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

- Global GDP growth is expected to improve moderately next year with the support of accommodative monetary and fiscal policies.
- World trade has deteriorated this year, damaging air cargo but slowdown will bottom out .
- Cost pressures have been lower on the back of muted fuel prices but balancing slow revenue growth will be a challenge.
- Regional differences in profitability remain significant in 2020 and are reflected in the variation of ROIC across regions.
- N American airlines perform best with a 6.0% net post-tax profit margin in 2020. Middle East will be the weakest with a 1.7% loss.
- Employment growth remains strong and jobs in the industry should reach 3.0 million with GVA per employee being over $102,900.
- Consumers benefit from lower real travel costs, more routes, and will spend 1% of world GDP on air transport in 2020.
- Economic development is stimulated by the doubling of city pairs and halving of air transport costs over the past 20 years.
- Governments benefit from $136 billion of tax in 2020 and from over 72 million 'supply chain' jobs.

Consumers

Consumers will see a substantial increase in the value they derive from air transport in 2020 including stability in what they pay airlines, after allowing for inflation. The average return fare (before surcharges and tax) of $293 in 2020 is forecast to be 64% lower than in 1998, after adjusting for inflation. The number of new destinations is forecast to rise further this year, with trip frequencies up too; both boosting consumer benefits. We expect 1% of world GDP to be spent on air transport in 2020, totaling $908 billion. RPK growth is forecast to remain stable close to the average of this year in 2020 on the back of moderate global economic backdrop. On the other hand, world trade is expected to rebound in 2020 following a weak year. This should support a small rebound in air cargo volumes.

Source: IATA Economics

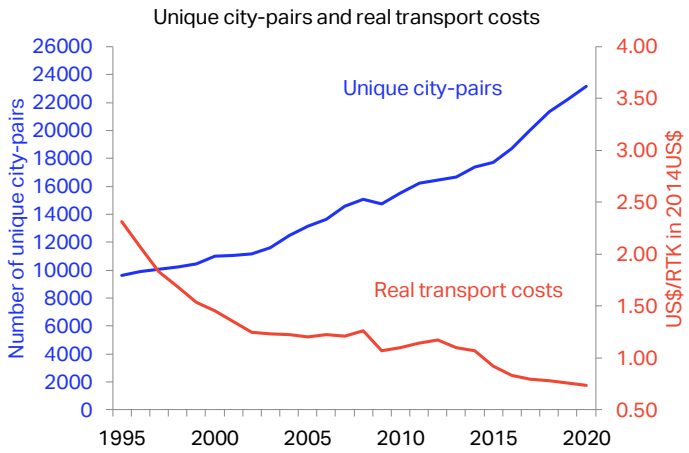
Worldwide airline Industry	2018	2019E	2020F
Spend on air transport*, $billion	845	873	908
% change over year	7.5%	3.3%	4.0%
% global GDP	1.0%	1.0%	1.0%
Return fare, $/pax. (2018$)	327	307	293
Compared to 1998	-60%	-62%	-64%
Freight rate, $/kg (2018$)	1.92	1.77	1.66
Compared to 1998	-61%	-64%	-66%
Passenger departures, million	4,378	4,540	4,723
% change over year	6.9%	3.7%	4.0%
RPKs, billion	8330	8680	9038
% change over year	7.4%	4.2%	4.1%
FTKs, million	262	254	259
% change over year	3.4%	-3.3%	2.0%
World GDP growth, %	3.1%	2.5%	2.7%
World trade growth, %	3.7%	0.9%	3.3%

Note: RPK = Revenue Passenger Km, FTK = Freight & mail Tonne Km
GVA = Gross Valued Added (firm-level GDP). *Airline revenue + indirect taxes.
Sources : IATA, ICAO, OE, CPB, PaxIS, CargoIS

Airline CFOs and heads of cargo reported in October that they were positive about future growth in air travel but less positive about cargo due to the slow-down in world trade as a result of trade disputes. There are increasing concerns about global economic prospects amongst business worldwide. However, central banks have reacted to the slowdown with monetary policy easing and governments have used fiscal policy to stimulate domestic demand, limiting the risk of recession.

Wider Economy

Economic development worldwide is getting a significant boost from air transport. This wider economic benefit is being generated by increasing connections between cities - enabling the flow of goods, people, capital, technology and ideas - and falling air transport costs. The number of unique city-pair connections will exceed 23,000 in 2020, more than double the connectivity by air twenty years ago. The price of air transport for users continues to fall, after adjusting for inflation. Compared to twenty years ago real transport costs have more than halved.



Lower air transport costs and improving connectivity have boosted trade flows; trade itself has resulted from globalizing supply chains and associated investment.

Worldwide airline Industry	2018	2019E	2020F
Unique city pairs	21332	22228	23162
Compared to 1998	108%	117%	126%
Transport cost, US$/RTK (2018$)	77.8	76.0	74.0
Compared to 1998	-54%	-55%	-56%
Value of trade carried, $billion	6,754	6,734	7,079
% change over year	11.7%	-0.3%	5.1%
Value of tourism spend, $billion	843	902	968
% change over year	10.3%	7.0%	7.3%
Supply chain jobs, million	68.7	70.4	72.0
% change over year	2.4%	2.4%	2.3%
Supply chain GVA, $ trillion	3.0	3.1	3.3
% change over year	5.2%	5.0%	4.7%

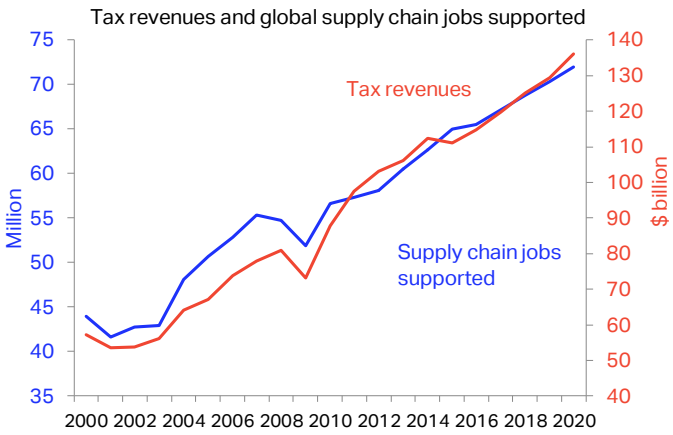
Note: RTK = Revenue Tonne Kilometers, GVA = Gross Value Added. The total number of 'routes' or airport pairs is much higher because of multiple airports in some cities and connections are counted both ways. City-pairs: jets + turboprops larger than 19 seats, at least 1 flight a week from SRS Analyser. Supply chain jobs and GVA from ATAG ABBB 2018 report appendix.

Air transport is vital for manufactures' trade, particularly trade in components which is a major part of cross border trade today. We forecast that the value of international trade shipped by air next year will be $7.1 trillion. Tourists travelling by air in 2020 are forecast to spend $968 billion.

Another impact on the wider economy comes through the influence that increased airline activity has on jobs in the sector, in its supply chain, and the jobs generated as spending ripples through the economy. These 'supply chain' jobs around the world are estimated to rise to 72 million in 2020, more than the population of the 20th most populous country in the world.

Government

Governments have also gained from the good performance of the airline industry. Airlines and their customers are forecast to generate $136 billion in tax revenues next year. That's the equivalent of 45% of the industry's GVA (Gross Value Added, which is the firm-level equivalent to GDP). In addition the industry continues to create high value added jobs.



Worldwide airline Industry	2018	2019E	2020F
Tax revenues, $billion	125	129	136
% change over year	4.5%	3.5%	5.2%
% GVA	44.9%	45.3%	44.9%
Number of ticket taxes	237	241	
% of countries requiring full visas	53		

Note: GVA = Gross Value Added (firm-level GDP). Source: IATA, OE.

But in many countries the value that aviation generates is not well understood. The commercial activities of the industry remain highly constrained by bilateral and other regulations. Moreover, regulation is far from 'smart', leading to unnecessarily high costs. Visa requirements discourage inbound tourism and business travel. Encouragingly, visa openness levels are improving. But the number of individual ticket taxes has risen to 241, while the level of many existing taxes continues to ratchet upwards.

Sources: IATA, ATAG, Oxford Economics, ICAO, SRS Analyser, UNWTO, WTO.

Capital Providers

Debt providers to the airline industry are well 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.

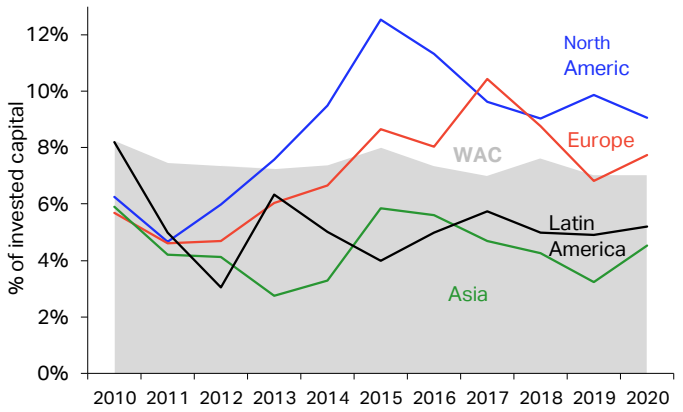
In recent years, equity owners have been rewarded adequately for risking their capital in some regions but not all of them. Investors should expect to earn at least the normal return generated by assets of a similar risk profile; the weighted average cost of capital (WACC). Such has been the intensity of competition, and the challenges to doing business, that average airline returns are rarely as high as the industry's cost of capital. Equity investors had typically seen their capital shrank until 2015. This has changed in North America and Europe. In North America, structural improvements combined with low fuel prices boosted return on invested capital (ROIC) above the industry's cost of capital, creating value for investors. In Europe, although rising competition put pressure on yields, airlines overall created value for its investors by managing their costs effectively and focusing on ancillaries as an additional source of revenue. On the other hand, airlines in Asia-Pacific and Latin America have consistently generated below-WACC returns. Highly competitive nature of many markets in Asia-Pacific has prevented airlines from fully reflecting the increase in costs, resulting in narrower operating margins. In addition, unexpected currency fluctuations have adversely impacted airlines both in Asia Pacific and Latin America resulting in lower returns for investors.

This year, we estimate the industry's ROIC falling to 5.8%, driven by a combination of weaker growth and deteriorating supply-demand conditions in some markets. However, in 2020 we expect to see moderate improvement on the back of better economic growth and supportive fuel prices on the cost side, moderated by faster capacity growth.

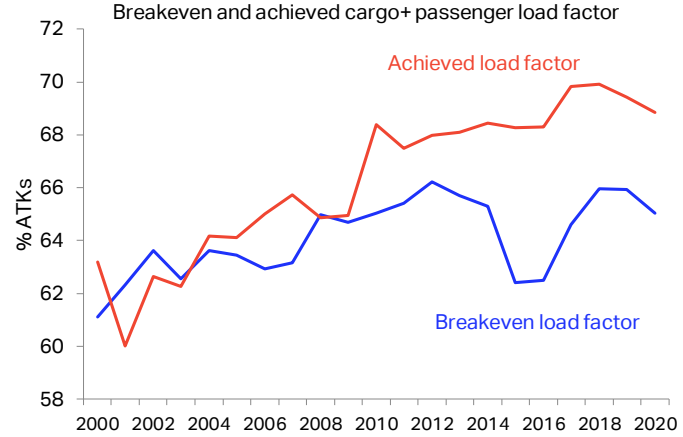
Worldwide airline Industry	2018	2019E	2020F
Industry ROIC, % invested capital	6.5%	5.7%	6.0%
North America	9.0%	9.9%	9.1%
Europe	8.8%	6.8%	7.7%
Asia-Pacific	4.3%	3.2%	4.5%
Latin America	5.0%	4.9%	5.2%
EBIT margin, % revenue	5.7%	5.1%	5.5%
Net post-tax profits, $billion	27.3	25.9	29.3
% revenues	3.4%	3.1%	3.4%
$ per passenger	6.22	5.70	6.20
Adjusted net debt/EBITDAR	4.50	4.60	4.50

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**.

Return on invested capital vs industry-average WACC



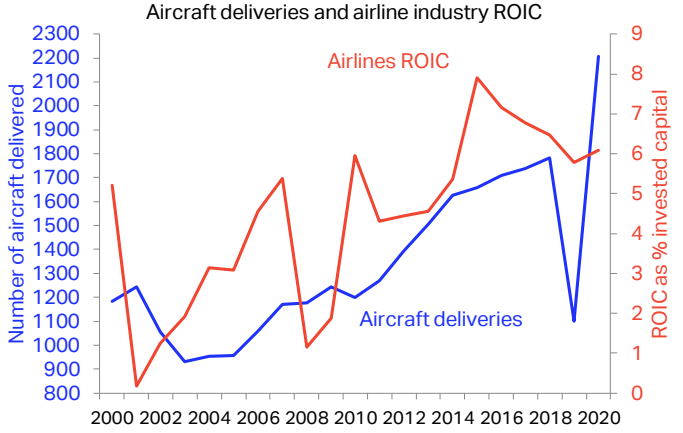
Breakeven and achieved cargo+ passenger load factor



Aircraft

Next year commercial airlines are scheduled to take delivery of over 2,206 new aircraft, an investment of around $123 billion by the industry, as the Boeing 737 MAX returns to service in 2020. The improvement in returns (ROIC) gave the industry the confidence to invest on this scale in some regions, but business conditions are becoming less favorable. Around half of this year's deliveries will replace existing fleet, making a significant contribution to increasing fleet fuel efficiency, as described below.

Aircraft deliveries and airline industry ROIC



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

The commercial fleet is forecast to increase by over 2,206 aircraft to end next year at over 31,000 aircraft; expansion continues although the outlook has deteriorated and uncertainty has grown.

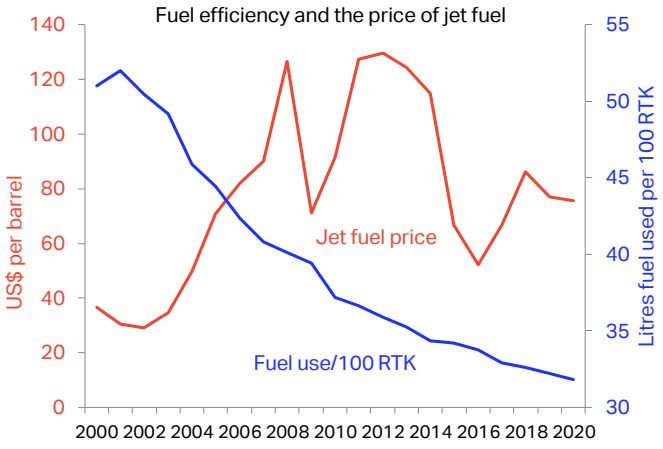
The average size of aircraft in the fleet is continuing to rise slowly. So by the end of 2020 there will be around 4.7 million available seats. These seats are also being used intensively, which is critical for profitability in a capital intensive industry – and it also helps to reduce environmental impact. That said, passenger load factors are expected to ease from all-time high levels to 82.0% on average in 2020. Aircraft are also being flown more intensively. The number of scheduled aircraft departures is forecast to surpass 40 million next year. That's an average of 77 aircraft departing each minute of 2020.

Worldwide airline Industry	2018	2019E	2020F
Aircraft fleet	29,507	29,805	31,375
% change over year	4.4%	1.0%	5.3%
Available seats, million	4.4	4.5	4.7
% change over year	6.1%	1.8%	6.0%
Average aircraft size, seats	149	150	151
% change over year	1.6%	0.8%	0.7%
Scheduled flights, million	38.1	39.0	40.3
% change over year	4.5%	2.3%	3.4%
ASKs, % change over year	6.9%	3.5%	4.7%
Passenger load factor, % ASK	81.9%	82.4%	82.0%
Freight load factor, % AFTK	49.3%	46.7%	46.3%
Weight load factor, % ATK	69.9%	69.4%	68.9%
Breakeven load factor, % ATK	66.0%	65.9%	65.0%

Note: ASK = Available Seat Kilometers, AFTK = Available Freight Tonne Kilometers ATK = Available Tonne Kilometers. Sources: Ascend, ICAO, IATA.

Fuel

Next year, we forecast the airlines fuel bill will decline to $182 billion, which will represent 22.1% of average operating costs. This decline is due to the delaying effect of hedging and continuation of low oil prices. Jet fuel prices have declined with oil prices this year and we base our forecast on an average jet fuel price of $75.6/b next year and $63/b for the Brent crude oil price. The concerns about a widening of the crack spread due to the IMO 2020 environment regulations have diminished. Hence, jet fuel prices are closer to oil prices than previously expected, mitigating fuel costs.



Fuel is such a large cost that it focuses intense effort in the industry to improve fuel efficiency, through replacing fleet with new aircraft, better operations and efforts to persuade governments to remove the airspace and airport inefficiencies that waste around 5% of fuel burn each year.

Worldwide airline Industry	2018	2019E	2020F
Fuel spend, $billion	180	188	182
% change over year	20.5%	4.7%	-3.4%
% operating costs	23.5%	23.7%	22.1%
Fuel use, billion litres	359	363	371
% change over year	5.2%	1.1%	2.3%
Fuel efficiency, litre fuel/100atk	22.8	22.4	21.9
% change over year	-0.9%	-1.9%	-2.1%
CO_2, million tonnes	905	915	936
% change over year	5.2%	1.1%	2.3%
Fuel price, $/barrel	86.1	77.0	75.6
% change over year	29.1%	-10.6%	-1.8%
% spread over oil price	20.3%	18.5%	20.0%
Upstream oil profits, $billion	16	16	16

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

We forecast that fuel efficiency, in terms of capacity use i.e. per ATK, will improve by 2.1% in 2020 as deliveries of new aircraft grow . The annual average per RTK fuel efficiency improvement from 2009-14 stands at 2.4%, versus the 1.5% industry target.

Continued fuel efficiency gains have partially decoupled CO_2 emissions from expanding air transport services. Without the expected fuel efficiency gain this year, fuel burn and CO_2 emissions would be 1.9% higher in 2019. That represents a saving of over 17 million tonnes of CO_2, as well as saving on fuel that would have cost the industry and its consumers an additional $3.2 billion.

Sources for charts on this page: IATA, ICAO, Platts.

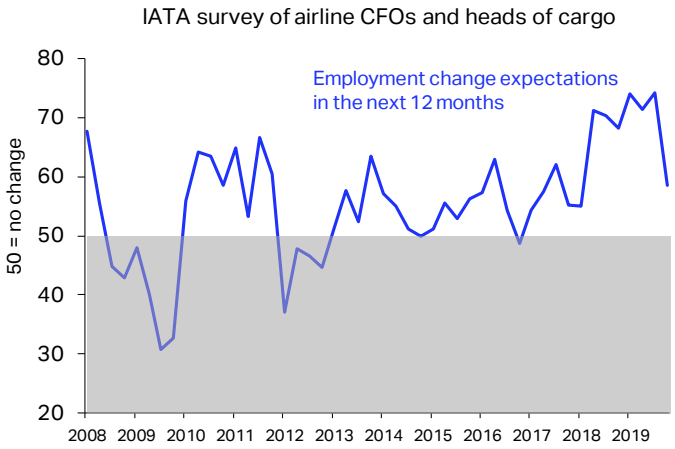
Labour

Airlines are expecting to continue hiring over the next twelve months, as capacity and traffic are expected to grow further, though the pace of expansion is slower than 2018.

We estimate that total employment by airlines will reach close to 3.0 million in 2020, a gain of 1.6% compared to 2019. Productivity is likely to be sustained, with the average employee generating 545,000 ATKs a year, which is a 2.9% improvement over this year. Wages and jobs will rise as employees share the benefits of improved performance. However, having declined or been stable in recent years, unit labour costs are now rising, which is one of the reasons behind the on-going squeeze on airline profit margins.

Worldwide airline Industry	2018	2019E	2020F
Labour costs, $ billion	182	188	197
% change over year	6.5%	3.5%	4.8%
Employment, million	2.89	2.90	2.95
% change over year	3.1%	0.3%	1.6%
Productivity, atk/employee	516,324	530,201	545,415
% change over year	2.9%	2.7%	2.9%
Unit labour cost, $/ATK	0.122	0.122	0.122
% change over year	0.3%	0.5%	0.3%
GVA/employee, $	96,178	98,483	102,918
% change over year	1.2%	2.4%	4.5%

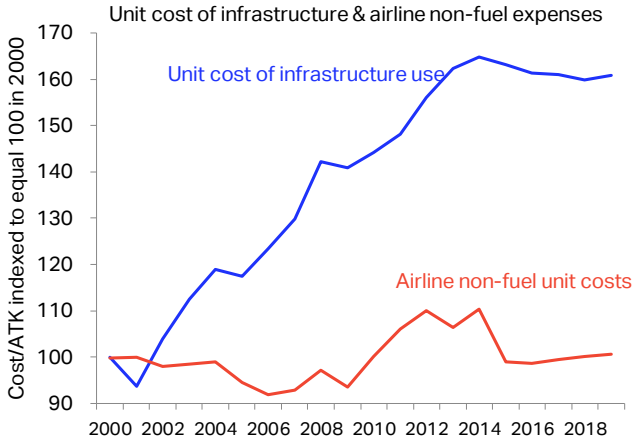
Note: ATK = Available Tonne Kilometers, GVA = Gross Value Added (firm-level GDP). Sources: IATA, ICAO, ATAG, Oxford Economics



The jobs being created are not just productive for their airline employers; they are also highly productive for the economies in which they are employed. We estimate that the direct GVA for national economies, generated by the average airline employee, will rise 4.5% this year to around $103,000 a year, which is well above the economy-wide average. Additional jobs in the airline sector will raise average levels of productivity in the economy.

Infrastructure

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



The direct cost paid for using infrastructure has increasingly been transferred to the passenger. 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 contrasts with the relatively limited rise in non-fuel airline costs.

Following a dramatic increase in 2018, airspace inefficiency declined in Europe this summer, with a 5.7 % decline in delay minutes. Airline costs stayed at $2.2 billion and we estimate the value of passengers' lost time at $2.6 billion.

EU airspace inefficiency	2017	2018	2019E
Delay minutes, million	15.9	25.6	24.1
% change over year	2.0%	61.2%	-5.7%
Operating cost to airlines, US$m	1,398	2,171	2,155
Passenger time value loss, US$m	1,583	2,506	2,555

Sources for charts on this page: ACI (aeronautical revenues), ICAO (en-route charges), Eurocontrol, IPRB, FAA, ATA.

Regions

The strongest financial performance is being delivered by airlines in North America. Net post-tax profits will be the highest at $16.5 billion next year. That represents a net profit of $16.0 per passenger, which is a almost double the level of 6 years earlier. Net margins are forecast at 6.0% for next year, representing a slight decline from 2019 levels stemming from the decline in yields with rising capacity. Ancillaries will limit the impact of lower yields, keeping breakeven load factors close to 59% next year. Consolidation in the region will continue to help to sustain load factors (passenger + cargo) close to 65%.

Breakeven load factors remain to be the highest in Europe at 70.4%, caused by low yields due to the highly competitive open aviation area, and high regulatory costs. However, as capacity expansion plans have been cut significantly and fuel costs remain subdued, net profits are forecast to be $7.9 billion in 2020, representing $6.4 per passenger and a margin of 3.6%.

Airlines in Asia-Pacific were the most exposed to weakness in world trade and cargo this year. The modest recovery in world trade will support profits next year in the region. Average profit per passenger next year is expected to increase to $3.3. In addition to the recovery in world trade, muted fuel costs will support net profits to go up to $6.0 billion and net margins to improve to 2.2%.

Middle Eastern airlines are going through a process of restructuring and announced schedules point to a substantial slowdown in capacity growth. We anticipated this will reduce the region's losses to -$1.0 billion (loss of -$1.5bn in 2019).

Latin American airlines have had a diverse performance in 2019. Improvements are expected in Latin America with some recovery from poor economic performance and a restructured industry producing $0.1 billion net profits (loss of $0.4bn in 2019).

Africa is one of the weakest regions, as in the past 5 years. Breakeven load factors are relatively low, as yields are a little higher than average and costs are lower. However, few airlines in the region are able to achieve adequate load factors; the average load factor will continue to be the lowest globally at 58.5% in 2020. Overall, industry performance is improving, but only slowly.

Worldwide airline Industry	2018	2019E	2020F
Africa			
Net post-tax profit, $billion	-0.1	-0.2	-0.2
Per passenger, $	-1.09	-2.13	-1.93
% revenue	-0.7%	-1.4%	-1.3%
RPK growth, %	6.1%	3.7%	3.8%
ASK growth, %	4.4%	4.2%	4.9%
Load factor, % ATK	60.7%	59.6%	58.5%
Breakeven load factor, % ATK	59.8%	59.0%	57.8%
Asia-Pacific			
Net post-tax profit, $billion	6.1	4.9	6.0
Per passenger, $	3.74	2.92	3.34
% revenue	2.4%	1.9%	2.2%
RPK growth, %	9.5%	4.7%	4.8%
ASK growth, %	8.8%	4.4%	5.5%
Load factor, % ATK	72.5%	72.0%	71.7%
Breakeven load factor, % ATK	68.5%	68.8%	67.6%
Middle East			
Net post-tax profit, $billion	-1.5	-1.5	-1.0
Per passenger, $	-6.69	-6.84	-4.48
% revenue	-2.7%	-2.7%	-1.7%
RPK growth, %	5.0%	2.6%	2.5%
ASK growth, %	5.9%	1.9%	3.2%
Load factor, % ATK	65.2%	62.2%	61.8%
Breakeven load factor, % ATK	68.2%	65.5%	64.4%
Latin America			
Net post-tax profit, $billion	-0.8	-0.4	0.1
Per passenger, $	-2.78	-1.32	0.42
% revenue	-2.3%	-1.1%	0.3%
RPK growth, %	7.0%	4.2%	4.3%
ASK growth, %	7.3%	3.0%	4.6%
Load factor, % ATK	67.9%	69.4%	69.2%
Breakeven load factor, % ATK	66.0%	66.9%	66.7%
North America			
Net post-tax profit, $billion	14.5	16.9	16.5
Per passenger, $	14.66	16.81	16.00
% revenue	5.7%	6.4%	6.0%
RPK growth, %	5.3%	3.8%	3.8%
ASK growth, %	4.9%	2.3%	5.1%
Load factor, % ATK	64.9%	65.4%	64.8%
Breakeven load factor, % ATK	59.0%	59.1%	58.9%
Europe			
Net post-tax profit, $billion	9.1	6.2	7.9
Per passenger, $	7.94	5.21	6.40
% revenue	4.5%	3.0%	3.6%
RPK growth, %	7.5%	4.5%	3.8%
ASK growth, %	6.6%	3.9%	3.7%
Load factor, % ATK	74.8%	74.3%	74.3%
Breakeven load factor, % ATK	70.2%	70.8%	70.4%

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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