



Economic Performance of the Airline Industry

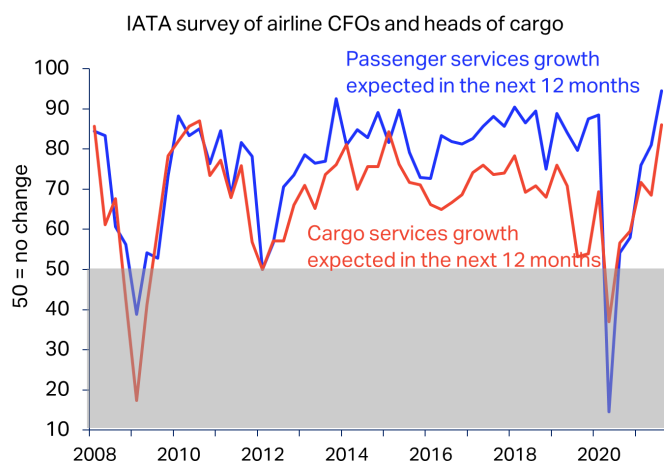
This semi-annual report takes a broad look at how the airline industry is adding value for its consumers, the wider economy and governments, as well as for its investors.

Key Points

- Airline industry is recovering gradually from COVID-19 but RPKs are still estimated to be only 40% of pre-crisis levels in 2021.
- Air cargo has recovered above 2019 levels and is expected to be strong in 2022 with the support of strong global trade.
- Vaccines will allow some governments to relax restrictions and support global travel to reach 61% of 2019 levels in 2022.
- The industry is forecast to make net losses of \$52 billion this year, cutting these losses to \$12 billion in 2022.
- Airlines are forecast to cut costs by 31% in 2021 vs 2019. As the traffic recovery continues airlines will face cost pressures.
- Airlines continued to receive life support from their governments, totaling \$243 billion since the beginning of the pandemic.
- Airline financial performance is expected to recover in all regions in 2022. North America is expected to turn to profitability in 2022.

Consumers

Following the worst year on record for the aviation industry (66% decline in global RPKs), the recovery in traffic has been slow in 2021 due to international travel restrictions. However, consumer confidence rebounded following the lockdown period last year and accumulated income of consumers supported domestic travel recovery. Global RPKs are estimated to improve by 18% in 2021, reaching 40% of pre-crisis levels. In 2022, the pace of vaccine rollout and government policies will determine the course of international traffic while domestic travel will remain strong. Global RPKs are forecast to improve by 51% in 2022 reaching 61% of pre-crisis levels. Although rising costs will put pressure on airline financials, real travel costs will be lower than pre-crisis as airlines will target to stimulate demand in re-opening markets. World trade is expected to remain strong in 2022, which will support air cargo volumes.



Source: IATA, WTO, Oxford Economics

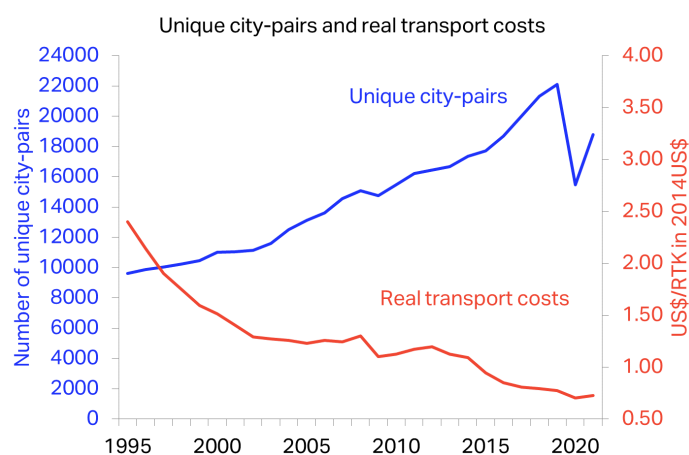
Worldwide Airline Industry	2019	2020	2021E	2022F
Spend on air transport*, \$billion	876	384	487	658
% change over year	3.6%	-56.1%	26.5%	35.2%
% global GDP	1.0%	0.4%	0.5%	0.6%
Return fare, \$/pax. (2018\$)	310	242	214	228
Compared to 1998	-62%	-70%	-74%	-72%
Freight rate, \$/kg (2018\$)	1.79	2.71	3.00	2.67
Compared to 1998	-65%	-47%	-41%	-48%
Passenger departures, million	4,543	1,807	2,277	3,432
% change over year	3.8%	-60.2%	26.0%	50.7%
RPKs, billion	8688	2965	3498	5283
% change over year	4.1%	-65.9%	18.0%	51.0%
CTKs, billion	254	232	274	288
% change over year	-3.2%	-8.7%	18.2%	4.9%
World GDP growth, %	2.4%	-3.6%	5.8%	4.1%
World trade growth, %	0.3%	-5.1%	9.5%	5.6%

Industry expectations for both air passenger travel and cargo demand are optimistic based on the latest business confidence surveys. Cargo volumes, which are already above pre-crisis levels, are expected to increase further on the back of capacity improvements as passenger capacity picks up. However, there are still concerns about new COVID waves and uncertainties regarding vaccine progress in some markets.

Wider Economy

Air transport is key to global economic development. This wider economic benefit is underpinned by both the direct connections between cities - enabling the flow of goods, people, capital, technology and ideas - and falling air transport costs.

COVID-19 has caused a significant loss in air connectivity. As a result of travel restrictions, unique city-pairs declined for the first time since the global financial crisis. In 2020, the number of unique city-pairs was reduced by 30%. In 2021, unique city-pair connectivity is expected to partly recover as airlines expand their networks with the easing of travel restrictions in some regions. However, it will be 15% below 2019 levels.



Government

Governments across the world have continued to support airlines as the impact of the COVID-19 shock has been deeper and longer than expected. This support prevented widespread airline failures in 2021, as was the case in 2020.

Support from governments has taken a variety of forms, including capital injections, loans, deferring the payment of taxes and reducing tax liabilities. Some governments also continued their wage subsidies (\$81bn) to preserve jobs. Loans and loan guarantees have also provided support, \$73 bn and \$26 bn, respectively. As of the end of September, government aid totaled \$243bn.

However, government aid has been unevenly distributed across regions. While airlines in the US, Europe and parts of Asia have generally received substantial government support, the support for airlines in Latin America and Africa was limited.

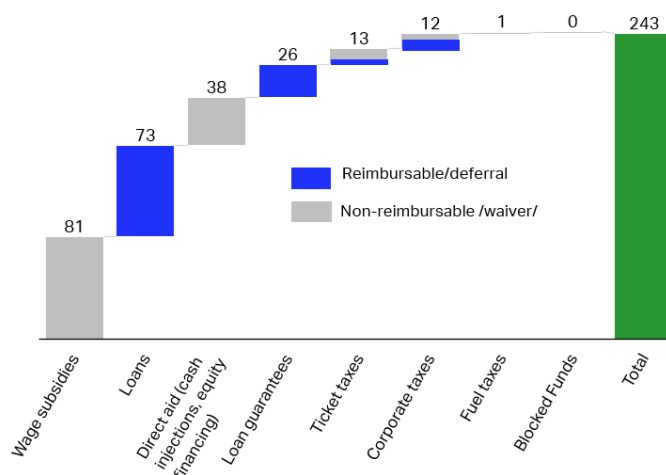
The initial objective of government aid was to provide temporary relief to airlines until travel demand returned. However, the industry remains exposed to the resurgence of the pandemic and financial support from governments remains still critical for survival for some airlines.

Worldwide Airline Industry	2019	2020	2021E	2022F
Unique city pairs	22104	15473	18788	
Compared to 1998	116%	51%	83%	
Transport cost, US\$/RTK (2018\$)	77.6	70.5	72.8	75.5
Compared to 1998	-56%	-60%	-58%	-57%
Value of trade carried, \$billion	6,489	5,964	7,467	8,007
% change over year	-2.6%	-8.1%	25.2%	7.2%
Value of tourism spend, \$billion	850	310	354	626
% change over year	6.5%	-63.5%	14.2%	76.8%

Note: RTK = Revenue Tonne Kilometers. The total number of 'routes' or airport pairs is much higher due to multiple airports in some cities and connections are counted both ways.

Air transport is vital for international trade in manufactured goods, particularly for the components industry that accounts for a major part of cross border trade today. We forecast that the value of international trade shipped by air this year will be \$7.5 trillion, 15% higher compared to 2019, and it will rise by a further 7.2% in 2022. Tourists travelling by air in 2021 are forecast to spend \$354 billion, 42% of the amount spent before the crisis. Next year, tourists travelling by air are forecast to spend \$626 billion, 74% of the level before the crisis.

Financial aid made available to airlines due to COVID-19, by type (USD bn)



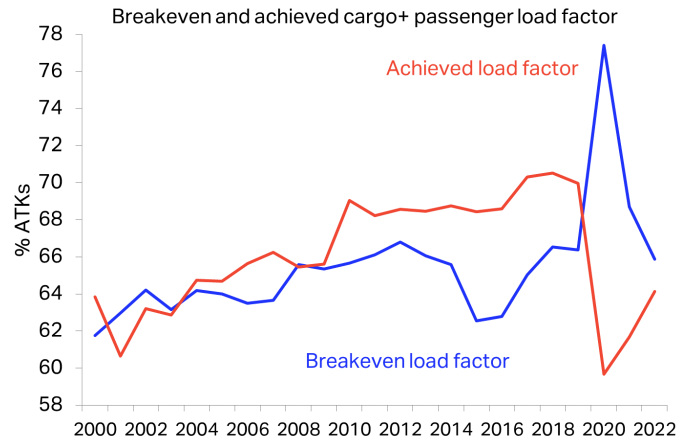
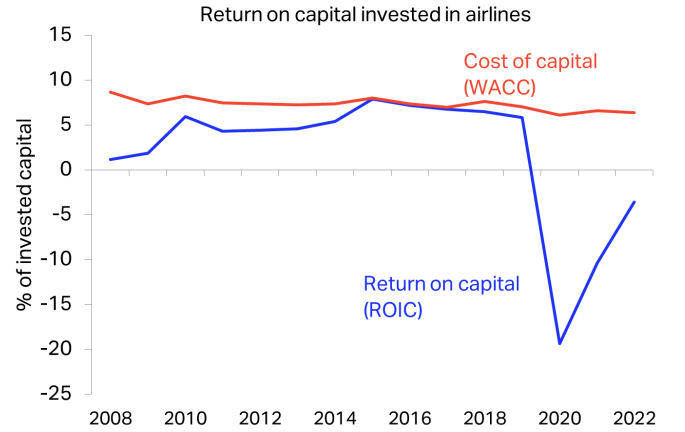
Sources: IATA, ATAG, Oxford Economics, ICAO, UNWTO, WTO, public information and data from SRS Analyser, DDS, FlightRadAR 24, TTBS, ACIC, Platts, Airline Analyst, annual reports. In the gov. aid chart.

Capital Providers

Historically, debt providers to the airline industry have been rewarded for their capital, usually invested with the security of a very mobile aircraft asset to back it. On average during previous business cycles, the airline industry has been able to generate enough revenue to pay its suppliers' bills and service its debt.

On the other hand, even prior to the COVID-19 crisis, equity owners had not been rewarded adequately for risking their capital in all regions. In normal times, investors should expect to earn at least the return generated by assets of a similar risk profile; the weighted average cost of capital (WACC). Such has been the intensity of competition, and the challenges to doing business, that average airline returns have rarely been as high as the industry's cost of capital. That said, for North America and Europe in the four years prior to the pandemic, equity investors have received a return above the cost of capital. On the other hand, airlines in the Asia Pacific and Latin America have consistently generated below-WACC returns. The highly competitive nature of the market in Asia Pacific has prevented airlines from fully reflecting the increase in costs resulting in narrower operating margins.

The situation has changed considerably with the COVID-19 crisis during the last two years. The unprecedented decline in air passenger traffic had a severe impact in all regions. We forecast the industry to generate an overall negative ROIC (-10.4%) in 2021. North America and Asia-Pacific are expected to perform better in 2021. Looking forward, we expect airline operating margins to gradually improve in 2022 (-2.7%). Nevertheless, airlines will continue to face difficulty in matching their costs with lower revenues. We expect to see a moderate improvement in ROIC stemming from the gradual recovery in demand conditions, but it is still expected to remain in negative territory in 2022.

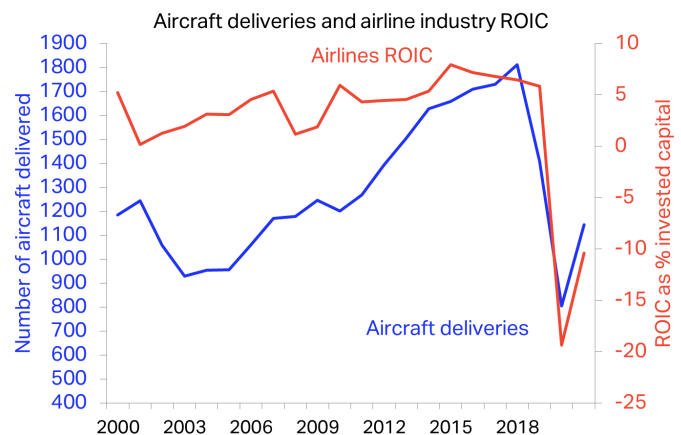


Worldwide Airline Industry	2019	2020	2021E
Industry ROIC, % invested capital	5.8%	-19.3%	-10.4%
North America	9.9%	-15.0%	-3.8%
Europe	7.0%	-17.4%	-12.2%
Asia Pacific	3.5%	-11.3%	-6.9%
Latin America	3.9%	-44.2%	-31.0%
EBIT margin, % revenue	5.2%	-29.7%	-11.4%
Net post-tax profits, \$billion	26.4	-137.7	-51.8
% revenues	3.1%	-37.0%	-11.0%
\$ per passenger	5.8	-76.2	-22.7

Note: ROIC = Return on Invested Capital, EBIT = Earnings Before Interest and Tax. Debt adjusted for operating leases. **Current year or forward-looking industry financial assessments should not be taken as reflecting the performance of individual airlines, which can differ significantly.**

Aircraft

In 2020, commercial airlines took delivery of 805 new aircraft, which was approximately half of the number originally planned at the beginning of the year. For 2021, airlines are estimated to take delivery of 1143 new aircraft. In 2022, airlines are scheduled to receive 1622 aircraft, which is above the 2019 figure. However, as the industry faces a challenging outlook, we expect that airlines will consider further cancellations or postponements. The investment appetite for new aircraft is likely to remain subdued as the global demand for air travel (RPKs) is not expected to recover to pre-crisis levels before 2024.



Sources for charts on this page: IATA, ICAO, McKinsey, Ascend.

Labour

We estimate that total employment by airlines declined to 2.48 million in 2020 and stayed stable in 2021. The fall in employment is less than had been forecast in November 2020, which is due to government relief measures. Overall, labour cost is 18% lower than 2019 levels. Employment in the airline industry is expected to increase by 10.8% in 2022.

Worldwide Airline Industry	2019	2020	2021F
Labour costs, \$ billion	189	155	156
% change over year	3.5%	-18.1%	1.0%
Employment, million	2.93	2.48	2.48
% change over year	0.3%	-15.6%	0.0%
Unit labour cost, \$/ATK	0.123	0.180	0.159
% change over year	0.4%	46.7%	-11.6%

Note: ATK = Available Tonne Kilometers,. Sources: IATA, ICAO, ATAG, Oxford

Fuel

This year, we forecast that the industry fuel bill will increase by 28% compared with 2020 to reach \$100 billion, which will represent 19% of average operating costs (compared with 23% in the pre-crisis period). The expected rise in fuel consumption reflects the air traffic recovery, notably in domestic markets, and also a sharp rise in jet fuel prices (+60% vs. 2020).

In 2022, we forecast the industry's fuel bill to rise further to \$132 bn (+32% vs. 2021) as the air travel rebound also spreads into international markets. The jet fuel crack spread, which turned briefly negative during 2020, should widen with rising air travel demand but it will remain lower than in the pre-pandemic period. We base our 2022 fuel consumption forecast on \$67/bbl for the Brent crude oil price and an average jet fuel price of \$77.8/bbl.

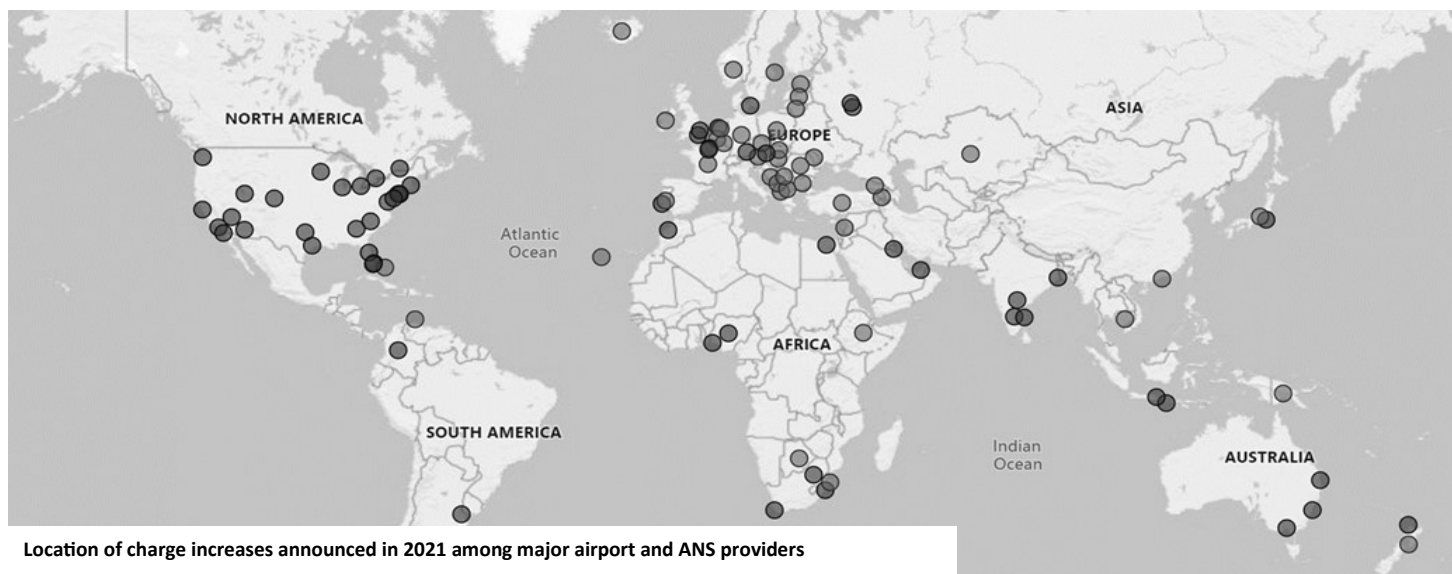
Worldwide Airline Industry	2019	2020	2021E	2022F
Fuel spend, \$billion	186	78	100	132
% change over year	4.7%	-58.1%	28.2%	31.7%
% operating costs	23.5%	16.2%	19.0%	19.5%
Fuel use, billion litres	359	196	217	266
% change over year	1.0%	-45.3%	10.5%	22.7%
Fuel price, \$/barrel	77.0	46.6	74.5	77.8
% change over year	-10.6%	-39.5%	59.9%	4.4%
% spread over oil price	18.5%	7.1%	7.1%	16.1%

Infrastructure

Infrastructure partners play an important role in the service that airlines provide to their customers, affecting the experience, the timeliness of the journey, as well as its cost.

Overall, the cost of using airport and ANSP infrastructure has risen steeply over past decades, partly because competitive pressures are very weak in this part of the supply chain. This sits in contrast with the relatively limited rise in non-fuel airline costs.

Infrastructure cost pressures are in danger of increasing once more during the industry recovery from COVID-19 at a time when all partners in the aviation supply chain must control costs. As seen in the map below, already close to 100 major infrastructure providers have announced increases in 2021 with several others under discussion at time of writing. Increases range from 3-86% and will create a further headwind to recovery in the provision of cost-efficient connectivity for air transport users.



Location of charge increases announced in 2021 among major airport and ANS providers

Regions

The airline industry is facing an uneven recovery from the pandemic. Regions with large domestic markets, faster vaccination rollout and less restrictive government policy will continue to recover faster than the other parts of the world. Financial performance in all regions is expected to improve in 2022 compared to 2021. However, at the aggregated level, net losses will extend to 2022 but will be only around one fifth of losses in 2021.

Airlines in North America, the strongest performers in the pre-crisis period, are forecast to return to profitability in 2022 ahead of the other regions. The fast recovering large U.S. domestic market will continue to be supportive in 2022. In addition, the pick-up in regional traffic (North America to Latin America) and the re-opening of North Atlantic travel will be supportive. In 2022, net profit is forecast to be \$9.9 billion.

The recovery of intra-European market is expected to gain pace but airlines in the region are dependent on medium/long haul international traffic. Hence net losses are estimated to be \$20.9 billion for the region in 2021. However, net losses are forecast to narrow to \$9.2 billion next year.

Asia-Pacific airlines have been impacted by strict government behavior as restrictions remain very tight and vaccination rollout is diverse and slower compared to Europe and North America, especially in emerging countries in Asia-Pacific. On the other hand, China's domestic market is strong and airlines in the country have started to achieve cash breakeven. In addition, the region's role as a manufacturing hub benefits local airlines' cargo revenues. Overall, net losses in 2022 are forecast to decline to \$2.4 billion from \$11.2 billion.

Middle Eastern airlines' dependence on connecting international flights and the lack of large domestic markets delays the recovery in the region. Middle Eastern airlines are expected to accumulate losses of \$6.8 billion and \$4.6 billion in 2021 and 2022, respectively.

In Latin America, interregional traffic is recovering quickly but improvement in financial performance is slow as some airlines in the region are in the restructuring process. The region is expected to post a \$3.7 billion net loss in 2022.

Africa is lagging other regions in its vaccine rollout, which will impact international travel recovery. Airlines in the region are expected to post a \$1.5 billion net loss in 2022 on top of a \$1.9 billion loss in 2021.

4th October 2021

Worldwide Airline Industry	2019	2020	2021E	2022F
Africa				
Net post-tax profit, \$billion	-0.3	-2.2	-1.9	-1.5
Per passenger, \$	-2.7	-44.6	-31.6	-21.8
% revenue	-1.8%	-34.6%	-24.5%	-18.0%
RPK growth, %	4.7%	-69.3%	8.6%	26.9%
ASK growth, %	4.5%	-62.3%	13.4%	6.1%
Load factor, % ATK	56.2%	49.7%	51.1%	58.1%
Breakeven load factor, % ATK	55.6%	60.5%	57.5%	63.8%
Asia-Pacific				
Net post-tax profit, \$billion	4.9	-45.6	-11.2	-2.4
Per passenger, \$	2.9	-51.4	-12.3	-2.0
% revenue	1.9%	-40.4%	-10.4%	-1.6%
RPK growth, %	4.7%	-62.0%	-10.0%	53.9%
ASK growth, %	4.4%	-54.1%	-6.2%	39.0%
Load factor, % ATK	72.3%	65.2%	66.2%	66.9%
Breakeven load factor, % ATK	68.9%	83.4%	74.7%	72.3%
Middle East				
Net post-tax profit, \$billion	-1.5	-8.5	-6.8	-4.6
Per passenger, \$	-6.8	-78.0	-55.9	-29.2
% revenue	-2.7%	-30.8%	-21.3%	-10.8%
RPK growth, %	2.3%	-72.1%	-8.7%	77.7%
ASK growth, %	0.1%	-63.2%	12.1%	34.7%
Load factor, % ATK	64.3%	55.0%	52.9%	56.8%
Breakeven load factor, % ATK	67.7%	66.4%	62.5%	62.3%
Latin America				
Net post-tax profit, \$billion	-0.7	-11.9	-5.6	-3.7
Per passenger, \$	-2.2	-89.3	-34.5	-16.8
% revenue	-1.8%	-80.0%	-28.5%	-13.3%
RPK growth, %	4.2%	-62.1%	27.1%	46.7%
ASK growth, %	3.0%	-58.3%	27.4%	35.8%
Load factor, % ATK	69.2%	62.6%	63.1%	69.8%
Breakeven load factor, % ATK	67.2%	84.1%	74.6%	76.5%
North America				
Net post-tax profit, \$billion	17.4	-35.1	-5.5	9.9
Per passenger, \$	17.0	-66.4	-7.3	10.6
% revenue	6.6%	-26.8%	-2.7%	3.7%
RPK growth, %	4.0%	-65.2%	72.4%	35.3%
ASK growth, %	2.9%	-50.2%	37.9%	23.6%
Load factor, % ATK	65.8%	52.2%	59.3%	64.0%
Breakeven load factor, % ATK	59.5%	68.8%	62.3%	60.9%
Europe				
Net post-tax profit, \$billion	6.5	-34.5	-20.9	-9.2
Per passenger, \$	5.42	-66.54	-33.39	-10.50
% revenue	3.1%	-43.0%	-20.3%	-5.9%
RPK growth, %	4.2%	-69.8%	18.2%	66.0%
ASK growth, %	3.5%	-62.4%	20.7%	46.4%
Load factor, % ATK	74.9%	64.0%	64.4%	68.9%
Breakeven load factor, % ATK	71.3%	84.3%	75.6%	72.9%

Note: RPK = Revenue Passenger Kilometers, ASK = Available Seat Kilometers, ATK = Available Tonne Kilometers. **Current year or forward-looking industry financial assessments should not be taken as reflecting the performance of individual airlines, which can differ significantly.** Sources: ICAO, IATA.

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