



# 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

- World trade has weakened sharply, damaging cargo, but fiscal policy is providing stimulus so GDP growth remains supportive.
- Rising costs, particularly fuel, and the ability to recover those costs will remain a major challenge for the industry.
- Airlines continue to create value for investors, but only just, with ROIC falling to 7.4% in 2019, marginally above the cost of capital.
- Some airlines continue to generate free cash flow but not the industry in aggregate. Debt ratios begin to rise again this year.
- N American airlines perform best with a 5.5% net post-tax profit margin in 2019. Middle East the weakest with a 1.9% loss.
- Employment growth remains strong and jobs in the industry should exceed 2.9 million, and GVA per employee is over \$98,600.
- Consumers benefit from lower real travel costs, more routes, and will spend 1% of world GDP on air transport in 2019.
- Economic development is stimulated by the doubling of city pairs and halving of air transport costs over the past 20 years.
- Governments gain from \$129bn of tax in 2019 and from over 70 million 'supply chain' jobs.

## Consumers

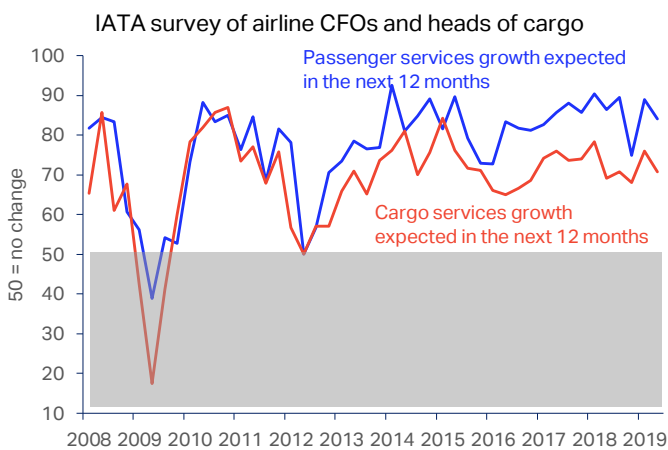
Consumers will see a substantial increase in the value they derive from air transport in 2019. The average return fare (before surcharges and tax) of \$317 in 2019 is forecast to be 61% lower than in 1998, after adjusting for inflation.

The number of new destinations is forecast to rise further this year, with frequencies up too; both boosting consumer benefits. We expect 1% of world GDP to be spent on air transport in 2019, totaling \$899 billion. RPK growth, which has been running well above trend, is forecast to slow further as economic growth weakens and fuel prices rise. But the major new weakness in the business environment is world trade, as a result of the trade disputes. GDP growth has slowed but by much less than trade, as domestic demand remains strong. The consequence has been a large downgrade in our forecast for cargo FTKs.

Worldwide airline Industry	2017	2018	2019F
Spend on air transport*, \$billion	787	845	899
% change over year	6.3%	7.5%	6.3%
% global GDP	0.9%	1.0%	1.0%
Return fare, \$/pax. (2018\$)	345	327	317
Compared to 1998	-58%	-60%	-61%
Freight rate, \$/kg (2018\$)	1.76	1.92	1.86
Compared to 1998	-64%	-61%	-62%
Passenger departures, million	4,095	4,378	4,579
% change over year	7.3%	6.9%	4.6%
RPKs, billion	7758	8330	8746
% change over year	8.1%	7.4%	5.0%
FTKs, million	254	262	262
% change over year	9.7%	3.4%	0.0%
World GDP growth, %	3.2%	3.1%	2.7%
World trade growth, %	5.6%	3.9%	2.5%

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

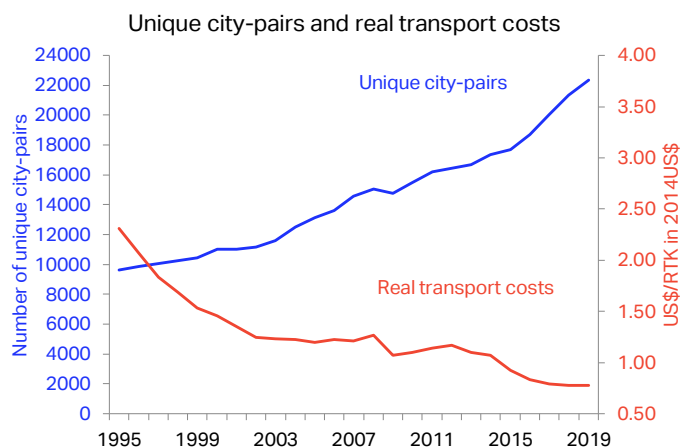
Airline CFOs and heads of cargo reported in April that they were less positive about future growth in air travel, and were less positive about cargo. This reflects increasing worries amongst business worldwide about economic prospects. The outlook for world trade has weakened sharply as a result of trade disputes, damaging cargo. However, governments have used fiscal policy to stimulate domestic demand, which limits the slowdown of GDP growth and the risk of recession.



Source: IATA

## Wider Economy

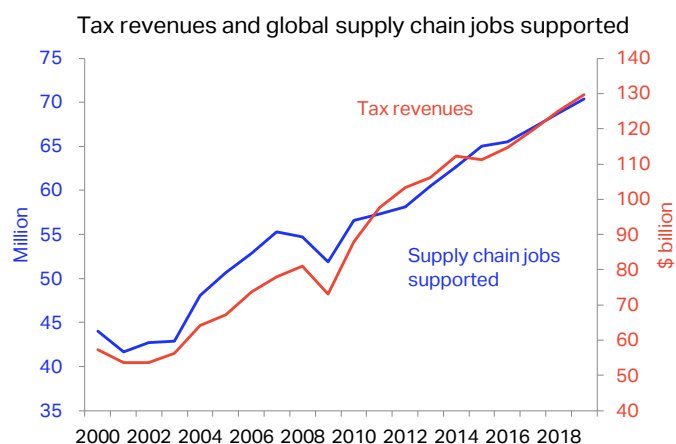
Economic development worldwide is getting a significant boost from air transport. This wider economic benefit is being generated by increasing connections between cities - enabling the flow of goods, people, capital, technology and ideas - and falling air transport costs. The number of unique city-pair connections has exceeded 22,000 this year, 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 transport costs and improving connectivity have boosted trade flows; trade itself has resulted from globalizing supply chains and associated investment.

## Government

Governments have also gained from the good performance of the airline industry. Airlines and their customers are forecast to generate \$129 billion in tax revenues this year. That's the equivalent of 45% of the industry's GVA (Gross Value Added, which is the firm-level equivalent to GDP).



Worldwide airline Industry	2017	2018	2019F
Unique city pairs	20032	21332	22375
Compared to 1998	95%	108%	118%
Transport cost, US\$/RTK (2018\$)	79.3	77.8	77.5
Compared to 1998	-53%	-54%	-54%
Value of trade carried, \$billion	6,071	6,659	6,737
% change over year	10.9%	9.7%	1.2%
Value of tourism spend, \$billion	764	843	909
% change over year	13.9%	10.3%	7.8%
Supply chain jobs, million	67.1	68.7	70.4
% change over year	2.5%	2.4%	2.4%
Supply chain GVA, \$ trillion	2.8	3.0	3.1
% change over year	5.5%	5.2%	5.0%

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 \$6.7 trillion. Tourists travelling by air in 2019 are forecast to spend \$909 billion.

Another impact on the wider economy comes through the influence 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 more than 70 million in 2019.

Worldwide airline Industry	2017	2018	2019F
Tax revenues, \$billion	120	125	129
% change over year	4.4%	4.5%	3.4%
% GVA	44.9%	44.9%	44.5%
Number of ticket taxes	236	237	237
% of countries requiring full visas	58	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 237, 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 contrast, until 2015 equity owners had not been rewarded adequately for risking their capital in most years, except at a handful of airlines. 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 have typically seen their capital shrink. This changed in the past 4 years, when earlier structural improvements combined with low fuel prices to boost return on invested capital (ROIC) above the industry's cost of capital, creating value for investors for the first time.

However, that transformation in performance for investors is now at risk. This year we forecast the industry to generate a return on invested capital (ROIC) of 7.4%, which is only marginally above the cost of capital. On invested capital of over \$700 billion, the industry is forecast to generate \$0.7 billion of value for investors next year. So, after just a few years of generating value for investors that outperformance has all but disappeared. Moreover, above-WACC returns had only started to be generated outside North America in the past year or two and are still not widespread across all regions.

The weakening of airline margins and ROIC in 2019 is being driven by a combination of weaker growth, deteriorating supply-demand conditions in some markets, higher than previously expected oil and fuel prices, and the broader challenge of recovering or mitigating rising unit costs.

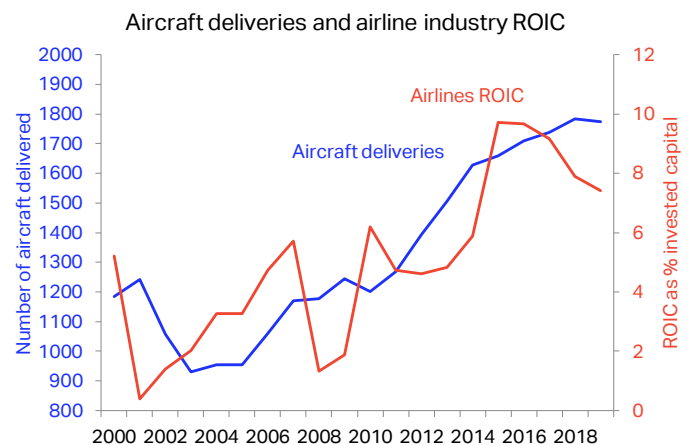
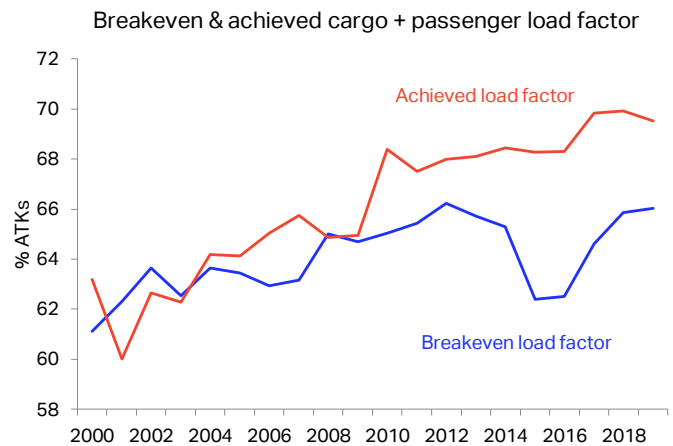
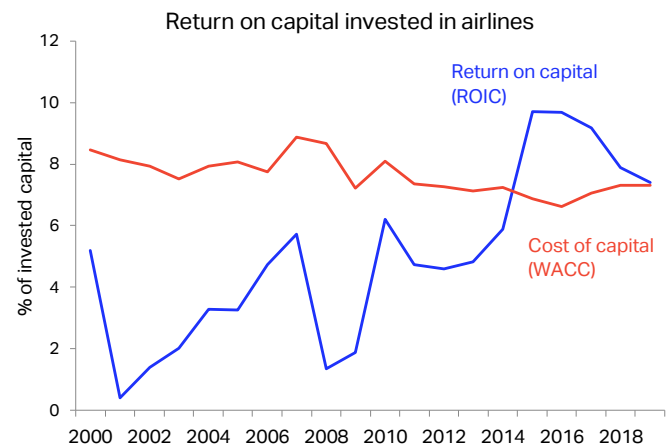
## Aircraft

This year commercial airlines are expected to take delivery of over 1,750 new aircraft, an investment of around \$80 billion by the industry (dependent on the 737MAX situation). The improvement in returns (ROIC) gave the industry the confidence to invest on this scale, but business conditions are becoming less favorable. Sustained high fuel costs had also made it economic to retire older aircraft at a higher rate, and that effect is rising again this year. Around half of this year's deliveries will replace existing fleet, making a significant contribution to increasing fleet fuel efficiency, as described below.

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

Worldwide airline Industry	2017	2018	2019F
ROIC, % invested capital	9.2%	7.9%	7.4%
ROIC-WACC	2.1%	0.6%	0.1%
Investor value, \$ billion	13.1	3.8	0.7
EBIT margin, % revenue	7.5%	5.8%	5.0%
Net post-tax profits, \$billion	37.6	30.0	28.0
% revenues	5.0%	3.7%	3.2%
\$ per passenger	9.18	6.85	6.12
Free cash flow, % invested capital	0.2%	0.6%	0.0%
Adjusted net debt/EBITDAR	4.10	4.50	4.60

Note: ROIC = Return on Invested Capital, WACC = Weighted Average Cost of 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.**



The fleet is forecast to increase by over 1000 aircraft to end next year at over 30,000 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 2019 there will be around 4.6 million available seats. These seats are also being used more intensively, which is critical for profitability in a capital intensive industry – and it also helps to reduce environmental impact. Passenger load factors are expected to rise from 2018 levels to 82.1% on average in 2019. Aircraft are also being flown more intensively. The number of scheduled aircraft departures is forecast to reach 39.4 million next year. That’s an average of 75 aircraft departing each minute of 2019.

Worldwide airline Industry	2017	2018	2019F
Aircraft fleet	28,305	29,633	30,697
% change over year	3.5%	4.7%	3.6%
Available seats, million	4.1	4.4	4.6
% change over year	5.2%	6.3%	5.0%
Average aircraft size, seats	146	148	151
% change over year	1.7%	1.6%	1.4%
Scheduled flights, million	36.4	38.1	39.4
% change over year	3.6%	4.5%	3.5%
ASKs, % change over year	6.7%	6.9%	4.7%
Passenger load factor, % ASK	81.5%	81.9%	82.1%
Freight load factor, % AFTK	50.2%	49.3%	48.2%
Weight load factor, % ATK	69.8%	69.9%	69.5%
Breakeven load factor, % ATK	64.6%	65.9%	66.0%

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

## Fuel

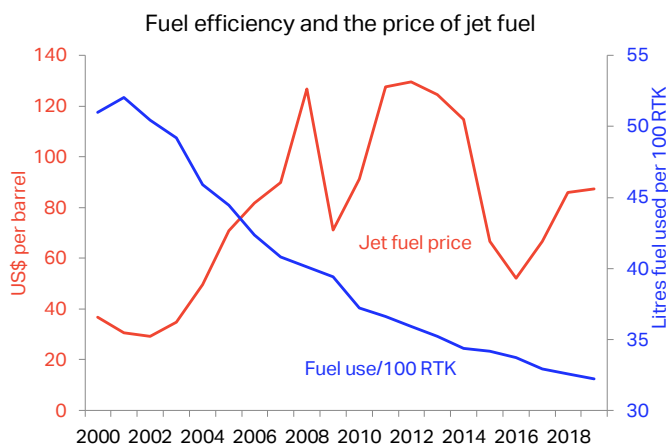
This year we forecast the airlines fuel bill will rise to \$206 billion, which will represent 25% of average operating costs. Jet fuel prices have risen with oil prices and we base our forecast on an average jet price of \$87.5/b next year, and \$70/b for the Brent crude oil price. The earlier fall from the peaks of 2018 had been driven by an over-supply of crude oil, partly from shale oil production in the US. But sanctions on Iran’s oil exports and limited spare capacity in OPEC caused oil prices to rise back above \$70/b. Crack spreads are also expected to rise under pressure from the IMO2020 regulation in shipping.

Worldwide airline Industry	2017	2018	2019F
Fuel spend, \$billion	149	180	206
% change over year	10.3%	20.5%	14.3%
% operating costs	21.4%	23.5%	25.0%
Fuel use, billion litres	341	359	368
% change over year	5.9%	5.2%	2.5%
Fuel efficiency, litre fuel/100atk	23.0	22.8	22.4
% change over year	-0.2%	-0.9%	-1.7%
CO <sub>2</sub> , million tonnes	860	905	927
% change over year	5.9%	5.2%	2.5%
Fuel price, \$/barrel	66.7	86.1	87.5
% change over year	28.0%	29.1%	1.6%
% spread over oil price	21.5%	20.3%	25.0%
Upstream oil profits, \$billion	14	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 1.7% in 2019 as deliveries of new aircraft grow and as fuel prices rise sharply. 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<sub>2</sub> emissions from expanding air transport services. Without the expected fuel efficiency gain this year, fuel burn and CO<sub>2</sub> emissions would be 1.7% higher in 2019. That represents a saving of over 16 million tonnes of CO<sub>2</sub>, as well as saving on fuel that would have cost the industry and its consumers an additional \$3.5 billion.



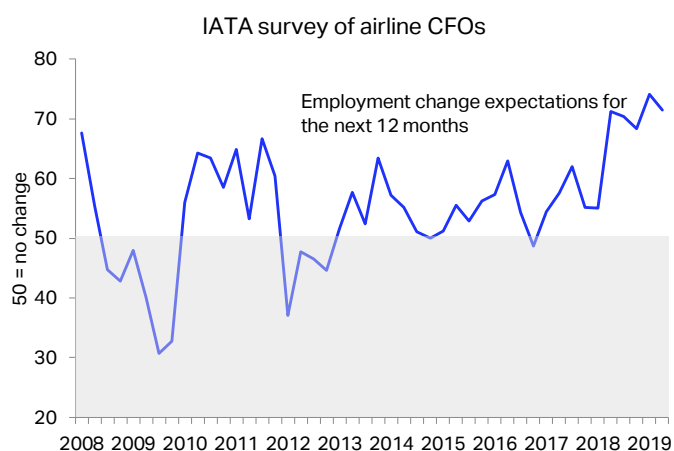
Fuel is such a large cost that it focuses intense effort in the industry to improve fuel efficiency, through replacing fleet with new aircraft, better operations and efforts to persuade governments to remove the airspace and airport inefficiencies that waste around 5% of fuel burn each year.

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 in the last 2 years.

We estimate that total employment by airlines will exceed 2.9 million in 2019, a gain of 2.2% compared to 2018. Productivity is likely to slow a little, with the average employee generating just under 530,000 ATKs a year, which is a 2% 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 and we forecast an average increase of 1% in 2019. Along with rising fuel costs this is one of the major contributions to the upward pressure on unit costs this year and the on-going squeeze on airline profit margins.



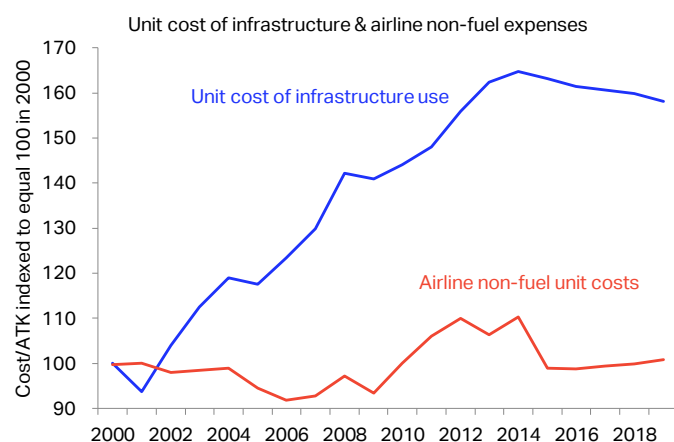
Worldwide airline Industry	2017	2018	2019F
Labour costs, \$ billion	170	181	190
% change over year	7.4%	6.5%	5.3%
Employment, million	2.79	2.88	2.94
% change over year	3.3%	3.1%	2.2%
Productivity, atk/employee	504,216	518,782	529,407
% change over year	2.8%	2.9%	2.0%
Unit labour cost, \$/ATK	0.121	0.121	0.122
% change over year	1.1%	0.3%	1.0%
GVA/employee, \$	95,488	96,636	98,631
% change over year	2.2%	1.2%	2.1%

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 2.1% this year to over \$98,600 a year, which is well above the economy-wide average. Additional jobs in the airline sector will raise average levels of productivity in an 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 airline non-fuel airline costs.

Airspace inefficiency increased dramatically in Europe last summer, with a 62% rise in delay minutes. Airline costs rose to over \$2 billion and we estimate passengers lost time they value at \$2.5 billion.

EU airspace inefficiency	2016	2017	2018
Delay minutes, million	15.6	15.9	25.7
% change over year	10.7%	2.0%	61.8%
Operating cost to airlines, US\$m	1,402	1,398	2,159
Passenger time value loss, US\$m	1,513	1,583	2,526

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 \$15 billion this year. That represents a net profit of \$14.77 per passenger, which is a marked improvement from just 6 years earlier. Net margins, forecast at 5.5%, are down from 2018 levels due to higher than expected fuel costs and slowing growth. The limited downside in this region has been underpinned by consolidation, helping to sustain load factors (passenger + cargo) above 65%, and ancillaries, which limits the impact of higher fuel costs, keeping breakeven load factors close to 60% next year.

Breakeven load factors are highest in Europe at 70%, caused by low yields due to the highly competitive open aviation area, and high regulatory costs. Europe is one of the more exposed regions to weak international trade and this has damaged prospects this year. Net profits are forecast to be \$8.1 billion in 2019, representing \$6.75 per passenger and a margin of 3.7%.

Airlines in Asia-Pacific will show very diverse performances, and is the most exposed region to weakness in world trade and cargo. Average profit per passenger this year is forecast at \$3.51 as weaker cargo and higher than expected fuel costs reduce net profits to \$6 billion and net margins to 2.3%.

Middle Eastern airlines have faced substantial challenges in recent years, both to the business environment and to business models. The region is going through a process of adjustment and announced schedules point to a substantial slowdown in capacity growth in 2019. Performance is now improving but the worsening in the business environment is expected to prolong losses in 2019.

Latin American airlines have faced a slowly improving environment, with the Brazilian economy recovering, but the rise in oil prices and exchange rate weakness versus the US\$ led to losses in 2018. A net profit of \$0.2 billion is forecast this year.

Africa is one of the weakest regions, as in the past 4 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, which average the lowest globally at 60.6% in 2019. Overall, industry performance is improving, but only slowly.

Worldwide airline Industry	2017	2018	2019F
<b>Africa</b>			
Net post-tax profit, \$billion	-0.2	-0.1	-0.1
Per passenger, \$	-2.29	-1.09	-1.54
% revenue	-1.5%	-0.7%	-1.0%
RPK growth, %	7.0%	6.1%	4.3%
ASK growth, %	3.5%	4.4%	3.7%
Load factor, % ATK	60.0%	60.7%	60.6%
Breakeven load factor, % ATK	59.5%	59.8%	60.0%
<b>Asia-Pacific</b>			
Net post-tax profit, \$billion	10.5	7.7	6.0
Per passenger, \$	7.06	4.74	3.51
% revenue	4.6%	3.1%	2.3%
RPK growth, %	10.9%	9.5%	6.3%
ASK growth, %	9.1%	8.8%	5.7%
Load factor, % ATK	72.4%	72.5%	72.4%
Breakeven load factor, % ATK	67.2%	68.6%	69.5%
<b>Middle East</b>			
Net post-tax profit, \$billion	0.1	-1.0	-1.1
Per passenger, \$	0.46	-4.46	-5.01
% revenue	0.2%	-1.8%	-1.9%
RPK growth, %	6.8%	5.0%	2.0%
ASK growth, %	6.7%	5.9%	0.6%
Load factor, % ATK	65.9%	65.2%	64.3%
Breakeven load factor, % ATK	67.9%	66.5%	65.7%
<b>Latin America</b>			
Net post-tax profit, \$billion	0.5	-0.5	0.2
Per passenger, \$	1.75	-1.65	0.50
% revenue	1.5%	-1.4%	0.4%
RPK growth, %	7.4%	7.0%	6.2%
ASK growth, %	5.5%	7.3%	5.1%
Load factor, % ATK	68.1%	67.9%	68.3%
Breakeven load factor, % ATK	63.9%	66.0%	65.6%
<b>North America</b>			
Net post-tax profit, \$billion	17.8	14.5	15.0
Per passenger, \$	18.86	14.66	14.77
% revenue	7.5%	5.7%	5.5%
RPK growth, %	3.9%	5.3%	4.3%
ASK growth, %	3.8%	4.9%	4.1%
Load factor, % ATK	64.9%	64.9%	65.2%
Breakeven load factor, % ATK	57.7%	59.0%	59.5%
<b>Europe</b>			
Net post-tax profit, \$billion	8.9	9.4	8.1
Per passenger, \$	8.27	8.20	6.75
% revenue	4.7%	4.7%	3.7%
RPK growth, %	9.1%	7.5%	4.9%
ASK growth, %	6.7%	6.6%	5.6%
Load factor, % ATK	74.3%	74.8%	74.0%
Breakeven load factor, % ATK	68.4%	70.2%	70.2%

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.

2nd June 2019

IATA Economics, [economics@iata.org](mailto:economics@iata.org)

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