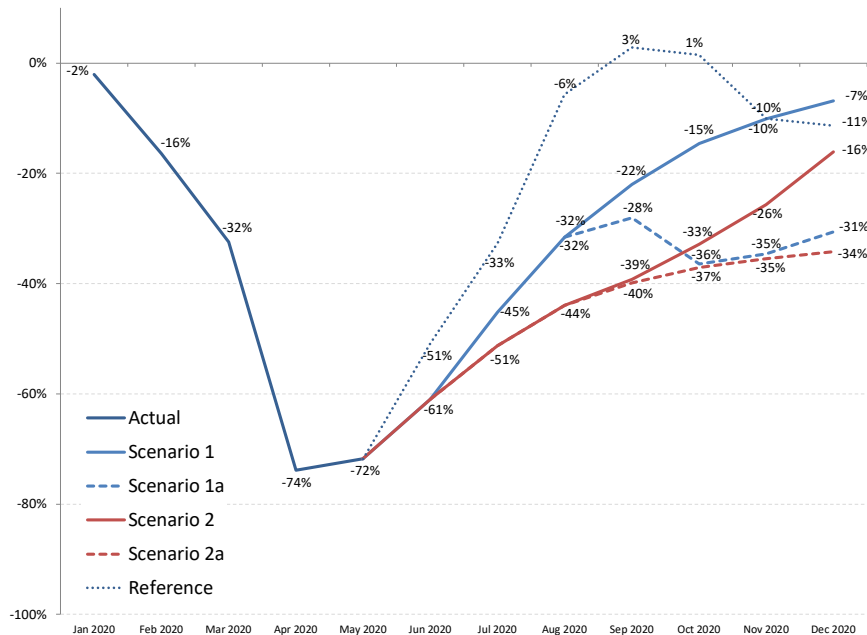


# Scenarios 1 & 2 (World total): Seat capacity change compared to Baseline

## International (-55% to -67% from Baseline)

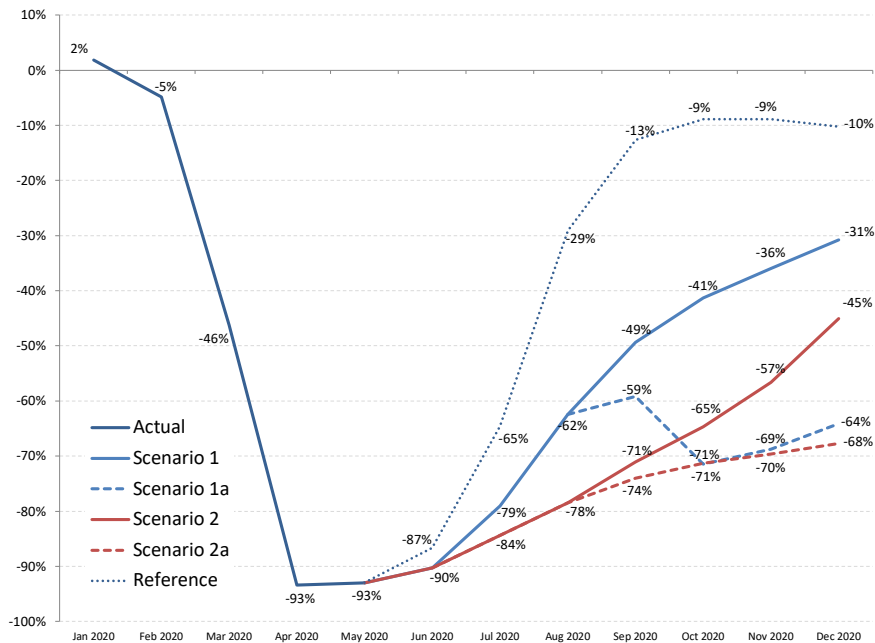


## Domestic (-32% to -42% from Baseline)

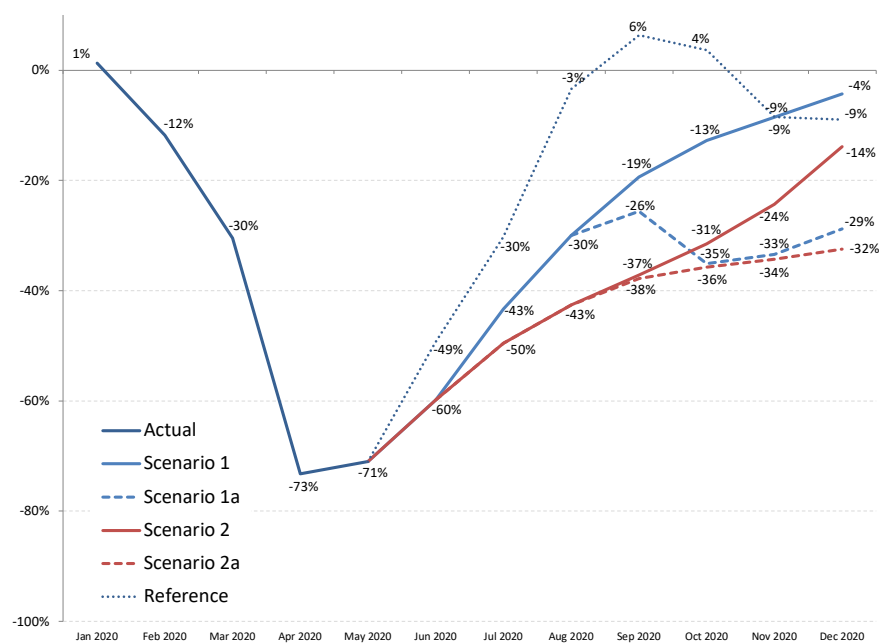


# Scenarios 1 & 2 (World total): Seat capacity change compared to 2019

## International (-54% to -66% YoY)



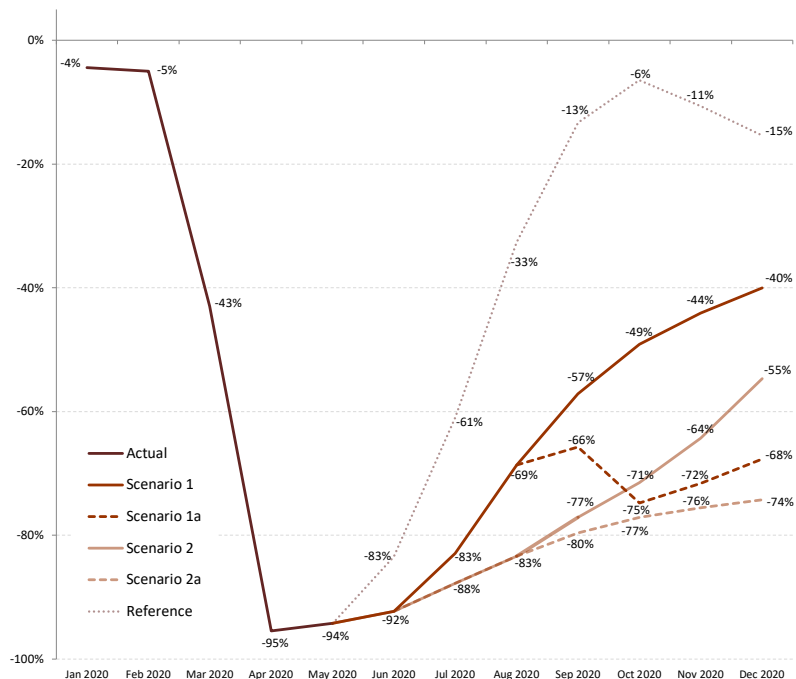
## Domestic (-30% to -40% YoY)



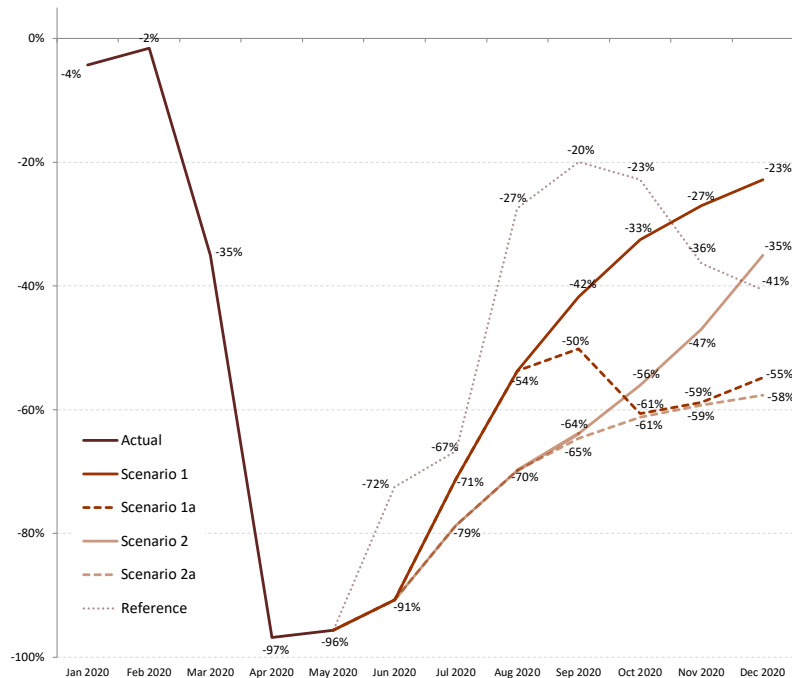


# Scenarios 1 & 2 (Africa): Seat capacity change compared to Baseline

## International (-57% to -69% from Baseline)

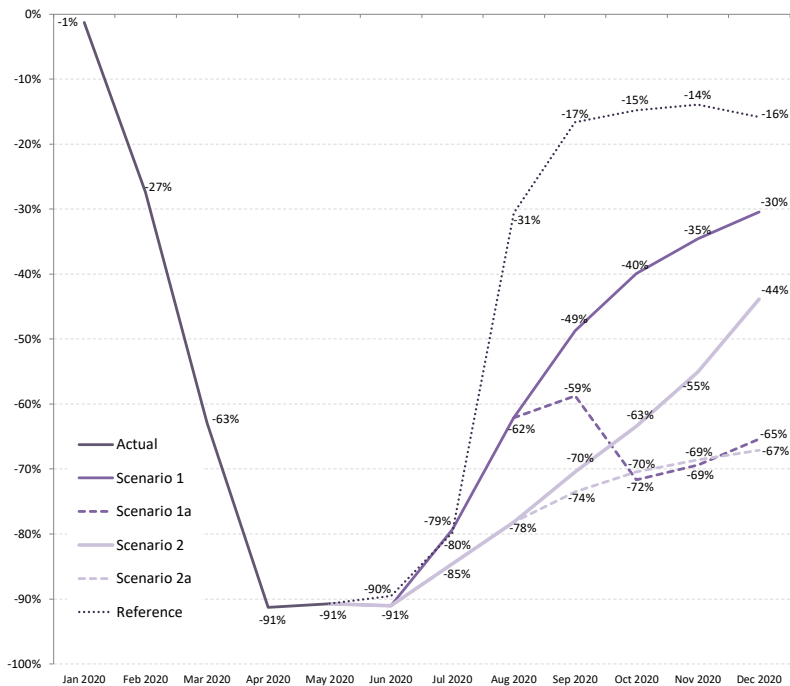


## Domestic (-47% to -59% from Baseline)

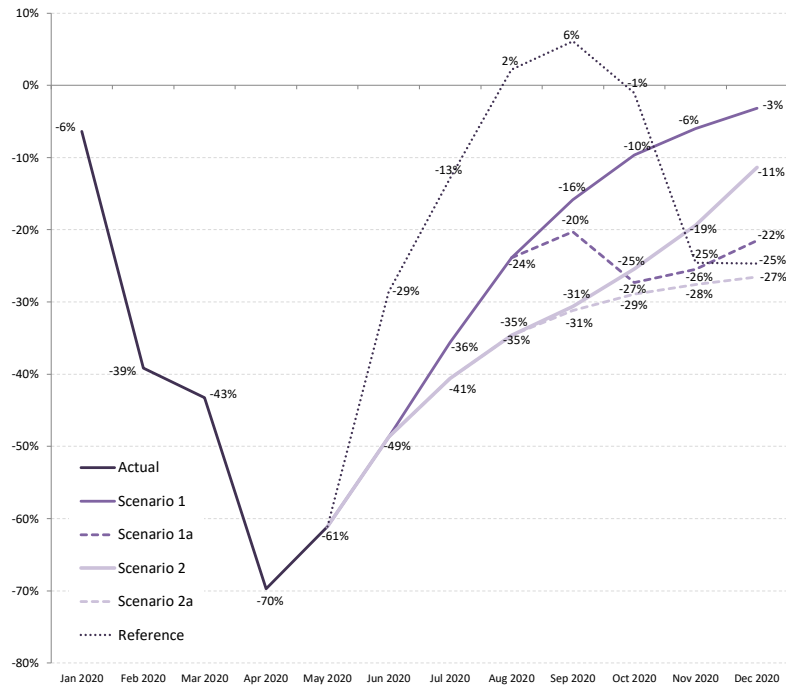


# Scenarios 1 & 2 (Asia/Pacific): Seat capacity change compared to Baseline

## International (-55% to -67% from Baseline)

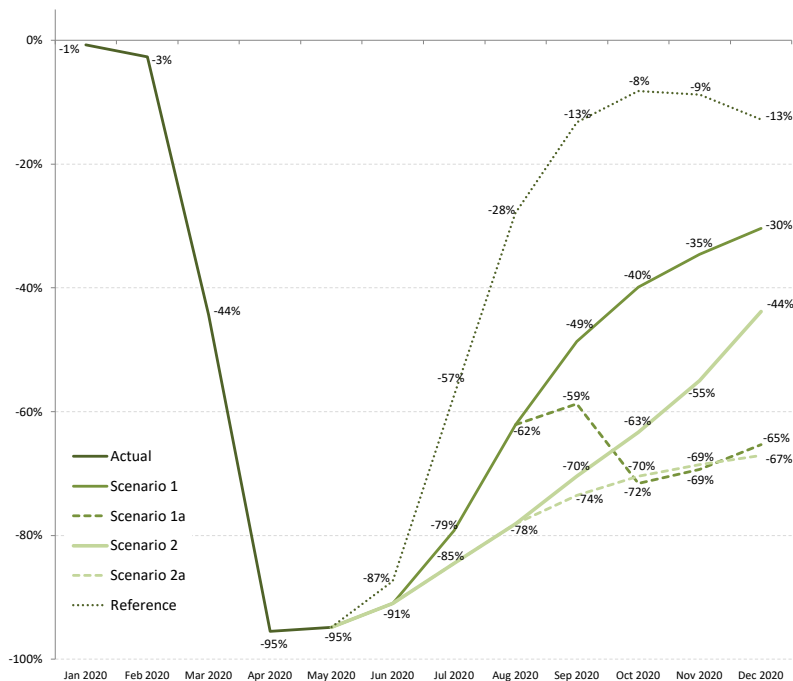


## Domestic (-30% to -38% from Baseline)

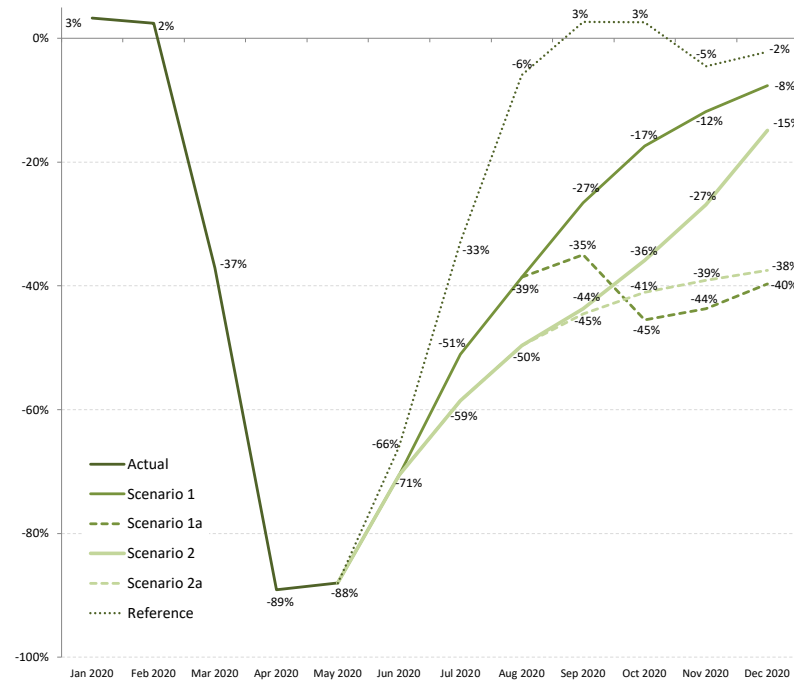


# Scenarios 1 & 2 (Europe): Seat capacity change compared to Baseline

## International (-56% to -68% from Baseline)

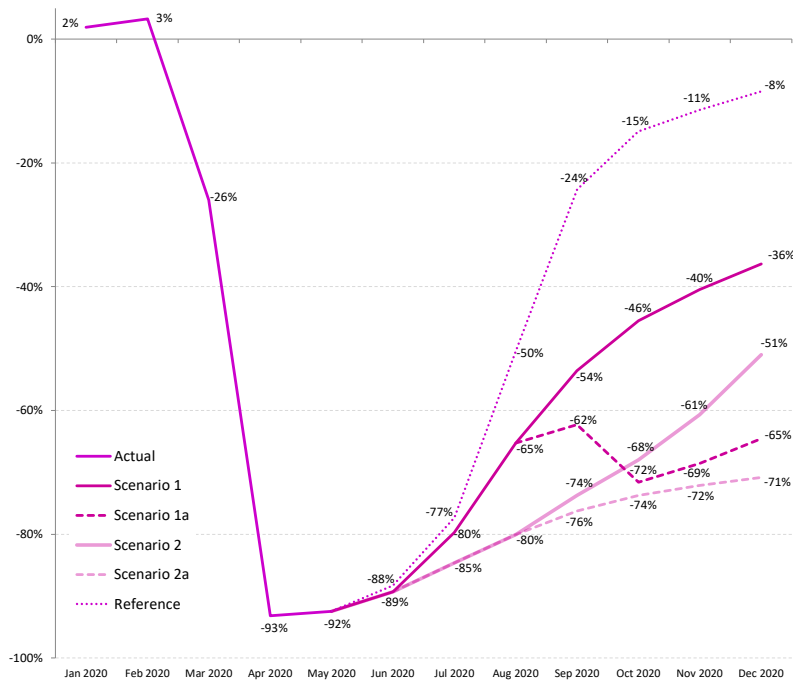


## Domestic (-37% to -47% from Baseline)

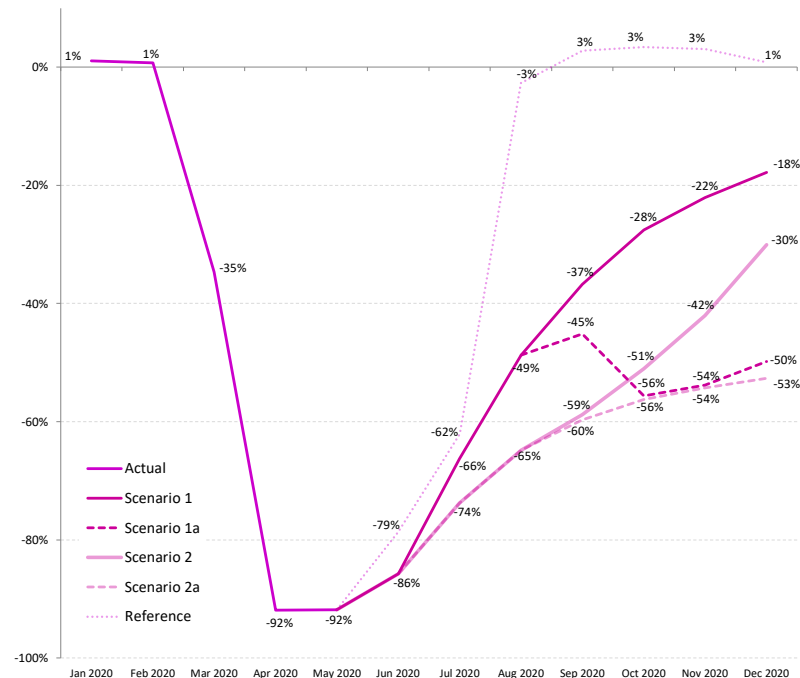


# Scenarios 1 & 2 (Latina America/Caribbean): Seat capacity change compared to Baseline

## International (-51% to -62% from Baseline)

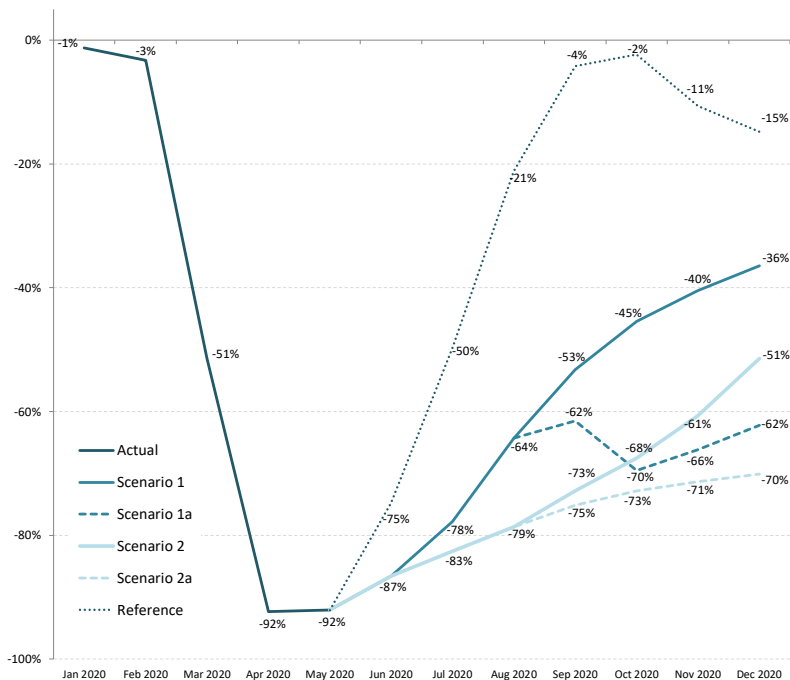


## Domestic (-43% to -55% from Baseline)

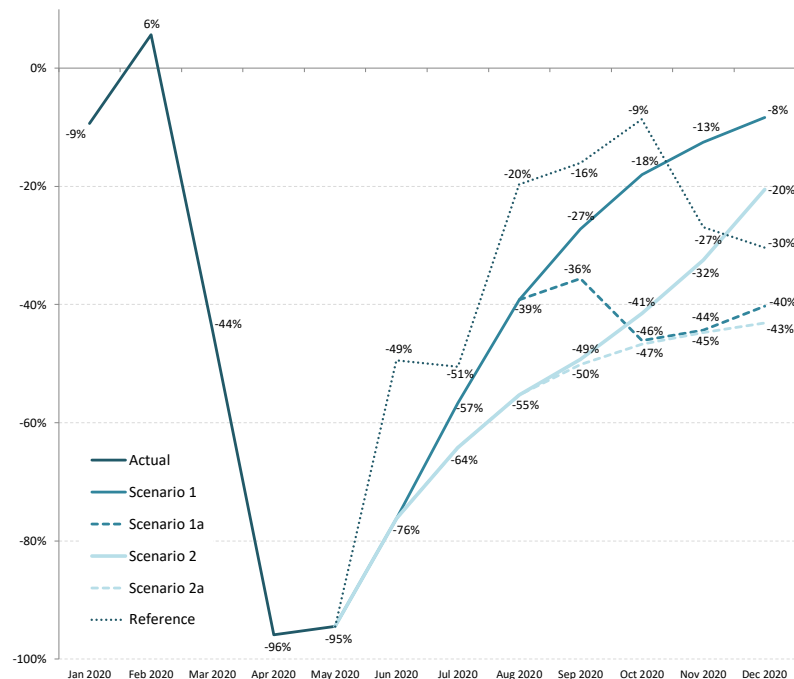


# Scenarios 1 & 2 (Middle East): Seat capacity change compared to Baseline

## International (-54% to -65% from Baseline)

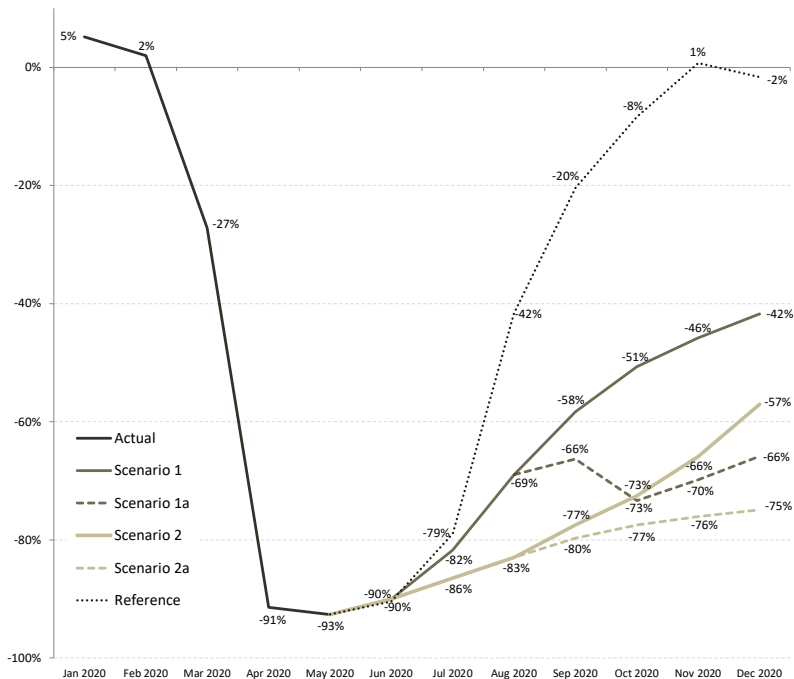


## Domestic (-41% to -52% from Baseline)

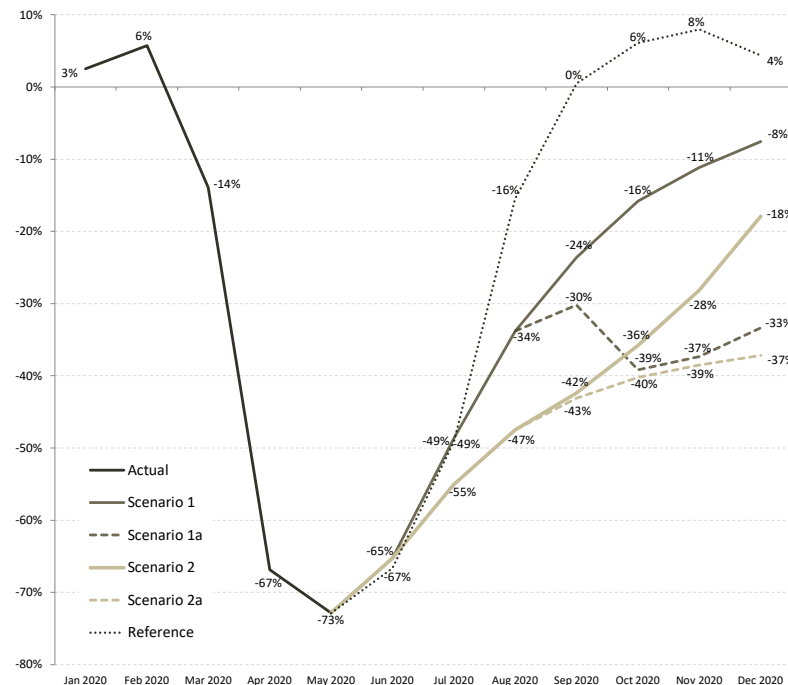


# Scenarios 1 & 2 (North America): Seat capacity change compared to Baseline

## International (-55% to -66% from Baseline)



## Domestic (-30% to -40% from Baseline)



## Impact on Passenger Numbers (Demand)

- Given the originally-planned seat capacity, passenger demand could have increased **151 million** for 2020 (international **57 million** and domestic **95 million**), compared to 2019.
- According to the latest estimates, passenger demand could instead drop from the above Baseline by **2,344 to 2,978 million** (international by **1,194 to 1,454 million** and domestic by **1,150 to 1,524 million**).
- This demand level would be **2,193 to 2,827 million** (international by **1,137 to 1,397 million** and domestic by **1,056 to 1,429 million**) below the 2019 level.
- The most substantial demand reduction (in total number) is expected to be in Asia/Pacific, followed by Europe, hitting its summer travel peak season.

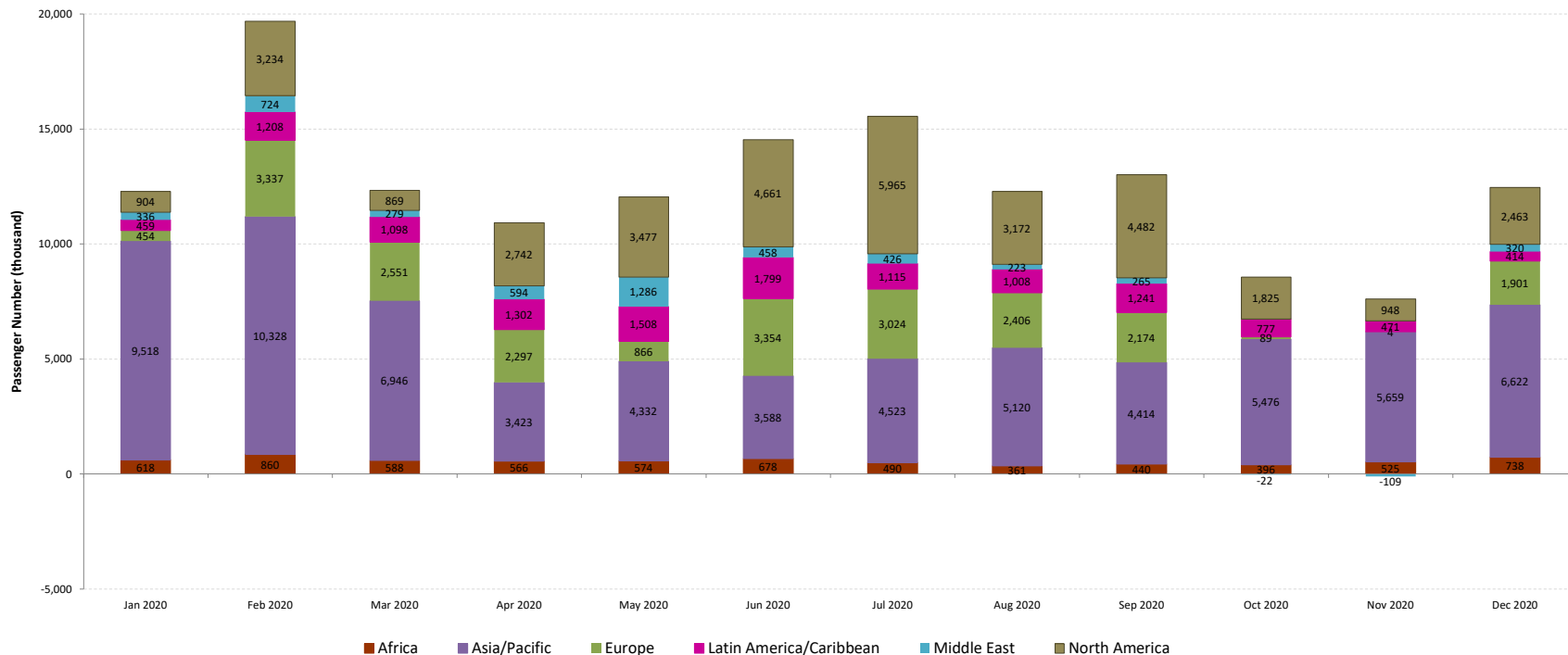


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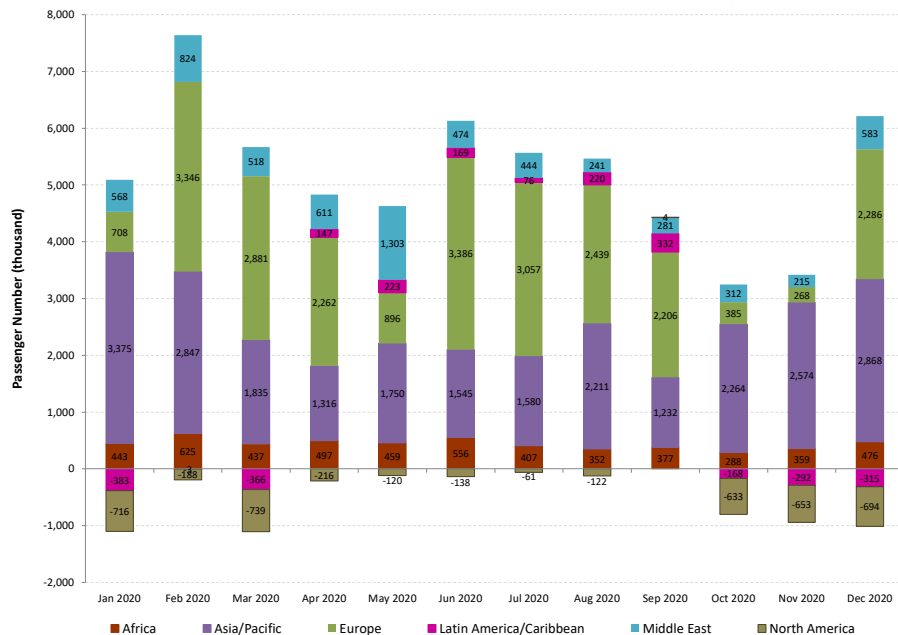
## Baseline passenger numbers compared to 2019

### International + Domestic (+151 million)

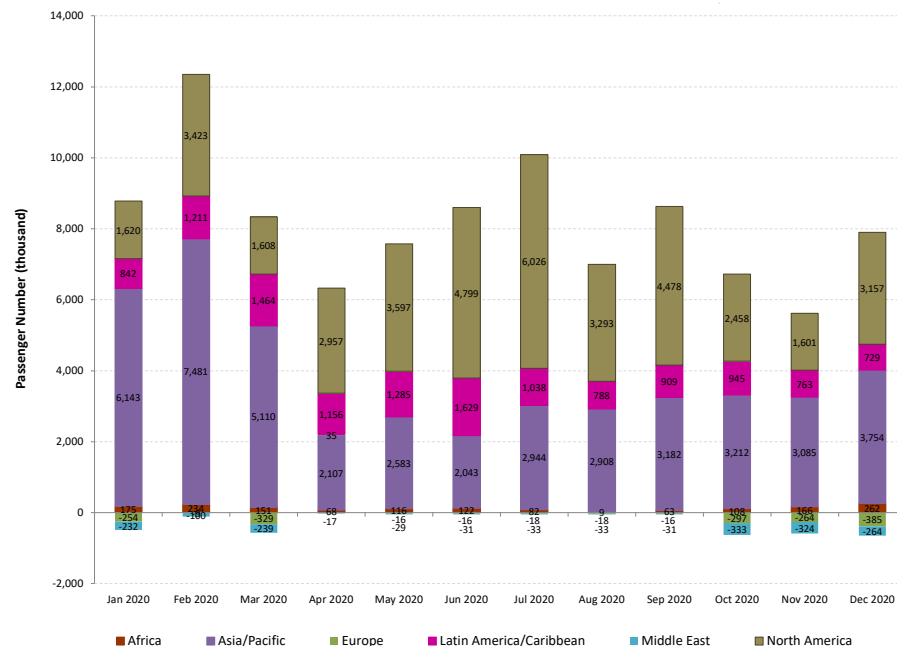




## International (+57 million)



## Domestic (+95 million)



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



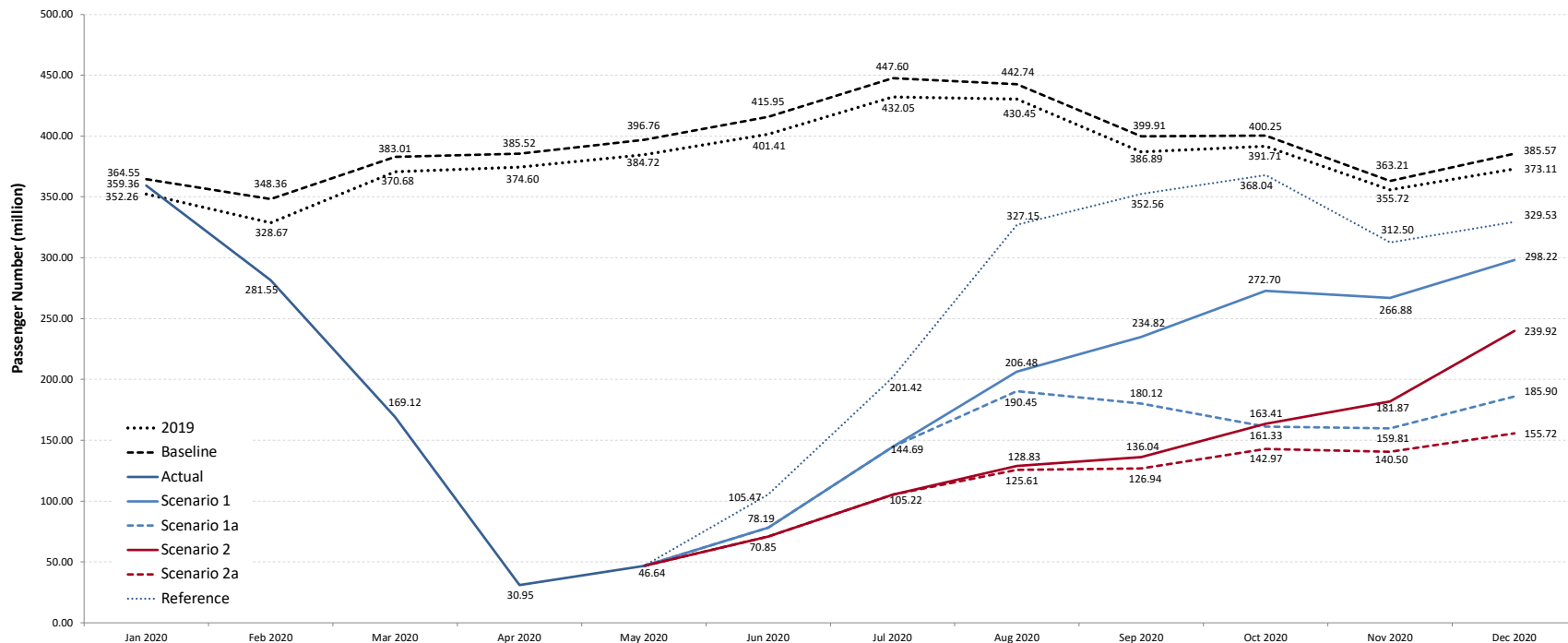
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# Scenarios 1 & 2 (World total): Passenger numbers compared to Baseline & 2019

## International + Domestic

(-2,344 to -2,978 million from Baseline and -2,193 to -2,827 million from 2019)

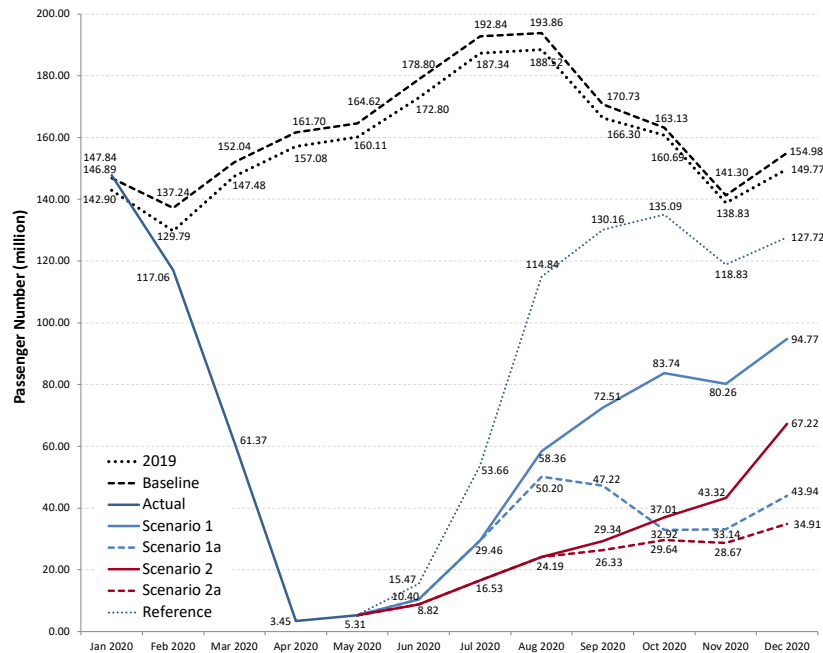




# Scenarios 1 & 2 (World total): Passenger numbers compared to Baseline & 2019

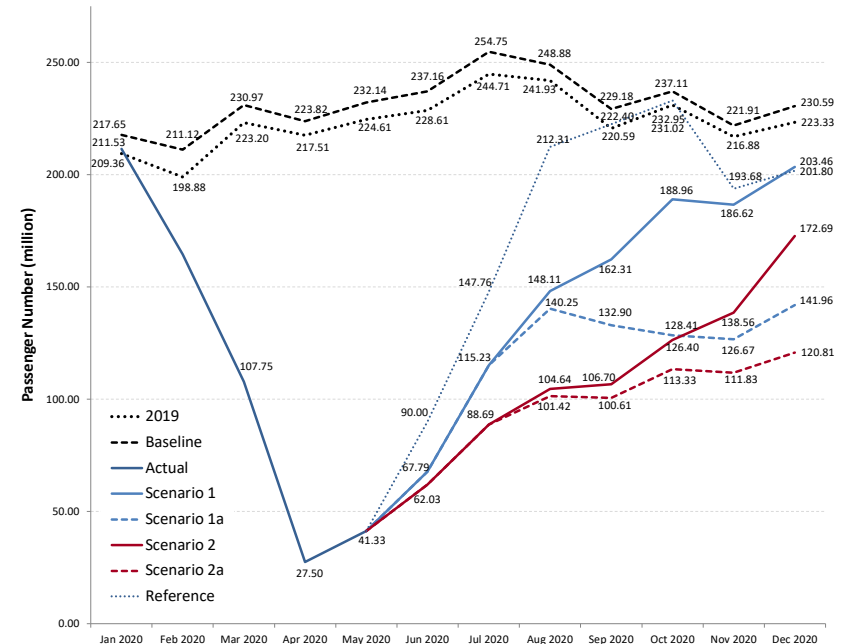
## International

(-1,194 to -1,454 million from Baseline and -1,137 to -1,397 million from 2019)



## Domestic

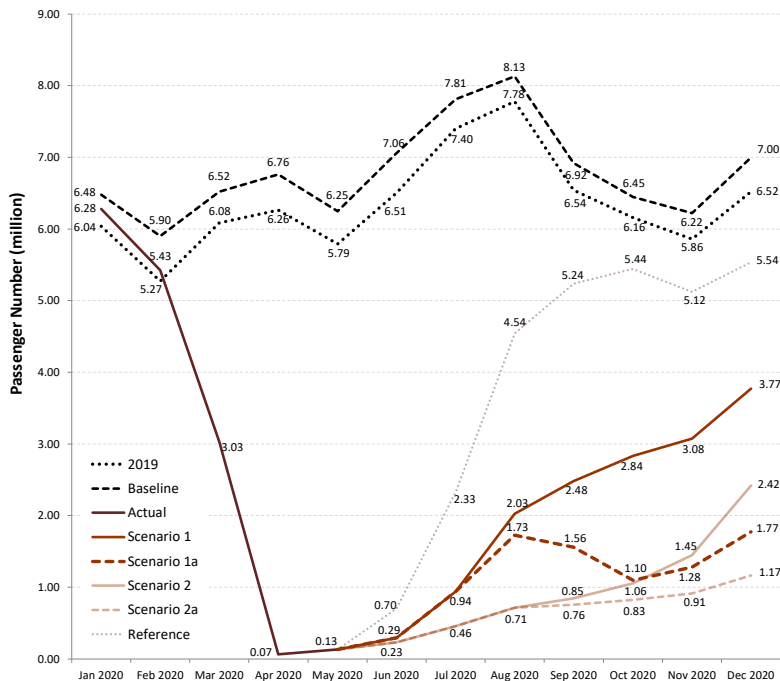
(-1,150 to -1,524 million from Baseline and -1,056 to -1,429 million from 2019)



# Scenarios 1 & 2 (Africa): Passenger numbers compared to Baseline & 2019

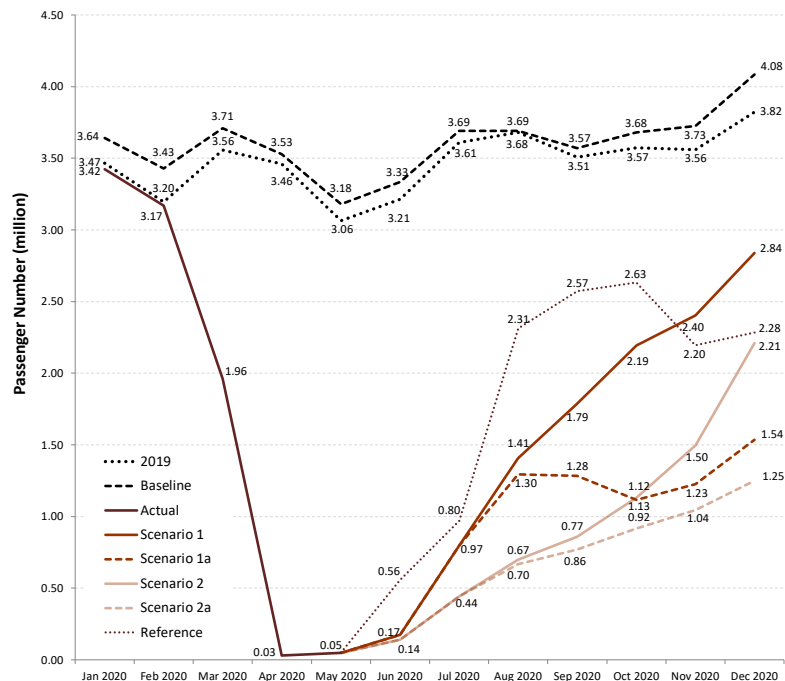
## International

(-51 to -61 million from Baseline and -46 to -56 million from 2019)



## Domestic

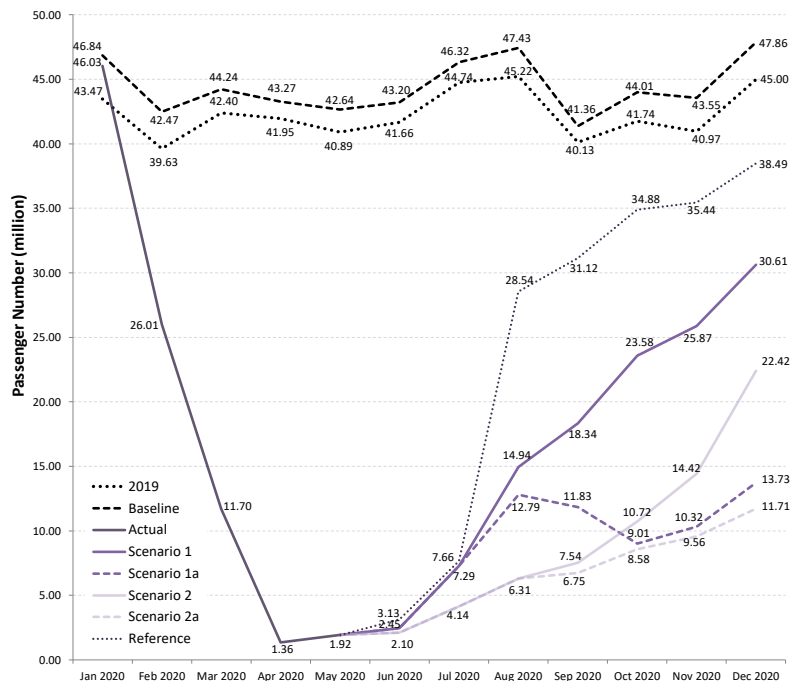
(-23 to -29 million from Baseline and -21 to -28 million from 2019)



# Scenarios 1 & 2 (Asia/Pacific): Passenger numbers compared to Baseline & 2019

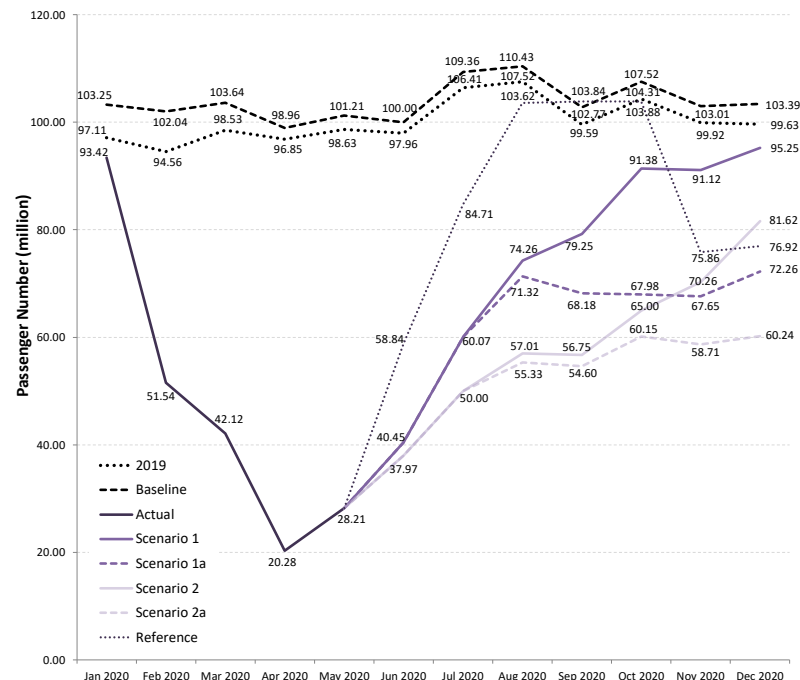
## International

(-323 to -397 million from Baseline and -298 to -372 million from 2019)



## Domestic

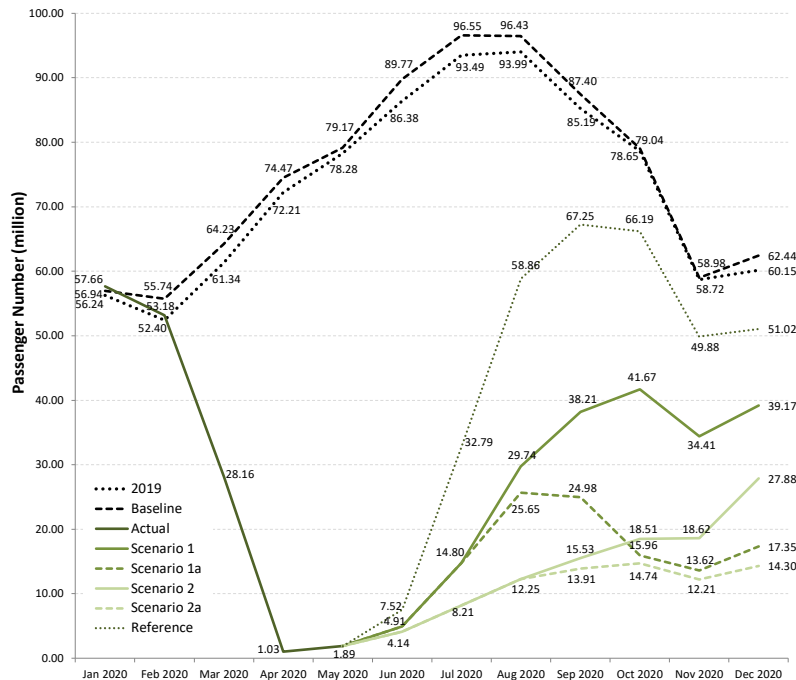
(-478 to -633 million from Baseline and -434 to -588 million from 2019)



# Scenarios 1 & 2 (Europe): Passenger numbers compared to Baseline & 2019

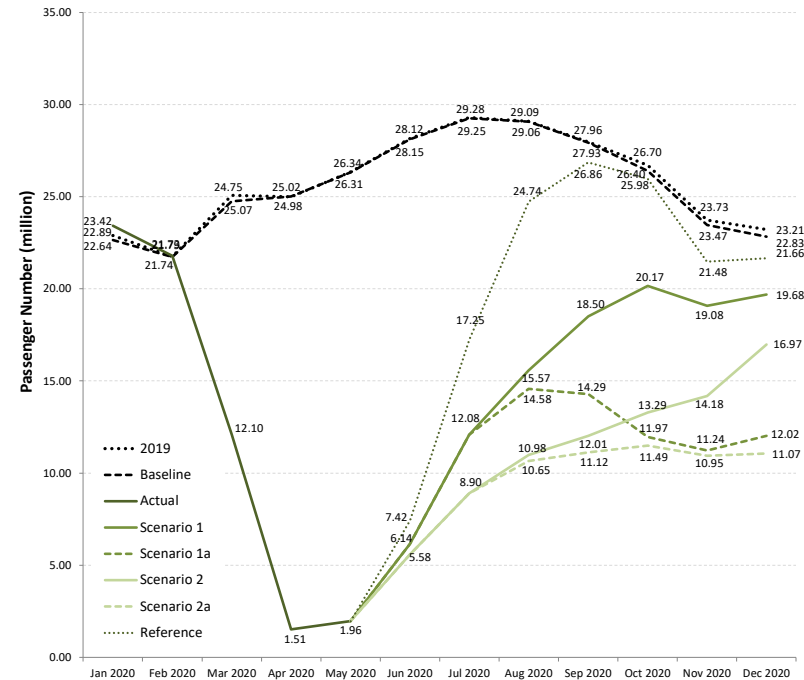
## International

(-556 to -680 million from Baseline and -532 to -655 million from 2019)



## Domestic

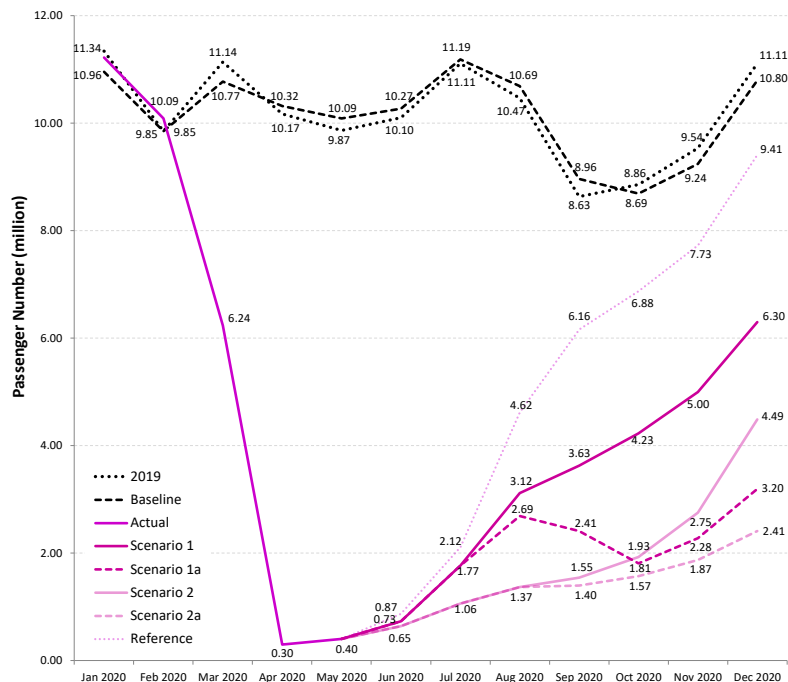
(-136 to -177 million from Baseline and -137 to -179 million from 2019)



# Scenarios 1 & 2 (Latina America/Caribbean): Passenger numbers compared to Baseline & 2019

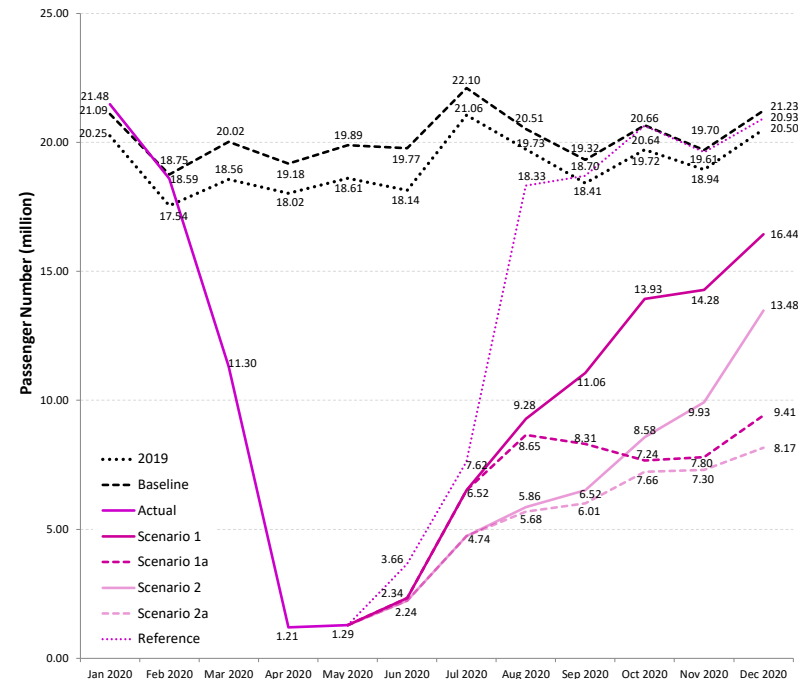
## International

(-69 to -83 million from Baseline and -69 to -84 million from 2019)



## Domestic

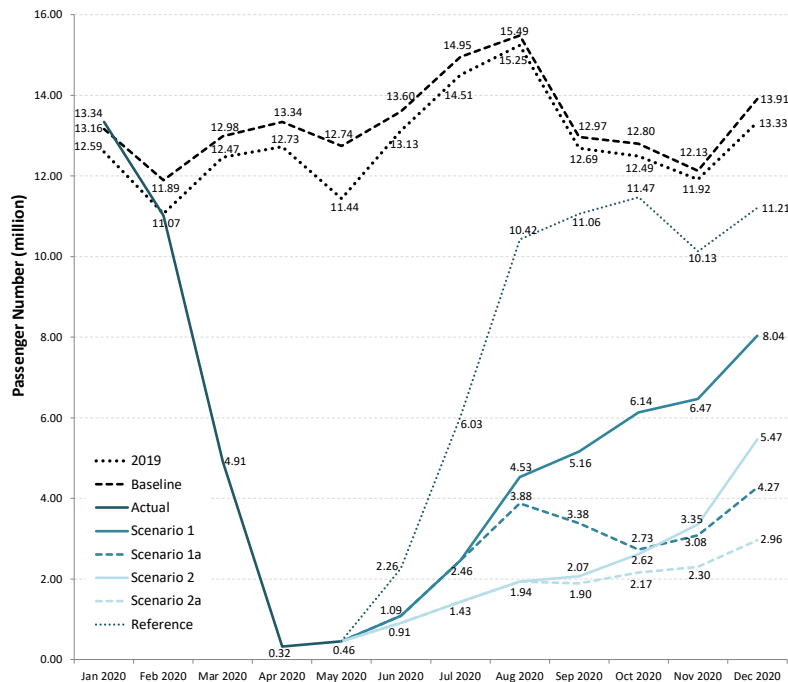
(-115 to -147 million from Baseline and -102 to -134 million from 2019)



# Scenarios 1 & 2 (Middle East): Passenger numbers compared to Baseline & 2019

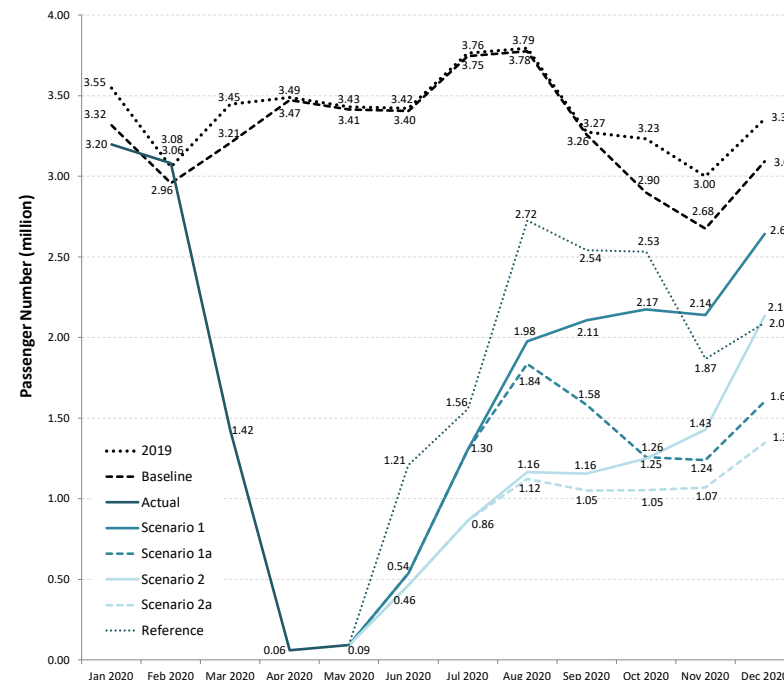
## International

(-96 to -116 million from Baseline and -90 to -110 million from 2019)



## Domestic

(-18 to -24 million from Baseline and -20 to -26 million from 2019)

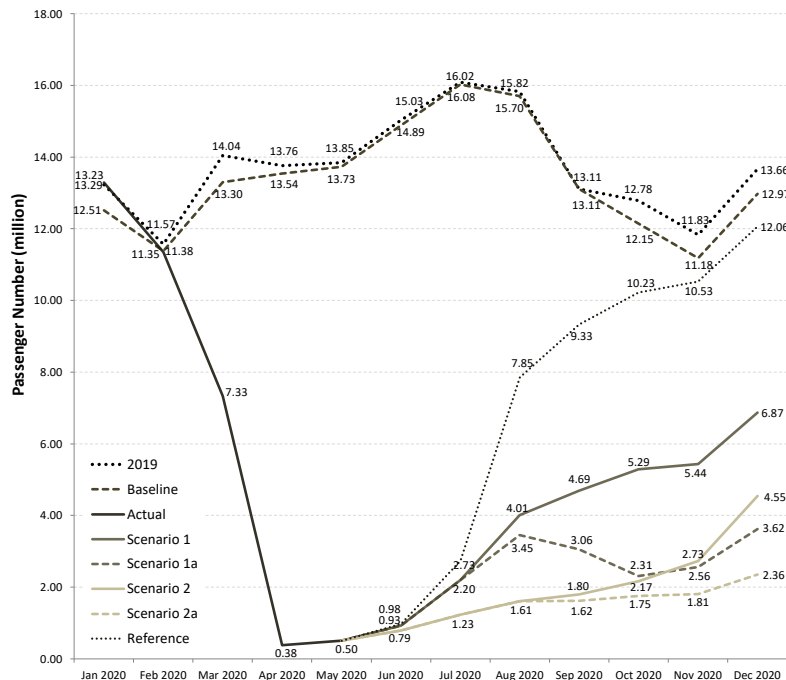




# Scenarios 1 & 2 (North America): Passenger numbers compared to Baseline & 2019

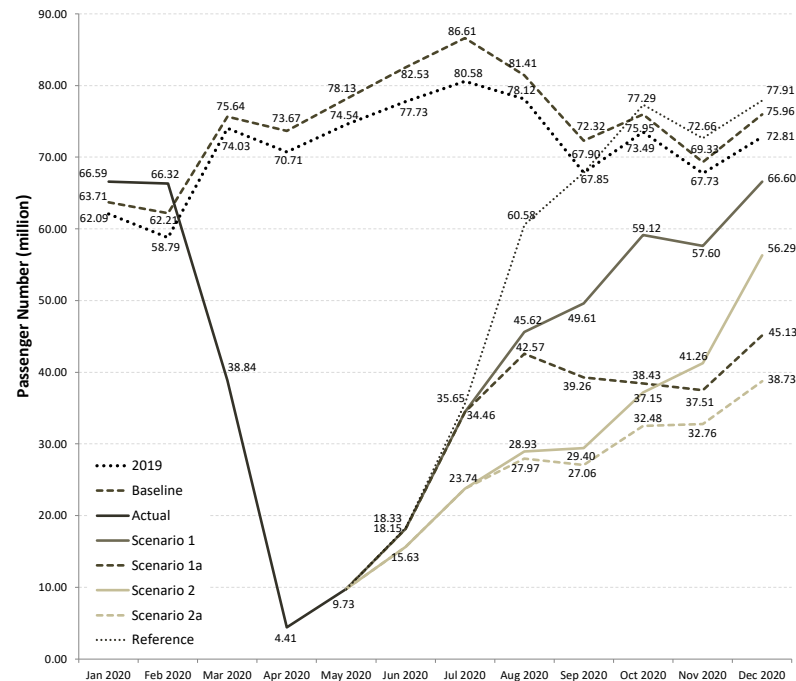
## International

(-98 to -116 million from Baseline and -102 to -121 million from 2019)



## Domestic

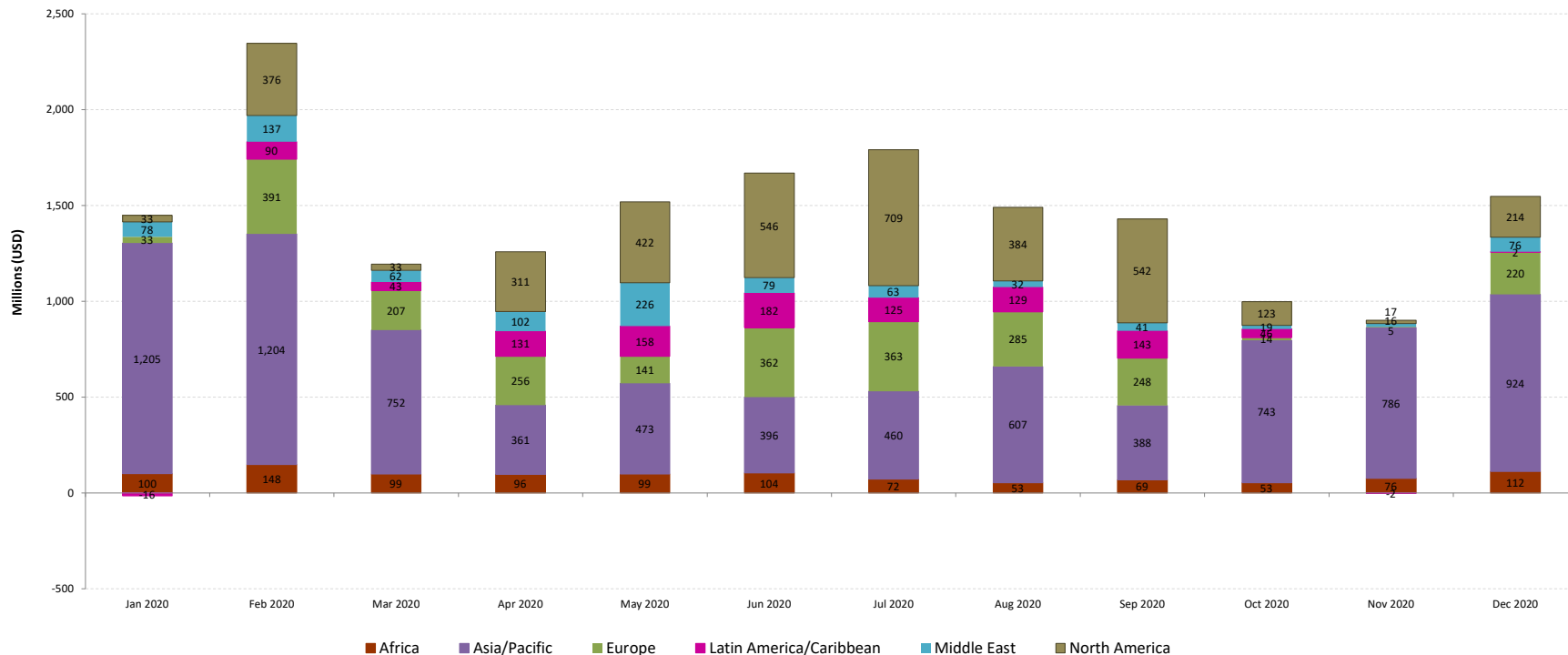
(-380 to -513 million from Baseline and -341 to -474 million from 2019)



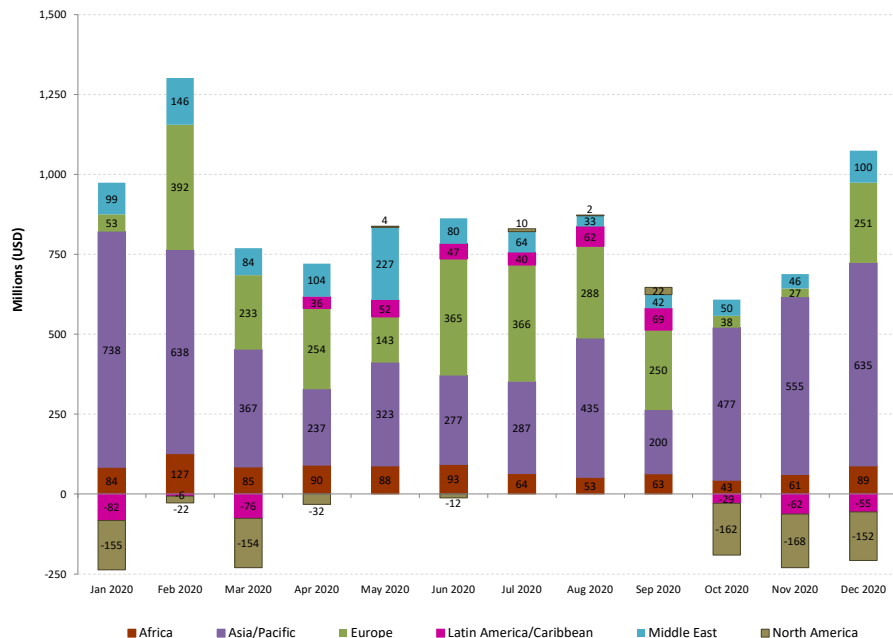
## Impact on Gross Passenger Operating Revenues of Airlines

- With the originally-planned seat capacity and trend line growth of demand, airlines' gross passenger operating revenues could have increased **USD 18 billion** for 2020 (**USD 9 billion** from international and **USD 9 billion** from domestic), compared to 2019.
- According to the latest estimates, airlines' revenues could instead plummet **USD 308 to 391 billion** (international **USD 207 to 256 billion** and domestic **USD 101 to 135 billion**) below the Baseline, or **USD 291 to 373 billion** (international **USD 198 to 247 billion** and domestic **USD 92 to 127 billion**) below the 2019 level.
- Approximately 60% of revenue loss would be recorded by Asia/Pacific and Europe.

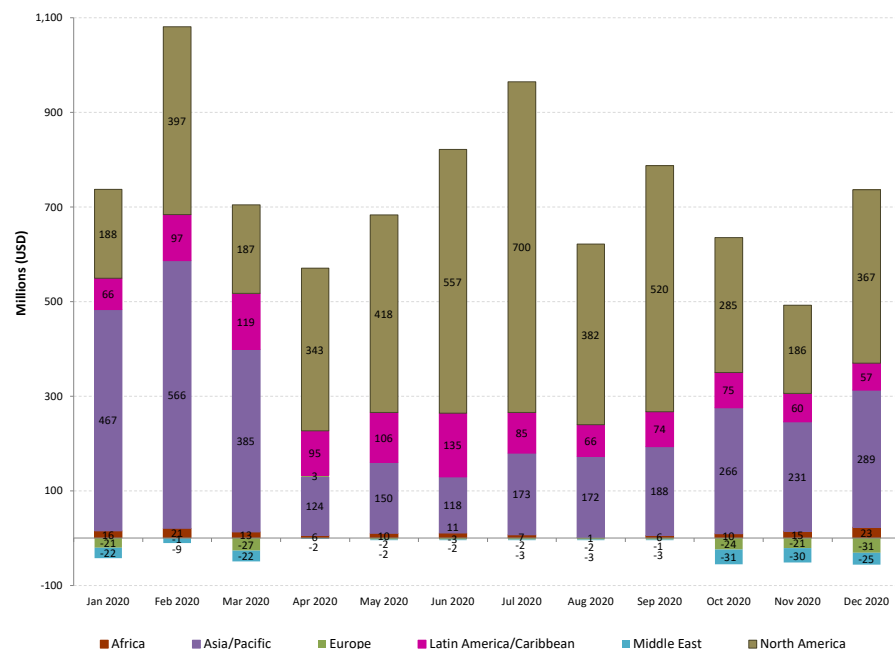
## International + Domestic (+18 billion USD)



## International (+9 billion USD)



## Domestic (+9 billion USD)



Note: The international 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).



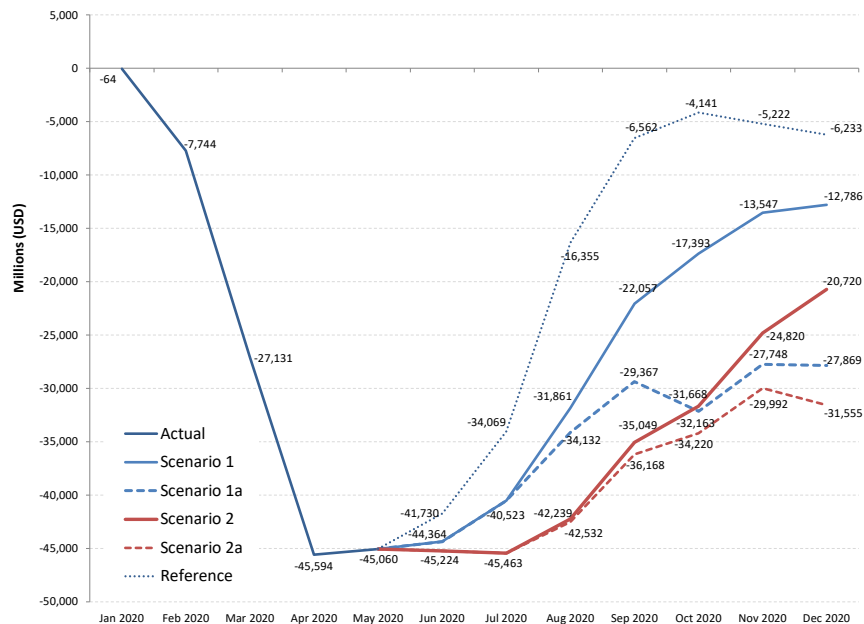
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# Scenarios 1 & 2 (World total): Passenger revenues compared to Baseline & 2019

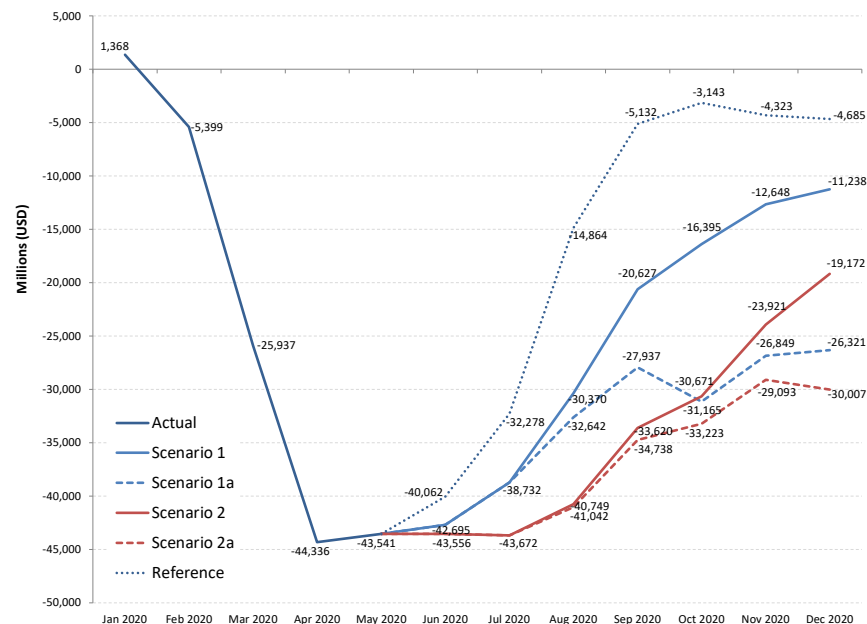
## International + Domestic

(-308 to -391 billion USD from Baseline)



## International + Domestic

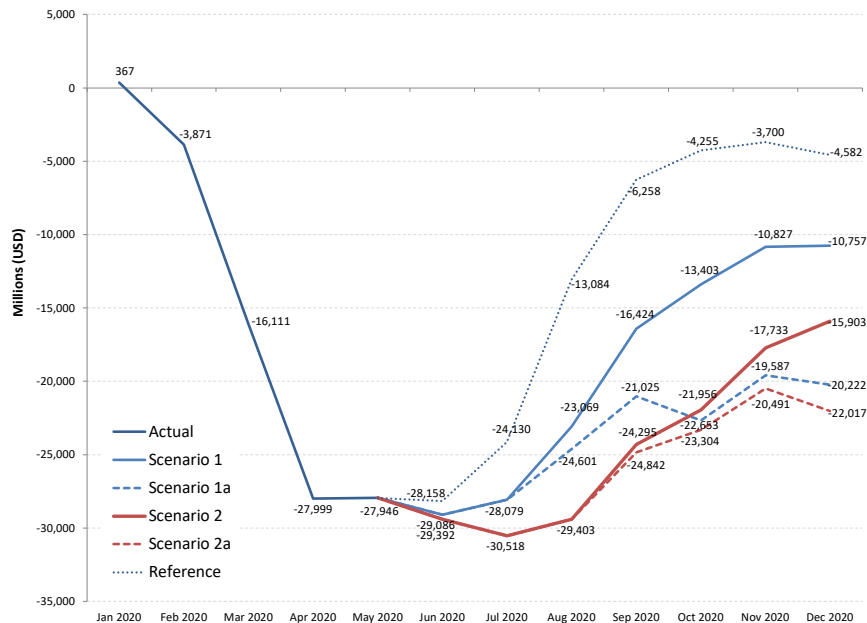
(-291 to -373 billion USD from 2019)



# Scenarios 1 & 2 (World total): Passenger revenues compared to Baseline

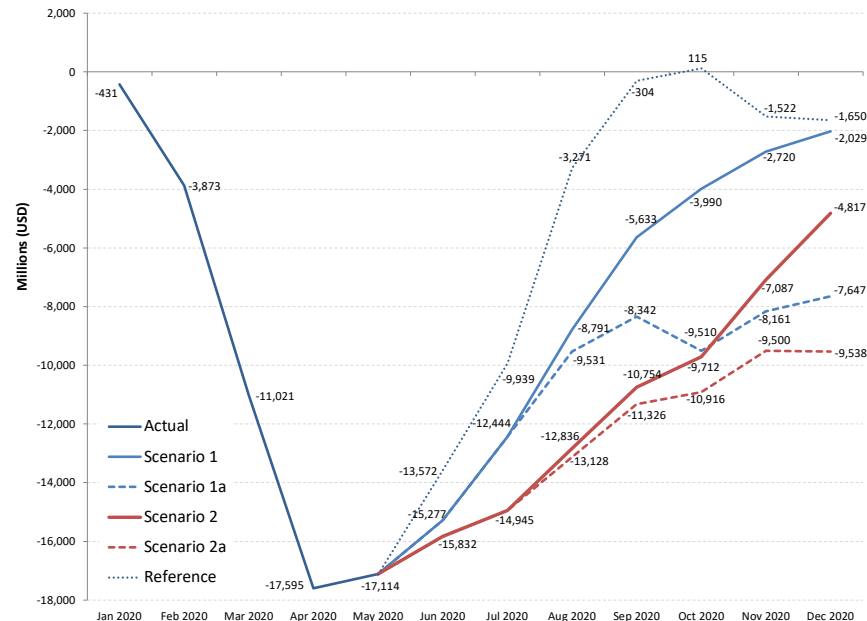
## International

(-207 to -256 billion USD from Baseline)



## Domestic

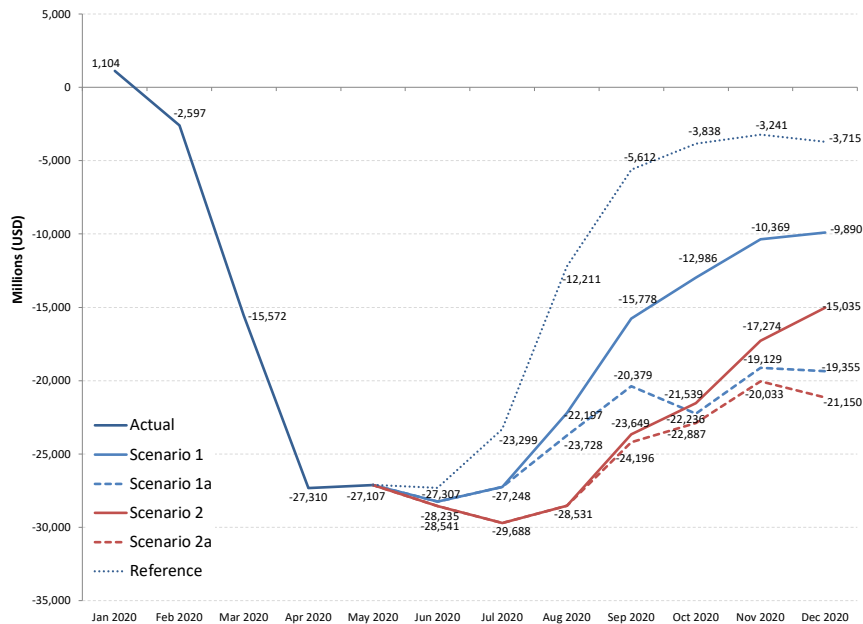
(-101 to -135 billion USD from Baseline)



# Scenarios 1 & 2 (World total): Passenger revenues compared to 2019

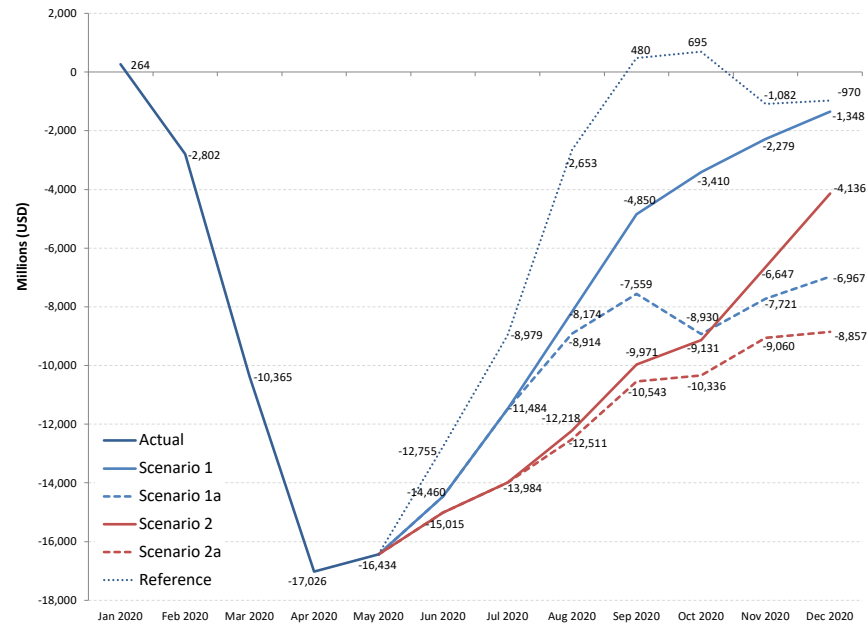
## International

(-198 to -247 billion USD from 2019)



## Domestic

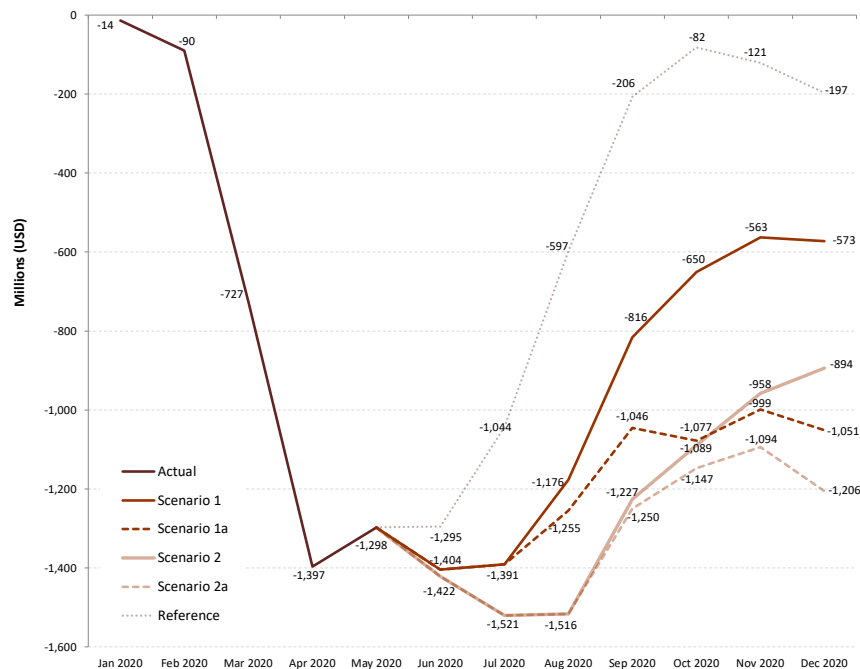
(-92 to -127 billion USD from 2019)



# Scenarios 1 & 2 (Africa): Passenger revenues compared to Baseline

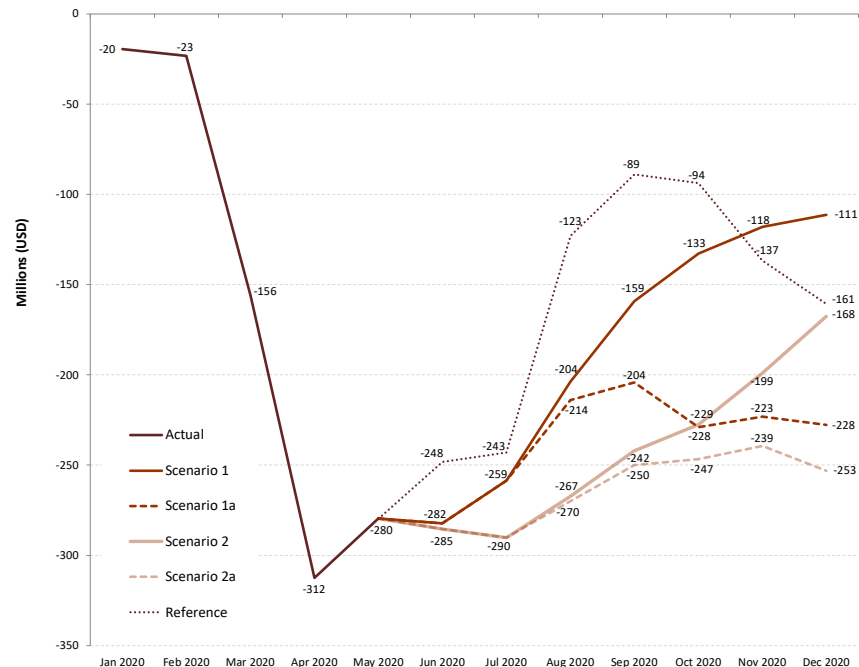
## International

(-10 to -13 billion USD from Baseline)



## Domestic

(-2 to -3 billion USD from Baseline)

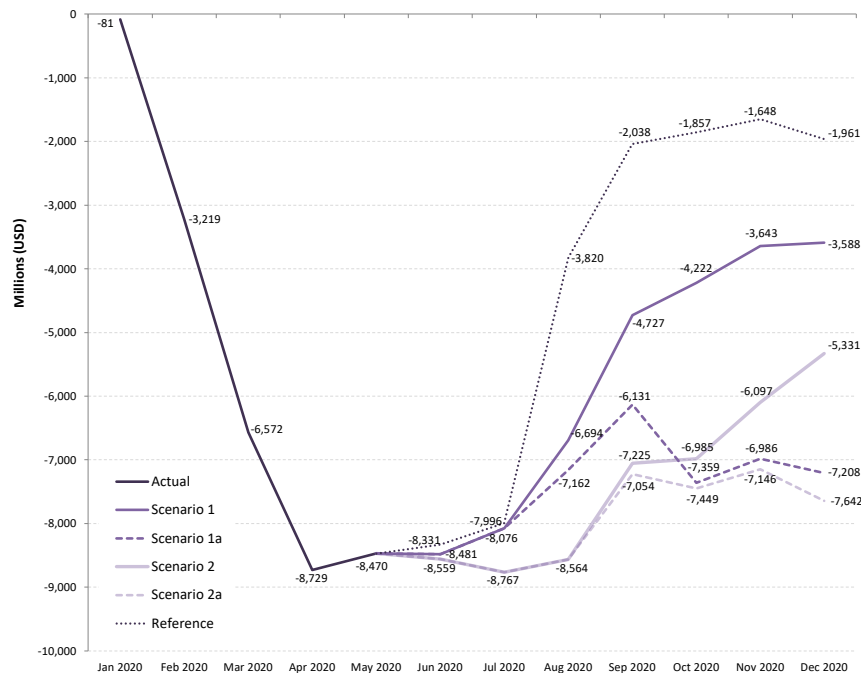




# Scenarios 1 & 2 (Asia/Pacific): Passenger revenues compared to Baseline

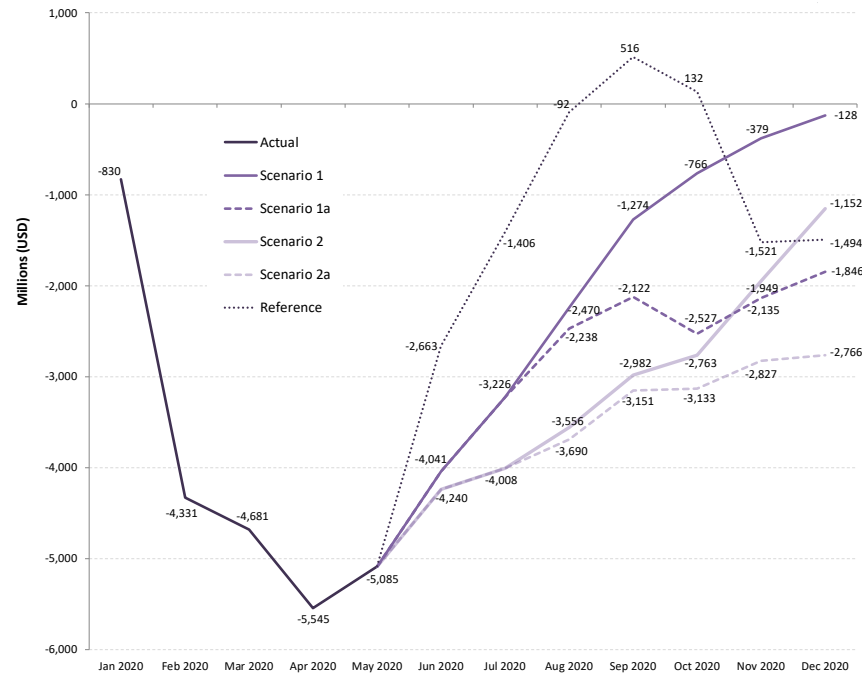
## International

(-67 to -82 billion USD from Baseline)



## Domestic

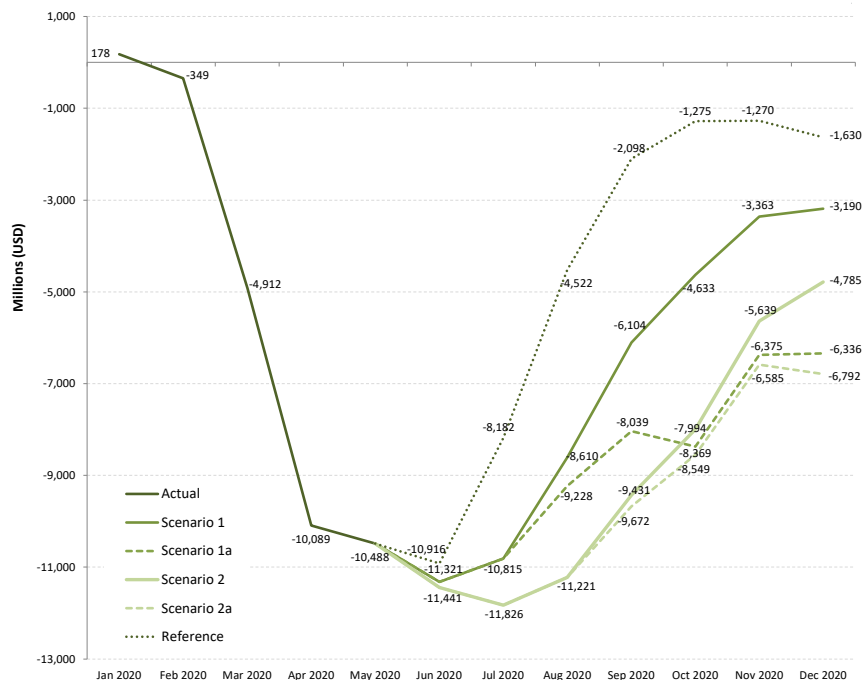
(-33 to -44 billion USD from Baseline)



# Scenarios 1 & 2 (Europe): Passenger revenues compared to Baseline

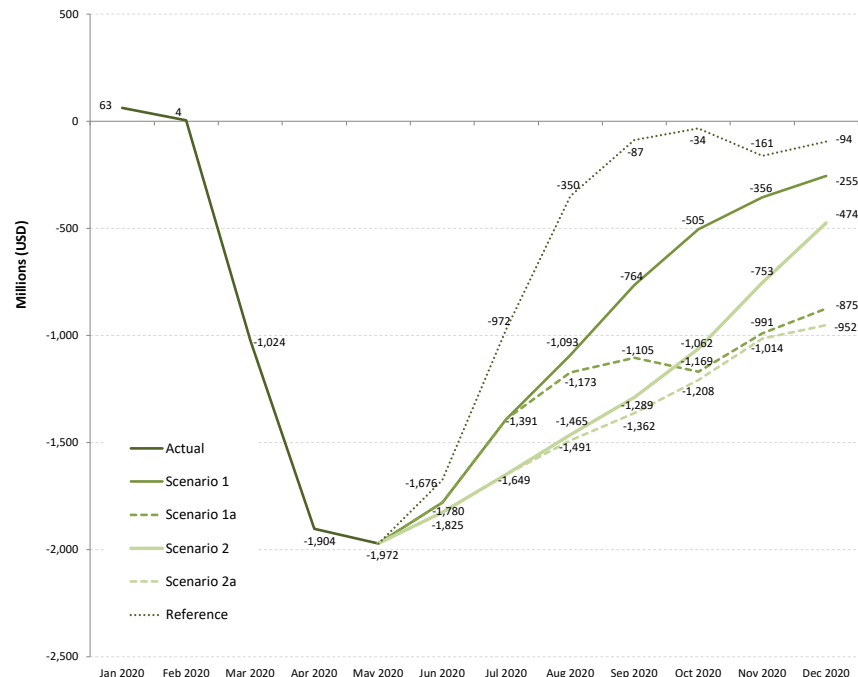
## International

(-74 to -92 billion USD from Baseline)



## Domestic

(-11 to -14 billion USD from Baseline)





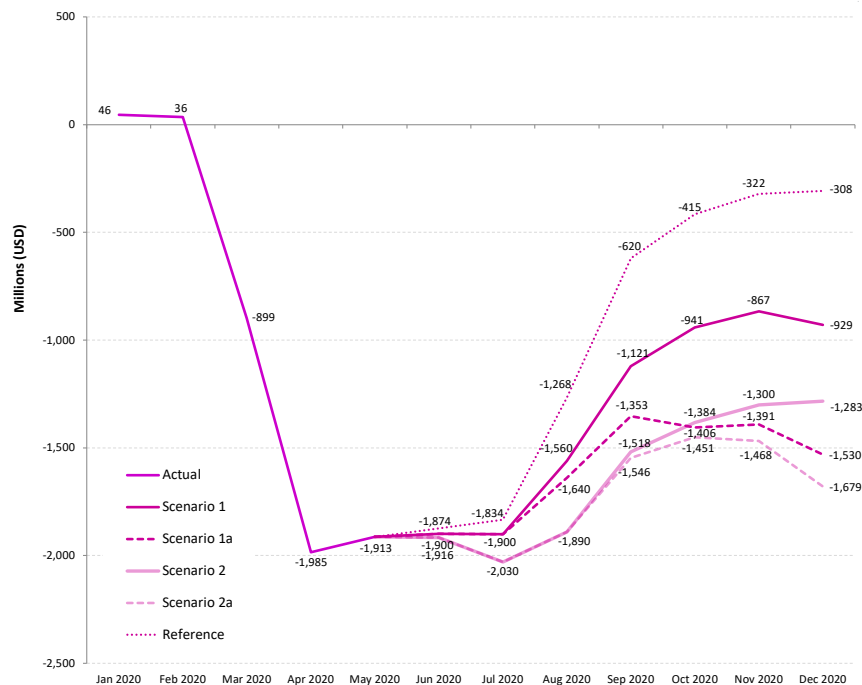
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## Scenarios 1 & 2 (Latin America/Caribbean): Passenger revenues compared to Baseline

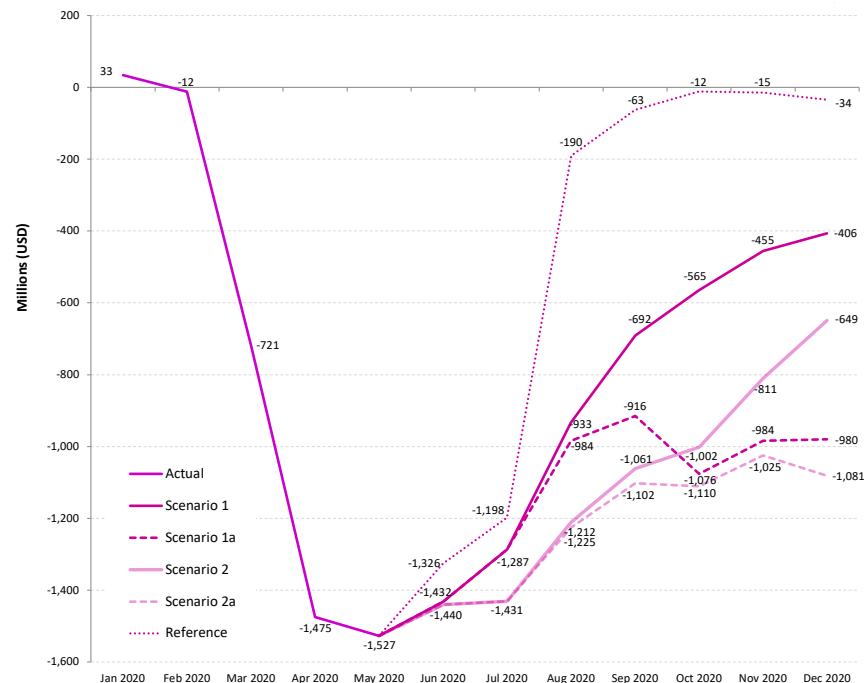
### International

(-14 to -17 billion USD from Baseline)



### Domestic

(-9 to -12 billion USD from Baseline)





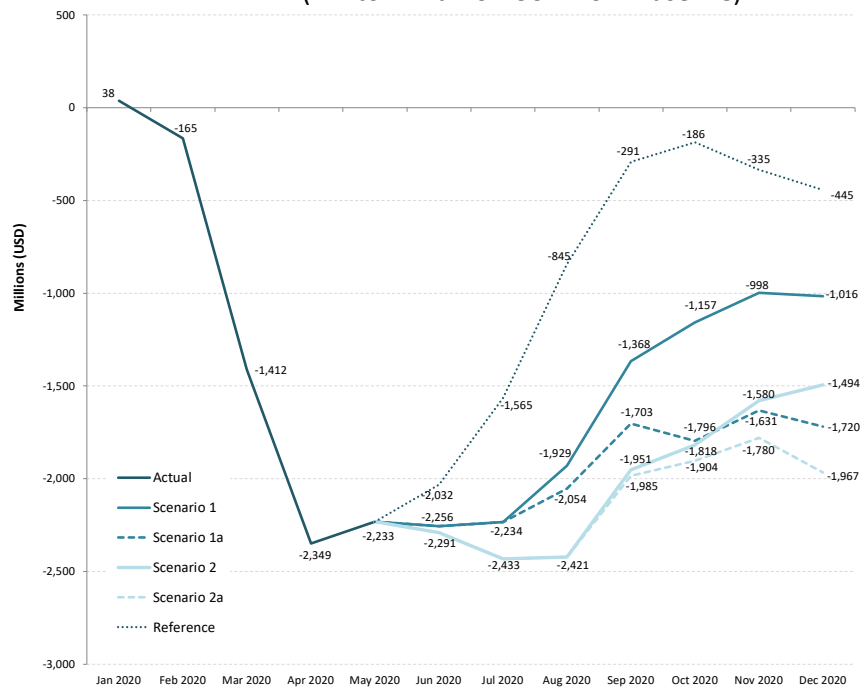
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## Scenarios 1 & 2 (Middle East): Passenger revenues compared to Baseline

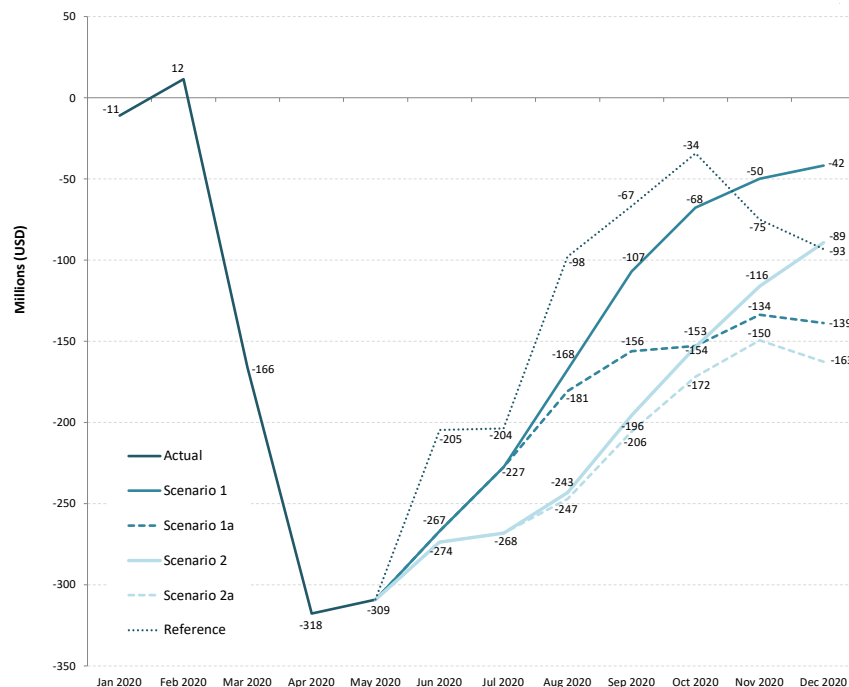
### International

(-17 to -21 billion USD from Baseline)



### Domestic

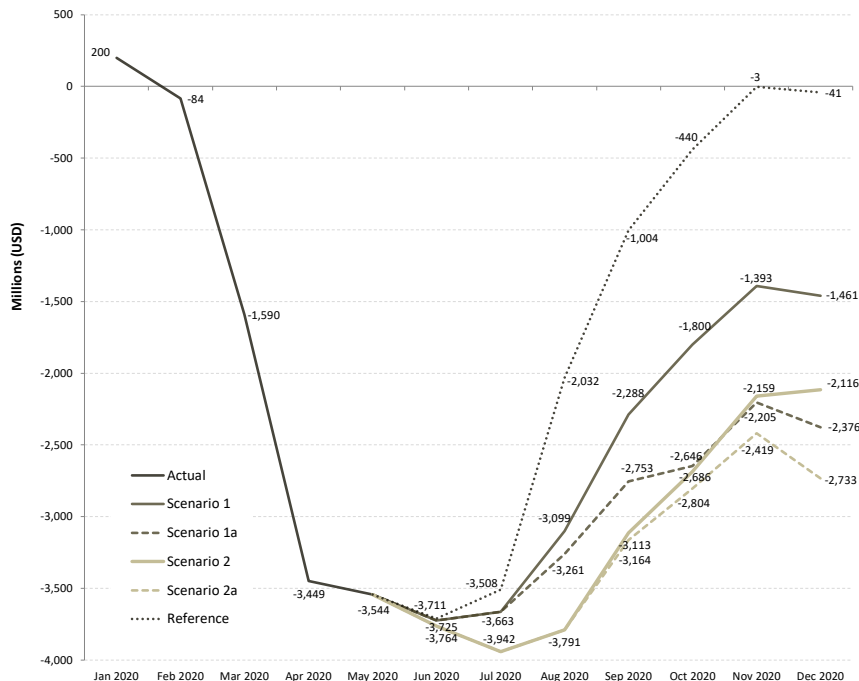
(-2 to -2 billion USD from Baseline)



# Scenarios 1 & 2 (North America): Passenger revenues compared to Baseline

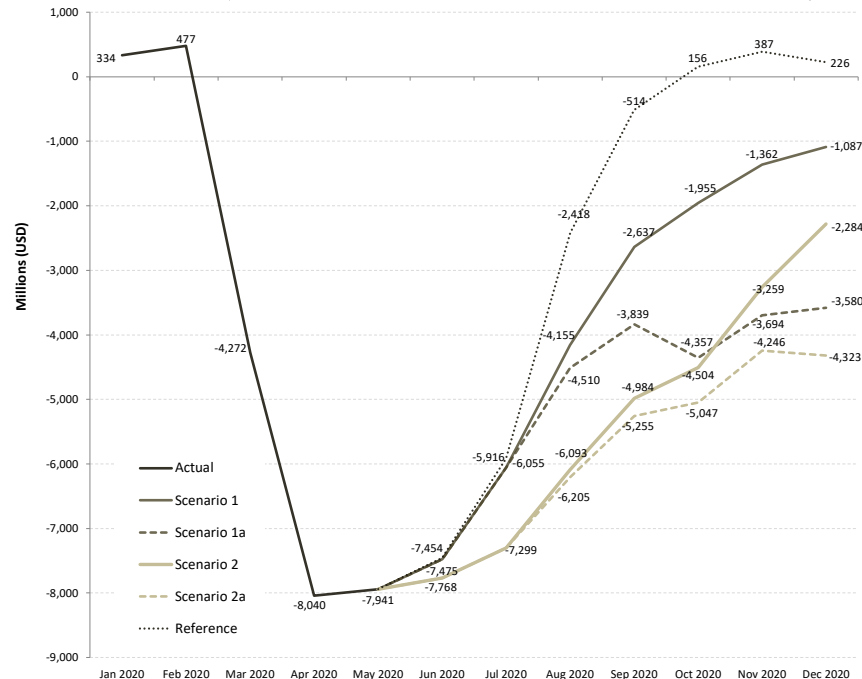
## International

(-26 to -31 billion USD from Baseline)



## Domestic

(-44 to -60 billion USD from Baseline)





## **Appendix A: Overview of Early Impact**



## COVID-19 outbreak has impacted air traffic of 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       | -89,778                                 | -1% |
| Italy                    | -65,971                                 | -1% |
| Turkey                   | -53,262                                 | -1% |
| China                    | -45,484                                 | 0%  |
| Morocco                  | -42,684                                 | -2% |
| United Arab Emirates     | -31,464                                 | 0%  |
| Iraq                     | -29,326                                 | -3% |
| Albania                  | -22,080                                 | -7% |
| United Kingdom           | -21,888                                 | 0%  |
| South Africa             | -21,476                                 | -1% |
| Iran Islamic Republic of | -20,891                                 | -2% |
| France                   | -19,537                                 | 0%  |
| Poland                   | -18,154                                 | 0%  |
| Romania                  | -17,493                                 | -1% |
| Japan                    | -16,449                                 | 0%  |
| United States            | -13,067                                 | 0%  |
| Indonesia                | -12,114                                 | 0%  |
| Bulgaria                 | -10,540                                 | -1% |
| India                    | -10,342                                 | 0%  |
| Cambodia                 | -10,158                                 | -1% |
| Bahamas                  | -9,588                                  | -2% |
| Denmark                  | -8,942                                  | 0%  |
| Viet Nam                 | -8,489                                  | 0%  |
| Malta                    | -7,372                                  | -1% |
| Lebanon                  | -7,182                                  | -1% |
| Bahrain                  | -7,123                                  | -1% |
| Uzbekistan               | -6,539                                  | -1% |
| Tunisia                  | -6,362                                  | -1% |
| Switzerland              | -6,235                                  | 0%  |
| Czechia                  | -5,642                                  | 0%  |

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 Republi | -71,910                                 | -21% |
| Finland                         | -71,413                                 | -4%  |

In February 2020, international passenger capacity **reduced by 10%**, mainly related to traffic from/to States experiencing an early outbreak and States deeply interconnected to China.

|  |  |
|--|--|
|  | 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 (29 February 2020)





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# 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, global international passenger capacity **reduced by 48%**, 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)

# The world reached 3 million confirmed COVID-19 cases in April 2020

## April 2020 International Passenger Capacity

| Country/Territory              | Capacity change from originally-planned |      |
|--------------------------------|---|------|
| United States                  | -22,976,621                             | -88% |
| United Kingdom                 | -22,345,210                             | -90% |
| Germany                        | -19,374,444                             | -92% |
| Spain                          | -18,041,897                             | -94% |
| China                          | -16,683,876                             | -95% |
| France                         | -13,480,021                             | -91% |
| Italy                          | -12,464,502                             | -94% |
| United Arab Emirates           | -11,009,896                             | -89% |
| Japan                          | -9,501,833                              | -88% |
| Turkey                         | -8,798,224                              | -94% |
| Thailand                       | -8,441,105                              | -94% |
| Republic of Korea              | -7,960,525                              | -86% |
| Hong Kong SAR of China (CN)    | -7,122,206                              | -93% |
| Netherlands                    | -6,960,693                              | -89% |
| Singapore                      | -6,596,279                              | -93% |
| Canada                         | -6,288,656                              | -90% |
| India                          | -6,286,458                              | -89% |
| Switzerland                    | -5,990,424                              | -93% |
| Russian Federation             | -5,747,918                              | -87% |
| Taiwan, Province of China (CN) | -5,400,277                              | -85% |

| Country/Territory | Capacity change from originally-planned |      |
|-------------------|---|------|
| Malaysia          | -4,959,606                              | -85% |
| Portugal          | -4,913,803                              | -95% |
| Saudi Arabia      | -4,193,572                              | -77% |
| Australia         | -4,115,805                              | -92% |
| Mexico            | -4,104,882                              | -78% |
| Austria           | -3,812,866                              | -91% |
| Qatar             | -3,760,492                              | -80% |
| Indonesia         | -3,723,583                              | -87% |
| Viet Nam          | -3,681,731                              | -89% |
| Ireland           | -3,595,318                              | -92% |
| Poland            | -3,449,632                              | -79% |
| Denmark           | -3,417,729                              | -93% |
| Belgium           | -3,323,135                              | -87% |
| Greece            | -3,078,774                              | -94% |
| Philippines       | -2,993,741                              | -86% |
| Sweden            | -2,941,579                              | -89% |
| Norway            | -2,476,519                              | -90% |
| Egypt             | -2,248,437                              | -78% |
| Brazil            | -2,214,850                              | -92% |
| Israel            | -2,196,238                              | -91% |

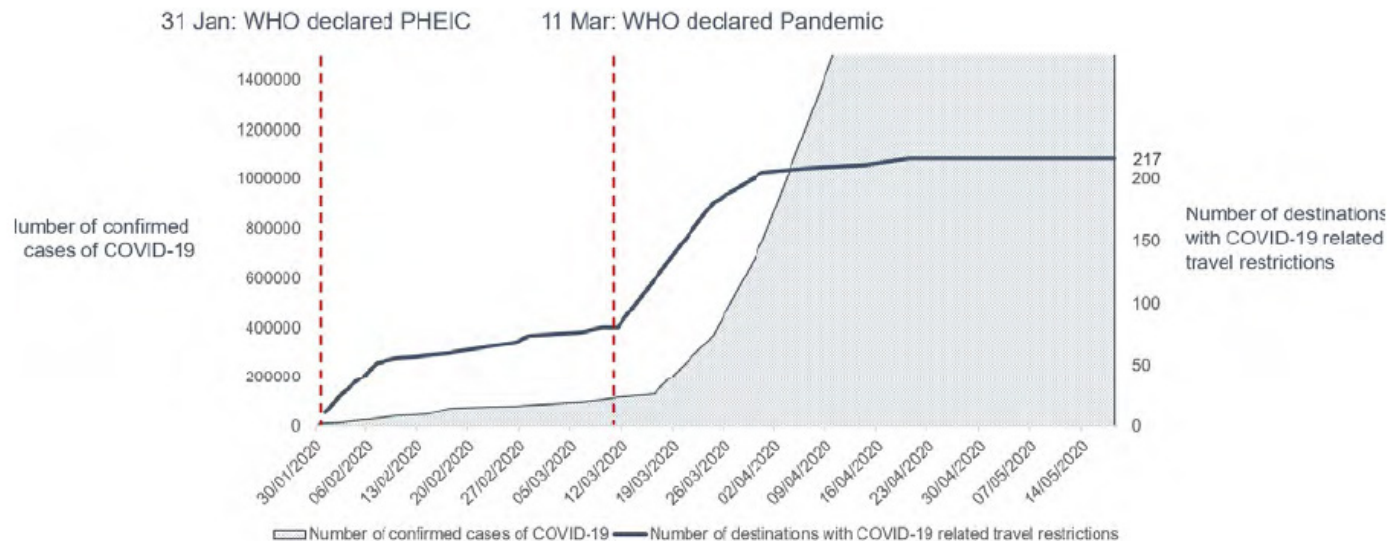
In April 2020, global international passenger capacity so far experienced by **unprecedented 94% reduction** (estimated)

|  |  |
|--|--|
|  | 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 (30 April 2020)

# Drastic reduction in passenger traffic amplified by travel restrictions

## Number of confirmed cases and destinations with COVID-19-related travel restrictions

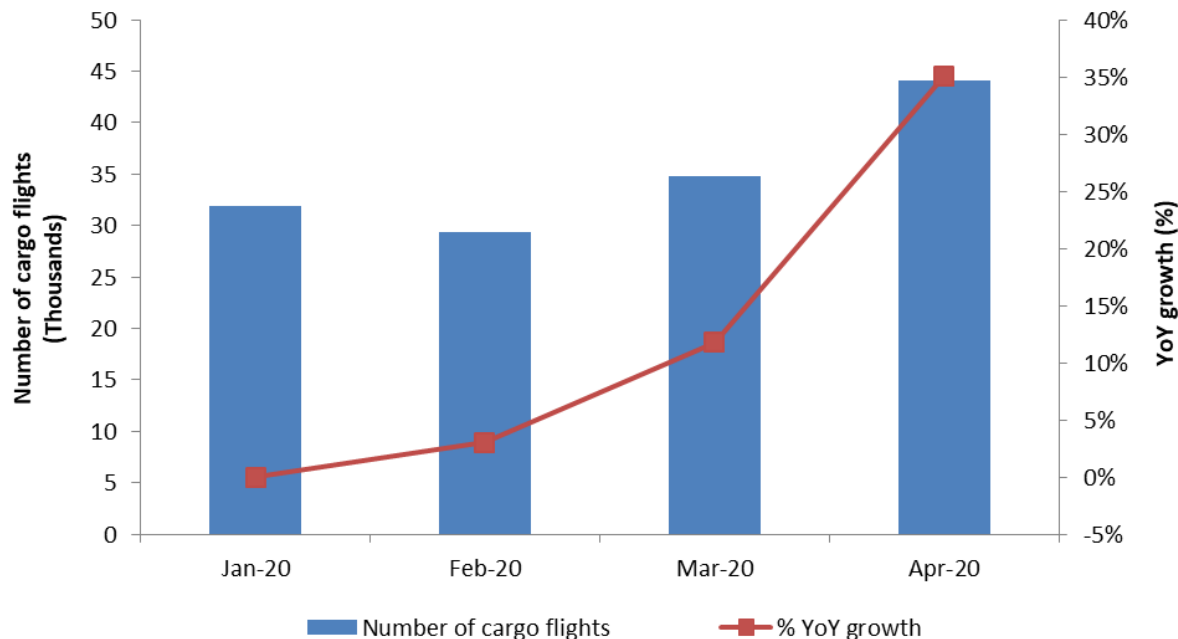


As of 18 May 2020, 100% of all world destinations have travel restrictions. About 185 (85%) destinations have completely or partially closed their borders, while 11 destinations (5%) have suspended completely or partially international flights.

<https://www.unwto.org/news/covid-19-response-travel-restrictions>

**In contrast, surge in cargo flights  
since March 2020**

**In contrast to the fall in passenger traffic, cargo flights surged with the increased cargo-only operations using passenger aircraft**





## **Appendix B: Scenario Assumptions in Detail**

| (International and domestic) | Baseline (Originally-planned, business as usual)  |   |
|------------------------------|---|---|
|                              | Seat capacity   | Passenger load factor   |
| January 2020                 | Airlines' winter schedules filed with OAG as of 6 January 2020  | Forecasted 2020 load factor by region/route group, based on ICAO long-term traffic forecasts (LTF), which was adjusted monthly by difference between 2019 actual monthly results (ICAO, IATA) and 2019 LTF forecasted load factor |
| February 2020                |   |   |
| March 2020                   |   |   |
| April 2020                   |   |   |
| May 2020                     | Maximum number of seats taken from airlines' summer schedules filed with OAG during the period from 6 January 2020 to 20 April 2020 |   |
| June 2020                    |   |   |
| July 2020                    |   |   |
| August 2020                  |   |   |
| September 2020               | Using 2019 winter schedule as the base, and applying the growth rate of 2019/2018   |   |
| October 2020                 |   |   |
| November 2020                |   |   |
| December 2020                |   |   |

| (International and domestic) | Scenarios 1/1a, 2/2a and Reference  |  |
|------------------------------|---|--|
|                              | Seat capacity   | Passenger load factor  |
| January 2020                 | Actual capacity based on ICAO ADS-B data  | Actual estimated results by region/route group   |
| February 2020                |   |  |
| March 2020                   |   |  |
| April 2020                   |   |  |
| May 2020                     |   | 43 percentage points (international) and 31 percentage points (domestic) lower than Baseline with adjustment of GDP impact by region/route group |
| June 2020                    | Scenarios 1/1a & 2/2a: Application of monthly "base percentage" which incorporates impacts of intra-/inter-regional share difference (2019), or most recent airlines' schedules filed with OAG, whichever is smaller<br>Reference: Most recent airlines' schedules filed with OAG | Application of "base percentage" which incorporates GDP impact by region/route group   |
| July 2020                    |   |  |
| August 2020                  |   |  |
| September 2020               |   |  |
| October 2020                 |   |  |
| November 2020                |   |  |
| December 2020                | Scenarios 1/1a & 2/2a: Application of monthly "base percentage" which incorporates impacts of intra-/inter-regional share difference (2019)<br>Reference: Most recent airlines' schedules filed with OAG  |  |

## “Base percentages” used for scenarios

### International (world average)

| Seat capacity | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|---------------|------|------|------|------|------|------|------|
| Reference     | -87% | -65% | -31% | -15% | -10% | -10% | -13% |
| Scenario 1    | -91% | -80% | -63% | -50% | -42% | -37% | -33% |
| Scenario 1a   | -91% | -80% | -63% | -60% | -72% | -69% | -65% |
| Scenario 2    | -91% | -85% | -79% | -72% | -65% | -57% | -47% |
| Scenario 2a   | -91% | -85% | -79% | -75% | -72% | -70% | -69% |

| Load factor | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|-------------|------|------|------|------|------|------|------|
| Reference   | -29% | -18% | -13% | -10% | -8%  | -6%  | -5%  |
| Scenario 1  | -33% | -22% | -16% | -13% | -10% | -9%  | -8%  |
| Scenario 1a | -33% | -22% | -26% | -26% | -24% | -20% | -16% |
| Scenario 2  | -41% | -38% | -36% | -33% | -29% | -24% | -16% |
| Scenario 2a | -41% | -38% | -36% | -33% | -30% | -27% | -24% |

### Domestic (world average)

| Seat capacity | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|---------------|------|------|------|------|------|------|------|
| Reference     | -51% | -33% | -6%  | 3%   | 1%   | -10% | -11% |
| Scenario 1    | -61% | -45% | -32% | -22% | -15% | -10% | -7%  |
| Scenario 1a   | -61% | -45% | -32% | -28% | -36% | -35% | -31% |
| Scenario 2    | -61% | -51% | -44% | -39% | -33% | -26% | -16% |
| Scenario 2a   | -61% | -51% | -44% | -40% | -37% | -35% | -34% |

| Load factor | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|-------------|------|------|------|------|------|------|------|
| Reference   | -20% | -13% | -9%  | -5%  | -3%  | -3%  | -2%  |
| Scenario 1  | -23% | -16% | -12% | -8%  | -6%  | -6%  | -5%  |
| Scenario 1a | -23% | -16% | -16% | -17% | -13% | -11% | -10% |
| Scenario 2  | -29% | -25% | -22% | -20% | -18% | -14% | -10% |
| Scenario 2a | -29% | -25% | -24% | -23% | -21% | -19% | -18% |

- Base percentages of seat capacity already take into consideration short-/long-haul (intra-/inter-region) impacts and will be applied to Baseline level of seat capacity
- Base percentages of load factor already take into consideration economic (GDP) factors and will be added to 2019 load factor %

- **Seat capacity (seats available for sale):** OAG airlines schedule data; Route Online; airline websites and ICAO ADS-B operational data
- **Load factor (RPKs/ASKs):** ICAO long-term traffic forecasts (LTF); ICAO statistical reporting forms; IATA economics data; and airline news release
- **Historical passenger traffic (including ASKs, RPKs, passenger numbers and operating revenues):** ICAO Annual Report of the Council; and ICAO statistical reporting forms
- **Yield (passenger revenues/RPK):** ICAO revenue-cost analysis of airlines (RCA); and ICAO-ICM Marketing Information Data Transfer (MIDT passenger origin-destination)
- **Macroeconomic factors (GDP impact):** Income elasticity of demand estimated for ICAO LTF; and IMF and World Bank economic outlook data

Note 1: A list of route group is shown in **Appendix D**.

Note 2: Average air fares (i.e. passenger yield multiplied by average trip distance) for each region/route group are used to estimate gross passenger operating revenues.





## Appendix C: Summary of Key Impact Indicators

Figures and estimates herein are subject to substantial changes, and will be updated with the situation evolving and more information available.

## Baseline

| Compared to 2019<br>(year-on-year) | Baseline (Originally-planned or business as usual) |                               |                                     |
|------------------------------------|--|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)                                  | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | 5.7%   | 6.83                          | 1.08                                |
| Asia/Pacific                       | 3.6%   | 69.95                         | 8.30                                |
| Europe                             | 1.2%   | 22.46                         | 2.52                                |
| Latin America/Caribbean            | 2.9%   | 12.40                         | 1.03                                |
| Middle East                        | 2.1%   | 4.78                          | 0.93                                |
| North America                      | 3.0%   | 34.74                         | 3.71                                |
| <b>Total</b>                       | <b>2.8%</b>  | <b>151.16</b>                 | <b>17.57</b>                        |

| Compared to 2019<br>(year-on-year) | Baseline (Originally-planned or business as usual) |                               |                                     |
|------------------------------------|--|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)                                  | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 3.0%   | 12.29                         | 1.43                                |
| February 2020                      | 5.4%   | 19.69                         | 2.35                                |
| March 2020                         | 2.8%   | 12.33                         | 1.19                                |
| April 2020                         | 2.4%   | 10.92                         | 1.26                                |
| May 2020                           | 2.7%   | 12.04                         | 1.52                                |
| June 2020                          | 3.1%   | 14.54                         | 1.67                                |
| July 2020                          | 3.1%   | 15.54                         | 1.79                                |
| August 2020                        | 2.4%   | 12.29                         | 1.49                                |
| September 2020                     | 2.9%   | 13.02                         | 1.43                                |
| October 2020                       | 1.7%   | 8.54                          | 1.00                                |
| November 2020                      | 1.6%   | 7.50                          | 0.90                                |
| December 2020                      | 2.8%   | 12.46                         | 1.55                                |
| <b>Total</b>                       | <b>2.8%</b>  | <b>151.16</b>                 | <b>17.57</b>                        |

## Reference

|                         | Reference<br>(compared to Baseline) |                               |                                     | Reference<br>(compared to 2019) |                               |                                     |
|-------------------------|-------------------------------------|-------------------------------|-------------------------------------|---------------------------------|-------------------------------|-------------------------------------|
| Region                  | Seat Capacity (%)                   | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)               | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                  | -40.3%                              | -58.75                        | -8.95                               | -36.9%                          | -51.92                        | -7.87                               |
| Asia/Pacific            | -30.7%                              | -669.27                       | -81.72                              | -28.2%                          | -599.32                       | -73.42                              |
| Europe                  | -37.0%                              | -527.09                       | -63.76                              | -36.2%                          | -504.63                       | -61.24                              |
| Latin America/Caribbean | -32.9%                              | -134.67                       | -17.90                              | -30.9%                          | -122.27                       | -16.87                              |
| Middle East             | -35.5%                              | -84.16                        | -13.39                              | -34.1%                          | -79.38                        | -12.46                              |
| North America           | -25.1%                              | -375.20                       | -54.18                              | -22.9%                          | -340.46                       | -50.47                              |
| <b>Total</b>            | <b>-31.7%</b>                       | <b>-1,849.14</b>              | <b>-239.90</b>                      | <b>-29.8%</b>                   | <b>-1,697.98</b>              | <b>-222.33</b>                      |

|                | Reference<br>(compared to Baseline) |                               |                                     | Reference<br>(compared to 2019) |                               |                                     |
|----------------|-------------------------------------|-------------------------------|-------------------------------------|---------------------------------|-------------------------------|-------------------------------------|
| Month          | Seat Capacity (%)                   | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)               | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020   | -1.4%                               | -5.19                         | -0.06                               | 1.5%                            | 7.10                          | 1.37                                |
| February 2020  | -13.7%                              | -66.82                        | -7.74                               | -9.0%                           | -47.13                        | -5.40                               |
| March 2020     | -38.6%                              | -213.89                       | -27.13                              | -36.9%                          | -201.56                       | -25.94                              |
| April 2020     | -82.2%                              | -354.57                       | -45.59                              | -81.7%                          | -343.65                       | -44.34                              |
| May 2020       | -80.8%                              | -350.12                       | -45.06                              | -80.3%                          | -338.08                       | -43.54                              |
| June 2020      | -66.6%                              | -310.48                       | -41.73                              | -65.6%                          | -295.94                       | -40.06                              |
| July 2020      | -46.9%                              | -246.18                       | -34.07                              | -45.3%                          | -230.64                       | -32.28                              |
| August 2020    | -16.7%                              | -115.59                       | -16.35                              | -14.7%                          | -103.30                       | -14.86                              |
| September 2020 | -4.6%                               | -47.34                        | -6.56                               | -1.9%                           | -34.33                        | -5.13                               |
| October 2020   | -3.2%                               | -32.21                        | -4.14                               | -1.6%                           | -23.67                        | -3.14                               |
| November 2020  | -10.1%                              | -50.71                        | -5.22                               | -8.7%                           | -43.21                        | -4.32                               |
| December 2020  | -11.9%                              | -56.04                        | -6.23                               | -9.5%                           | -43.58                        | -4.68                               |
| <b>Total</b>   | <b>-31.7%</b>                       | <b>-1,849.14</b>              | <b>-239.90</b>                      | <b>-29.8%</b>                   | <b>-1,697.98</b>              | <b>-222.33</b>                      |



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# Estimated results: Scenario 1 (World total)

| Compared to Baseline<br>(business as usual) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                                      | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                                      | -53.5%               | -74.17                        | -12.16                              | -61.4%                | -85.09                        | -14.18                              |
| Asia/Pacific                                | -37.5%               | -801.35                       | -99.03                              | -43.9%                | -940.87                       | -117.31                             |
| Europe                                      | -51.0%               | -691.85                       | -84.67                              | -59.4%                | -806.38                       | -99.46                              |
| Latin America/Caribbean                     | -46.0%               | -183.32                       | -23.41                              | -54.0%                | -216.36                       | -27.19                              |
| Middle East                                 | -51.5%               | -114.51                       | -18.80                              | -58.5%                | -131.02                       | -21.56                              |
| North America                               | -34.2%               | -478.65                       | -70.06                              | -40.9%                | -565.61                       | -82.05                              |
| <b>Total</b>                                | <b>-41.9%</b>        | <b>-2,343.83</b>              | <b>-308.12</b>                      | <b>-49.1%</b>         | <b>-2,745.33</b>              | <b>-361.76</b>                      |

| Compared to Baseline<br>(business as usual) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                                       | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                                | -1.4%                | -5.19                         | -0.06                               | -1.4%                 | -5.19                         | -0.06                               |
| February 2020                               | -13.7%               | -66.82                        | -7.74                               | -13.7%                | -66.82                        | -7.74                               |
| March 2020                                  | -38.6%               | -213.89                       | -27.13                              | -38.6%                | -213.89                       | -27.13                              |
| April 2020                                  | -82.2%               | -354.57                       | -45.59                              | -82.2%                | -354.57                       | -45.59                              |
| May 2020                                    | -80.8%               | -350.12                       | -45.06                              | -80.8%                | -350.12                       | -45.06                              |
| June 2020                                   | -73.8%               | -337.76                       | -44.36                              | -73.8%                | -337.76                       | -44.36                              |
| July 2020                                   | -60.1%               | -302.90                       | -40.52                              | -60.1%                | -302.90                       | -40.52                              |
| August 2020                                 | -45.5%               | -236.26                       | -31.86                              | -45.5%                | -252.29                       | -34.13                              |
| September 2020                              | -34.2%               | -165.09                       | -22.06                              | -41.8%                | -219.79                       | -29.37                              |
| October 2020                                | -26.0%               | -127.55                       | -17.39                              | -51.1%                | -238.92                       | -32.16                              |
| November 2020                               | -20.8%               | -96.33                        | -13.55                              | -48.4%                | -203.41                       | -27.75                              |
| December 2020                               | -17.4%               | -87.34                        | -12.79                              | -44.7%                | -199.67                       | -27.87                              |
| <b>Total</b>                                | <b>-41.9%</b>        | <b>-2,343.83</b>              | <b>-308.12</b>                      | <b>-49.1%</b>         | <b>-2,745.33</b>              | <b>-361.76</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | -50.8%               | -67.34                        | -11.08                              | -59.2%                | -78.26                        | -13.10                              |
| Asia/Pacific                       | -35.2%               | -731.40                       | -90.73                              | -41.8%                | -870.92                       | -109.02                             |
| Europe                             | -50.4%               | -669.39                       | -82.15                              | -58.9%                | -783.92                       | -96.93                              |
| Latin America/Caribbean            | -44.4%               | -170.92                       | -22.38                              | -52.6%                | -203.96                       | -26.16                              |
| Middle East                        | -50.5%               | -109.73                       | -17.87                              | -57.6%                | -126.24                       | -20.64                              |
| North America                      | -32.3%               | -443.91                       | -66.35                              | -39.1%                | -530.87                       | -78.34                              |
| <b>Total</b>                       | <b>-40.3%</b>        | <b>-2,192.67</b>              | <b>-290.55</b>                      | <b>-47.7%</b>         | <b>-2,594.17</b>              | <b>-344.19</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 1.5%                 | 7.10                          | 1.37                                | 1.5%                  | 7.10                          | 1.37                                |
| February 2020                      | -9.0%                | -47.13                        | -5.40                               | -9.0%                 | -47.13                        | -5.40                               |
| March 2020                         | -36.9%               | -201.56                       | -25.94                              | -36.9%                | -201.56                       | -25.94                              |
| April 2020                         | -81.7%               | -343.65                       | -44.34                              | -81.7%                | -343.65                       | -44.34                              |
| May 2020                           | -80.3%               | -338.08                       | -43.54                              | -80.3%                | -338.08                       | -43.54                              |
| June 2020                          | -73.0%               | -323.23                       | -42.69                              | -73.0%                | -323.23                       | -42.69                              |
| July 2020                          | -58.9%               | -287.36                       | -38.73                              | -58.9%                | -287.36                       | -38.73                              |
| August 2020                        | -44.2%               | -223.97                       | -30.37                              | -44.2%                | -240.00                       | -32.64                              |
| September 2020                     | -32.3%               | -152.07                       | -20.63                              | -40.1%                | -206.77                       | -27.94                              |
| October 2020                       | -24.7%               | -119.01                       | -16.40                              | -50.3%                | -230.38                       | -31.17                              |
| November 2020                      | -19.5%               | -88.84                        | -12.65                              | -47.5%                | -195.91                       | -26.85                              |
| December 2020                      | -15.1%               | -74.89                        | -11.24                              | -43.1%                | -187.21                       | -26.32                              |
| <b>Total</b>                       | <b>-40.3%</b>        | <b>-2,192.67</b>              | <b>-290.55</b>                      | <b>-47.7%</b>         | <b>-2,594.17</b>              | <b>-344.19</b>                      |



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# Estimated results: Scenario 2 (World total)

| Compared to Baseline<br>(business as usual) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                                      | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                                      | -61.8%               | -87.04                        | -14.62                              | -65.2%                | -90.90                        | -15.31                              |
| Asia/Pacific                                | -44.0%               | -969.92                       | -119.55                             | -46.9%                | -1,030.03                     | -126.71                             |
| Europe                                      | -59.1%               | -818.93                       | -101.35                             | -62.5%                | -856.46                       | -106.08                             |
| Latin America/Caribbean                     | -54.2%               | -216.81                       | -27.34                              | -57.6%                | -230.23                       | -28.81                              |
| Middle East                                 | -59.6%               | -135.02                       | -22.24                              | -62.6%                | -140.71                       | -23.17                              |
| North America                               | -41.6%               | -591.96                       | -85.67                              | -44.4%                | -629.68                       | -90.67                              |
| <b>Total</b>                                | <b>-49.3%</b>        | <b>-2,819.68</b>              | <b>-370.78</b>                      | <b>-52.3%</b>         | <b>-2,978.01</b>              | <b>-390.75</b>                      |

| Compared to Baseline<br>(business as usual) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                                       | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                                | -1.4%                | -5.19                         | -0.06                               | -1.4%                 | -5.19                         | -0.06                               |
| February 2020                               | -13.7%               | -66.82                        | -7.74                               | -13.7%                | -66.82                        | -7.74                               |
| March 2020                                  | -38.6%               | -213.89                       | -27.13                              | -38.6%                | -213.89                       | -27.13                              |
| April 2020                                  | -82.2%               | -354.57                       | -45.59                              | -82.2%                | -354.57                       | -45.59                              |
| May 2020                                    | -80.8%               | -350.12                       | -45.06                              | -80.8%                | -350.12                       | -45.06                              |
| June 2020                                   | -73.8%               | -345.11                       | -45.22                              | -73.8%                | -345.11                       | -45.22                              |
| July 2020                                   | -65.8%               | -342.38                       | -45.46                              | -65.8%                | -342.38                       | -45.46                              |
| August 2020                                 | -59.3%               | -313.91                       | -42.24                              | -59.3%                | -317.13                       | -42.53                              |
| September 2020                              | -53.1%               | -263.86                       | -35.05                              | -54.8%                | -272.96                       | -36.17                              |
| October 2020                                | -46.3%               | -236.84                       | -31.67                              | -51.5%                | -257.27                       | -34.22                              |
| November 2020                               | -38.2%               | -181.34                       | -24.82                              | -49.2%                | -222.72                       | -29.99                              |
| December 2020                               | -28.5%               | -145.65                       | -20.72                              | -48.2%                | -229.85                       | -31.56                              |
| <b>Total</b>                                | <b>-49.3%</b>        | <b>-2,819.68</b>              | <b>-370.78</b>                      | <b>-52.3%</b>         | <b>-2,978.01</b>              | <b>-390.75</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | -59.7%               | -80.21                        | -13.54                              | -63.3%                | -84.06                        | -14.23                              |
| Asia/Pacific                       | -42.0%               | -899.97                       | -111.25                             | -44.9%                | -960.08                       | -118.41                             |
| Europe                             | -58.6%               | -796.47                       | -98.82                              | -62.0%                | -834.00                       | -103.55                             |
| Latin America/Caribbean            | -52.8%               | -204.41                       | -26.31                              | -56.3%                | -217.83                       | -27.78                              |
| Middle East                        | -58.7%               | -130.24                       | -21.31                              | -61.8%                | -135.93                       | -22.24                              |
| North America                      | -39.9%               | -557.22                       | -81.96                              | -42.8%                | -594.94                       | -86.96                              |
| <b>Total</b>                       | <b>-47.9%</b>        | <b>-2,668.52</b>              | <b>-353.21</b>                      | <b>-51.0%</b>         | <b>-2,826.85</b>              | <b>-373.18</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 1.5%                 | 7.10                          | 1.37                                | 1.5%                  | 7.10                          | 1.37                                |
| February 2020                      | -9.0%                | -47.13                        | -5.40                               | -9.0%                 | -47.13                        | -5.40                               |
| March 2020                         | -36.9%               | -201.56                       | -25.94                              | -36.9%                | -201.56                       | -25.94                              |
| April 2020                         | -81.7%               | -343.65                       | -44.34                              | -81.7%                | -343.65                       | -44.34                              |
| May 2020                           | -80.3%               | -338.08                       | -43.54                              | -80.3%                | -338.08                       | -43.54                              |
| June 2020                          | -73.0%               | -330.57                       | -43.56                              | -73.0%                | -330.57                       | -43.56                              |
| July 2020                          | -64.7%               | -326.84                       | -43.67                              | -64.7%                | -326.84                       | -43.67                              |
| August 2020                        | -58.4%               | -301.62                       | -40.75                              | -58.4%                | -304.84                       | -41.04                              |
| September 2020                     | -51.8%               | -250.85                       | -33.62                              | -53.5%                | -259.95                       | -34.74                              |
| October 2020                       | -45.4%               | -228.30                       | -30.67                              | -50.7%                | -248.73                       | -33.22                              |
| November 2020                      | -37.2%               | -173.84                       | -23.92                              | -48.4%                | -215.22                       | -29.09                              |
| December 2020                      | -26.5%               | -133.19                       | -19.17                              | -46.8%                | -217.39                       | -30.01                              |
| <b>Total</b>                       | <b>-47.9%</b>        | <b>-2,668.52</b>              | <b>-353.21</b>                      | <b>-51.0%</b>         | <b>-2,826.85</b>              | <b>-373.18</b>                      |

## Baseline

| Compared to 2019<br>(year-on-year) | Baseline (Originally-planned or business as usual) |                               |                                     |
|------------------------------------|--|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)                                  | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | 6.8%   | 5.28                          | 0.94                                |
| Asia/Pacific                       | 4.6%   | 25.40                         | 5.17                                |
| Europe                             | 2.0%   | 24.12                         | 2.66                                |
| Latin America/Caribbean            | -0.7%  | -0.36                         | -0.01                               |
| Middle East                        | 3.9%   | 6.37                          | 1.08                                |
| North America                      | -2.9%  | -4.28                         | -0.82                               |
| <b>Total</b>                       | <b>2.5%</b>  | <b>56.53</b>                  | <b>9.02</b>                         |

| Compared to 2019<br>(year-on-year) | Baseline (Originally-planned or business as usual) |                               |                                     |
|------------------------------------|--|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)                                  | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 2.3%   | 3.99                          | 0.74                                |
| February 2020                      | 5.2%   | 7.45                          | 1.27                                |
| March 2020                         | 2.6%   | 4.57                          | 0.54                                |
| April 2020                         | 2.4%   | 4.62                          | 0.69                                |
| May 2020                           | 2.4%   | 4.51                          | 0.84                                |
| June 2020                          | 3.0%   | 5.99                          | 0.85                                |
| July 2020                          | 2.4%   | 5.50                          | 0.83                                |
| August 2020                        | 2.3%   | 5.34                          | 0.87                                |
| September 2020                     | 2.2%   | 4.43                          | 0.65                                |
| October 2020                       | 1.1%   | 2.45                          | 0.42                                |
| November 2020                      | 1.3%   | 2.47                          | 0.46                                |
| December 2020                      | 3.0%   | 5.20                          | 0.87                                |
| <b>Total</b>                       | <b>2.5%</b>  | <b>56.53</b>                  | <b>9.02</b>                         |

## Reference

|                         | Reference<br>(compared to Baseline) |                               |                                     | Reference<br>(compared to 2019) |                               |                                     |
|-------------------------|-------------------------------------|-------------------------------|-------------------------------------|---------------------------------|-------------------------------|-------------------------------------|
| Region                  | Seat Capacity (%)                   | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)               | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                  | -39.1%                              | -37.64                        | -7.07                               | -35.0%                          | -32.36                        | -6.13                               |
| Asia/Pacific            | -44.1%                              | -266.92                       | -54.72                              | -41.5%                          | -241.52                       | -49.55                              |
| Europe                  | -40.5%                              | -425.75                       | -55.55                              | -39.3%                          | -401.64                       | -52.89                              |
| Latin America/Caribbean | -40.3%                              | -55.78                        | -11.36                              | -40.8%                          | -56.14                        | -11.36                              |
| Middle East             | -35.0%                              | -67.32                        | -11.82                              | -32.4%                          | -60.95                        | -10.74                              |
| North America           | -39.4%                              | -73.93                        | -19.21                              | -41.2%                          | -78.21                        | -20.02                              |
| <b>Total</b>            | <b>-40.9%</b>                       | <b>-927.35</b>                | <b>-159.73</b>                      | <b>-39.4%</b>                   | <b>-870.82</b>                | <b>-150.71</b>                      |

|                | Reference<br>(compared to Baseline) |                               |                                     | Reference<br>(compared to 2019) |                               |                                     |
|----------------|-------------------------------------|-------------------------------|-------------------------------------|---------------------------------|-------------------------------|-------------------------------------|
| Month          | Seat Capacity (%)                   | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)               | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020   | -0.4%                               | 0.94                          | 0.37                                | 1.9%                            | 4.94                          | 1.10                                |
| February 2020  | -9.6%                               | -20.18                        | -3.87                               | -4.9%                           | -12.73                        | -2.60                               |
| March 2020     | -47.6%                              | -90.67                        | -16.11                              | -46.2%                          | -86.11                        | -15.57                              |
| April 2020     | -93.6%                              | -158.25                       | -28.00                              | -93.4%                          | -153.63                       | -27.31                              |
| May 2020       | -93.2%                              | -159.31                       | -27.95                              | -93.0%                          | -154.80                       | -27.11                              |
| June 2020      | -87.0%                              | -163.33                       | -28.16                              | -86.7%                          | -157.34                       | -27.31                              |
| July 2020      | -65.4%                              | -139.19                       | -24.13                              | -64.6%                          | -133.68                       | -23.30                              |
| August 2020    | -30.6%                              | -79.02                        | -13.08                              | -29.0%                          | -73.68                        | -12.21                              |
| September 2020 | -14.5%                              | -40.57                        | -6.26                               | -12.7%                          | -36.14                        | -5.61                               |
| October 2020   | -9.8%                               | -28.05                        | -4.26                               | -8.9%                           | -25.60                        | -3.84                               |
| November 2020  | -10.1%                              | -22.48                        | -3.70                               | -8.9%                           | -20.01                        | -3.24                               |
| December 2020  | -12.8%                              | -27.25                        | -4.58                               | -10.2%                          | -22.05                        | -3.71                               |
| <b>Total</b>   | <b>-40.9%</b>                       | <b>-927.35</b>                | <b>-159.73</b>                      | <b>-39.4%</b>                   | <b>-870.82</b>                | <b>-150.71</b>                      |



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# Estimated results: Scenario 1 (International)

| Compared to Baseline<br>(business as usual) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                                      | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                                      | -57.2%               | -51.13                        | -10.10                              | -64.5%                | -57.88                        | -11.75                              |
| Asia/Pacific                                | -54.6%               | -323.09                       | -66.50                              | -64.0%                | -378.75                       | -78.47                              |
| Europe                                      | -55.8%               | -556.35                       | -73.70                              | -64.4%                | -641.99                       | -86.14                              |
| Latin America/Caribbean                     | -51.0%               | -68.80                        | -13.93                              | -58.2%                | -78.68                        | -15.84                              |
| Middle East                                 | -54.2%               | -96.02                        | -17.08                              | -61.0%                | -109.02                       | -19.51                              |
| North America                               | -55.2%               | -98.22                        | -25.90                              | -61.2%                | -109.51                       | -29.10                              |
| <b>Total</b>                                | <b>-55.0%</b>        | <b>-1,193.61</b>              | <b>-207.21</b>                      | <b>-63.4%</b>         | <b>-1,375.82</b>              | <b>-240.81</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | -54.3%               | -45.86                        | -9.16                               | -62.1%                | -52.60                        | -10.81                              |
| Asia/Pacific                       | -52.5%               | -297.69                       | -61.33                              | -62.4%                | -353.35                       | -73.31                              |
| Europe                             | -54.9%               | -532.23                       | -71.04                              | -63.6%                | -617.87                       | -83.48                              |
| Latin America/Caribbean            | -51.3%               | -69.16                        | -13.94                              | -58.5%                | -79.04                        | -15.84                              |
| Middle East                        | -52.4%               | -89.65                        | -16.00                              | -59.5%                | -102.64                       | -18.44                              |
| North America                      | -56.5%               | -102.49                       | -26.71                              | -62.4%                | -113.79                       | -29.92                              |
| <b>Total</b>                       | <b>-53.9%</b>        | <b>-1,137.08</b>              | <b>-198.18</b>                      | <b>-62.4%</b>         | <b>-1,319.29</b>              | <b>-231.79</b>                      |

| Compared to Baseline<br>(business as usual) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                                       | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                                | -0.4%                | 0.94                          | 0.37                                | -0.4%                 | 0.94                          | 0.37                                |
| February 2020                               | -9.6%                | -20.18                        | -3.87                               | -9.6%                 | -20.18                        | -3.87                               |
| March 2020                                  | -47.6%               | -90.67                        | -16.11                              | -47.6%                | -90.67                        | -16.11                              |
| April 2020                                  | -93.6%               | -158.25                       | -28.00                              | -93.6%                | -158.25                       | -28.00                              |
| May 2020                                    | -93.2%               | -159.31                       | -27.95                              | -93.2%                | -159.31                       | -27.95                              |
| June 2020                                   | -90.5%               | -168.39                       | -29.09                              | -90.5%                | -168.39                       | -29.09                              |
| July 2020                                   | -79.5%               | -163.38                       | -28.08                              | -79.5%                | -163.38                       | -28.08                              |
| August 2020                                 | -63.3%               | -135.50                       | -23.07                              | -63.3%                | -143.66                       | -24.60                              |
| September 2020                              | -50.4%               | -98.22                        | -16.42                              | -60.1%                | -123.51                       | -21.03                              |
| October 2020                                | -41.9%               | -79.40                        | -13.40                              | -71.7%                | -130.21                       | -22.65                              |
| November 2020                               | -36.8%               | -61.04                        | -10.83                              | -69.2%                | -108.16                       | -19.59                              |
| December 2020                               | -32.8%               | -60.21                        | -10.76                              | -65.2%                | -111.04                       | -20.22                              |
| <b>Total</b>                                | <b>-55.0%</b>        | <b>-1,193.61</b>              | <b>-207.21</b>                      | <b>-63.4%</b>         | <b>-1,375.82</b>              | <b>-240.81</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 1.9%                 | 4.94                          | 1.10                                | 1.9%                  | 4.94                          | 1.10                                |
| February 2020                      | -4.9%                | -12.73                        | -2.60                               | -4.9%                 | -12.73                        | -2.60                               |
| March 2020                         | -46.2%               | -86.11                        | -15.57                              | -46.2%                | -86.11                        | -15.57                              |
| April 2020                         | -93.4%               | -153.63                       | -27.31                              | -93.4%                | -153.63                       | -27.31                              |
| May 2020                           | -93.0%               | -154.80                       | -27.11                              | -93.0%                | -154.80                       | -27.11                              |
| June 2020                          | -90.2%               | -162.40                       | -28.23                              | -90.2%                | -162.40                       | -28.23                              |
| July 2020                          | -79.0%               | -157.88                       | -27.25                              | -79.0%                | -157.88                       | -27.25                              |
| August 2020                        | -62.4%               | -130.15                       | -22.20                              | -62.4%                | -138.32                       | -23.73                              |
| September 2020                     | -49.4%               | -93.79                        | -15.78                              | -59.2%                | -119.07                       | -20.38                              |
| October 2020                       | -41.3%               | -76.95                        | -12.99                              | -71.4%                | -127.76                       | -22.24                              |
| November 2020                      | -36.0%               | -58.57                        | -10.37                              | -68.8%                | -105.69                       | -19.13                              |
| December 2020                      | -30.8%               | -55.01                        | -9.89                               | -64.1%                | -105.83                       | -19.35                              |
| <b>Total</b>                       | <b>-53.9%</b>        | <b>-1,137.08</b>              | <b>-198.18</b>                      | <b>-62.4%</b>         | <b>-1,319.29</b>              | <b>-231.79</b>                      |



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# Estimated results: Scenario 2 (International)

| Compared to Baseline<br>(business as usual) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                                      | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                                      | -65.3%               | -59.38                        | -12.15                              | -68.6%                | -61.49                        | -12.68                              |
| Asia/Pacific                                | -63.0%               | -378.52                       | -78.43                              | -67.0%                | -397.02                       | -82.42                              |
| Europe                                      | -64.5%               | -654.12                       | -88.00                              | -67.9%                | -679.50                       | -91.75                              |
| Latin America/Caribbean                     | -58.7%               | -79.78                        | -16.04                              | -61.9%                | -83.24                        | -16.70                              |
| Middle East                                 | -62.2%               | -112.12                       | -20.11                              | -65.2%                | -116.31                       | -20.90                              |
| North America                               | -62.9%               | -112.77                       | -30.04                              | -65.6%                | -116.46                       | -31.08                              |
| <b>Total</b>                                | <b>-63.4%</b>        | <b>-1,396.69</b>              | <b>-244.76</b>                      | <b>-66.9%</b>         | <b>-1,454.03</b>              | <b>-255.53</b>                      |

| Compared to Baseline<br>(business as usual) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                                       | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                                | -0.4%                | 0.94                          | 0.37                                | -0.4%                 | 0.94                          | 0.37                                |
| February 2020                               | -9.6%                | -20.18                        | -3.87                               | -9.6%                 | -20.18                        | -3.87                               |
| March 2020                                  | -47.6%               | -90.67                        | -16.11                              | -47.6%                | -90.67                        | -16.11                              |
| April 2020                                  | -93.6%               | -158.25                       | -28.00                              | -93.6%                | -158.25                       | -28.00                              |
| May 2020                                    | -93.2%               | -159.31                       | -27.95                              | -93.2%                | -159.31                       | -27.95                              |
| June 2020                                   | -90.5%               | -169.98                       | -29.39                              | -90.5%                | -169.98                       | -29.39                              |
| July 2020                                   | -84.7%               | -176.31                       | -30.52                              | -84.7%                | -176.31                       | -30.52                              |
| August 2020                                 | -78.9%               | -169.67                       | -29.40                              | -78.9%                | -169.67                       | -29.40                              |
| September 2020                              | -71.6%               | -141.39                       | -24.29                              | -74.5%                | -144.40                       | -24.84                              |
| October 2020                                | -65.0%               | -126.13                       | -21.96                              | -71.6%                | -133.49                       | -23.30                              |
| November 2020                               | -57.2%               | -97.99                        | -17.73                              | -70.0%                | -112.64                       | -20.49                              |
| December 2020                               | -46.7%               | -87.76                        | -15.90                              | -68.6%                | -120.07                       | -22.02                              |
| <b>Total</b>                                | <b>-63.4%</b>        | <b>-1,396.69</b>              | <b>-244.76</b>                      | <b>-66.9%</b>         | <b>-1,454.03</b>              | <b>-255.53</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | -63.0%               | -54.10                        | -11.21                              | -66.4%                | -56.22                        | -11.74                              |
| Asia/Pacific                       | -61.3%               | -353.13                       | -73.26                              | -65.5%                | -371.62                       | -77.25                              |
| Europe                             | -63.7%               | -630.00                       | -85.34                              | -67.3%                | -655.39                       | -89.09                              |
| Latin America/Caribbean            | -59.0%               | -80.13                        | -16.04                              | -62.2%                | -83.59                        | -16.70                              |
| Middle East                        | -60.7%               | -105.74                       | -19.03                              | -63.9%                | -109.94                       | -19.82                              |
| North America                      | -64.0%               | -117.05                       | -30.86                              | -66.6%                | -120.74                       | -31.90                              |
| <b>Total</b>                       | <b>-62.5%</b>        | <b>-1,340.16</b>              | <b>-235.74</b>                      | <b>-66.1%</b>         | <b>-1,397.50</b>              | <b>-246.51</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 1.9%                 | 4.94                          | 1.10                                | 1.9%                  | 4.94                          | 1.10                                |
| February 2020                      | -4.9%                | -12.73                        | -2.60                               | -4.9%                 | -12.73                        | -2.60                               |
| March 2020                         | -46.2%               | -86.11                        | -15.57                              | -46.2%                | -86.11                        | -15.57                              |
| April 2020                         | -93.4%               | -153.63                       | -27.31                              | -93.4%                | -153.63                       | -27.31                              |
| May 2020                           | -93.0%               | -154.80                       | -27.11                              | -93.0%                | -154.80                       | -27.11                              |
| June 2020                          | -90.2%               | -163.98                       | -28.54                              | -90.2%                | -163.98                       | -28.54                              |
| July 2020                          | -84.3%               | -170.81                       | -29.69                              | -84.3%                | -170.81                       | -29.69                              |
| August 2020                        | -78.4%               | -164.33                       | -28.53                              | -78.4%                | -164.33                       | -28.53                              |
| September 2020                     | -71.0%               | -136.96                       | -23.65                              | -74.0%                | -139.97                       | -24.20                              |
| October 2020                       | -64.6%               | -123.68                       | -21.54                              | -71.3%                | -131.05                       | -22.89                              |
| November 2020                      | -56.6%               | -95.52                        | -17.27                              | -69.6%                | -110.17                       | -20.03                              |
| December 2020                      | -45.1%               | -82.55                        | -15.04                              | -67.7%                | -114.86                       | -21.15                              |
| <b>Total</b>                       | <b>-62.5%</b>        | <b>-1,340.16</b>              | <b>-235.74</b>                      | <b>-66.1%</b>         | <b>-1,397.50</b>              | <b>-246.51</b>                      |

## Baseline

| Compared to 2019<br>(year-on-year) | Baseline (Originally-planned or business as usual) |                               |                                     |
|------------------------------------|--|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)                                  | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | 3.7%   | 1.56                          | 0.14                                |
| Asia/Pacific                       | 3.2%   | 44.55                         | 3.13                                |
| Europe                             | -1.1%  | -1.66                         | -0.13                               |
| Latin America/Caribbean            | 4.9%   | 12.76                         | 1.04                                |
| Middle East                        | -4.2%  | -1.59                         | -0.15                               |
| North America                      | 4.1%   | 39.02                         | 4.53                                |
| <b>Total</b>                       | <b>3.0%</b>  | <b>94.63</b>                  | <b>8.55</b>                         |

| Compared to 2019<br>(year-on-year) | Baseline (Originally-planned or business as usual) |                               |                                     |
|------------------------------------|--|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)                                  | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 3.4%   | 8.29                          | 0.70                                |
| February 2020                      | 5.6%   | 12.24                         | 1.07                                |
| March 2020                         | 3.0%   | 7.77                          | 0.66                                |
| April 2020                         | 2.4%   | 6.31                          | 0.57                                |
| May 2020                           | 2.8%   | 7.53                          | 0.68                                |
| June 2020                          | 3.2%   | 8.55                          | 0.82                                |
| July 2020                          | 3.5%   | 10.04                         | 0.96                                |
| August 2020                        | 2.4%   | 6.95                          | 0.62                                |
| September 2020                     | 3.4%   | 8.59                          | 0.78                                |
| October 2020                       | 2.1%   | 6.09                          | 0.58                                |
| November 2020                      | 1.8%   | 5.03                          | 0.44                                |
| December 2020                      | 2.7%   | 7.25                          | 0.68                                |
| <b>Total</b>                       | <b>3.0%</b>  | <b>94.63</b>                  | <b>8.55</b>                         |

## Reference

|                         | Reference<br>(compared to Baseline) |                               |                                     | Reference<br>(compared to 2019) |                               |                                     |
|-------------------------|-------------------------------------|-------------------------------|-------------------------------------|---------------------------------|-------------------------------|-------------------------------------|
| Region                  | Seat Capacity (%)                   | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)               | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                  | -42.5%                              | -21.11                        | -1.89                               | -40.4%                          | -19.55                        | -1.75                               |
| Asia/Pacific            | -24.8%                              | -402.35                       | -27.00                              | -22.4%                          | -357.80                       | -23.87                              |
| Europe                  | -26.9%                              | -101.33                       | -8.21                               | -27.7%                          | -102.99                       | -8.34                               |
| Latin America/Caribbean | -29.0%                              | -78.89                        | -6.54                               | -25.6%                          | -66.13                        | -5.50                               |
| Middle East             | -37.4%                              | -16.84                        | -1.57                               | -40.1%                          | -18.44                        | -1.72                               |
| North America           | -22.4%                              | -301.26                       | -34.98                              | -19.2%                          | -262.25                       | -30.45                              |
| <b>Total</b>            | <b>-25.2%</b>                       | <b>-921.79</b>                | <b>-80.18</b>                       | <b>-22.9%</b>                   | <b>-827.16</b>                | <b>-71.63</b>                       |

|                | Reference<br>(compared to Baseline) |                               |                                     | Reference<br>(compared to 2019) |                               |                                     |
|----------------|-------------------------------------|-------------------------------|-------------------------------------|---------------------------------|-------------------------------|-------------------------------------|
| Month          | Seat Capacity (%)                   | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)               | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020   | -2.0%                               | -6.13                         | -0.43                               | 1.3%                            | 2.17                          | 0.26                                |
| February 2020  | -16.4%                              | -46.64                        | -3.87                               | -11.8%                          | -34.40                        | -2.80                               |
| March 2020     | -32.4%                              | -123.22                       | -11.02                              | -30.4%                          | -115.45                       | -10.37                              |
| April 2020     | -73.8%                              | -196.33                       | -17.60                              | -73.2%                          | -190.02                       | -17.03                              |
| May 2020       | -71.8%                              | -190.81                       | -17.11                              | -71.0%                          | -183.28                       | -16.43                              |
| June 2020      | -50.9%                              | -147.15                       | -13.57                              | -49.3%                          | -138.61                       | -12.75                              |
| July 2020      | -32.7%                              | -106.99                       | -9.94                               | -30.3%                          | -96.95                        | -8.98                               |
| August 2020    | -5.7%                               | -36.57                        | -3.27                               | -3.4%                           | -29.62                        | -2.65                               |
| September 2020 | 2.8%                                | -6.77                         | -0.30                               | 6.3%                            | 1.81                          | 0.48                                |
| October 2020   | 1.5%                                | -4.16                         | 0.11                                | 3.6%                            | 1.93                          | 0.70                                |
| November 2020  | -10.1%                              | -28.23                        | -1.52                               | -8.5%                           | -23.21                        | -1.08                               |
| December 2020  | -11.3%                              | -28.79                        | -1.65                               | -8.9%                           | -21.53                        | -0.97                               |
| <b>Total</b>   | <b>-25.2%</b>                       | <b>-921.79</b>                | <b>-80.18</b>                       | <b>-22.9%</b>                   | <b>-827.16</b>                | <b>-71.63</b>                       |





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# Estimated results: Scenario 1 (Domestic)

| Compared to Baseline<br>(business as usual) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                                      | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                                      | -46.6%               | -23.04                        | -2.06                               | -55.6%                | -27.21                        | -2.43                               |
| Asia/Pacific                                | -29.9%               | -478.26                       | -32.52                              | -34.9%                | -562.12                       | -38.84                              |
| Europe                                      | -37.1%               | -135.50                       | -10.98                              | -45.2%                | -164.40                       | -13.32                              |
| Latin America/Caribbean                     | -43.4%               | -114.52                       | -9.47                               | -51.8%                | -137.68                       | -11.36                              |
| Middle East                                 | -41.0%               | -18.48                        | -1.72                               | -48.6%                | -22.01                        | -2.05                               |
| North America                               | -30.3%               | -380.43                       | -44.17                              | -37.1%                | -456.10                       | -52.95                              |
| <b>Total</b>                                | <b>-32.5%</b>        | <b>-1,150.23</b>              | <b>-100.92</b>                      | <b>-38.8%</b>         | <b>-1,369.51</b>              | <b>-120.95</b>                      |

| Compared to Baseline<br>(business as usual) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                                       | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                                | -2.0%                | -6.13                         | -0.43                               | -2.0%                 | -6.13                         | -0.43                               |
| February 2020                               | -16.4%               | -46.64                        | -3.87                               | -16.4%                | -46.64                        | -3.87                               |
| March 2020                                  | -32.4%               | -123.22                       | -11.02                              | -32.4%                | -123.22                       | -11.02                              |
| April 2020                                  | -73.8%               | -196.33                       | -17.60                              | -73.8%                | -196.33                       | -17.60                              |
| May 2020                                    | -71.8%               | -190.81                       | -17.11                              | -71.8%                | -190.81                       | -17.11                              |
| June 2020                                   | -61.0%               | -169.37                       | -15.28                              | -61.0%                | -169.37                       | -15.28                              |
| July 2020                                   | -45.2%               | -139.52                       | -12.44                              | -45.2%                | -139.52                       | -12.44                              |
| August 2020                                 | -31.6%               | -100.77                       | -8.79                               | -31.6%                | -108.63                       | -9.53                               |
| September 2020                              | -22.0%               | -66.87                        | -5.63                               | -28.1%                | -96.28                        | -8.34                               |
| October 2020                                | -14.6%               | -48.15                        | -3.99                               | -36.4%                | -108.71                       | -9.51                               |
| November 2020                               | -10.2%               | -35.29                        | -2.72                               | -34.6%                | -95.25                        | -8.16                               |
| December 2020                               | -6.8%                | -27.13                        | -2.03                               | -30.6%                | -88.63                        | -7.65                               |
| <b>Total</b>                                | <b>-32.5%</b>        | <b>-1,150.23</b>              | <b>-100.92</b>                      | <b>-38.8%</b>         | <b>-1,369.51</b>              | <b>-120.95</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | -44.7%               | -21.48                        | -1.92                               | -53.9%                | -25.65                        | -2.29                               |
| Asia/Pacific                       | -27.6%               | -433.71                       | -29.40                              | -32.8%                | -517.57                       | -35.71                              |
| Europe                             | -37.8%               | -137.16                       | -11.11                              | -45.8%                | -166.06                       | -13.45                              |
| Latin America/Caribbean            | -40.6%               | -101.76                       | -8.44                               | -49.5%                | -124.92                       | -10.32                              |
| Middle East                        | -43.5%               | -20.08                        | -1.87                               | -50.8%                | -23.60                        | -2.20                               |
| North America                      | -27.4%               | -341.41                       | -39.64                              | -34.5%                | -417.08                       | -48.42                              |
| <b>Total</b>                       | <b>-30.4%</b>        | <b>-1,055.59</b>              | <b>-92.37</b>                       | <b>-37.0%</b>         | <b>-1,274.87</b>              | <b>-112.40</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 1<br>Path 1 |                               |                                     | Scenario 1<br>Path 1a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 1.3%                 | 2.17                          | 0.26                                | 1.3%                  | 2.17                          | 0.26                                |
| February 2020                      | -11.8%               | -34.40                        | -2.80                               | -11.8%                | -34.40                        | -2.80                               |
| March 2020                         | -30.4%               | -115.45                       | -10.37                              | -30.4%                | -115.45                       | -10.37                              |
| April 2020                         | -73.2%               | -190.02                       | -17.03                              | -73.2%                | -190.02                       | -17.03                              |
| May 2020                           | -71.0%               | -183.28                       | -16.43                              | -71.0%                | -183.28                       | -16.43                              |
| June 2020                          | -59.8%               | -160.82                       | -14.46                              | -59.8%                | -160.82                       | -14.46                              |
| July 2020                          | -43.3%               | -129.48                       | -11.48                              | -43.3%                | -129.48                       | -11.48                              |
| August 2020                        | -30.0%               | -93.82                        | -8.17                               | -30.0%                | -101.68                       | -8.91                               |
| September 2020                     | -19.4%               | -58.28                        | -4.85                               | -25.6%                | -87.69                        | -7.56                               |
| October 2020                       | -12.8%               | -42.06                        | -3.41                               | -35.1%                | -102.61                       | -8.93                               |
| November 2020                      | -8.6%                | -30.26                        | -2.28                               | -33.4%                | -90.22                        | -7.72                               |
| December 2020                      | -4.3%                | -19.88                        | -1.35                               | -28.8%                | -81.37                        | -6.97                               |
| <b>Total</b>                       | <b>-30.4%</b>        | <b>-1,055.59</b>              | <b>-92.37</b>                       | <b>-37.0%</b>         | <b>-1,274.87</b>              | <b>-112.40</b>                      |



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# Estimated results: Scenario 2 (Domestic)

| Compared to Baseline<br>(business as usual) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                                      | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                                      | -55.3%               | -27.66                        | -2.47                               | -59.1%                | -29.40                        | -2.63                               |
| Asia/Pacific                                | -35.6%               | -591.39                       | -41.12                              | -37.9%                | -633.01                       | -44.29                              |
| Europe                                      | -43.6%               | -164.81                       | -13.35                              | -46.8%                | -176.96                       | -14.33                              |
| Latin America/Caribbean                     | -51.9%               | -137.03                       | -11.31                              | -55.3%                | -147.00                       | -12.12                              |
| Middle East                                 | -49.2%               | -22.90                        | -2.13                               | -52.2%                | -24.39                        | -2.27                               |
| North America                               | -37.6%               | -479.19                       | -55.63                              | -40.4%                | -513.22                       | -59.58                              |
| <b>Total</b>                                | <b>-39.1%</b>        | <b>-1,422.99</b>              | <b>-126.02</b>                      | <b>-41.8%</b>         | <b>-1,523.98</b>              | <b>-135.22</b>                      |

| Compared to Baseline<br>(business as usual) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|---|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                                       | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                                | -2.0%                | -6.13                         | -0.43                               | -2.0%                 | -6.13                         | -0.43                               |
| February 2020                               | -16.4%               | -46.64                        | -3.87                               | -16.4%                | -46.64                        | -3.87                               |
| March 2020                                  | -32.4%               | -123.22                       | -11.02                              | -32.4%                | -123.22                       | -11.02                              |
| April 2020                                  | -73.8%               | -196.33                       | -17.60                              | -73.8%                | -196.33                       | -17.60                              |
| May 2020                                    | -71.8%               | -190.81                       | -17.11                              | -71.8%                | -190.81                       | -17.11                              |
| June 2020                                   | -61.0%               | -175.13                       | -15.83                              | -61.0%                | -175.13                       | -15.83                              |
| July 2020                                   | -51.3%               | -166.07                       | -14.94                              | -51.3%                | -166.07                       | -14.94                              |
| August 2020                                 | -44.0%               | -144.23                       | -12.84                              | -44.0%                | -147.45                       | -13.13                              |
| September 2020                              | -39.2%               | -122.47                       | -10.75                              | -39.9%                | -128.57                       | -11.33                              |
| October 2020                                | -32.9%               | -110.71                       | -9.71                               | -37.1%                | -123.78                       | -10.92                              |
| November 2020                               | -25.7%               | -83.35                        | -7.09                               | -35.5%                | -110.08                       | -9.50                               |
| December 2020                               | -16.1%               | -57.90                        | -4.82                               | -34.2%                | -109.78                       | -9.54                               |
| <b>Total</b>                                | <b>-39.1%</b>        | <b>-1,422.99</b>              | <b>-126.02</b>                      | <b>-41.8%</b>         | <b>-1,523.98</b>              | <b>-135.22</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Region                             | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| Africa                             | -53.7%               | -26.10                        | -2.33                               | -57.6%                | -27.85                        | -2.49                               |
| Asia/Pacific                       | -33.5%               | -546.84                       | -37.99                              | -35.9%                | -588.46                       | -41.16                              |
| Europe                             | -44.3%               | -166.47                       | -13.48                              | -47.4%                | -178.62                       | -14.47                              |
| Latin America/Caribbean            | -49.5%               | -124.28                       | -10.27                              | -53.2%                | -134.24                       | -11.08                              |
| Middle East                        | -51.3%               | -24.50                        | -2.28                               | -54.3%                | -25.99                        | -2.42                               |
| North America                      | -35.0%               | -440.17                       | -51.10                              | -38.0%                | -474.20                       | -55.05                              |
| <b>Total</b>                       | <b>-37.3%</b>        | <b>-1,328.36</b>              | <b>-117.47</b>                      | <b>-40.1%</b>         | <b>-1,429.35</b>              | <b>-126.67</b>                      |

| Compared to 2019<br>(year-on-year) | Scenario 2<br>Path 2 |                               |                                     | Scenario 2<br>Path 2a |                               |                                     |
|------------------------------------|----------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------------|-------------------------------------|
| Month                              | Seat Capacity (%)    | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) | Seat Capacity (%)     | Passenger number<br>(million) | Passenger revenue<br>(USD, billion) |
| January 2020                       | 1.3%                 | 2.17                          | 0.26                                | 1.3%                  | 2.17                          | 0.26                                |
| February 2020                      | -11.8%               | -34.40                        | -2.80                               | -11.8%                | -34.40                        | -2.80                               |
| March 2020                         | -30.4%               | -115.45                       | -10.37                              | -30.4%                | -115.45                       | -10.37                              |
| April 2020                         | -73.2%               | -190.02                       | -17.03                              | -73.2%                | -190.02                       | -17.03                              |
| May 2020                           | -71.0%               | -183.28                       | -16.43                              | -71.0%                | -183.28                       | -16.43                              |
| June 2020                          | -59.8%               | -166.58                       | -15.01                              | -59.8%                | -166.58                       | -15.01                              |
| July 2020                          | -49.5%               | -156.03                       | -13.98                              | -49.5%                | -156.03                       | -13.98                              |
| August 2020                        | -42.6%               | -137.29                       | -12.22                              | -42.6%                | -140.51                       | -12.51                              |
| September 2020                     | -37.1%               | -113.89                       | -9.97                               | -37.8%                | -119.98                       | -10.54                              |
| October 2020                       | -31.5%               | -104.62                       | -9.13                               | -35.7%                | -117.69                       | -10.34                              |
| November 2020                      | -24.3%               | -78.33                        | -6.65                               | -34.3%                | -105.05                       | -9.06                               |
| December 2020                      | -13.8%               | -50.64                        | -4.14                               | -32.5%                | -102.53                       | -8.86                               |
| <b>Total</b>                       | <b>-37.3%</b>        | <b>-1,328.36</b>              | <b>-117.47</b>                      | <b>-40.1%</b>         | <b>-1,429.35</b>              | <b>-126.67</b>                      |



## Appendix D: Estimated Results at Route Group Level

More detailed break-down of the information is available in the COVID-19 Air Traffic Dashboard (<https://www.icao.int/sustainability/Pages/COVID-19-Air-Traffic-Dashboard.aspx>).

In case of any discrepancy and inconsistency of information contained in this Appendix and the Dashboard, the Appendix information shall prevail as the Dashboard uses non-cleaned operational data.



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# Estimated results by route group for Jan-May 2020 (compared to Baseline)

| Route Group                                       | DOM/INT       | Seat capacity |        |        |        |        | Scheduled passenger (thousand) |         |         |         |         | Gross revenue (USD, million) |        |        |        |        |
|---|---------------|---------------|--------|--------|--------|--------|--------------------------------|---------|---------|---------|---------|------------------------------|--------|--------|--------|--------|
|   |               | Jan 20        | Feb 20 | Mar 20 | Apr 20 | May 20 | Jan 20                         | Feb 20  | Mar 20  | Apr 20  | May 20  | Jan 20                       | Feb 20 | Mar 20 | Apr 20 | May 20 |
| Africa  | Domestic      | -4.3%         | -1.6%  | -35.1% | -96.8% | -95.7% | -219                           | -262    | -1,748  | -3,498  | -3,131  | -20                          | -23    | -156   | -312   | -280   |
| Africa - Asia/Pacific                             | International | 5.2%          | -18.7% | -45.8% | -94.6% | -90.5% | 18                             | -115    | -239    | -379    | -361    | 10                           | -64    | -132   | -210   | -200   |
| Africa - Middle East                              | International | -5.2%         | -5.9%  | -55.8% | -95.9% | -94.5% | -69                            | -174    | -1,595  | -2,563  | -2,480  | -15                          | -38    | -349   | -561   | -543   |
| Africa - North America                            | International | -7.9%         | -2.1%  | -25.4% | -87.1% | -87.1% | -15                            | -8      | -87     | -191    | -190    | -11                          | -6     | -64    | -141   | -140   |
| Africa & Middle East - Central America/Caribbean  | International |               |        |        |        |        | 0                              | 0       | 0       | 0       | 0       | 0                            | 0      | 0      | 0      | 0      |
| Africa & Middle East - South America              | International | 2.5%          | 5.4%   | -22.3% | -83.7% | -89.3% | 4                              | -8      | -52     | -116    | -115    | 2                            | -3     | -22    | -48    | -48    |
| Central America/Caribbean                         | Domestic      | -2.1%         | -2.3%  | -20.4% | -83.9% | -85.9% | -87                            | -150    | -1,642  | -4,399  | -4,593  | -6                           | -11    | -123   | -330   | -344   |
| Central America/Caribbean - Europe                | International | -0.2%         | 1.2%   | -18.7% | -94.6% | -91.5% | 31                             | 16      | -522    | -1,411  | -1,178  | 11                           | 5      | -178   | -482   | -403   |
| Central America/Caribbean - North America         | International | 5.4%          | 5.2%   | -19.9% | -91.3% | -91.4% | 490                            | 348     | -3,389  | -7,668  | -6,920  | 77                           | 55     | -532   | -1,203 | -1,086 |
| Central America/Caribbean - South America         | International | 5.7%          | 5.7%   | -25.7% | -96.6% | -94.8% | 77                             | 54      | -463    | -1,193  | -1,248  | 14                           | 10     | -84    | -218   | -228   |
| China   | Domestic      | -9.9%         | -75.4% | -60.1% | -55.4% | -36.7% | -8,447                         | -46,714 | -37,003 | -30,975 | -26,757 | -743                         | -4,111 | -3,256 | -2,726 | -2,355 |
| China - Europe                                    | International | 2.6%          | -51.8% | -73.9% | -93.0% | -90.8% | 70                             | -908    | -1,514  | -2,020  | -2,017  | 21                           | -276   | -459   | -613   | -612   |
| China - Middle East                               | International | 5.7%          | -56.2% | -76.5% | -91.7% | -95.7% | 38                             | -330    | -485    | -581    | -575    | 9                            | -81    | -119   | -142   | -141   |
| China - North America                             | International | 3.6%          | -44.6% | -66.2% | -92.4% | -87.4% | 56                             | -666    | -1,078  | -1,529  | -1,508  | 22                           | -267   | -433   | -614   | -605   |
| China & South West Asia - North Asia              | International | -0.1%         | -43.3% | -84.2% | -89.6% | -88.6% | -63                            | -3,428  | -5,914  | -5,873  | -5,718  | -11                          | -610   | -1,052 | -1,045 | -1,017 |
| China & South West Asia - Pacific South East Asia | International | -1.5%         | -47.1% | -71.9% | -90.9% | -90.4% | -268                           | -5,529  | -7,999  | -9,107  | -8,821  | -58                          | -1,197 | -1,731 | -1,971 | -1,909 |
| Europe  | Domestic      | 3.2%          | 2.4%   | -37.1% | -89.1% | -88.0% | 777                            | 55      | -12,641 | -23,505 | -24,348 | 63                           | 4      | -1,024 | -1,904 | -1,972 |
| Europe - Middle East                              | International | 1.5%          | 0.2%   | -43.5% | -89.7% | -89.3% | 345                            | 11      | -4,194  | -7,572  | -7,200  | 63                           | 2      | -772   | -1,393 | -1,325 |



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UNITING AVIATION

# Estimated results by route group for Jan-May 2020 (compared to Baseline)

| Route Group  | DOM/INT       | Seat capacity |        |        |        |        | Scheduled passenger (thousand) |        |         |         |         | Gross revenue (USD, million) |        |        |        |        |
|--|---------------|---------------|--------|--------|--------|--------|--------------------------------|--------|---------|---------|---------|------------------------------|--------|--------|--------|--------|
|  |               | Jan 20        | Feb 20 | Mar 20 | Apr 20 | May 20 | Jan 20                         | Feb 20 | Mar 20  | Apr 20  | May 20  | Jan 20                       | Feb 20 | Mar 20 | Apr 20 | May 20 |
| Europe - North Africa  | International | 0.6%          | 1.6%   | -40.6% | -97.8% | -96.7% | 69                             | 4      | -1,768  | -4,009  | -3,162  | 10                           | 1      | -261   | -591   | -466   |
| Europe - North America   | International | 6.8%          | 5.4%   | -34.1% | -91.2% | -93.4% | 521                            | 263    | -3,016  | -7,311  | -8,391  | 164                          | 82     | -947   | -2,295 | -2,634 |
| Europe - North Asia  | International | 5.6%          | 5.2%   | -41.7% | -89.7% | -90.6% | 62                             | -8     | -529    | -1,083  | -1,095  | 29                           | -4     | -248   | -508   | -514   |
| Europe - Pacific South East Asia                               | International | -2.6%         | 0.1%   | -13.8% | -91.5% | -90.8% | -24                            | -97    | -555    | -1,420  | -1,274  | -12                          | -49    | -277   | -709   | -637   |
| Europe - South America   | International | -4.9%         | -4.8%  | -36.7% | -95.5% | -93.3% | -39                            | -64    | -677    | -1,351  | -1,338  | -14                          | -23    | -242   | -483   | -479   |
| Europe - South West Asia                                       | International | 1.8%          | 2.9%   | -36.4% | -89.9% | -88.5% | 56                             | -56    | -958    | -1,806  | -1,754  | 15                           | -15    | -258   | -487   | -473   |
| Europe - Sub Saharan Africa                                    | International | 3.1%          | 3.4%   | -26.4% | -90.3% | -91.0% | 102                            | 46     | -729    | -1,586  | -1,521  | 43                           | 19     | -309   | -671   | -644   |
| Intra Africa   | International | -9.7%         | -10.1% | -44.0% | -95.4% | -94.3% | -251                           | -348   | -1,273  | -2,307  | -2,239  | -33                          | -45    | -166   | -301   | -292   |
| Intra Central America/Caribbean                                | International | 5.2%          | 4.3%   | -27.0% | -89.7% | -88.1% | 73                             | 43     | -554    | -1,260  | -1,316  | 6                            | 4      | -46    | -105   | -110   |
| Intra China & South West Asia                                  | International | -9.6%         | -60.5% | -78.8% | -88.7% | -86.8% | -498                           | -3,012 | -4,007  | -4,571  | -4,424  | -63                          | -383   | -510   | -582   | -563   |
| Intra Europe   | International | -1.6%         | -3.0%  | -46.1% | -96.4% | -95.6% | 124                            | -2,171 | -28,839 | -58,663 | -62,817 | 13                           | -221   | -2,936 | -5,972 | -6,395 |
| Intra Middle East  | International | -2.9%         | -4.4%  | -67.9% | -94.8% | -94.8% | 53                             | -175   | -2,664  | -3,703  | -3,368  | 6                            | -20    | -305   | -424   | -386   |
| Intra North America  | International | 4.1%          | 3.4%   | -23.1% | -93.3% | -96.8% | 126                            | 23     | -1,236  | -2,730  | -2,615  | 17                           | 3      | -165   | -364   | -349   |
| Intra North Asia   | International | -1.5%         | -2.0%  | -78.6% | -96.4% | -96.2% | -25                            | -221   | -1,072  | -1,665  | -1,651  | -1                           | -12    | -58    | -89    | -89    |
| Intra Pacific South East Asia                                  | International | -0.6%         | -4.8%  | -45.3% | -94.9% | -95.9% | -89                            | -1,590 | -4,857  | -7,706  | -7,511  | -13                          | -237   | -723   | -1,147 | -1,118 |
| Intra South America  | International | -8.9%         | -0.6%  | -39.5% | -96.9% | -96.0% | -174                           | -29    | -885    | -1,625  | -1,664  | -30                          | -5     | -154   | -282   | -289   |
| Latin America/Caribbean - China                                | International | 5.7%          |        |        |        |        | 0                              | 0      | 0       | 0       | 0       | 0                            | 0      | 0      | 0      | 0      |
| Latin America/Caribbean - North Asia & Pacific South East Asia | International | 3.6%          | 0.9%   | -17.4% | -78.8% | -86.6% | 3                              | -8     | -29     | -67     | -66     | 2                            | -5     | -19    | -45    | -45    |



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UNITING AVIATION

# Estimated results by route group for Jan-May 2020 (compared to Baseline)

| Route Group  | DOM/INT       | Seat capacity |        |        |        |        | Scheduled passenger (thousand) |         |          |          |          | Gross revenue (USD, million) |        |         |         |         |
|--|---------------|---------------|--------|--------|--------|--------|--------------------------------|---------|----------|----------|----------|------------------------------|--------|---------|---------|---------|
|  |               | Jan 20        | Feb 20 | Mar 20 | Apr 20 | May 20 | Jan 20                         | Feb 20  | Mar 20   | Apr 20   | May 20   | Jan 20                       | Feb 20 | Mar 20  | Apr 20  | May 20  |
| Middle East  | Domestic      | -9.4%         | 5.7%   | -44.1% | -95.9% | -94.5% | -118                           | 124     | -1,784   | -3,413   | -3,321   | -11                          | 12     | -166    | -318    | -309    |
| Middle East - North America                        | International | 2.7%          | 3.4%   | -26.9% | -90.1% | -92.7% | 46                             | 23      | -329     | -747     | -754     | 22                           | 11     | -156    | -355    | -359    |
| Middle East - North Asia & Pacific South East Asia | International | -0.8%         | -1.6%  | -35.7% | -82.0% | -85.4% | -5                             | -318    | -1,304   | -2,260   | -2,099   | -1                           | -85    | -349    | -605    | -562    |
| Middle East - South West Asia                      | International | -2.4%         | -0.9%  | -43.7% | -96.6% | -93.5% | -97                            | -609    | -2,872   | -4,826   | -4,648   | -15                          | -96    | -453    | -762    | -734    |
| North America                                      | Domestic      | 2.5%          | 5.7%   | -13.9% | -66.8% | -72.9% | 2,873                          | 4,110   | -36,799  | -69,253  | -68,398  | 334                          | 477    | -4,272  | -8,040  | -7,941  |
| North America - North Asia                         | International | 5.7%          | 5.7%   | -24.6% | -85.0% | -86.7% | 76                             | -86     | -602     | -1,332   | -1,349   | 24                           | -27    | -190    | -420    | -425    |
| North America - Pacific South East Asia            | International | 4.8%          | 5.7%   | -17.2% | -88.6% | -86.7% | 36                             | -48     | -282     | -639     | -627     | 28                           | -38    | -225    | -510    | -500    |
| North America - South America                      | International | 5.6%          | 5.7%   | -27.1% | -94.0% | -94.8% | 87                             | 64      | -598     | -1,263   | -1,305   | 34                           | 25     | -235    | -498    | -514    |
| North America - South West Asia                    | International | 4.4%          | 5.6%   | -27.8% | -91.9% | -87.9% | 8                              | -13     | -91      | -183     | -173     | 6                            | -9     | -67     | -135    | -128    |
| North Asia   | Domestic      | 1.0%          | -1.8%  | -18.7% | -54.6% | -68.8% | 205                            | -1,094  | -6,885   | -9,227   | -9,248   | 10                           | -55    | -344    | -461    | -462    |
| North Asia - Pacific South East Asia               | International | 0.5%          | -6.9%  | -63.3% | -89.0% | -88.8% | -12                            | -1,055  | -3,415   | -3,928   | -3,820   | -3                           | -272   | -882    | -1,015  | -987    |
| Pacific South East Asia                            | Domestic      | -4.3%         | -5.2%  | -30.1% | -88.1% | -84.6% | -811                           | -2,362  | -11,897  | -25,117  | -23,079  | -50                          | -145   | -729    | -1,539  | -1,414  |
| South America                                      | Domestic      | 2.0%          | 1.7%   | -39.4% | -94.8% | -93.9% | 473                            | -11     | -7,080   | -13,573  | -14,012  | 40                           | -1     | -598    | -1,145  | -1,182  |
| South West Asia                                    | Domestic      | -3.8%         | 2.2%   | -30.4% | -98.8% | -94.4% | -775                           | -334    | -5,742   | -13,365  | -13,924  | -47                          | -20    | -352    | -819    | -853    |
| <b>Domestic</b>                                    |               | -2.0%         | -16.4% | -32.4% | -73.8% | -71.8% | -6,129                         | -46,637 | -123,220 | -196,325 | -190,811 | -431                         | -3,873 | -11,021 | -17,595 | -17,114 |
| <b>International</b>                               |               | -0.4%         | -9.6%  | -47.6% | -93.6% | -93.2% | 941                            | -20,179 | -90,673  | -158,246 | -159,313 | 367                          | -3,871 | -16,111 | -27,999 | -27,946 |
| <b>Total</b>                                       |               | -1.4%         | -13.7% | -38.6% | -82.2% | -80.8% | -5,188                         | -66,816 | -213,893 | -354,571 | -350,124 | -64                          | -7,744 | -27,131 | -45,594 | -45,060 |

\* May results are tentative



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# Estimated results by route group for Jan-May 2020 (compared to Jan-May 2019)

| Route Group                                       | DOM/INT       | Seat capacity |         |        |        |        | Scheduled passenger (thousand) |         |         |         |         | Gross revenue (USD, million) |        |        |        |        |
|---|---------------|---------------|---------|--------|--------|--------|--------------------------------|---------|---------|---------|---------|------------------------------|--------|--------|--------|--------|
|   |               | Jan 20        | Feb 20  | Mar 20 | Apr 20 | May 20 | Jan 20                         | Feb 20  | Mar 20  | Apr 20  | May 20  | Jan 20                       | Feb 20 | Mar 20 | Apr 20 | May 20 |
| Africa  | Domestic      | 0.4%          | 5.5%    | -32.4% | -96.7% | -95.5% | -44                            | -27     | -1,597  | -3,430  | -3,016  | -4                           | -2     | -143   | -306   | -269   |
| Africa - Asia/Pacific                             | International | 18.1%         | -1.2%   | -37.9% | -94.0% | -89.6% | 65                             | -48     | -187    | -337    | -324    | 36                           | -27    | -104   | -186   | -179   |
| Africa - Middle East                              | International | 7.2%          | 9.6%    | -50.1% | -95.6% | -94.1% | 246                            | 160     | -1,298  | -2,329  | -2,267  | 54                           | 35     | -284   | -510   | -497   |
| Africa - North America                            | International | 7.6%          | 22.2%   | -13.0% | -86.0% | -85.4% | 16                             | 28      | -57     | -175    | -165    | 12                           | 20     | -42    | -129   | -122   |
| Africa & Middle East - Central America/Caribbean  | International |               | -100.0% |        |        |        | 0                              | 0       | 0       | 0       | 0       | 0                            | 0      | 0      | 0      | 0      |
| Africa & Middle East - South America              | International | -5.7%         | 1.9%    | -26.8% | -81.8% | -87.7% | -7                             | -12     | -59     | -104    | -98     | -3                           | -5     | -25    | -43    | -41    |
| Central America/Caribbean                         | Domestic      | 9.2%          | 11.7%   | -12.0% | -82.8% | -85.1% | 426                            | 425     | -1,173  | -4,089  | -4,319  | 32                           | 32     | -88    | -307   | -324   |
| Central America/Caribbean - Europe                | International | -1.7%         | 2.6%    | -21.0% | -94.4% | -91.2% | 12                             | 36      | -560    | -1,358  | -1,137  | 4                            | 12     | -192   | -464   | -388   |
| Central America/Caribbean - North America         | International | 0.0%          | 3.9%    | -24.4% | -91.5% | -91.5% | 89                             | 295     | -3,860  | -7,803  | -6,940  | 14                           | 46     | -606   | -1,224 | -1,089 |
| Central America/Caribbean - South America         | International | 3.5%          | 3.6%    | -28.4% | -96.4% | -94.6% | 50                             | 32      | -507    | -1,144  | -1,202  | 9                            | 6      | -93    | -209   | -219   |
| China   | Domestic      | -3.7%         | -73.4%  | -58.0% | -55.7% | -37.2% | -4,915                         | -42,473 | -34,259 | -31,137 | -26,922 | -433                         | -3,738 | -3,015 | -2,740 | -2,369 |
| China - Europe                                    | International | 4.0%          | -49.0%  | -73.1% | -93.1% | -90.9% | 98                             | -813    | -1,457  | -2,033  | -2,041  | 30                           | -247   | -442   | -617   | -619   |
| China - Middle East                               | International | 6.2%          | -56.4%  | -77.1% | -91.8% | -95.6% | 43                             | -330    | -500    | -586    | -567    | 10                           | -81    | -122   | -144   | -139   |
| China - North America                             | International | -5.7%         | -48.2%  | -70.1% | -92.8% | -88.1% | -91                            | -755    | -1,263  | -1,618  | -1,599  | -37                          | -303   | -507   | -650   | -642   |
| China & South West Asia - North Asia              | International | 21.7%         | -31.8%  | -81.5% | -89.1% | -88.2% | 1,222                          | -2,322  | -4,935  | -5,605  | -5,510  | 217                          | -413   | -878   | -997   | -980   |
| China & South West Asia - Pacific South East Asia | International | 6.7%          | -45.6%  | -71.3% | -91.0% | -90.4% | 635                            | -5,202  | -7,747  | -9,090  | -8,754  | 137                          | -1,126 | -1,677 | -1,967 | -1,895 |
| Europe  | Domestic      | 1.5%          | 1.8%    | -38.3% | -89.1% | -88.1% | 523                            | 45      | -12,971 | -23,470 | -24,378 | 42                           | 4      | -1,051 | -1,901 | -1,975 |
| Europe - Middle East                              | International | 4.9%          | 6.1%    | -42.6% | -89.6% | -88.1% | 591                            | 397     | -4,061  | -7,492  | -6,431  | 109                          | 73     | -747   | -1,379 | -1,183 |



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UNITING AVIATION

# Estimated results by route group for Jan-May 2020 (compared to Jan-May 2019)

| Route Group  | DOM/INT       | Seat capacity |         |         |         |         | Scheduled passenger (thousand) |        |         |         |         | Gross revenue (USD, million) |        |        |        |        |
|--|---------------|---------------|---------|---------|---------|---------|--------------------------------|--------|---------|---------|---------|------------------------------|--------|--------|--------|--------|
|  |               | Jan 20        | Feb 20  | Mar 20  | Apr 20  | May 20  | Jan 20                         | Feb 20 | Mar 20  | Apr 20  | May 20  | Jan 20                       | Feb 20 | Mar 20 | Apr 20 | May 20 |
| Europe - North Africa  | International | -0.9%         | 5.6%    | -42.3%  | -97.7%  | -96.7%  | 52                             | 145    | -1,836  | -3,753  | -3,156  | 8                            | 21     | -271   | -553   | -465   |
| Europe - North America   | International | 0.4%          | 4.1%    | -36.2%  | -91.3%  | -93.5%  | 176                            | 203    | -3,227  | -7,404  | -8,453  | 55                           | 64     | -1,013 | -2,324 | -2,653 |
| Europe - North Asia  | International | 4.3%          | 6.4%    | -41.9%  | -89.4%  | -90.4%  | 52                             | 2      | -529    | -1,050  | -1,072  | 24                           | 1      | -248   | -492   | -503   |
| Europe - Pacific South East Asia                               | International | 5.5%          | 6.7%    | -19.2%  | -91.3%  | -90.7%  | 118                            | 9      | -661    | -1,377  | -1,251  | 59                           | 5      | -330   | -688   | -625   |
| Europe - South America   | International | -2.7%         | 0.0%    | -36.9%  | -95.4%  | -93.1%  | -4                             | 1      | -675    | -1,310  | -1,302  | -1                           | 1      | -241   | -468   | -466   |
| Europe - South West Asia                                       | International | -8.3%         | -3.9%   | -43.0%  | -89.9%  | -87.9%  | -142                           | -174   | -1,169  | -1,793  | -1,665  | -38                          | -47    | -315   | -483   | -449   |
| Europe - Sub Saharan Africa                                    | International | 0.6%          | 5.2%    | -27.5%  | -90.4%  | -90.9%  | 59                             | 75     | -755    | -1,600  | -1,502  | 25                           | 32     | -320   | -677   | -636   |
| Intra Africa   | International | 1.5%          | 5.3%    | -36.4%  | -95.0%  | -93.4%  | 27                             | -25    | -977    | -2,080  | -1,933  | 4                            | -3     | -127   | -272   | -252   |
| Intra Central America/Caribbean                                | International | 1.1%          | 3.9%    | -30.3%  | -90.0%  | -88.6%  | 21                             | 42     | -614    | -1,297  | -1,369  | 2                            | 3      | -51    | -108   | -114   |
| Intra China & South West Asia                                  | International | -2.0%         | -57.0%  | -76.9%  | -87.4%  | -85.0%  | -104                           | -2,624 | -3,594  | -4,059  | -3,847  | -13                          | -334   | -457   | -517   | -490   |
| Intra Europe   | International | -0.6%         | 3.4%    | -43.0%  | -96.3%  | -95.6%  | 922                            | 837    | -25,724 | -56,601 | -62,382 | 94                           | 85     | -2,619 | -5,763 | -6,351 |
| Intra Middle East  | International | 0.3%          | 0.6%    | -66.7%  | -94.5%  | -94.1%  | 188                            | 4      | -2,517  | -3,510  | -2,977  | 22                           | 0      | -288   | -402   | -341   |
| Intra North America  | International | -4.0%         | -1.1%   | -29.5%  | -93.6%  | -96.9%  | -74                            | -72    | -1,481  | -2,820  | -2,736  | -10                          | -10    | -198   | -376   | -365   |
| Intra North Asia   | International | -32.5%        | -31.0%  | -85.0%  | -96.6%  | -96.4%  | -610                           | -708   | -1,609  | -1,760  | -1,728  | -33                          | -38    | -86    | -95    | -93    |
| Intra Pacific South East Asia                                  | International | 7.1%          | 2.0%    | -42.7%  | -94.7%  | -95.7%  | 526                            | -1,081 | -4,490  | -7,439  | -7,104  | 78                           | -161   | -668   | -1,107 | -1,058 |
| Intra South America  | International | -9.5%         | 2.5%    | -37.3%  | -96.5%  | -95.5%  | -176                           | 32     | -818    | -1,463  | -1,470  | -31                          | 6      | -142   | -254   | -255   |
| Latin America/Caribbean - China                                | International | -66.0%        | -100.0% | -100.0% | -100.0% | -100.0% | -5                             | -7     | -8      | -10     | -10     | -4                           | -6     | -6     | -7     | -7     |
| Latin America/Caribbean - North Asia & Pacific South East Asia | International | 2.9%          | 0.7%    | -19.3%  | -77.2%  | -84.7%  | 2                              | -8     | -30     | -62     | -57     | 2                            | -5     | -20    | -42    | -39    |





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UNITING AVIATION

# Estimated results by route group for Jan-May 2020 (compared to Jan-May 2019)

| Route Group  | DOM/INT       | Seat capacity |        |        |        |        | Scheduled passenger (thousand) |         |          |          |          | Gross revenue (USD, million) |        |         |         |         |
|--|---------------|---------------|--------|--------|--------|--------|--------------------------------|---------|----------|----------|----------|------------------------------|--------|---------|---------|---------|
|  |               | Jan 20        | Feb 20 | Mar 20 | Apr 20 | May 20 | Jan 20                         | Feb 20  | Mar 20   | Apr 20   | May 20   | Jan 20                       | Feb 20 | Mar 20  | Apr 20  | May 20  |
| Middle East  | Domestic      | -15.5%        | 2.0%   | -48.1% | -96.0% | -94.5% | -351                           | 24      | -2,023   | -3,430   | -3,337   | -33                          | 2      | -188    | -319    | -311    |
| Middle East - North America                        | International | 4.8%          | 6.6%   | -27.6% | -90.0% | -92.4% | 62                             | 44      | -336     | -734     | -716     | 29                           | 21     | -160    | -349    | -341    |
| Middle East - North Asia & Pacific South East Asia | International | -0.5%         | 2.8%   | -36.0% | -81.4% | -83.6% | 11                             | -214    | -1,308   | -2,176   | -1,841   | 3                            | -57    | -350    | -583    | -493    |
| Middle East - South West Asia                      | International | 2.9%          | 9.5%   | -39.7% | -96.3% | -92.7% | 180                            | -160    | -2,530   | -4,406   | -4,121   | 28                           | -25    | -400    | -696    | -651    |
| North America                                      | Domestic      | 4.8%          | 11.5%  | -12.4% | -65.6% | -71.6% | 4,494                          | 7,533   | -35,191  | -66,295  | -64,801  | 522                          | 875    | -4,086  | -7,697  | -7,523  |
| North America - North Asia                         | International | 3.5%          | 5.0%   | -26.7% | -84.8% | -86.2% | 50                             | -93     | -636     | -1,315   | -1,300   | 16                           | -29    | -201    | -415    | -410    |
| North America - Pacific South East Asia            | International | 6.5%          | 12.0%  | -18.2% | -88.8% | -86.5% | 50                             | -9      | -288     | -650     | -616     | 40                           | -7     | -230    | -519    | -491    |
| North America - South America                      | International | -8.0%         | -2.8%  | -34.1% | -94.1% | -94.8% | -114                           | -38     | -732     | -1,286   | -1,304   | -45                          | -15    | -289    | -507    | -514    |
| North America - South West Asia                    | International | 20.4%         | 24.4%  | -14.9% | -88.7% | -83.0% | 34                             | 14      | -62      | -129     | -119     | 25                           | 10     | -46     | -95     | -88     |
| North Asia   | Domestic      | 3.1%          | 2.3%   | -18.5% | -54.5% | -68.0% | 503                            | -597    | -6,755   | -9,122   | -8,882   | 25                           | -30    | -338    | -456    | -444    |
| North Asia - Pacific South East Asia               | International | 15.9%         | 8.6%   | -59.9% | -88.9% | -88.6% | 668                            | -388    | -3,010   | -3,876   | -3,733   | 172                          | -100   | -778    | -1,001  | -964    |
| Pacific South East Asia                            | Domestic      | 1.3%          | 3.1%   | -26.2% | -87.5% | -83.7% | 691                            | -371    | -10,437  | -23,697  | -21,500  | 42                           | -23    | -640    | -1,452  | -1,318  |
| South America                                      | Domestic      | 3.2%          | 5.6%   | -35.7% | -94.5% | -93.5% | 803                            | 625     | -6,085   | -12,727  | -13,001  | 68                           | 53     | -514    | -1,074  | -1,097  |
| South West Asia                                    | Domestic      | 0.2%          | 6.6%   | -27.4% | -98.7% | -94.1% | 37                             | 418     | -4,965   | -12,621  | -13,122  | 2                            | 26     | -304    | -773    | -804    |
| <b>Domestic</b>                                    |               | 1.3%          | -11.8% | -30.4% | -73.2% | -71.0% | 2,166                          | -34,398 | -115,455 | -190,018 | -183,277 | 264                          | -2,802 | -10,365 | -17,026 | -16,434 |
| <b>International</b>                               |               | 1.9%          | -4.9%  | -46.2% | -93.4% | -93.0% | 4,936                          | -12,728 | -86,107  | -153,629 | -154,802 | 1,104                        | -2,597 | -15,572 | -27,310 | -27,107 |
| <b>Total</b>                                       |               | 1.5%          | -9.0%  | -36.9% | -81.7% | -80.3% | 7,102                          | -47,126 | -201,562 | -343,647 | -338,079 | 1,368                        | -5,399 | -25,937 | -44,336 | -43,541 |

\* May results are tentative

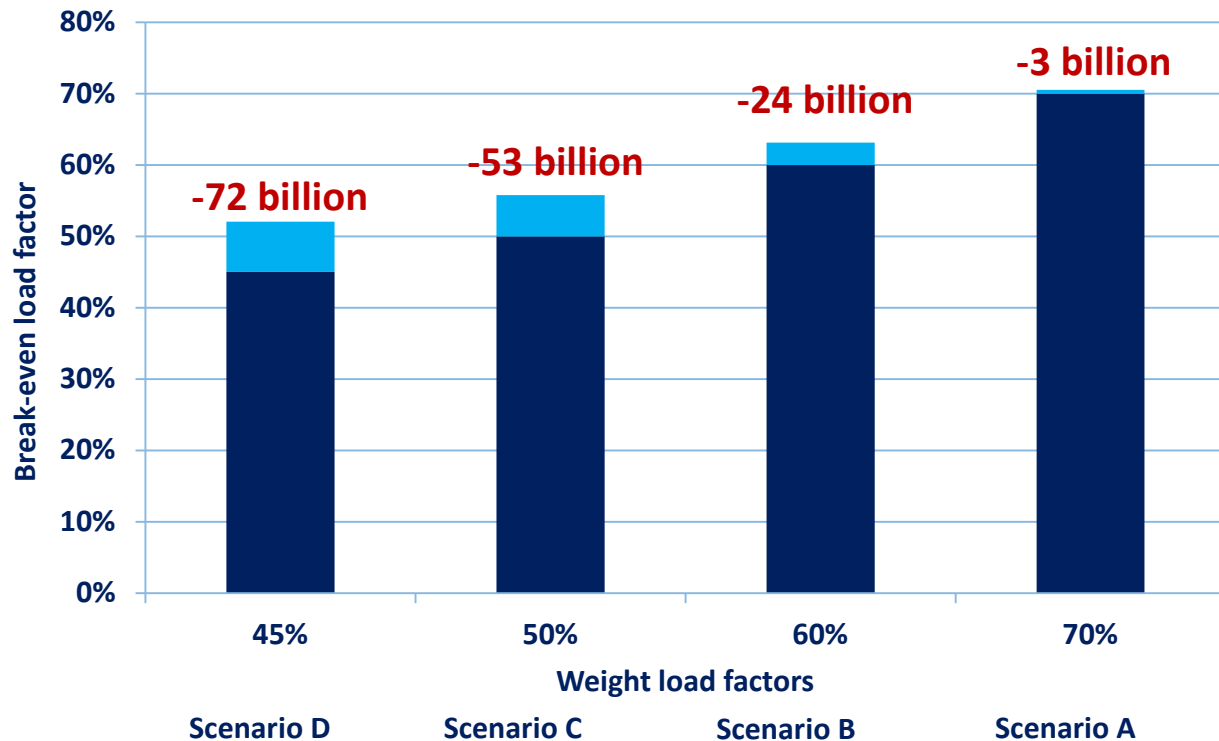
## Appendix E: Airline Financial Analysis

Figures and estimates herein are subject to substantial changes, and will be updated with the situation evolving and more information available.

Scenarios are based on the assumption that air traffic, measured in Revenue Tonnes-Kilometres (RTKs, both international and domestic), will **decrease by 50% in 2020** compared to 2019

|  | <b>Scenario A</b><br>Weight load factor = 70%                                      | <b>Scenario B</b><br>Weight load factor = 60%                                      | <b>Scenario C</b><br>Weight load factor = 50%                       | <b>Scenario D</b><br>Weight load factor = 45%                                  |
|--|--|--|---|--|
|  | Load factor remains high, rebound of demand in Q3 and Q4 with severe capacity cuts | Load factor moderate-high and rebound during Q4, with capacity cuts in all regions | Low load factor and moderate return of normal capacity in Q3 and Q4 | Low load factors (social distancing) and airlines increase capacity in Q2 2020 |
| <b>Total capacity reduction</b>  | -51%   | -42%   | -31%  | -23%   |
| <b>Fuel costs (USD, billion)</b><br><i>Oil price: 49% decrease compared to 2019 levels</i>     | 46   | 54   | 65  | 72   |
| <b>Break-even weight load factor</b><br><i>(excluding depreciation and amortization costs)</i> | 70.5%  | 63.1%  | 55.8%   | 52.1%  |

# Airlines close to break even as load factor increases



Operating loss  
Excluding  
depreciation and  
amortizations  
costs

Difference between  
load factor and break-  
even load factors in  
each scenario



## **Appendix F: Summary of Analysis by Other Organizations**

## ACI: Airport would lose USD 97.4 billion gross revenues in 2020

| 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                  | -114  | -47.3%        | -2.2  | -51.2%        |
| Asia/Pacific            | -1,797  | -52.9%        | -29.4   | -58.9%        |
| Europe                  | -1,416  | -57.1%        | -37.1   | -62.6%        |
| Latin America/Caribbean | -289  | -44.2%        | -5.3  | -50.5%        |
| Middle East             | -201  | -46.9%        | -7.0  | -53.0%        |
| North America           | -859  | -41.1%        | -16.4   | -47.3%        |
| <b>Total</b>            | <b>-4,676</b>   | <b>-50.4%</b> | <b>-97.4</b>  | <b>-56.7%</b> |

<https://aci.aero/wp-content/uploads/2020/05/200505-Third-Economic-Impact-Bulletin-FINAL.pdf>



# IATA: Airlines would lose USD 84 billion net profits in 2020

IATA's estimates are based on "region of airline registration" while ICAO uses "all traffic from States in each region" for the regional break-down.

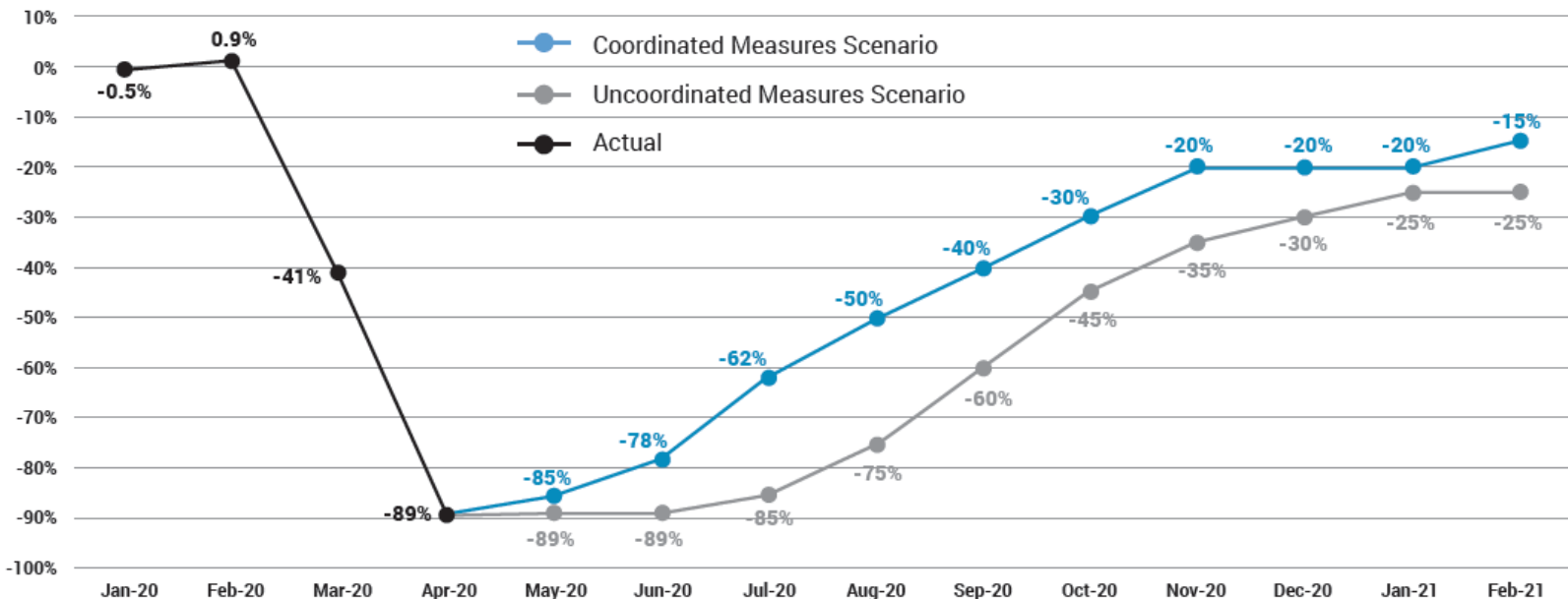
IATA recently updated its estimated loss of gross passenger revenues from **USD 314 billion to USD 371 billion** (USD 419 billion including passengers, cargo and others) but no regional break-down was released.

| Region of airline registration | Revenue Passenger Kilometres (RPKs) - both international and domestic for full year 2020 | Net profit for full year 2020       |
|--------------------------------|--|-------------------------------------|
|                                | year-on-year % change from 2019 level  | USD billion, compared to 2019 level |
| Africa                         | -58.5%   | -2.0                                |
| Asia/Pacific                   | -53.8%   | -29.0                               |
| Europe                         | -56.4%   | -21.5                               |
| Latin America/Caribbean        | -57.4%   | -4.0                                |
| Middle East                    | -56.1%   | -4.8                                |
| North America                  | -52.6%   | -23.1                               |
| <b>Total</b>                   | <b>-54.7%</b>  | <b>-84.3</b>                        |

<https://www.iata.org/en/iata-repository/publications/economic-reports/airline-industry-economic-performance-june-2020-data-tables/>

# EUOCONTROL: A loss of € 110 billion for airlines, airports and ANSPs in Europe in 2020

EUROCONTROL Draft Traffic Scenarios - 24 April 2020 (base year 2019)

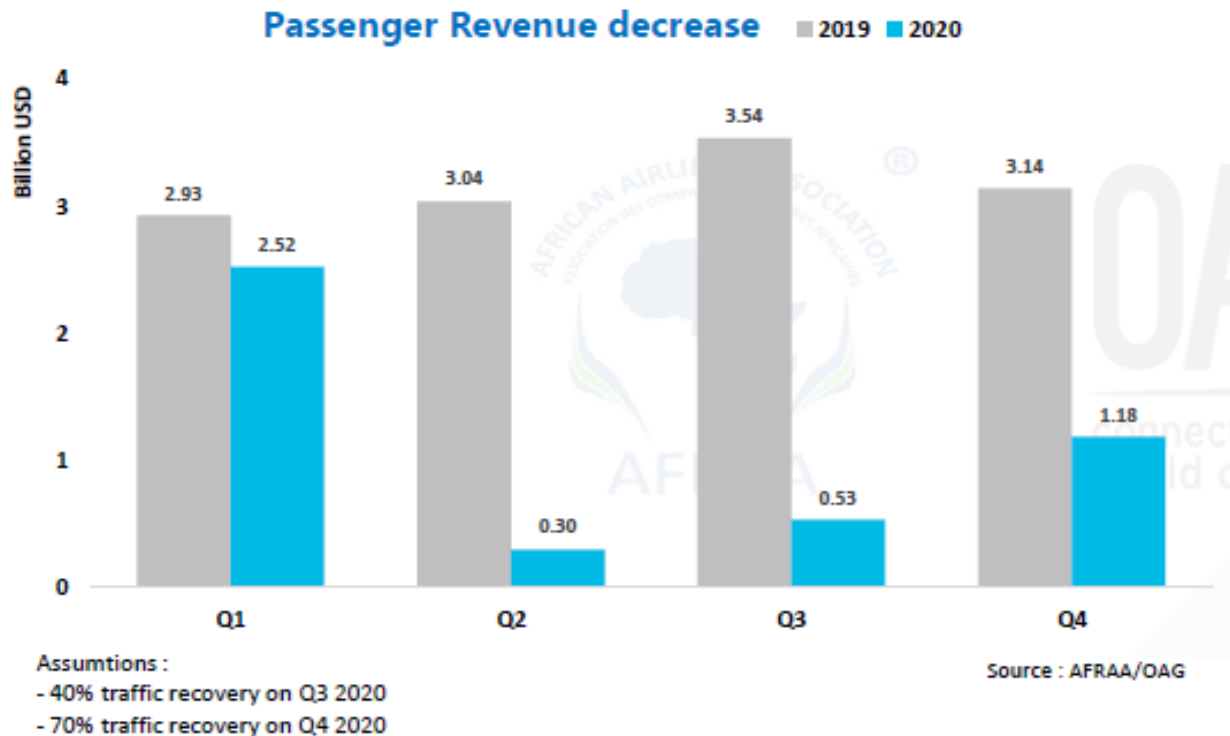


The Coordinated Measures Scenario envisages a loss of 45% of flights (5 million) in 2020, while the Uncoordinated Measures Scenario would result in the loss of 57% of flights (6.2 million).

<https://www.eurocontrol.int/covid19#traffic-scenarios>



# AFRAA: African Airlines would lose USD 8.1 billion passenger revenues in 2020

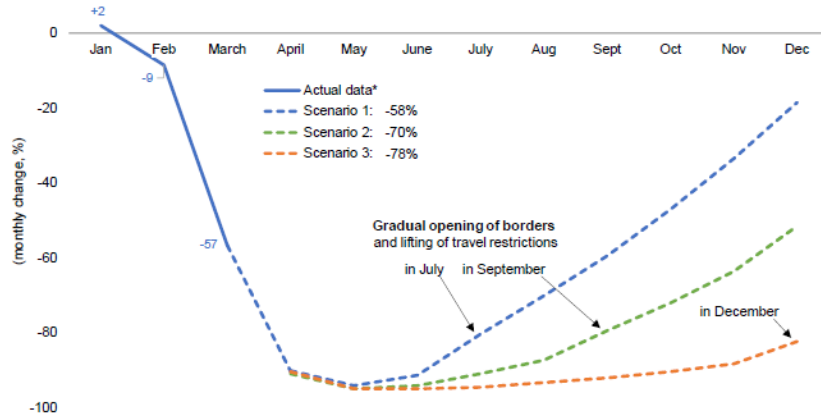


AFRAA's estimates (USD 8.1 billion loss) is greater than IATA's estimates (USD 6 billion loss). Both estimates are for airlines registered in Africa.

<http://afraa.org/wp-content/uploads/2020/06/CoVID-19-Impact-assessment.pdf>

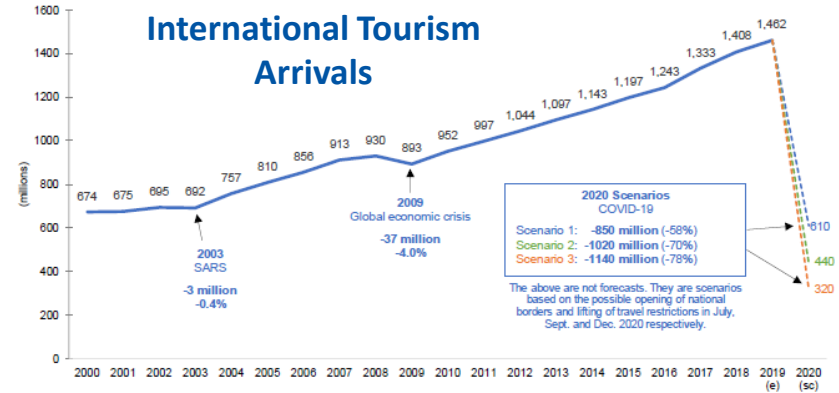
# UNWTO: A loss of USD 910 to 1,170 billion in international tourism receipts in 2020

## Three scenarios dependent upon re-opening of borders International Tourism Arrivals (year-on-year % change from 2019 level)

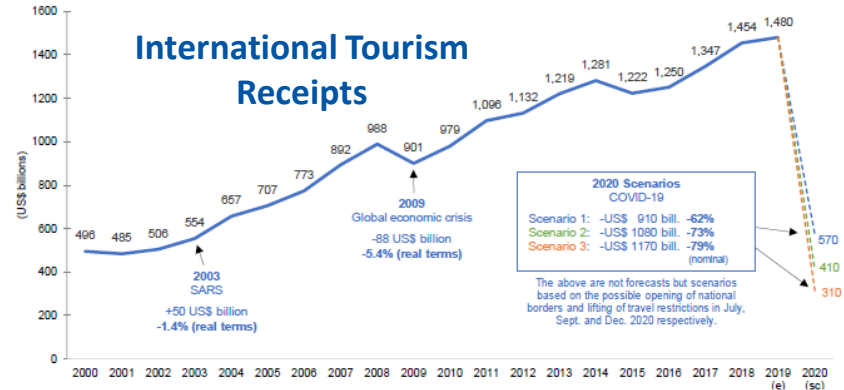


<https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2020-05/Barometer%20-%20May%202020%20-%20Short.pdf>

## International Tourism Arrivals



## International Tourism Receipts



# WTTC: A loss of 100 million jobs in travel and tourism sector in 2020

## 2020 forecasts – COVID-19 impact on travel and tourism sector

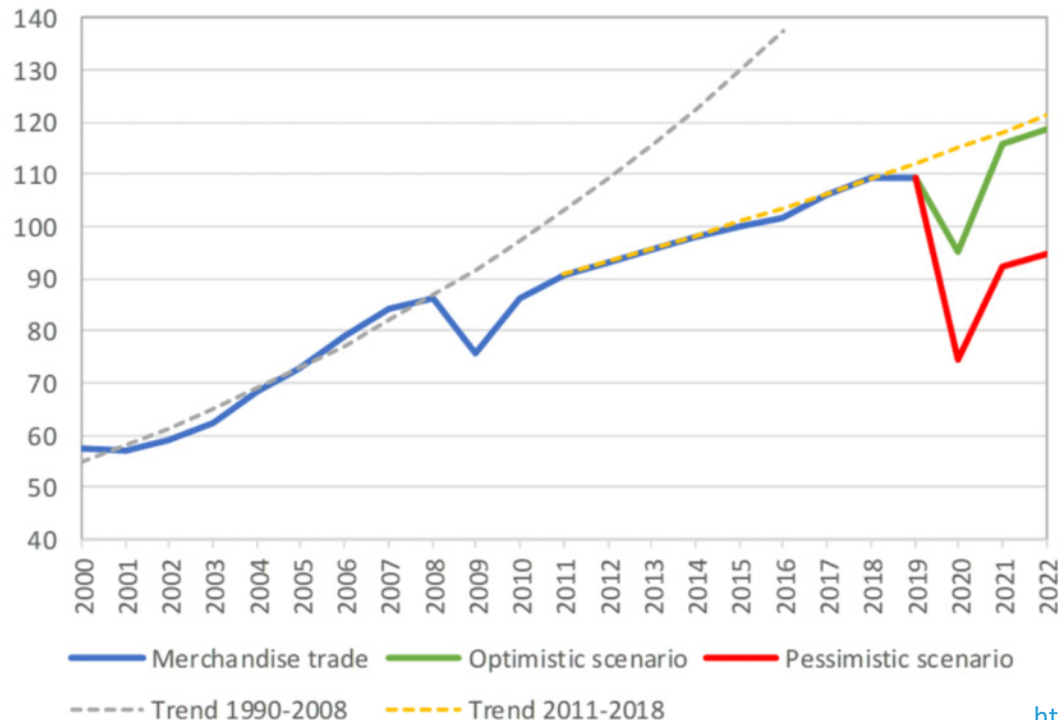
| Region                  | Potential Total Job Losses<br>(million) | Total GDP Loss<br>(USD billion*) |
|-------------------------|---|----------------------------------|
| Africa                  | -7.6                                    | -52.8                            |
| Asia/Pacific            | -63.4                                   | -1,041.0                         |
| Europe                  | -13.0                                   | -708.5                           |
| Latin America/Caribbean | -5.9                                    | -110.2                           |
| Middle East             | -2.6                                    | -96.2                            |
| North America           | -8.2                                    | -680.7                           |
| <b>Total</b>            | <b>-100.8</b>                           | <b>-2689.4</b>                   |

\* based on 2019 prices and exchange rates

<https://wtcc.org/About/News-Media/Press-Releases>

Index, 2015=100

## World merchandise trade volume, 2000-2022



- World merchandise trade is set to plummet by between 13 and 32% in 2020 due to the COVID-19 pandemic.
- A 2021 recovery in trade is expected, but dependent on the duration of the outbreak and the effectiveness of the policy responses.
- Nearly all regions will suffer double-digit declines in trade volumes in 2020, with exports from North America and Asia hit hardest.

[https://www.wto.org/english/news\\_e/pres20\\_e/pr855\\_e.htm](https://www.wto.org/english/news_e/pres20_e/pr855_e.htm)

# IMF & World Bank: Global economy is projected to contract by -4.9% to -5.2% in 2020

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

| Real GDP<br>(Percent change from previous year) | IMF  |       |      | World Bank |      |      |
|---|------|-------|------|------------|------|------|
|   | 2019 | 2020  | 2021 | 2019       | 2020 | 2021 |
| World   | 2.9  | -4.9  | 5.4  | 2.4        | -5.2 | 4.2  |
| Advanced economies                              | 1.7  | -8.0  | 4.8  | 1.6        | -7.0 | 3.9  |
| United States                                   | 2.3  | -8.0  | 4.5  | 2.3        | -6.1 | 4.0  |
| Euro Area                                       | 1.3  | -10.2 | 6.0  | 1.2        | -9.1 | 4.5  |
| Japan   | 0.7  | -5.8  | 2.4  | 0.7        | -6.1 | 2.5  |
| Emerging market and developing economies        | 3.7  | -3.0  | 5.9  | 3.5        | -2.5 | 4.6  |
| Emerging and Developing Asia                    | 5.5  | -0.8  | 7.4  |            |      |      |
| East Asia and Pacific                           |      |       |      | 5.9        | 0.5  | 6.6  |
| China   | 6.1  | 1.0   | 8.2  | 6.1        | 1.0  | 6.9  |
| South Asia                                      |      |       |      | 4.7        | -2.7 | 2.8  |
| India   | 4.2  | -4.5  | 6.0  | 4.2        | -3.2 | 3.1  |
| Emerging and Developing Europe                  | 2.1  | -5.8  | 4.3  |            |      |      |
| Europe and Central Asia                         |      |       |      | 2.2        | -4.7 | 3.6  |
| Russia  | 1.3  | -6.6  | 4.1  | 1.3        | -6.0 | 2.7  |

| Real GDP<br>(Percent change from previous year) | IMF  |       |      | World Bank |      |      |
|---|------|-------|------|------------|------|------|
|   | 2019 | 2020  | 2021 | 2019       | 2020 | 2021 |
| Emerging market and developing economies        |      |       |      |            |      |      |
| Middle East and Central Asia                    | 1.0  | -4.7  | 3.3  |            |      |      |
| Middle East and North Africa                    |      |       |      | -0.2       | -4.2 | 2.3  |
| Saudi Arabia                                    | 0.3  | -6.8  | 3.1  | 0.3        | -3.8 | 2.5  |
| Sub-Saharan Africa                              | 3.1  | -3.2  | 3.4  | 2.2        | -2.8 | 3.1  |
| Nigeria   | 2.2  | -5.4  | 2.6  | 2.2        | -3.2 | 1.7  |
| South Africa                                    | 0.2  | -8.0  | 3.5  | 0.2        | -7.1 | 2.9  |
| Latin America and the Caribbean                 | 0.1  | -9.4  | 3.7  | 0.8        | -7.2 | 2.8  |
| Brazil  | 1.1  | -9.1  | 3.6  | 1.1        | -8.0 | 2.2  |
| Mexico  | -0.3 | -10.5 | 3.3  | -0.3       | -7.5 | 3.0  |
| High-income countries                           |      |       |      | 1.7        | -6.8 | 3.8  |
| Developing countries                            |      |       |      | 3.7        | -2.4 | 4.7  |
| Low-income countries                            | 5.2  | -1.0  | 5.2  | 5.0        | 1.0  | 4.6  |

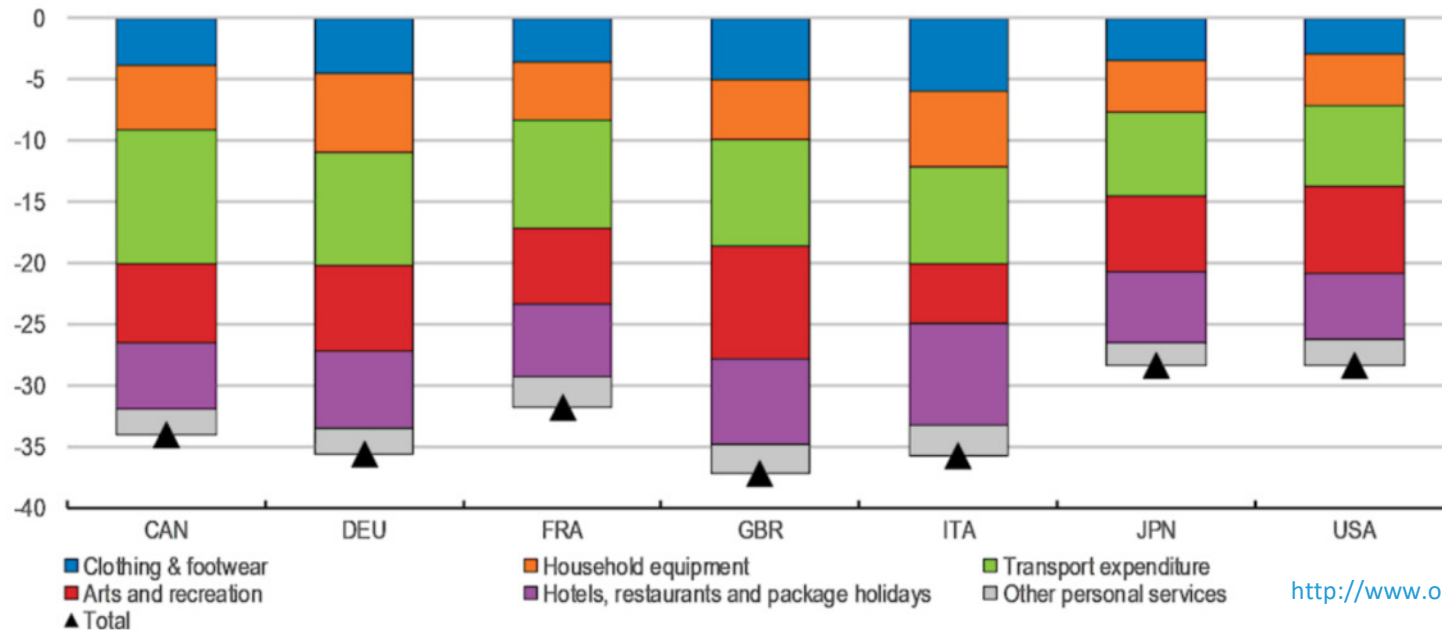
\* IMF and World Bank use different Region/State classification; 2019: estimates; 2020 and 2021: projections

<https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>  
<https://www.worldbank.org/en/publication/global-economic-prospects>

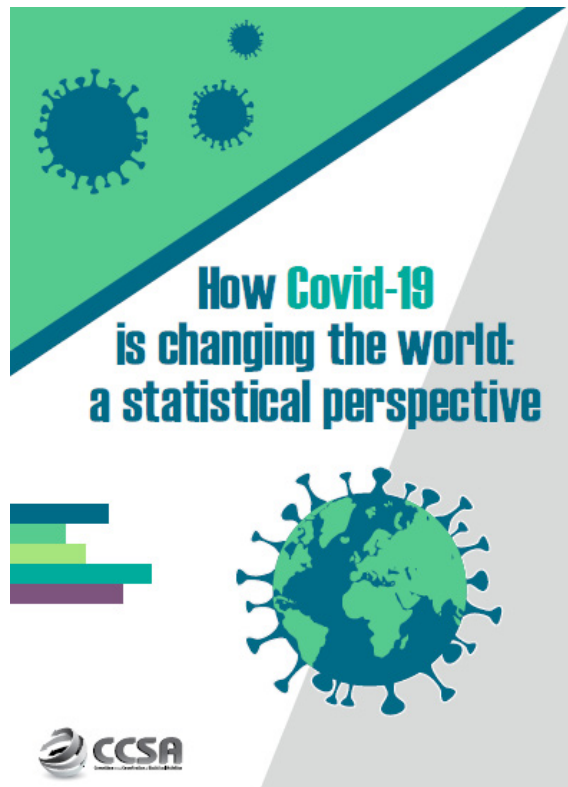
# OECD: Sharp decrease in consumers' expenditures for air travel due to containment measures

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

Per cent of total consumers' expenditure



<http://www.oecd.org/coronavirus/en/>



The new report will be published by the Committee for the Coordination of Statistical Activities (CCSA) under the auspice of the UN-DESA

## ECONOMIC

### Aviation industry facing deepest crisis ever in history

The aviation industry bears the weight of the consequences of the COVID-19 outbreak heavier than other industries as its "raison d'être" is the transport of people and goods all across the globe for travel, tourism, business and trade.

<https://unstats.un.org/unsd/ccsa/documents/covid19-report-ccsa.pdf>



ICAO

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Contact: Economic Development [ECD@icao.int](mailto:ECD@icao.int)



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<https://www.icao.int/sustainability/Pages/COVID-19-Air-Traffic-Dashboard.aspx>

<https://www.icao.int/Newsroom/Pages/Billion-fewer-international-air-travellers-this-year-according-to-latest-ICAO-forecast.aspx>

THANK YOU

<https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>

<https://www.icao.int/sustainability/Pages/Air-Traffic-Monitor.aspx>