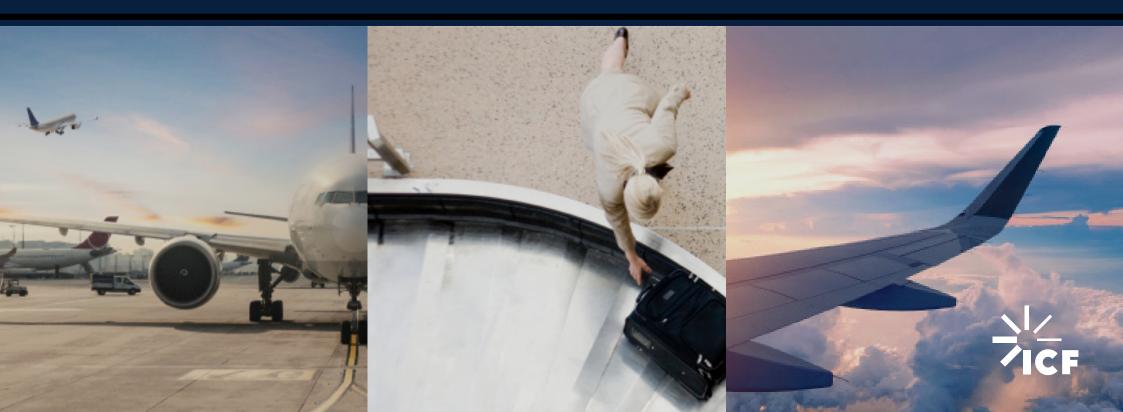


COVID-19 air traffic recovery update: A view one year into the pandemic

June 2021





Introduction

When we published our initial **COVID-19 traffic recovery forecast**, the world was less than a month into a pandemic. Global aviation had nearly shut down, and we saw no encouraging signs on the horizon. No one knew how long the pandemic would last, what impact it would have on the economy, or how it would impact human behavior. This crisis is unique because it spared no country.

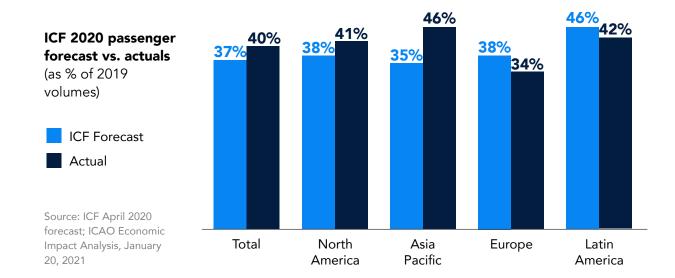
Fast forward to the present, and we see significant changes in consumer behavior, a surprisingly resilient global economy, and growing divergence on the pathway to recovery at both the country and industry level.

In this report, we present an updated COVID-19 traffic recovery forecast based on the factors underlying our latest views on the air travel outlook.

But first, how did our original recovery forecast compare to reality in 2020?

Asia-Pacific outpaced expectations

Our 2020 forecast proved quite accurate, although we underestimated the Asia-Pacific region's resilience—driven by the much faster-than-expected recovery of the Chinese domestic market. By the end of 2020, while the rest of the world struggled to contain new waves of COVID-19, China's domestic market had already returned to pre-pandemic demand levels.



Economic resiliency and technology lessened damage from COVID-19

Despite widespread lockdowns and travel restrictions, global gross domestic product (GDP) growth in 2020 fared much better than economists had expected, contracting "only" 3.5% according to the International Monetary Fund (IMF)—0.9% better than originally forecast, thanks to a strong second-half performance.

Unemployment in advanced economies also came in less than expected.

The global economic outlook for the near future improved—all due largely to generous government aid, particularly in the U.S. and Western Europe. But, the economic resilience coincides with the enabling power of technology: widely available and affordable high-speed internet and digital solutions for everything from shopping to workforce productivity. A decade or two ago, a similar pandemic would have crippled the global economy, but the saying "this time is different" came true in 2020.





Ceased operations (Select airlines)









Restructuring























That said, airlines had to work very hard to survive 2020 and position themselves for an eventual recovery.

Airline efforts centered around three areas:



Raising liquidity and cutting costs.

Leverage skyrocketed as airline debt backed by tangible and intangible assets rose, from aircraft and spare parts to slots and loyalty programs. Debt at the top 50 airlines increased \$60 billion last year, according to FactSet. Airlines also aggressively renegotiated contracts and trimmed fixed costs.



2. Downsizing and refocusing.

Airlines have accelerated the retirement of older aircraft types and larger widebody aircraft in anticipation of a slow recovery in long-haul travel. Up to 2,000 aircraft may be permanently removed from service, either by retirement or parking-about 7% of the global fleet before the pandemic.



3. Seeking partnerships and mergers.

Unlikely partnerships have emerged, such as Azul and LATAM Airlines Group or American and jetBlue. Meanwhile, Korean Air acquired rival Asiana to rationalize networks in the face of reduced demand.



So, what do we expect to happen next?

COVID-19 vaccine development will buoy the economy

As we look towards 2021 and beyond, favorable macroeconomic tailwinds-combined with successful vaccine development-position the global economy for a stronger rebound than expected this time last year.

Global growth is now forecast at 6.1% in 2021, revised upward from 5.3% in December. Pent-up consumer demand should further boost air travel.

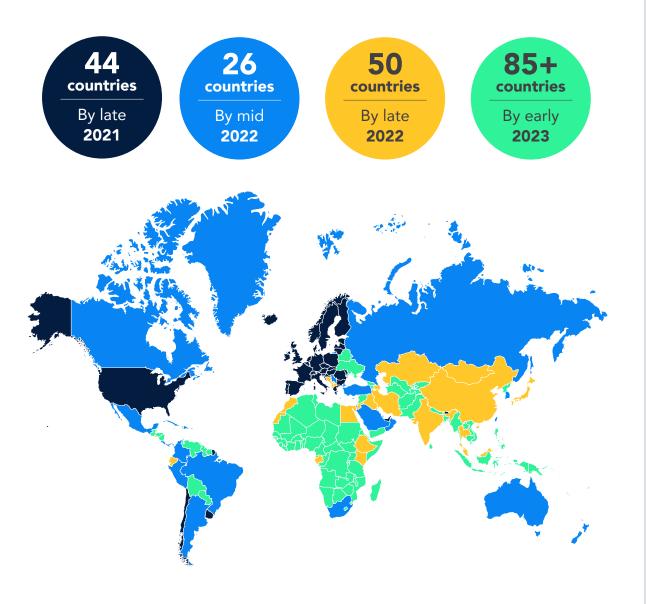
Still, air travel headwinds loom—namely uneven global vaccine distribution, new waves of lockdowns, and uncertainty over how governments will reopen borders while mitigating the risk of spreading COVID-19. The challenges in developing harmonized air travel security procedures after 9/11 pale in comparison to harmonizing global biosecurity protocols.

Air travel recovery tailwinds and headwinds

Vaccines	Tailwinds	Headwinds	
	13 approved or authorized80+ candidates in development	Production rateEfficacy to new variants	
Government support	Trillions of dollars in direct and indirect aid, incl. \$5 trillion in the U.S. \$2 trillion in EU	 Sustained fiscal support Vaccine distribution Health passports Harmonized travel rules 	
Consumer behavior	Significant pent-up demandConsumer confidence or "animal spirits"	"Zoomification" impactReduced corporate travel budgetsEnvironmental focus	



Widespread COVID-19 vaccination coverage





Air travel will return to pre-pandemic rates

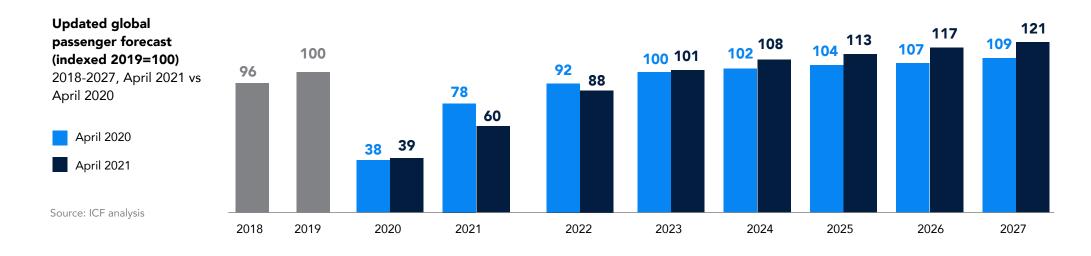
We forecast global air travel to return to prepandemic levels in 2023 (3 years 10 months), marginally better than our April 2020 forecast (4 years 1 month).

We also expect 2021 to be a more challenging year for the industry due to an uneven global recovery. But, continued support for airlines from governments, lessors, and lenders will see the industry through the year.

We're also more optimistic about the longer term. Our experts revised our forecast upward through 2027 based on the view that air traffic growth will return to pre-pandemic rates, particularly since the pandemic impacted airlines and fleets less than initially feared. We now forecast 2019-2027 global passenger demand to grow at 2.4% per year, compared to only 1.1% per year in our April 2020 forecast. Over the 2010-2019 period, global passenger demand grew 5.9% per year.

Source: Economist Intelligence Unit, April 22, 2021



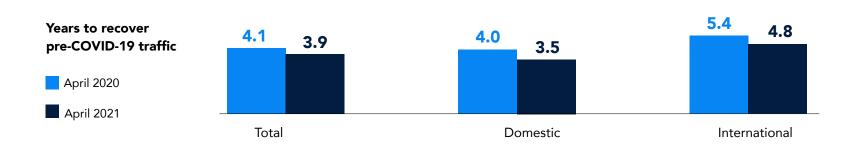


While our latest global years-to-recovery predictions are similar to last year's forecast, the disparity in vaccination rates and in governments' capacity to stimulate the economy contribute to **greater divergence in recovery** by travel segment and world region. Whereas we forecast domestic travel to recover globally in the first half of 2023, international will not recover until late 2024.

Led by China, travel in Asia-Pacific will recover in 2023

Looking at recovery by world region, we expect Asia-Pacific to recover in 2023–faster than other regions and in-line with North America. But we see two contrasting pictures: China should reach aggregate 2019 passenger levels in 2022, albeit with traffic redirected to domestic markets, whereas the rest of the region will not recover until late 2023 due to lagging vaccination. Also, the region will strongly depend on Chinese tourists.

"Greater divergence in recovery by travel segment and world region."







Recovery timing will vary by region, with North America and Asia/Pacific expected to recover first

ICF COVID-19 regional recovery forecast

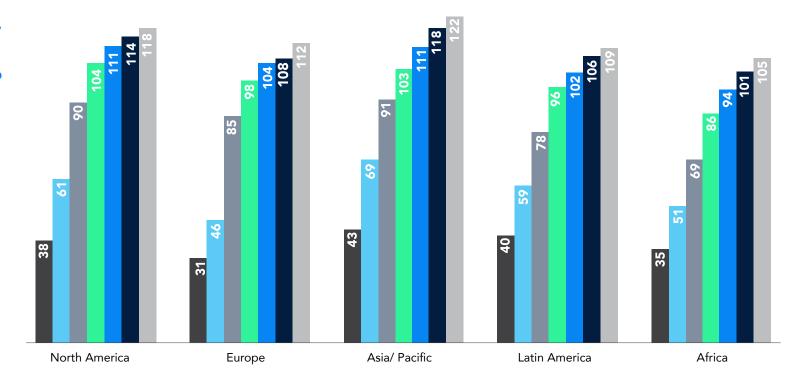
Total air passengers, indexed: 2019 = 100 Note: Mexico is included in Latin America





2026

Source: ICF analysis



ICF COVID-19 years to recover

(2020 = Year 1)

Note: Mexico is included

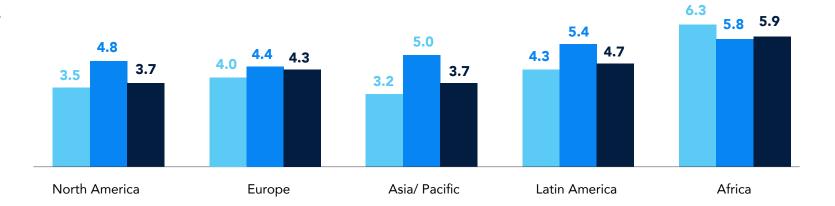
in Latin America

Domestic

International

Total

Source: ICF analysis





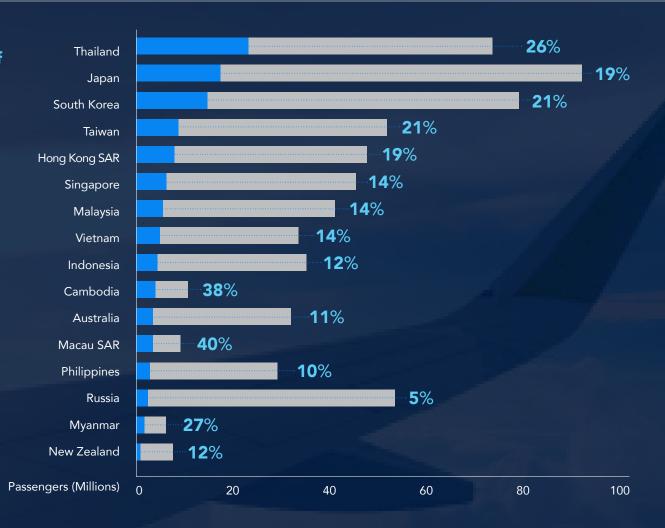
Mainland China traffic as a share (%) of total international passengers for main Far East/Australasia markets, 2019

Note: Australia and New Zealand exclude Trans-Tasman traffic.

Mainland China

Total international passengers

Source: IATA PaxIS, ICF Analysis



In North America, the U.S. will push the region to reach pre-pandemic air traffic by 2023

Largely driven by the U.S., we expect North America to reach pre-pandemic traffic by 2023. Unprecedented fiscal stimulus and a rapidly accelerating vaccination program should drive a recovery, led by domestic leisure and visiting friends or relatives. On the supply side, despite

large aircraft retirements, confirmed purchase and lease commitments as of early 2021 suggest U.S. airlines will have capacity to meet demand—with low-cost carriers (LCCs) and new entrants (e.g., Breeze, Avelo) picking up the slack from full service network carriers.



U.S. airline estimated fleet by end 2022	Active fleet, end of 2020	Change vs. 2019	Current purchase commitments, 2021-2022	Estimated fleet, end 2022	Change vs. 2019
Delta	1,090	-250	73	1,163	-13%
American	1,399	-148	80	1,479	-4%
United	1,287	-71	76	1,363	0%
Southwest	718	-29	25	743	-1%
jetBlue	267	8	26	293	13%
Alaska	291	-41	34	325	-2%
Spirit	157	12	25	182	26%
Frontier	104	6	27	131	+34%
Total	5,313	-513	366	5,679	-3%
Delta, American, United	3,776	-469	229	4,005	-6%
LCC/Hybrid	1,537	-44	137	1,674	6%

Note: Estimated fleet in 2022 does not account for retirements.

Source: Annual reports, FY2019 and FY2020

Europe and Latin
America will steadily
improve, while; Africa
will lag in vaccine
distribution and
governmental
intervention

Our views on recovery in Europe and Latin America are brighter than in April 2020. The return to pre-pandemic demand is expected to occur one year earlier than previously thought.

In the case of Europe, our improved outlook rests on a better-than-expected economic forecast, successful vaccine roll-out in the U.K., and the capacity for ultra-low-cost carriers to ramp up quickly after COVID-19 has receded.

In Latin America, our more optimistic view depends on the resilience of large domestic markets like Brazil and Mexico. Air travel in these countries has held up better than expected throughout the pandemic, meaning they should be first to recover once the pandemic passes. Once the pandemic passes (note: although the second wave of COVID-19 cases in Brazil since March 2021 has set back traffic, a reminder of how fragile the recovery can be.) Our experts do have concerns over the region's uncertain political and economic outlook, which could push back the recovery.

Our forecast for Africa remains unchanged, unfortunately. A bleak COVID-19 vaccination outlook and lack of government resources to stimulate their economies relegates the region to last in terms of demand recovery.



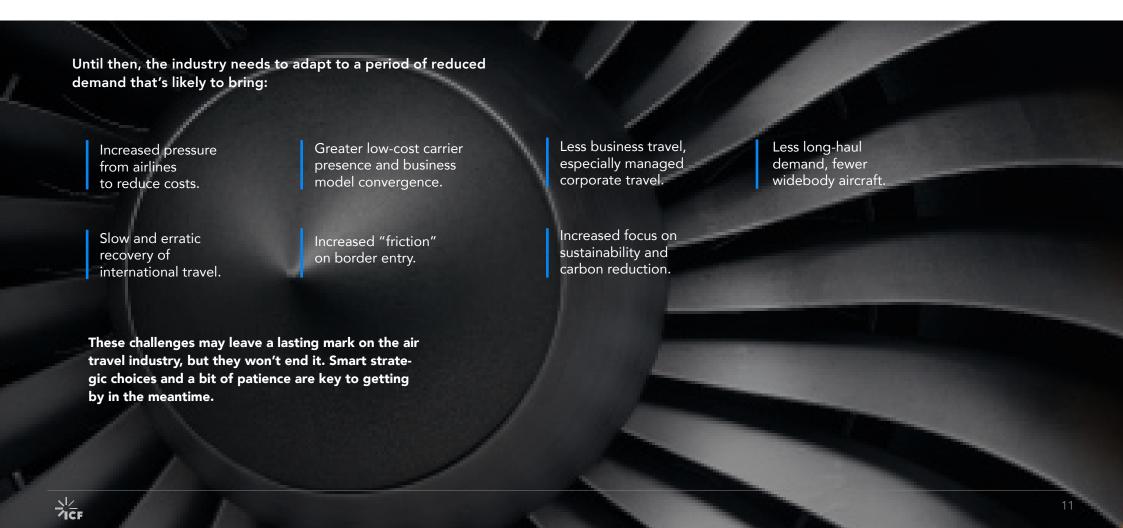
The near future remains challenging

Despite a slightly improved air travel outlook, the commercial airline industry, its suppliers, and the broader travel and hospitality value chain face serious obstacles ahead. Air travel can't fully recover until COVID-19 is behind us and governments can eliminate sanitary restrictions on international travel.

There's no doubt that people want to travel. Technology helps, but is not a substitute for face-to-face human interaction and memorable experiences.

So, passenger demand will return and eventually surpass pre-pandemic levels—recovering its long-term relationship to GDP.





For more information, contact:

Carlos Ozores

Vice President, Aviation Carlos.Ozores@icf.com

Rob Walker

Principal, Aviation Rob.Walker@icf.com

▼ twitter.com/ICF

Sean Lee

Senior Aviation Consultant Sean.Lee@icf.com

Benjamin Pavie

Senior Aviation Consultant Benjamin.Pavie@icf.com

in linkedir

in linkedin.com/company/icf-international

f facebook.com/ThisIsICF

#thisisicf

icf.com

About ICF

ICF (NASDAQ:ICFI) is a global consulting services company with over 7,000 full- and part-time employees, but we are not your typical consultants. At ICF, business analysts and policy specialists work together with digital strategists, data scientists and creatives. We combine unmatched industry expertise with cutting-edge engagement capabilities to help organizations solve their most complex challenges. Since 1969, public and private sector clients have worked with ICF to navigate change and shape the future. Learn more at icf.com.