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Economic Impact of COVID-19 on Civil Aviation

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- **Economic impact of COVID-19 on civil aviation**
- **Forward looking scenario analysis**
- **ICAO COVID-19 interactive dashboards**
- **Financial relief and mitigation measures**
- **Value-added of aviation to national economy**

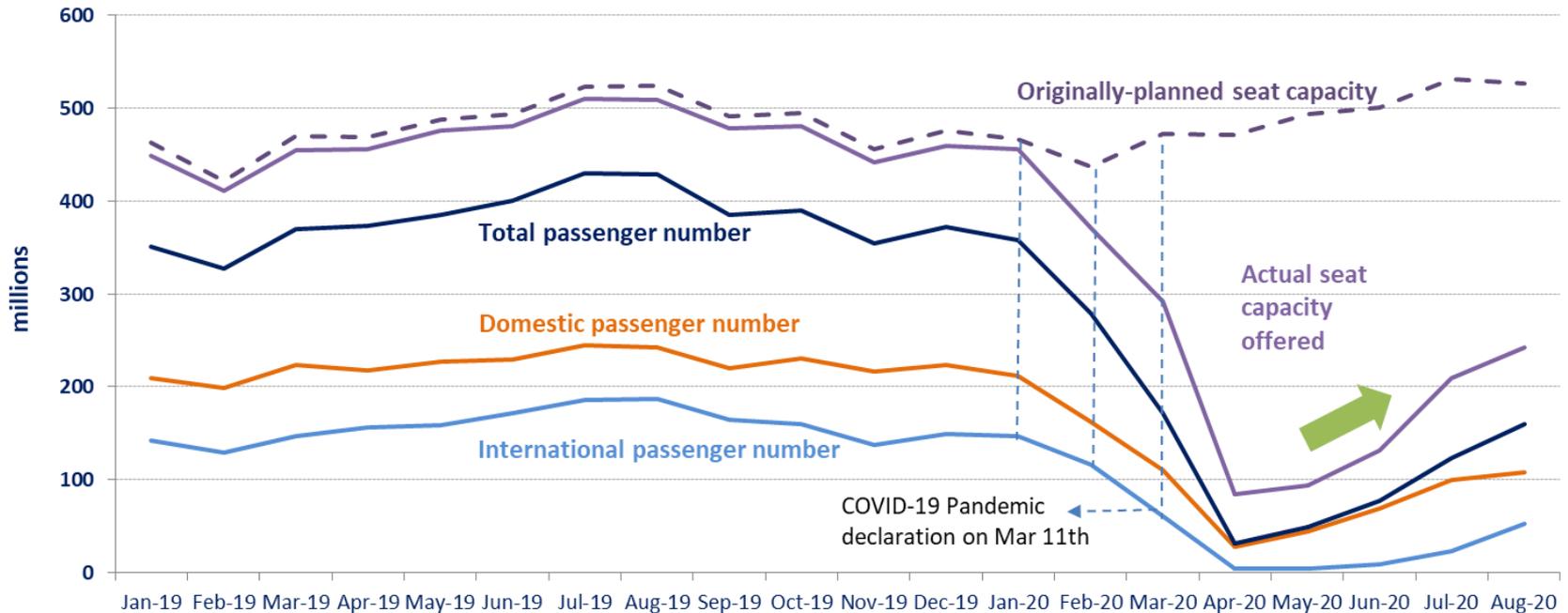


Economic Impact of COVID-19 on Civil Aviation - Global -

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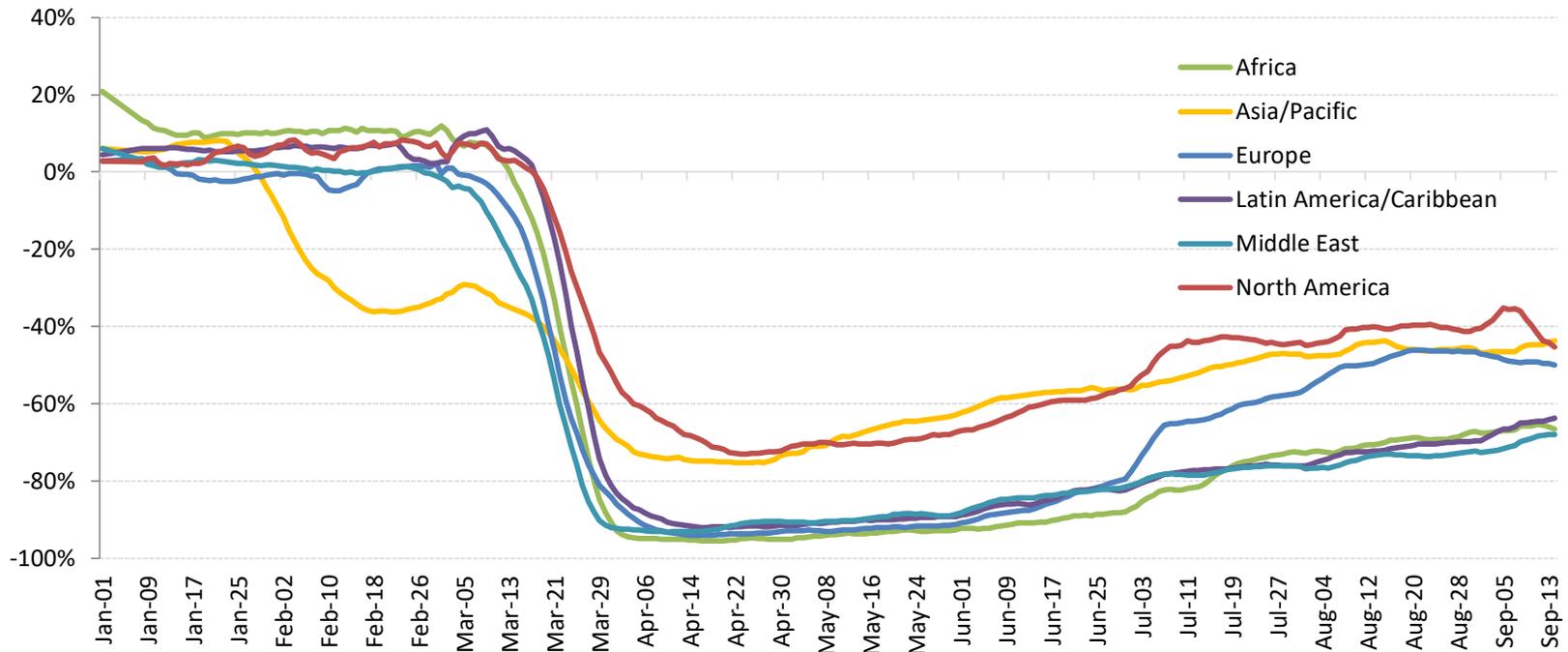


Both capacity and demand reached the bottom low in April; Number of passengers from Jan to Aug dropped by 60% from 3.1 billion in 2019 to 1.2 billion in 2020





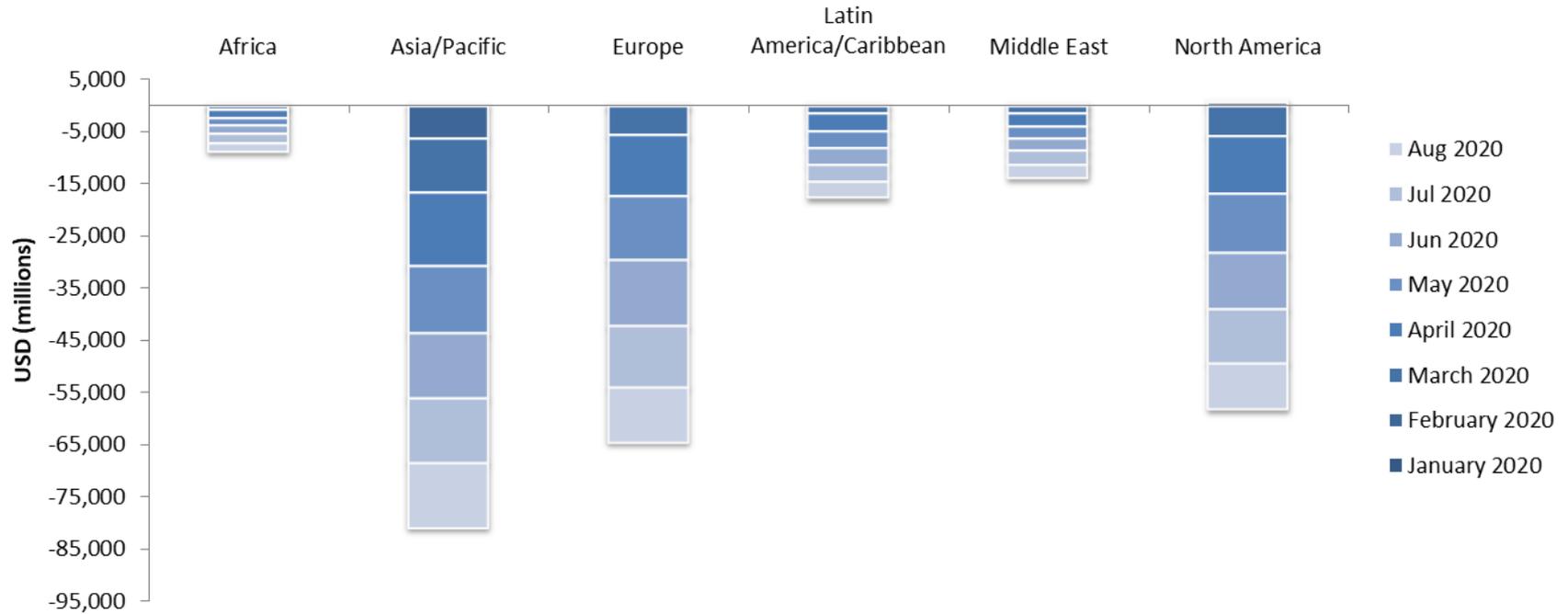
Comparison of total seat capacity by region (7-day average, YoY compared to 2019)





Airline passenger revenue of all regions plummeted

Airlines are estimated to loss approximately USD 241 billion passenger revenue from Jan to Aug 2020 compared to 2019

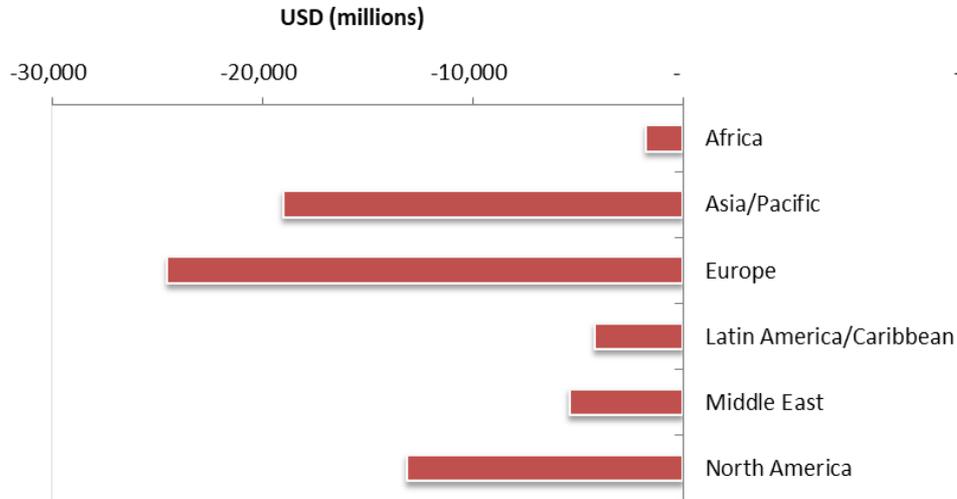




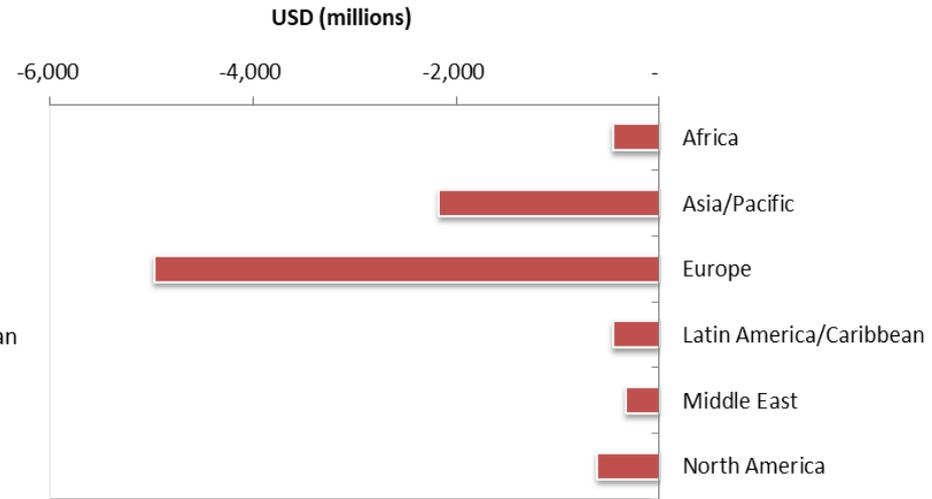
Airport and ANSP revenues were also severely impacted

Airports and ANSPs are estimated to loss approximately USD 68 and USD 9 billion from Jan to Aug 2020 compared to 2019

Airport



ANSP



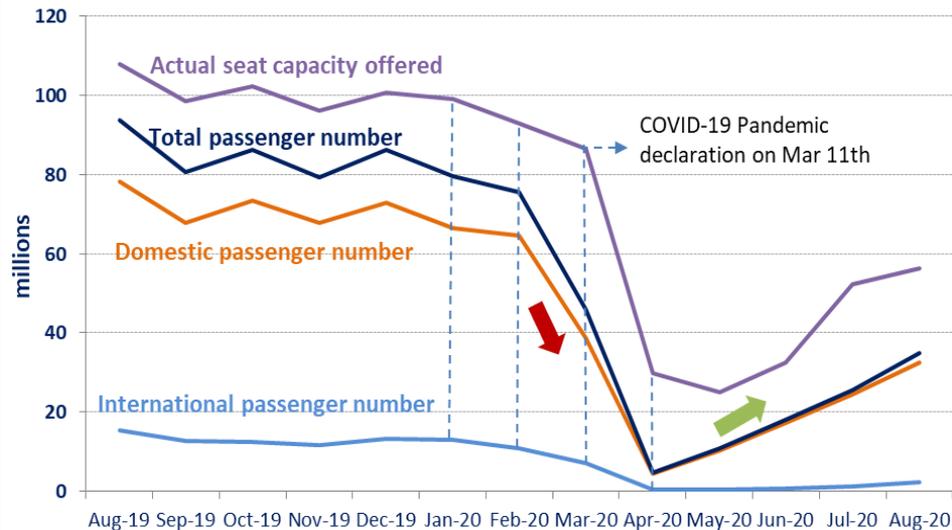


Economic Impact of COVID-19 on Civil Aviation - North America and Latin America/Caribbean -

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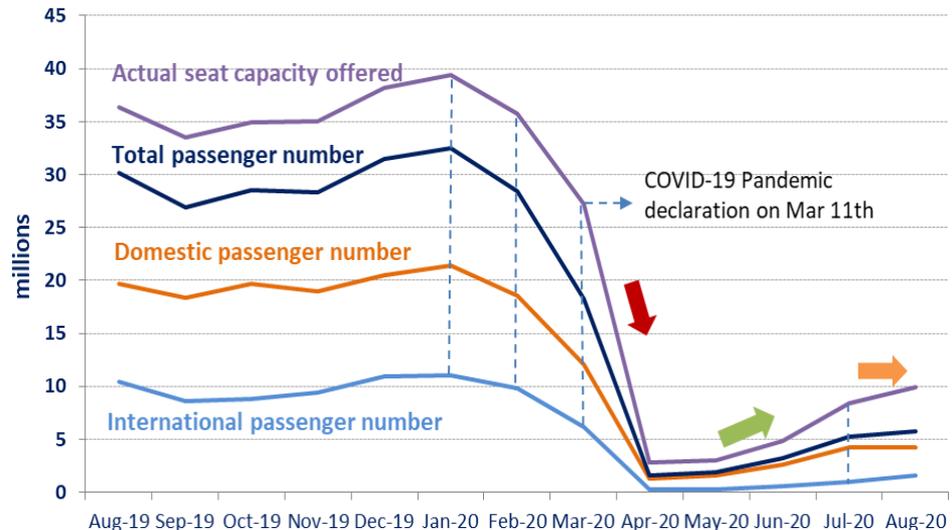
North America

Number of passengers from Jan to Aug dropped by 57% from 689 million in 2019 to 295 million in 2020; international passengers declined by 68%



Latin America/Caribbean

Number of passengers from Jan to Aug dropped by 59% from 235 million in 2019 to 97 million in 2020; international passengers declined by 63%

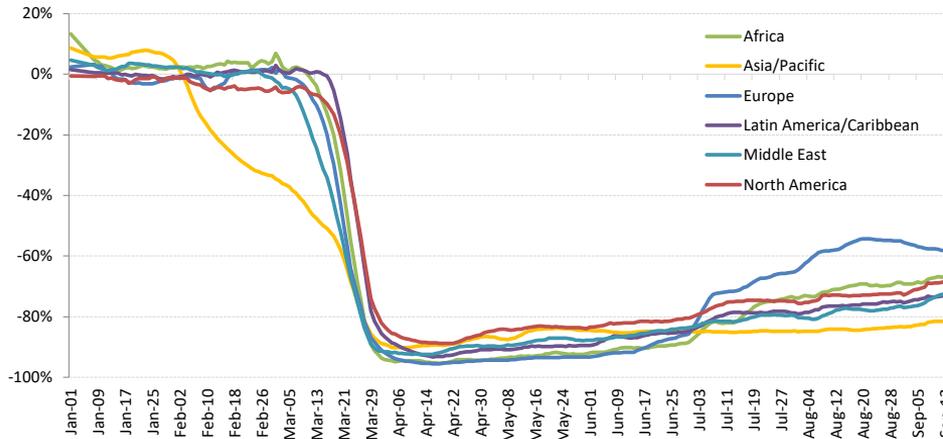




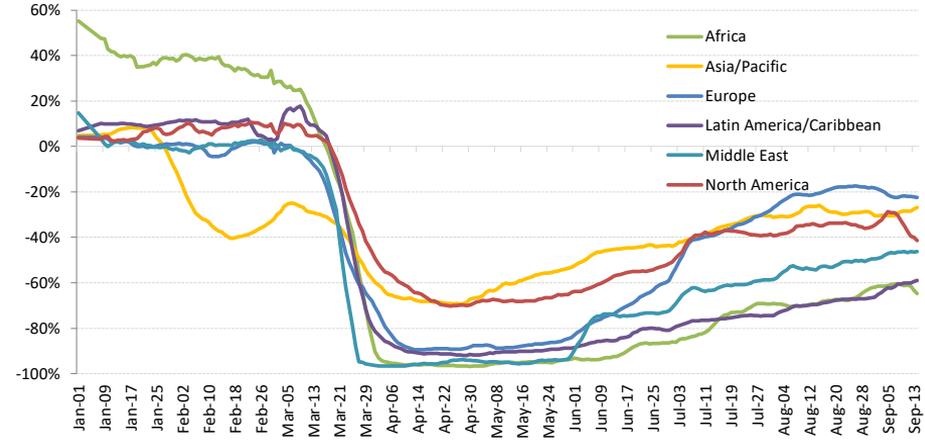
Domestic passenger traffic often exhibits more resilience than international

North America was supported by domestic market while Latin America/Caribbean showed the slowest pace in domestic recovery

International seat capacity reduction (7-day average, YoY compared to 2019)



Domestic seat capacity reduction (7-day average, YoY compared to 2019)





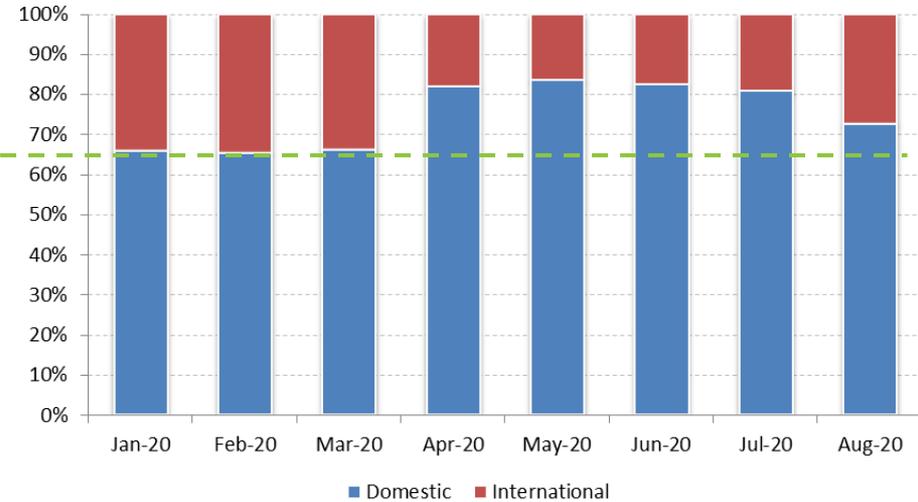
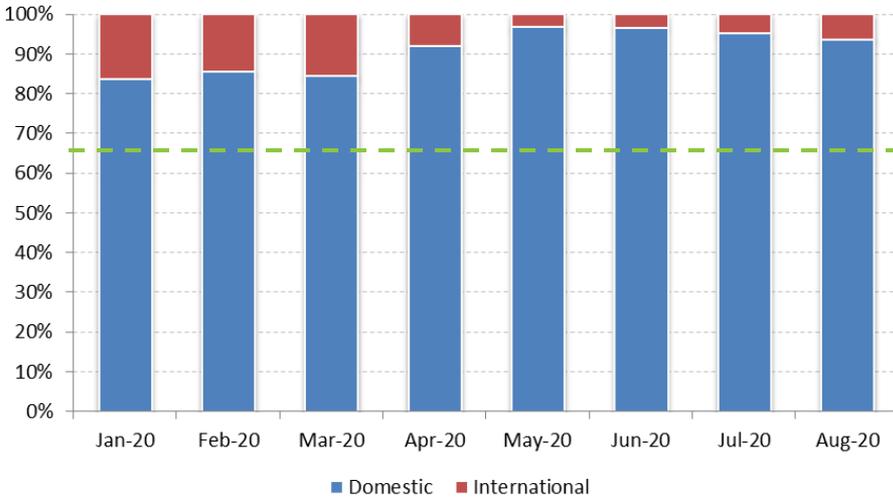
Share of international and domestic traffic of the region

North America

Majority of traffic was dominated by domestic passengers, and international passengers represented less than 10% since April

Latin America/Caribbean

Since April, international passengers represented less than 20% while increased to 27% in August

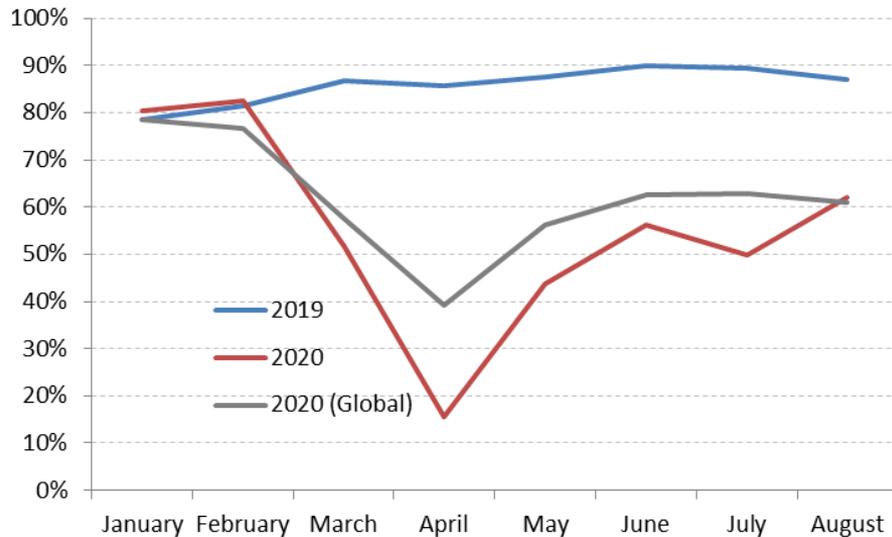




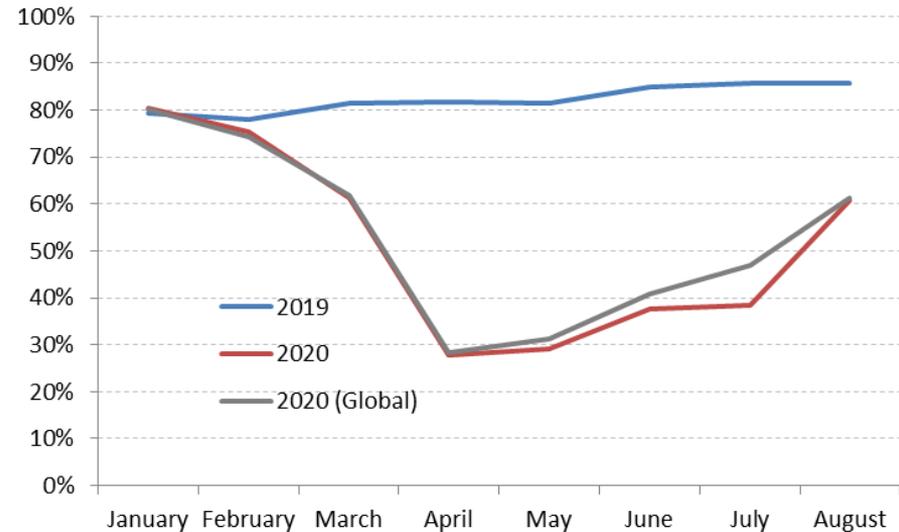
Steep fall in international passenger load factor (North America)

Both domestic and international load factor were below world average; in April, domestic load factor dropped to all-time low at 15% and below 30% for international

Domestic load factor 2020 vs. 2019



International load factor 2020 vs. 2019

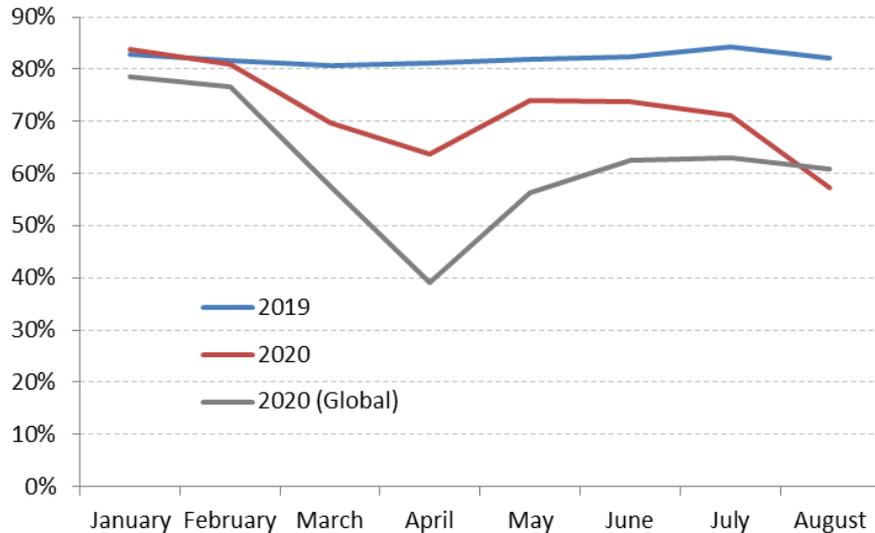




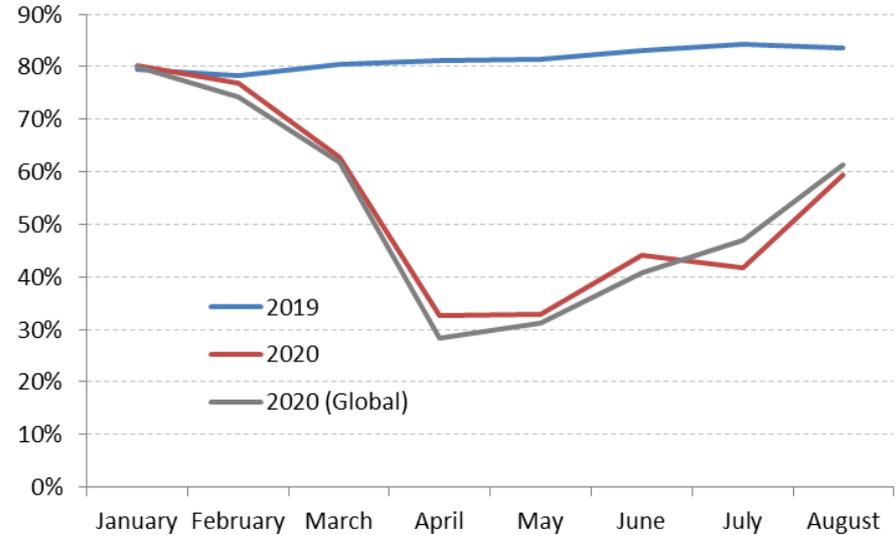
Steep fall in international passenger load factor (Latin America/Caribbean)

Domestic load factor performed better than world average; international load factor dropped more significantly similar to world average

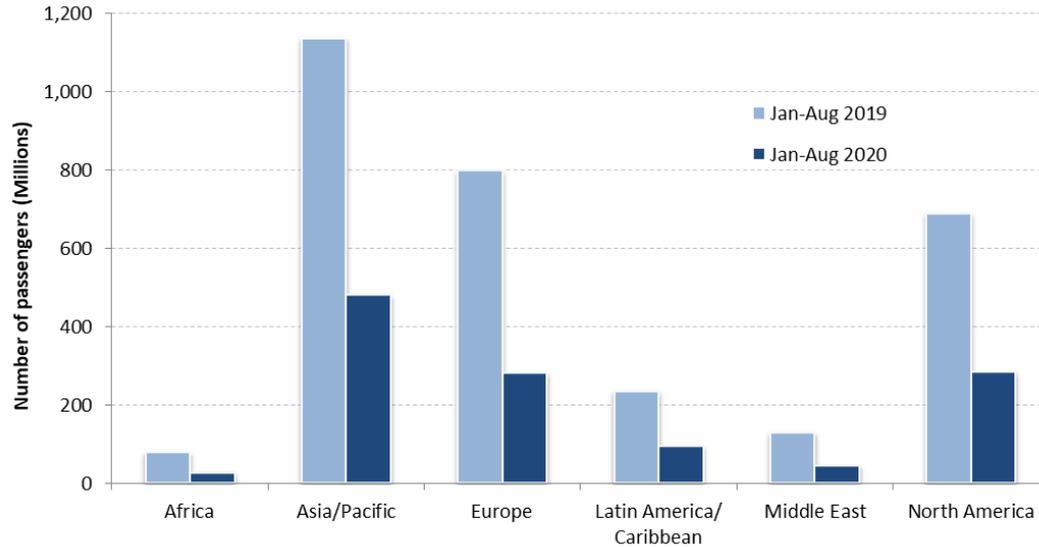
Domestic load factor 2020 vs. 2019



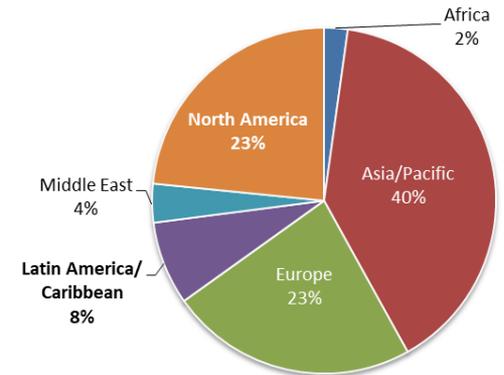
International load factor 2020 vs. 2019



Number of passengers of Jan-Aug 2020 compared to 2019

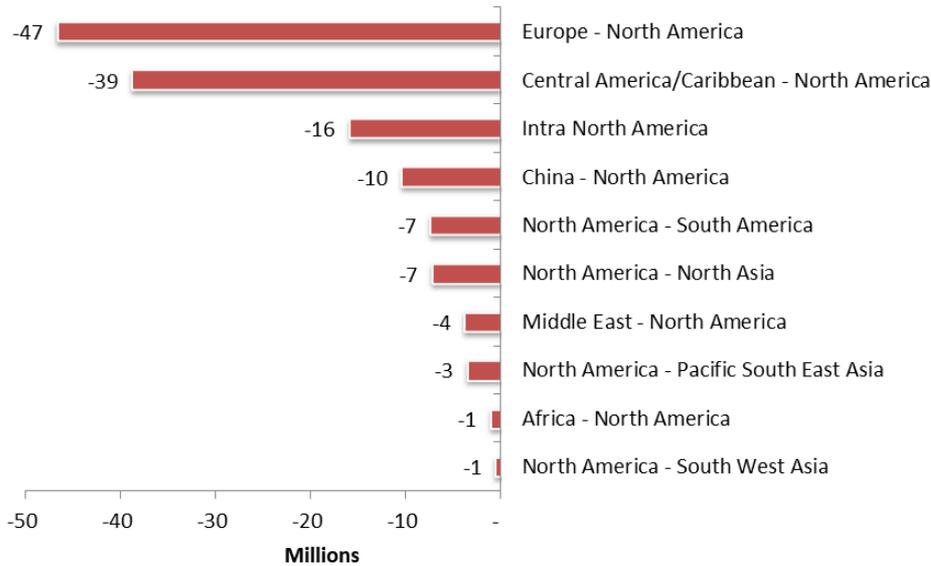


Share of passengers by region of Jan-Aug 2020

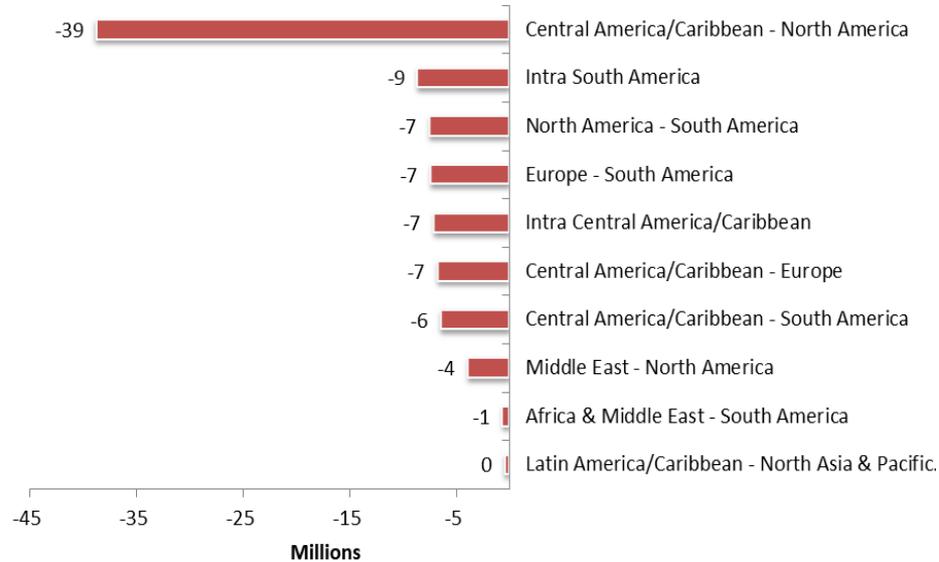




Impact on North America international route groups (passenger loss Jan-Aug)

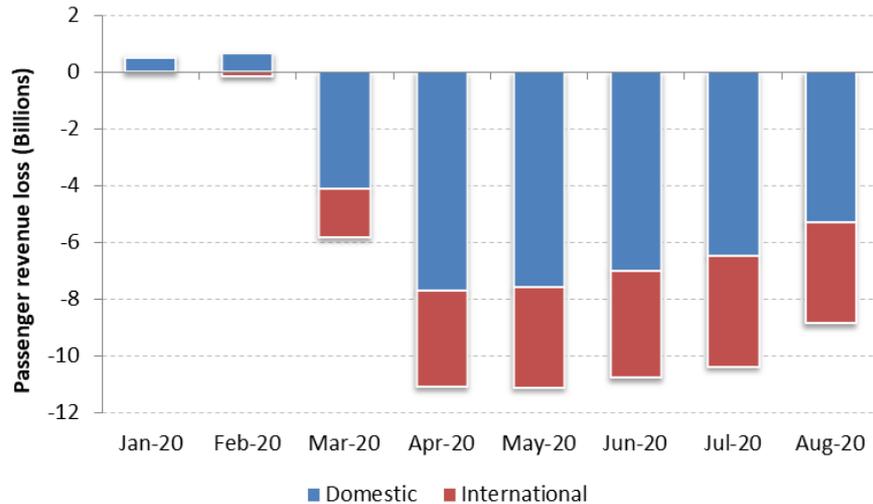


Impact on Latin America/Caribbean international route groups (passenger loss Jan-Aug)

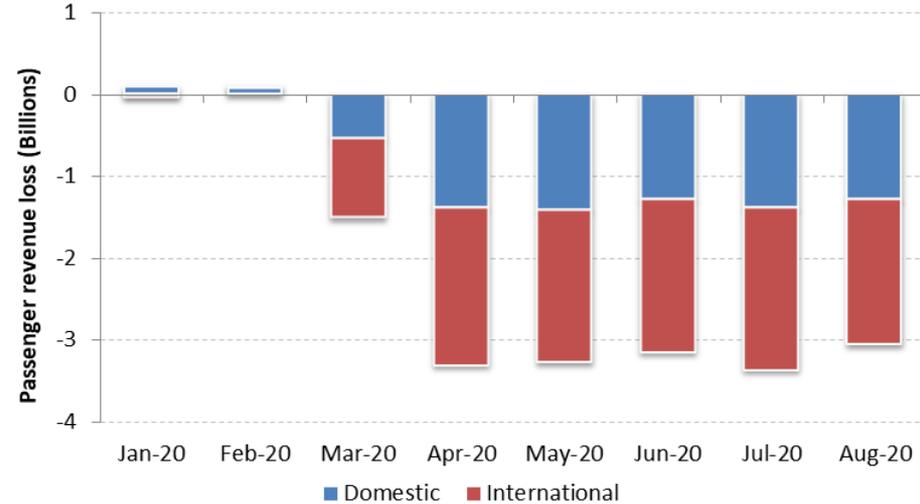


Passenger revenue loss by month North America

North America recorded a total airline passenger revenue loss of around USD 57 billion from Jan to Aug; 65% of loss was attributed to domestic



Latin America/Caribbean recorded a total airline passenger revenue loss of around USD 17 billion from Jan to Aug; 60% of loss was attributed to international



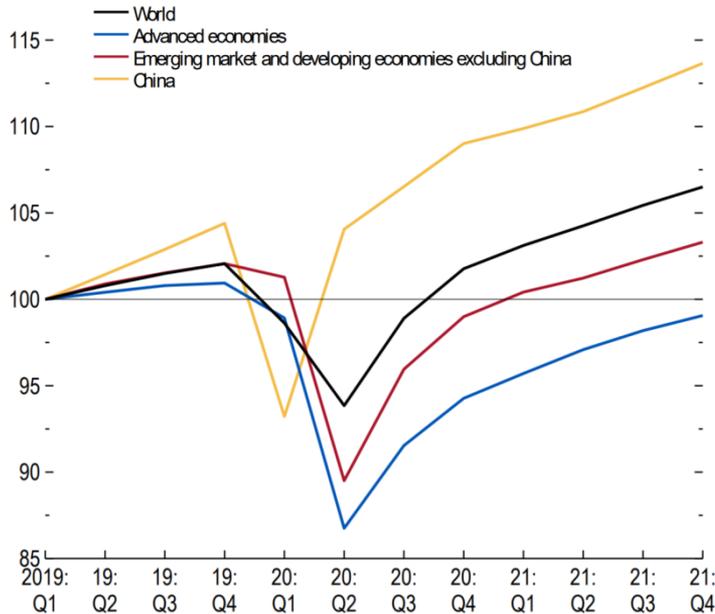


Forward Looking Scenario Analysis

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

World’s GDP Projections (by IMF)

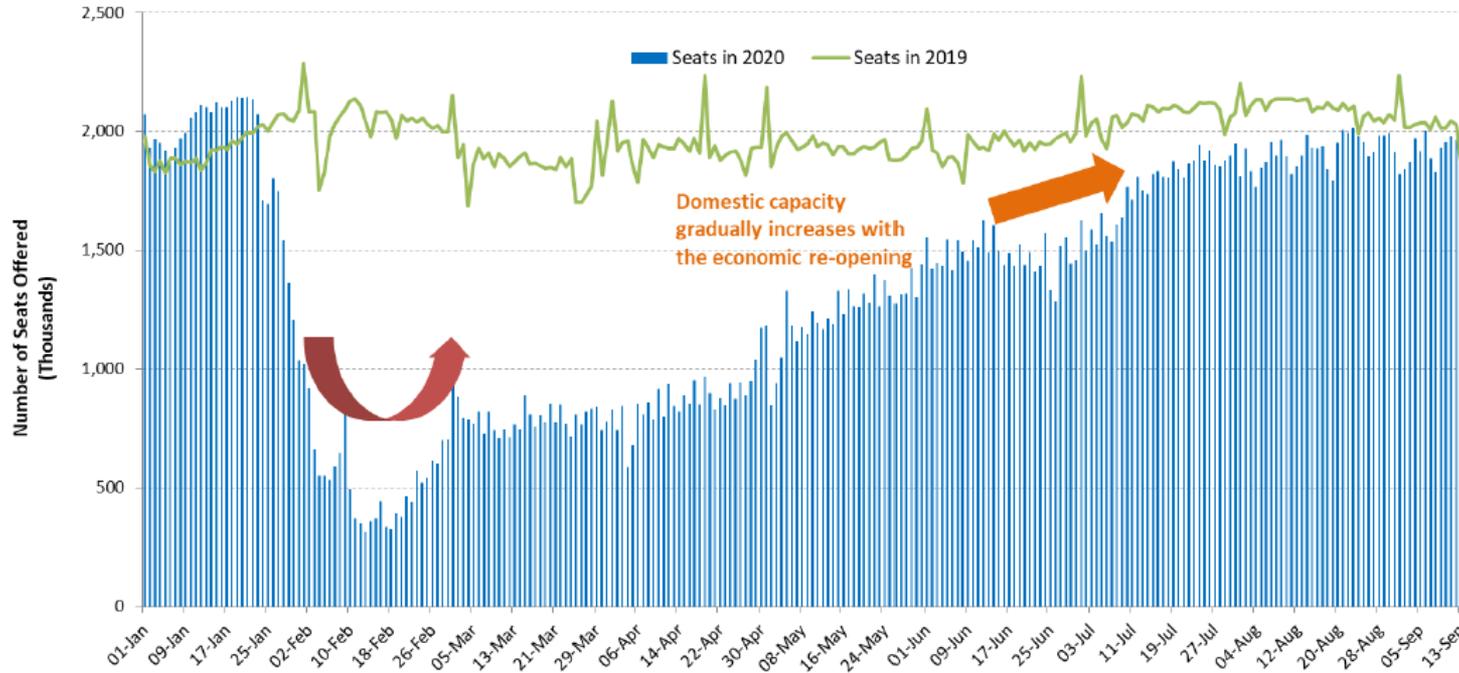


<https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>

- 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?

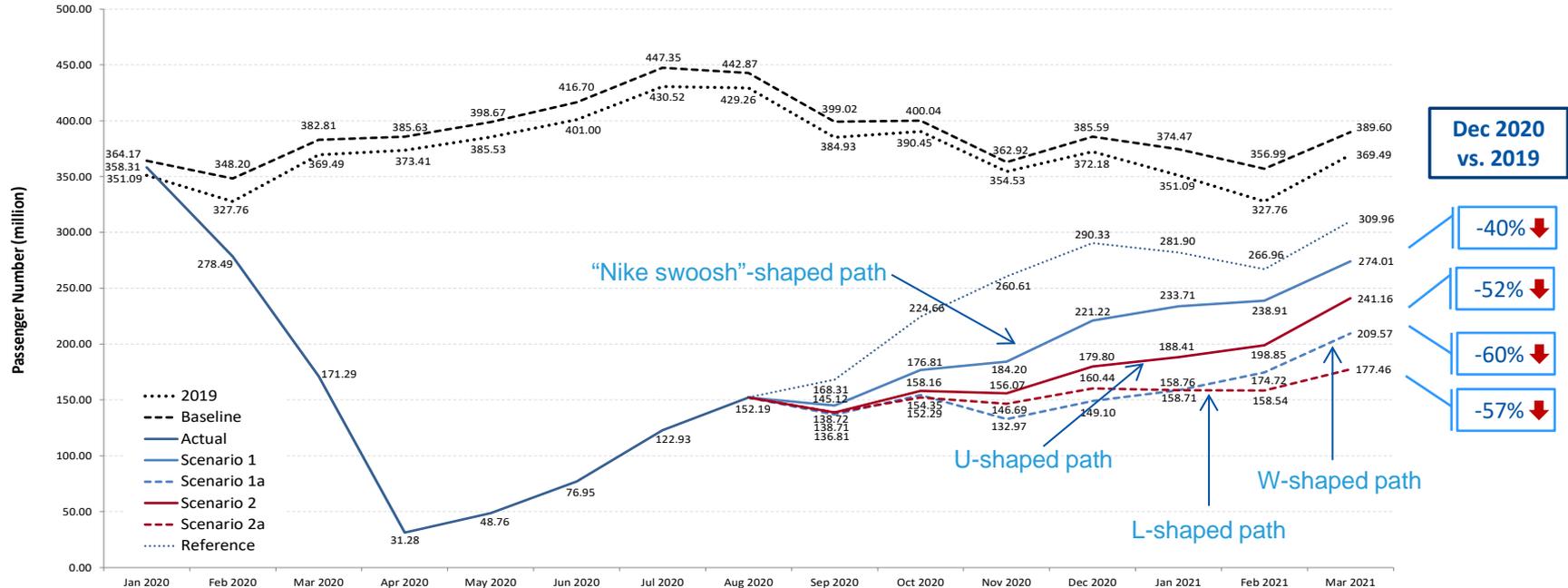
Domestic passenger traffic is recovering ahead of international

Domestic passenger traffic in China already bottomed out in mid-February, and capacity offered in August was recovered to around 90% of last year





Scenario estimations of world total passengers of 2020 (-57% to -60%)





ICAO Economic Impact Analysis of COVID-19:

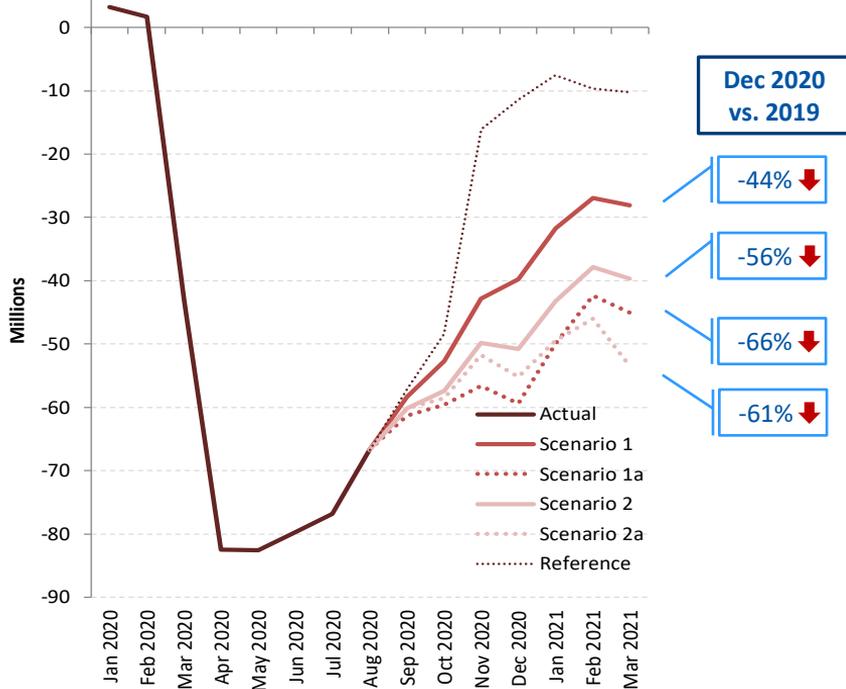
<https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>



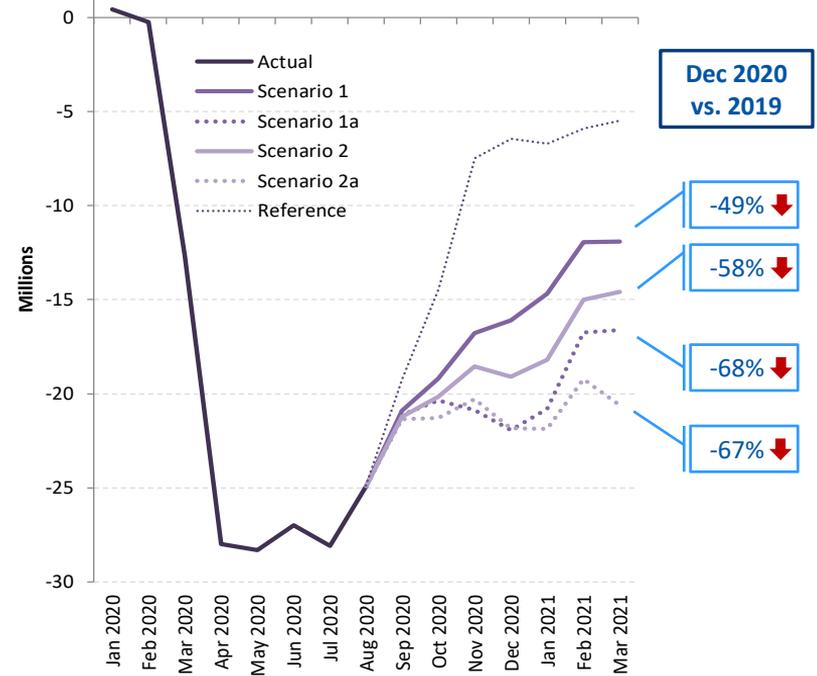


Scenario estimation of trend of passengers for 2020

North America (Total)



Latin America/Caribbean (Total)

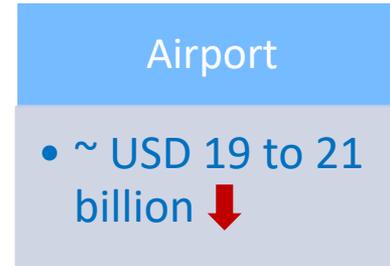




ICAO Economic Impact Analysis of COVID-19:

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

North America
-57% to -61%

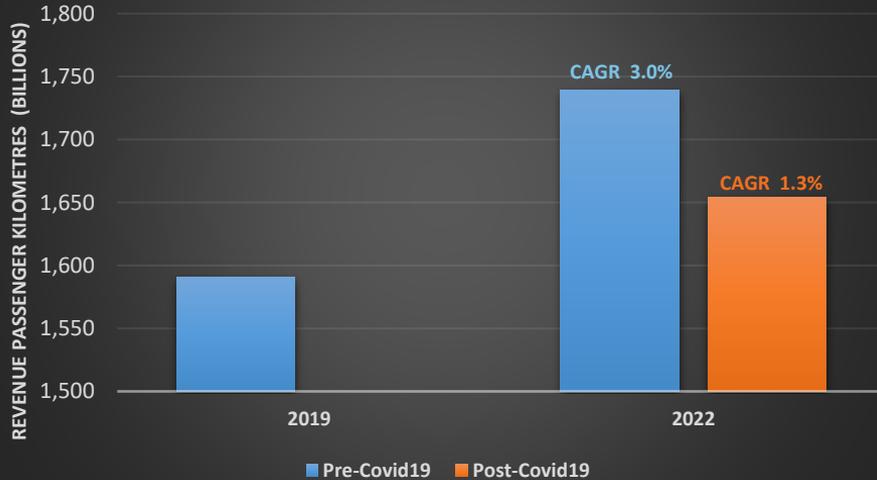


Latin America/Caribbean
-59% to -63%

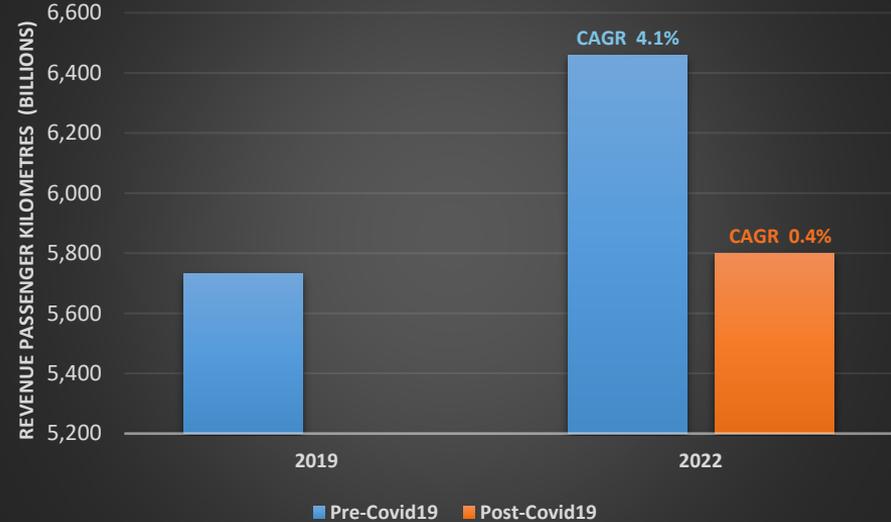




International Passenger Traffic (North America, RPK)



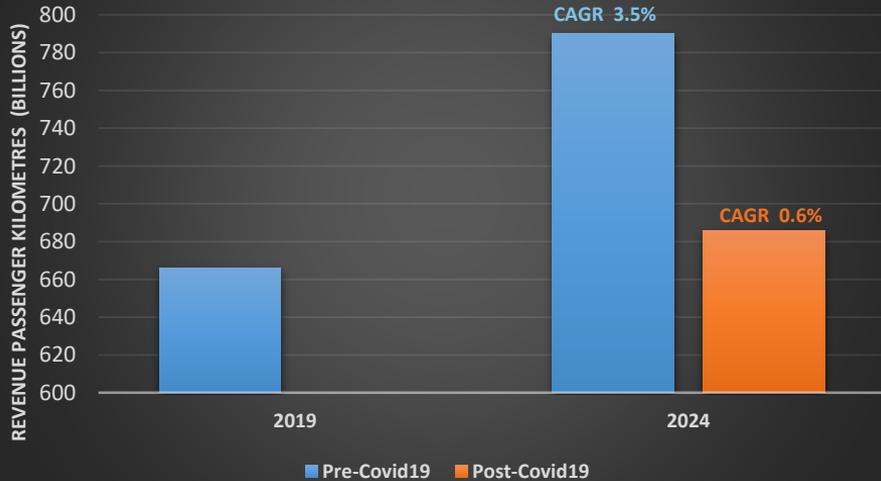
International Passenger Traffic (World, RPK)



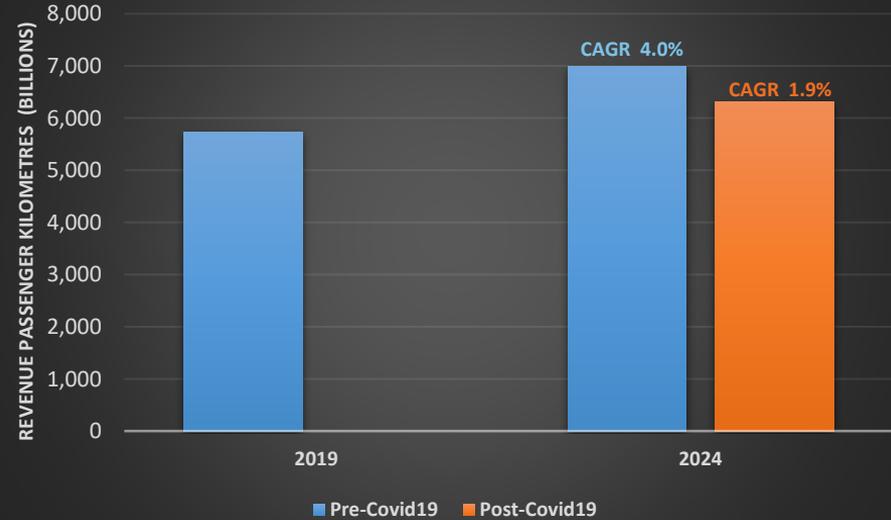
- Global international passenger traffic is expected to rebound to 2019 levels in 2022
- Global international passenger traffic CAGR 2019-2022 is expected to decline to 0.4% from 4.1%
- North America route groups CAGR is expected to decline to 1.3% from 3.0%

Post-COVID-19 traffic forecast (Latin America/Caribbean)

International Passenger Traffic (Latin America/ Caribbean, RPK)



International Passenger Traffic (World, RPK)



- Latin America/Caribbean international passenger traffic is expected to return to 2019 level in 2024
- Latin America/Caribbean route group CAGR is expected to decline to 0.6% from 3.5%



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ICAO COVID-19 Interactive Dashboard

ICAO COVID-19 dashboards provide timely data and trends to monitor and assess the evolving impact of COVID-19 on civil aviation

- **Operational impact:** impact on the number of flights, seats offered, and segmented into international and domestic operations
- **Economic impact:** impact on the revenues of air carriers, airports and ANSPs
- **Aircraft utilization:** aircraft utilization and grounded aircraft by aircraft category
- **Country-pair Traffic:** level of country-pair traffic with COVID-19 cases.



Operational impact



Aircraft utilization



Country-pair traffic



Economic impact - Air carriers



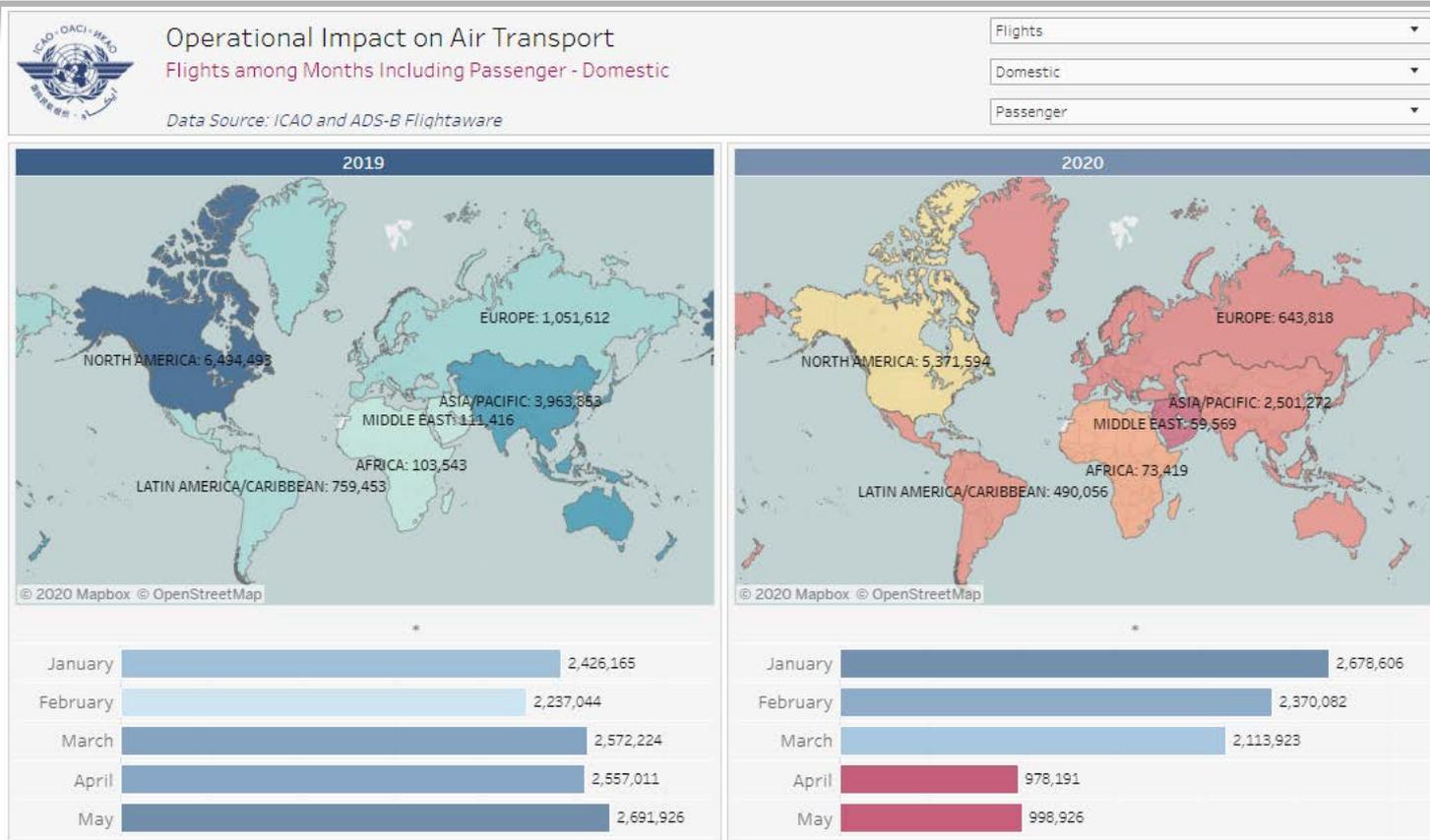
ECONOMIC IMPACT - AIRPORTS



ECONOMIC IMPACT - ANSPS

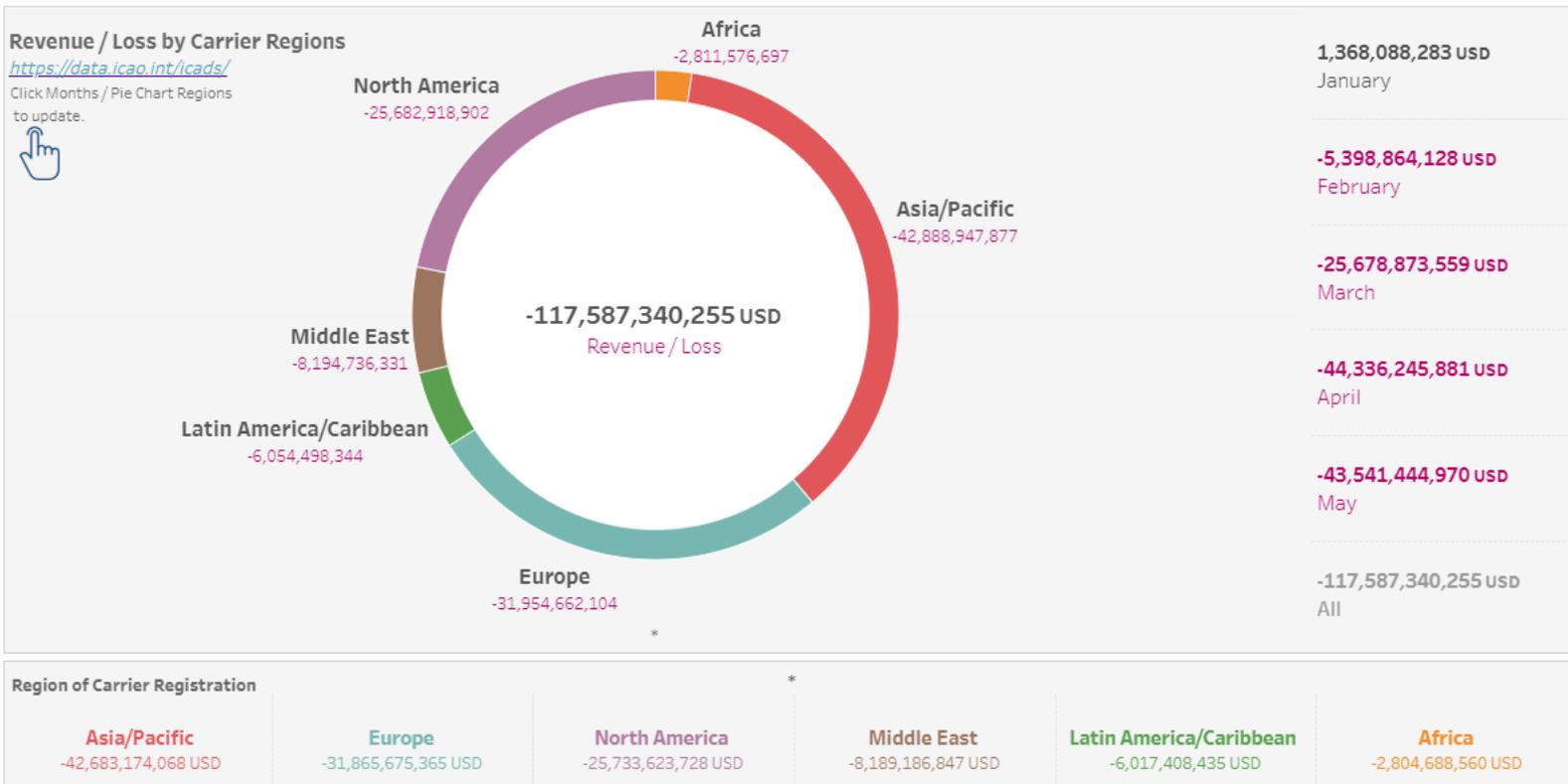


COVID-19 Air Traffic Impact Dashboard:
<https://www.icao.int/sustainability/Pages/COVID-19-Air-Traffic-Dashboard.aspx>





COVID-19 dashboard: Economic impact – air carriers





Financial relief and mitigation measures



Depending on the nature of the measures, financial relief and mitigation measures can be classified into the following categories

- **Industry operational measures**
- **Industry financial measures**
- **State regulatory support measures**
- **State fiscal and monetary relief measures**



Form of measures	Effect/Implication	Limitation/Risk
a) Increase in cost of travel	Enable air carriers to make operations on routes with break even at reduced load factors.	Higher price elasticity of demand might be expected due to pandemic.
b) Diverting excess passenger capacity to non-scheduled passenger and cargo operations	Put unutilized scheduled passenger capacity into use to infuse much needed liquidity.	Competition from other transport modes for carriage of cargo; Conversion of passenger aircraft to cargo entails upfront costs.
c) Fuel hedging	Provide certainty on future fuel costs and reduce the risk of unviable operations due to fuel costs variability.	Variability in real fuel prices could make hedging contracts unprofitable; Prices of hedges usually carry an upfront cost.
d) Mergers and acquisitions	Mergers and acquisitions within the air transport value chain will reduce the costs of operations and optimize use of capacity.	Monopoly and competition laws as well as restrictions on foreign ownership and control.

Form of measures	Effect/Implication	Limitation/Risk
a) Negotiation of reduced rates or defer payments to input providers or suppliers	Lower costs, reduce short-term payments and free up cash; Make operations on routes break even at reduced load factors.	Existing contracts and business continuity concerns could adversely impact the negotiation on reduction or deferment.
b) Negotiation of reduced interest rates or deferred loan payments to lenders and aircraft lessors	Lower costs, reduce short-term payments and free up cash.	
c) Diluting equity or equity financing	Raise capital by selling shares in the market or by pledging it with financial institutions for a discount over market prices; Alternatively air carriers could issue preferential shares or convertible debentures to financial institutions where the capital has a loan and an equity component convertible at a premium over market at a future date.	a) Domestic and foreign financial institutions could buy shares directly from market instead of negotiating a discount with the owner if they expect valuation to decline further.
		b) States could limit ownership of equity if the investment is from a foreign fund or investor due to ownership and control restrictions.

Form of measures	Effect/Implication	Limitation/Risk
d) Securitizing future earnings for present capital from State owned or private banks and financial institutions	Diverse funding and financing sources; Monetize existing and predictable cash flows to sustain business; Availability of capital could make some operations viable under a low demand, capacity constrained environment.	Uncertainty of future revenue streams; Process of securitizing can be complex. Discounting future flows carries a cost.
e) Monetizing the value of frequent flyer programme (FFP) such as mortgaging FFP for loans	Diverse funding and financing sources; Monetize existing and predictable cash flows expected to sustain business; Availability of capital could make some operations viable under a low demand, capacity constrained environment.	Potential unfavorable terms leading airlines to give up some control over the programme; could impact customer loyalty.
f) Route rationalization; Cost control and management including reduction in hiring, reduction in salary, voluntary unpaid time-off, temporary furlough, reduction in workforce	Increase availability in short term working capital	Reduction in skilled workforce could impact post pandemic operations.



Form of measures	Effect/Implication	Limitation/Risk
a) Negotiation of more liberal agreements including open skies and cooperative arrangements on identified routes such as pooling agreement and joint venture	Availability of capital could make some operations viable under a low demand, capacity constrained environment	Regulatory changes take time and due process needs to be followed. Consideration of the valuation of its own national operators could impact the decision of the State to relax ownership and control regulations.
b) Relaxation on foreign ownership and control rules		
c) Temporary suspension of slot rules	Provide flexibility to allow air carriers to plan and adjust schedules with appropriate levels to respond to market conditions and changing demand projections; Air carriers can avoid the need to run empty services in order to maintain slots, and can allocate aircraft to other routes.	Limitation on allocating unutilized slots to those required operations. Timing of re-commencing or continuing the suspended slot rules could be a challenge.
d) Bankruptcy code	Can preserve the future valuation of air carrier and give a fresh start for future effort by canceling many of the unsecured debts, while allowing the carrier to pay Creditors a portion of debts depending on its ability to pay as indicated in the court order (called the Discharge); After filing for bankruptcy, the Discharge prevents the creditors of the carrier from taking actions to collect the debts.	Difference in bankruptcy law in States, creating a bankruptcy law is a lengthy regulatory process.



Form of measures	Effect/Implication	Limitation/Risk
a) Cash injection as grant, or through loans and loan guarantees with zero or low interest	Availability of capital could make operations viable under a low demand, capacity constrained environment; Valuation of air carrier of the State can be preserved with possibility to recoup through future valuation. Reduced bankruptcies of air carrier will preserve the direct and indirect value added and jobs generated from air transport.	Competing priorities of the State by different sectors in the economy and the low value added to the national economy from air transport relative to other sectors.
b) Wage subsidies or provide wage guarantee by absorbing a portion of wage costs for qualified personnel as deemed appropriate by the State		
c) Government takes equity in its air carriers with the option to sell it back to the carrier at a premium over market price when valuations improve		
d) Taxation relief, including alleviation of payroll taxes, corporate taxes		
e) Reduction or deferred payment of taxes and charges imposed by State on the industry		
f) Operating grants, i.e. route specific grants		



Council Aviation Recovery Task Force (CART) Recommendation on Economic and Financial Measures

***CART Recommendation 10** - Member States should consider appropriate extraordinary emergency measures to support financial viability and to maintain an adequate level of safe, secure and efficient operations, which should be inclusive, targeted, proportionate, transparent, temporary and consistent with ICAO's policies, while striking an appropriate balance among the respective interests without prejudice to fair competition and compromising safety, security and environmental performance.*



The United States confirmed on a USD 2 trillion stimulus packages under the Coronavirus Aid, Relief, and Economic Security Act (Cares Act) in March 2020. The approved programmes include USD 61 billion to the aviation section such as USD 25 billion in loans and loan guarantees for passenger airlines, repair stations and ticket agents, USD 4 billion loans and loan guarantees for cargo airlines, USD 10 billion in grants-in-aid for airports, and USD 25 billion in funding to be used exclusively for US passenger airline employee wages, salaries and benefits.

Mexico's airport administrator 'Grupo Aeroportuario del Pacifico' (GAP) granted passenger and cargo airlines an exemption of 100% through July for landing fees at contact positions, long-term parking fees, and office space rental fees; It also granted an exemption of 50% for airline employees parking fees.

Costa Rica announced relief measures, for instance, for SJO, waived office space rental fees until the end of the emergency period, waived long term parking fees for those aircraft currently parked since 18 March 2020 through 18 May; 75% reduction in landing fees, approach, lighting, jetways, bus services, and parking fees for international passenger flights.



Examples of measures adopted by States and the industry (Global)

Singapore government provides aviation support packages to protect jobs and to provide cost relief to airlines, ground handlers and cargo business such as landing and parking charges, rental rebates for airlines lounges and offices within Changi Airport, as well as maintaining a minimum level of air connectivity.

Germany has thrown Lufthansa a €9bn lifeline, agreeing a bailout that gives Berlin a veto in the event of a hostile bid for the airline. The largest German corporate rescue since the coronavirus crisis struck will result in the government taking a 20% stake, which could rise to 25% plus one share in the event of a takeover attempt, as it seeks to protect thousands of jobs.

Australia announced on 18 March AU\$715 million relief package for Australian aviation industry, involving the refunding and ongoing waiving of a range of government charges on the industry including air services charges on domestic airline operations and domestic and regional aviation security charges.

China implemented policies on 23 January to reduce aerodrome charges and air navigation charges. Landing Charges reduced by 10%; Parking Charges exempted; Air Navigation Facility Charges reduced by 10% (with overfly charges exclusive).



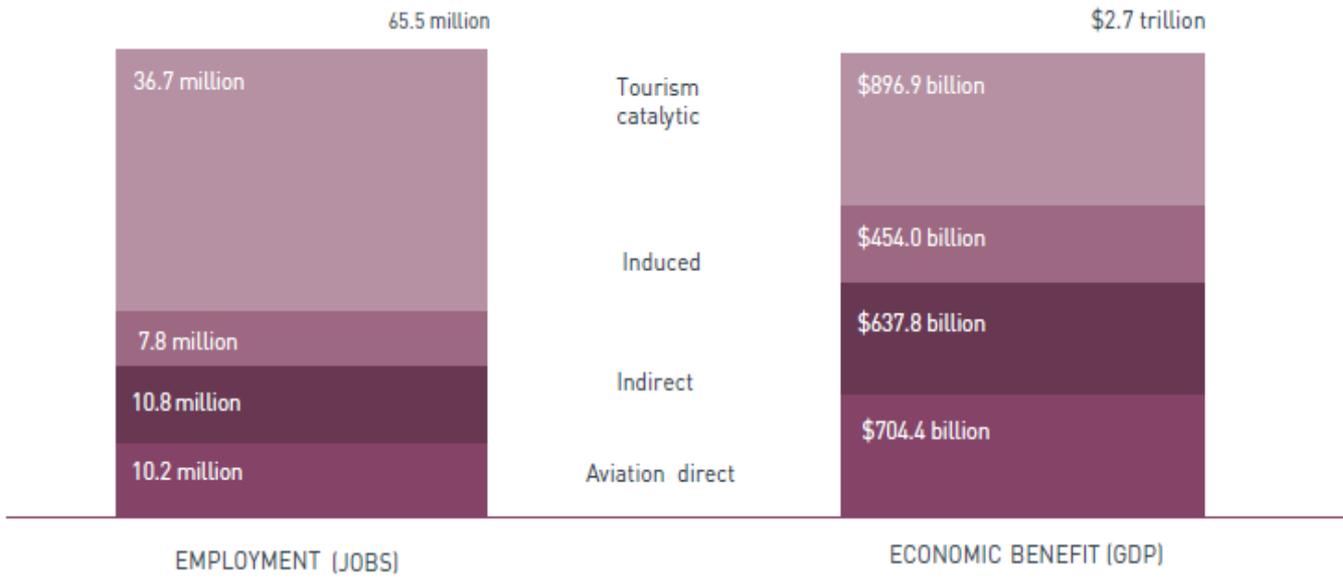
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Value-added of aviation to national economy



Prior to COVID-19, global aviation supported 65.5 million jobs and USD 2.7 trillion GDP





Economic benefits of aviation in North America and Latin America/Caribbean pre-COVID-19

Prior to COVID-19, aviation in North America supported **7.3 million jobs** and **USD 844 billion GDP**



Prior to COVID-19, aviation in Latin America/Caribbean supported **7.2 million jobs** and **USD 156 billion GDP**





International harmonized framework and tool to evaluate contribution of aviation to national economy

- **Aviation Satellite Account (ASA) methodological framework to measure the direct contribution of aviation industry to national economy**
- **Value-added Calculator to support States to assess how much value-added can be generated through the help provided to aviation, as well as to the national economy as a whole such as GDP and jobs.**



ICAO Aviation Satellite Account and Value-added Calculator



- Traffic recovery is expected to be slow and unstable with full of uncertainties in near term; the pandemic will remain a threat until a vaccine or effective treatment is made widely available;
- The economic and consumer confidence effects of the pandemic are deep and global;
- Global traffic is expected to return to 2019 level in 2022 the earliest; domestic and leisure travel will likely return faster than international and corporate travel;
- From 2021 onward, providing with more stabilized situation of the pandemic globally and the availability of vaccine, sustained recovery can be expected;
- North America's traffic remain dominant by domestic, while Latin America/Caribbean was one of the hardest hit regions with insignificant recovery;
- States' implementation of ICAO CART Recommendation 10 on economic and financial measures with a holistic view to evaluate the impacts and benefits on all stakeholders will be critical to help the industry to weather through the crisis so it can continue its instrumental role in driving national economy and supporting jobs.

ICAO Economic Impact Analysis of COVID-19:

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

COVID-19 Air Traffic Impact Dashboards:

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Operational impact



Aircraft utilization



Country-pair traffic



Economic impact - Air carriers



ECONOMIC IMPACT - AIRPORTS



ECONOMIC IMPACT - ANSPS



ICAO Aviation Satellite Account and Value-added Calculator



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THANK YOU