STATS WINDOW

Global Aviation Industry

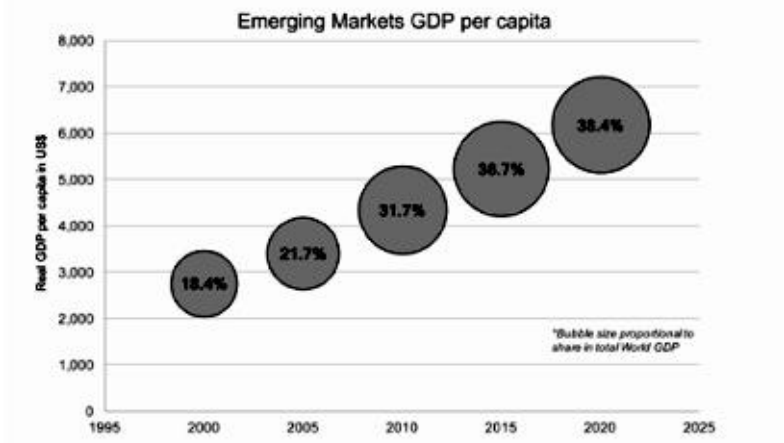
Aviation is a dynamic industry that continuously adapts to various market forces. Forecasting long-term demand for airplanes requires assumptions and predictions about the macro trends and drivers that will shape the airline industry far into the future. A multitude of factors are at play, and they often vary

from market to market. However, we can broadly categorize three key dimensions of the macro environment that drive airplane demand forecasts

- The underlying demand for air travel.
- The regulatory, infrastructure, and technology environment.
- The strategies and products airlines offer in the marketplace.

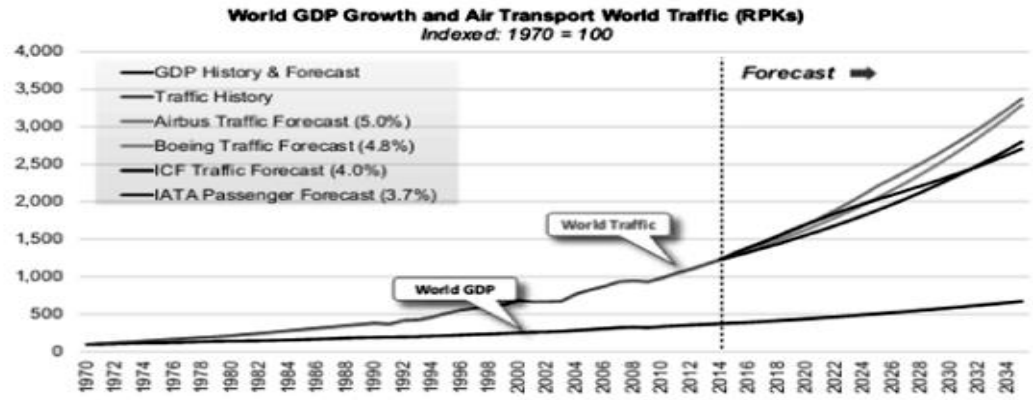
Strong Growth In The Demand For Air Travel

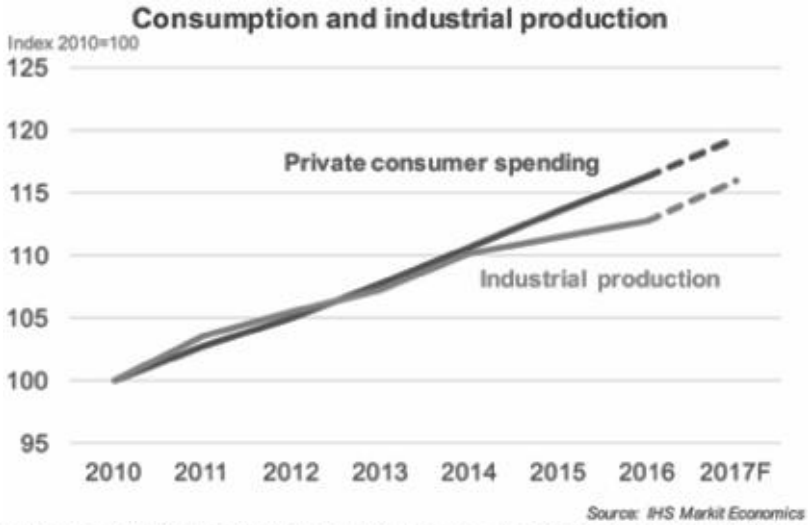
Worldwide air travel has grown at a historically brisk pace. Year-over-year passenger travel growth for the past five years has averaged 6.2 percent. Low air fares,higher living standards with a growing middle class in large emerging markets, and the growth of tourism and travel relative to total consumer spending in major economies are all driving strength in the demand for air travel.



World air traffic growth has outpaced GDP growth

World Traffic grew 1.9x GDP from 1970-2015, and is forecast to grow 1.7x through 2035

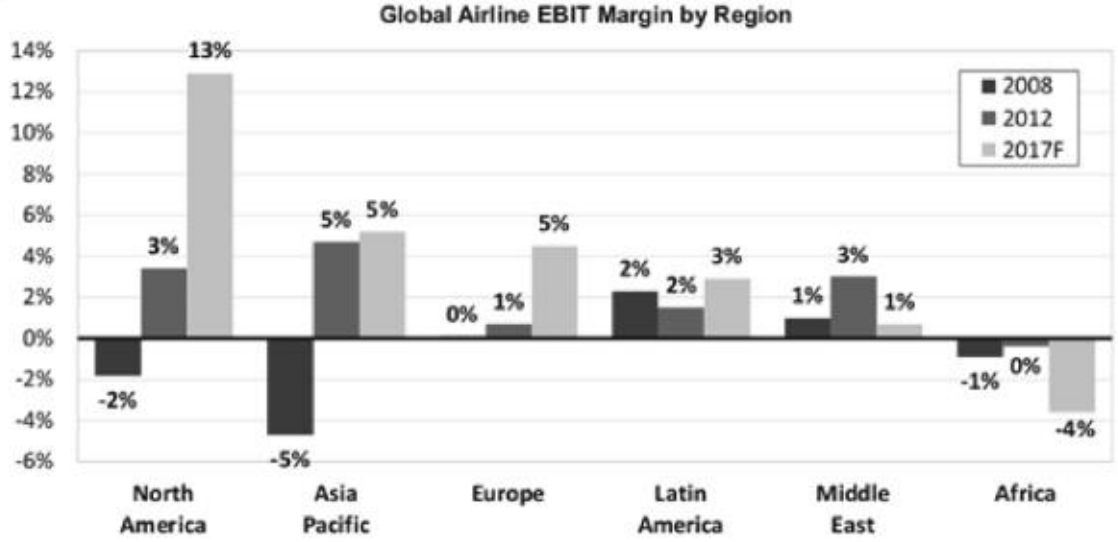




Source: IHS Markit Economics

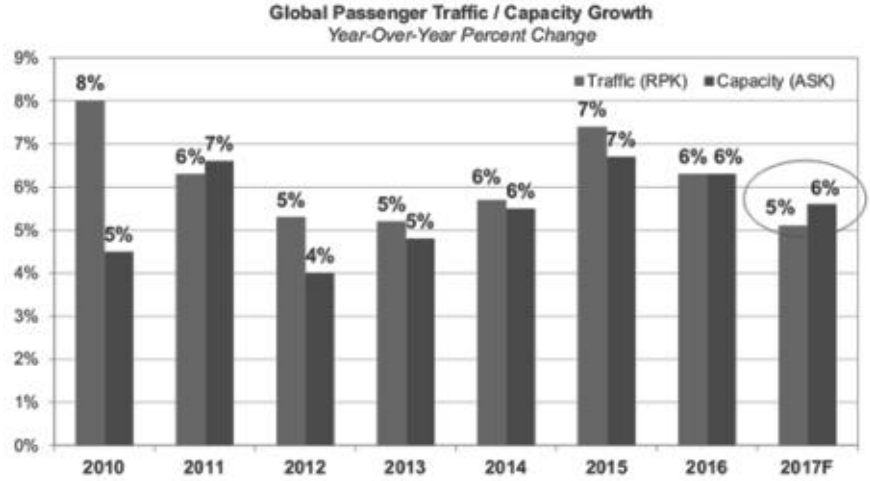
Rising fuel and labor costs will contribute to a decrease in profitability in 2017

Sources: IATA, ICF Analysis



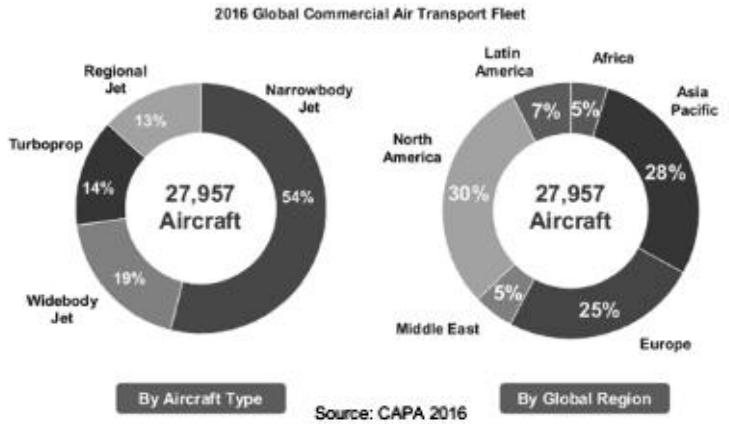
Sources: IATA, ICF Analysis

Global Passenger Traffic

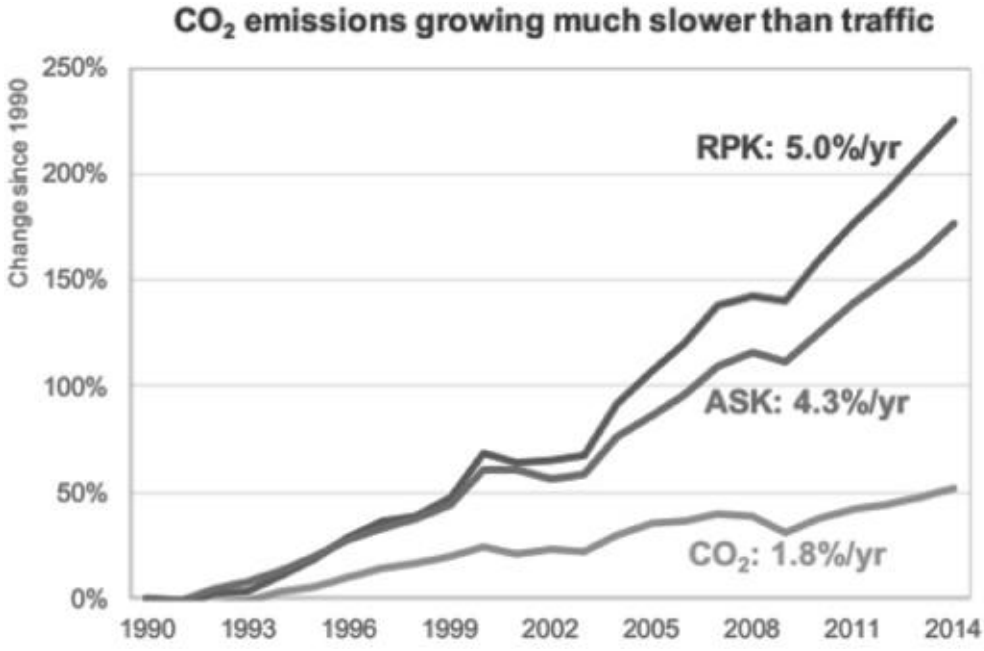


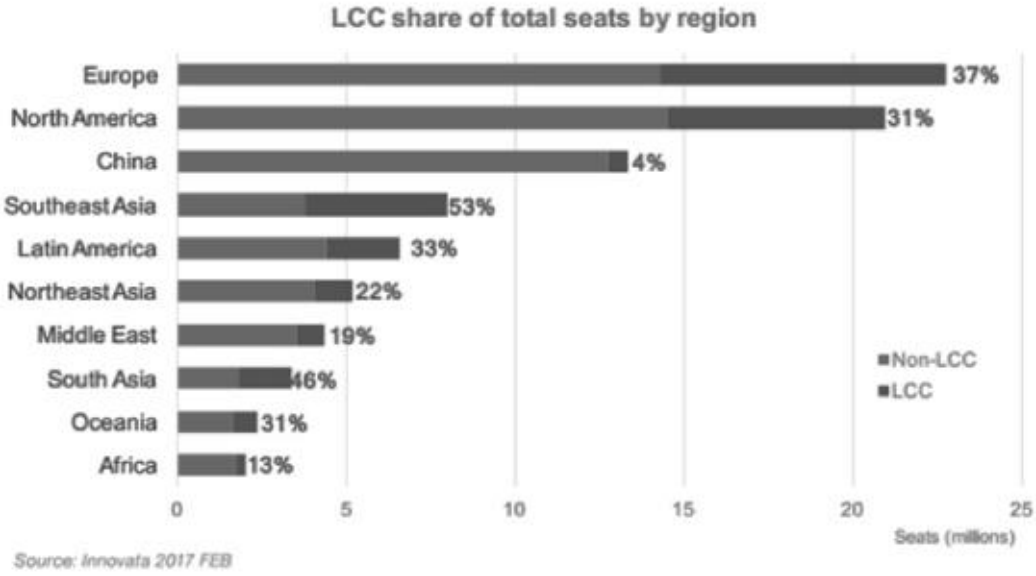
Sources: IATA Air Transport Market Analysis (2017) and Economic Performance of the Airline Industry (Dec 2016)

Commercial Air Transport Fleet

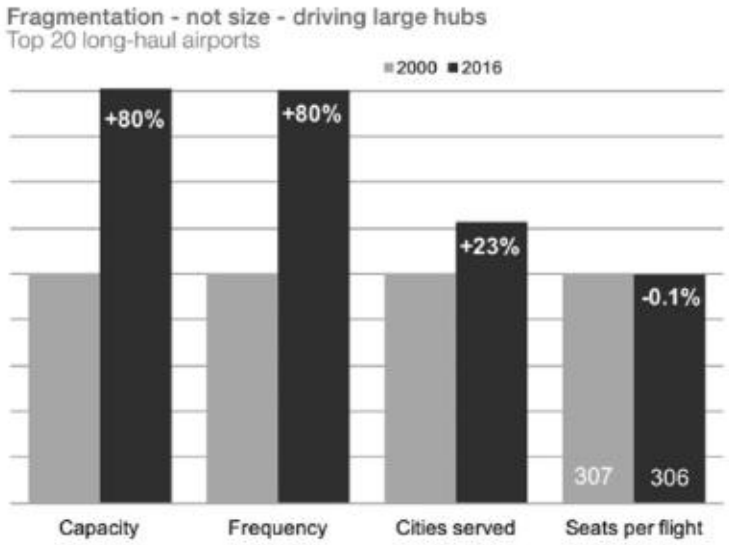


Source: CAPA 2016

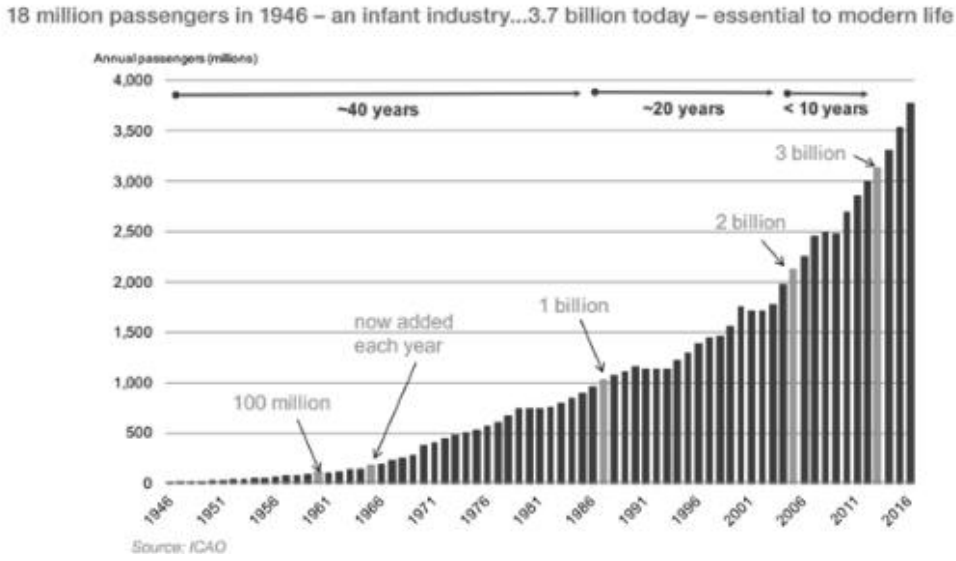




Source: Innovata 2017 FEB

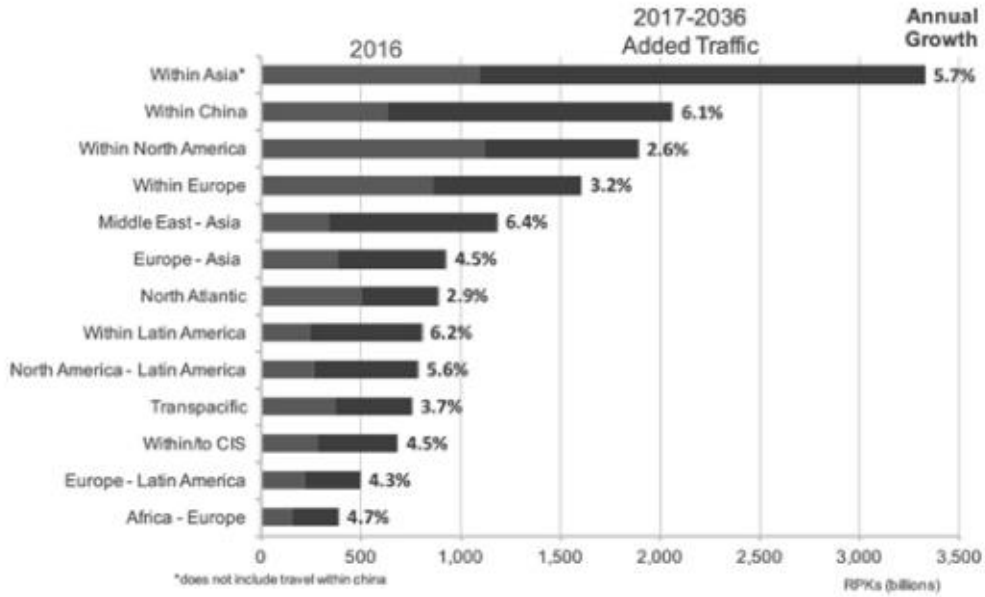


Traffic And Market Outlook

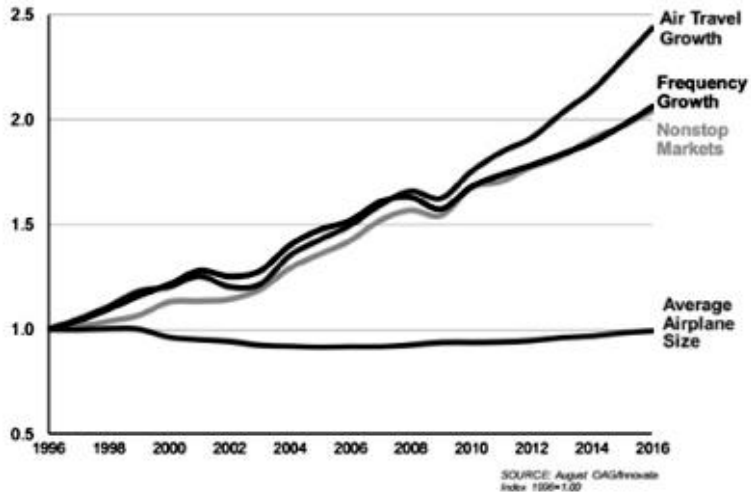


Source: ICAO

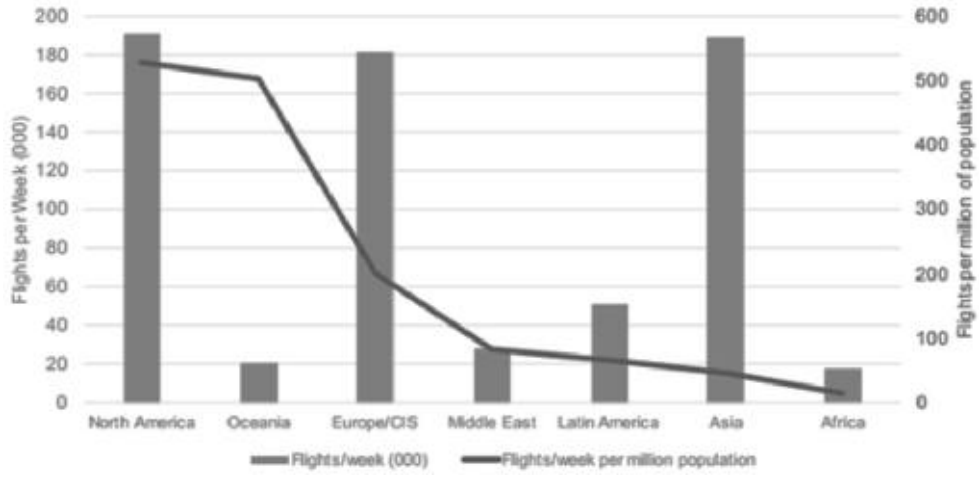
Outlook For 4.7 Percent Average Annual Passenger Traffic Growth Over The Next 20 Years



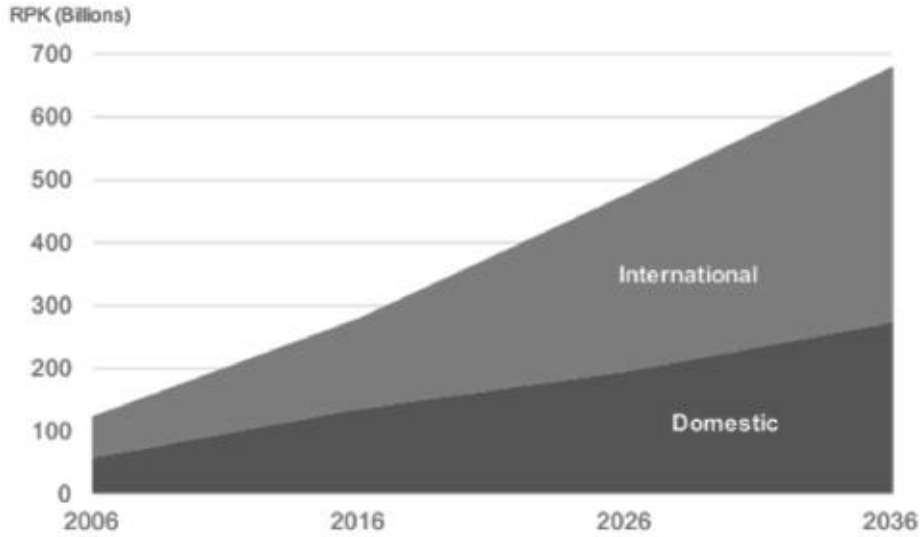
Air travel growth has been met by increased frequencies and nonstops



Africa is underserved compared to other regions of the world



Expansion of traffic in both domestic and international markets



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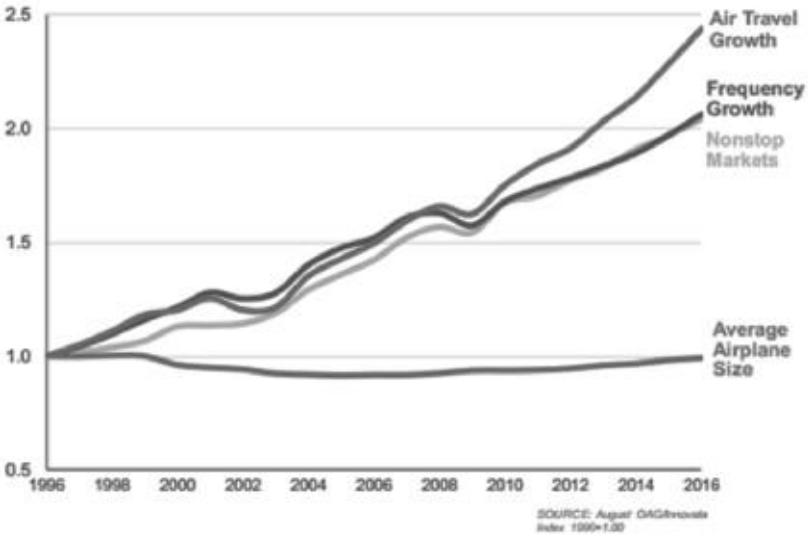

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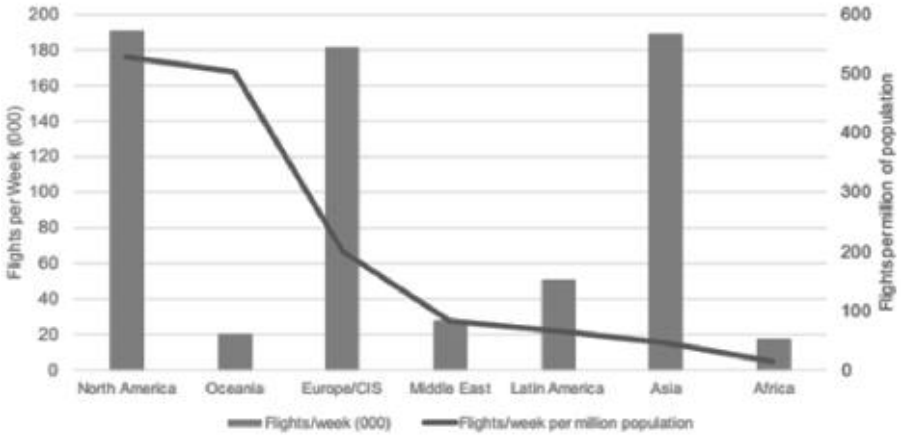
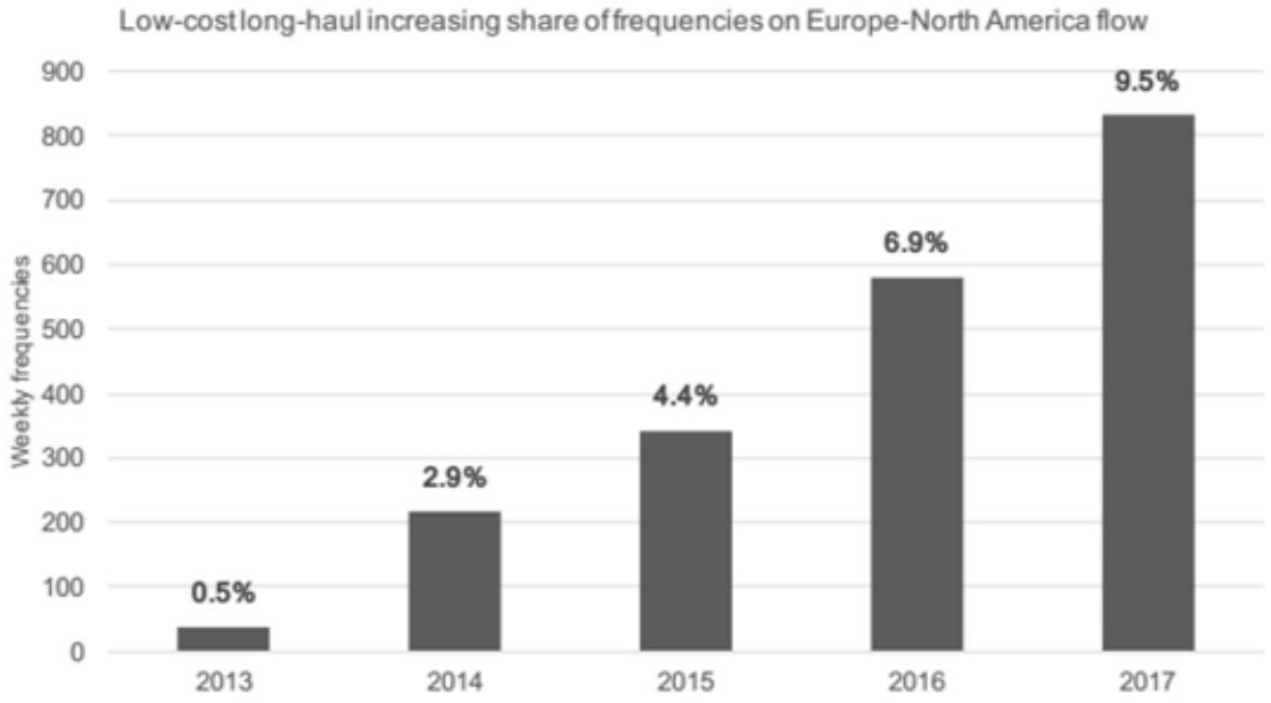
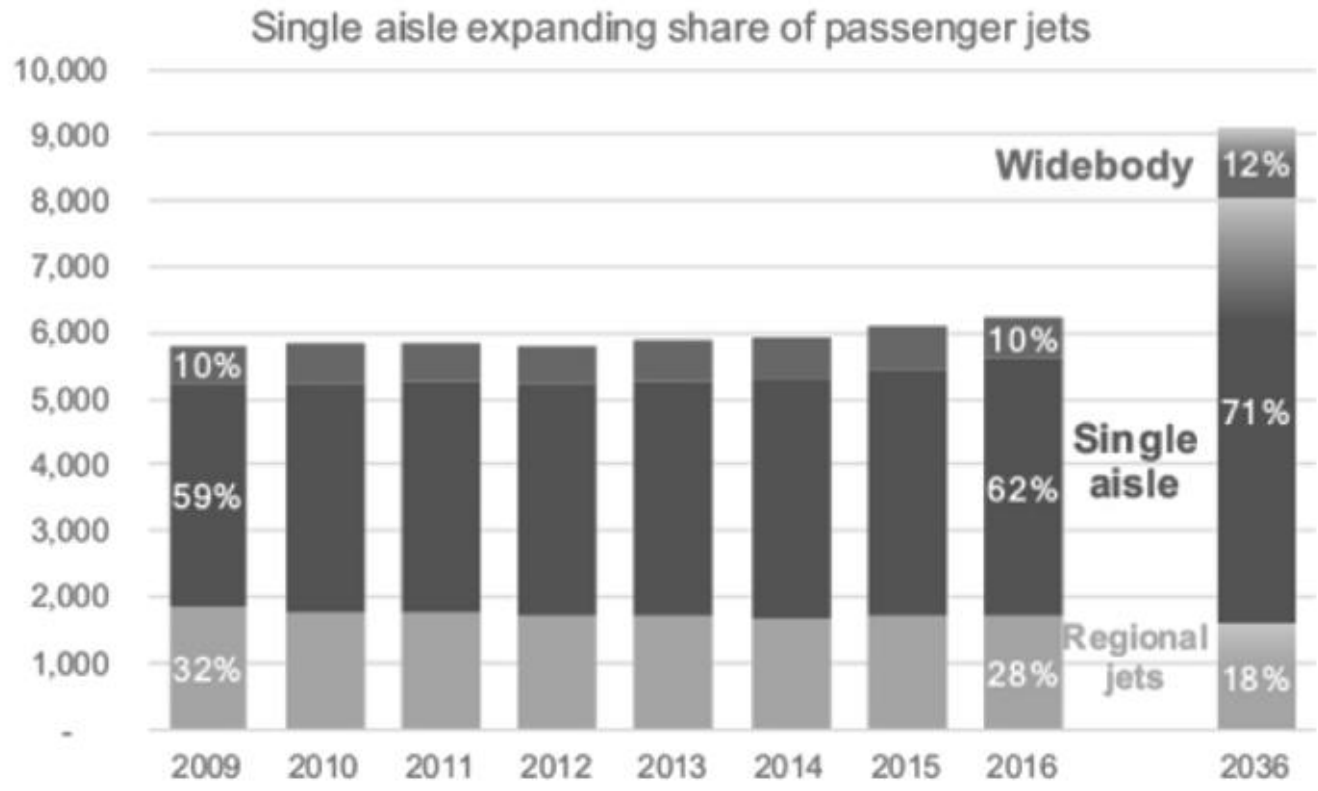




Source: Diio/Innovata/OAG



Source: Ascend May 2017, CMO 2017

Worldwide airline Industry	2015	2016	2017
Spend on air transport*, $billion	752	737	776
% change over year	-6.0%	-2.0%	5.3%
% global GDP	1.0%	0.9%	1.0%
Return fare, $/pax. (2016$)	417	371	353
Compared to 1996	-58%	-63%	-64%
Freight rate, $/kg (2016$)	1.85	1.58	1.51
Compared to 1996	-63%	-68%	-69%
Passenger departures, million	3,561	3,810	4,085
% change over year	7.0%	7.0%	7.2%
RPKs, billion	6671	7164	7694
% change over year	7.3%	7.4%	7.4%
Freight tonnes, million	52.2	54.3	58.2
% change over year	1.5%	3.9%	7.3%
World GDP growth, %	2.7%	2.4%	2.9%
World trade growth, %	2.7%	2.2%	3.9%

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

Worldwide airline Industry	2015	2016	2017
Unique city pairs	17711	18691	19699
Compared to 1996	79%	89%	99%
Transport cost, US$/RTK (2016$)	90.5	81.1	77.2
Compared to 1996	-51%	-56%	-58%
Value of trade carried, $billion	5,616	5,459	5,906
% change over year	-12.7%	-2.8%	8.2%
Value of tourism spend, $billion	665	651	685
% change over year	-1.0%	-2.1%	5.2%
Supply chain jobs, million	65.0	67.7	69.6
% change over year	3.7%	4.1%	2.8%
Supply chain GVA, $ trillion	2.8	3.0	3.3
% change over year	6.2%	5.9%	9.4%

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 + turbo-props larger than 20 seats, at least 1 flight a week; from SRS Analyzer database.

Worldwide airline Industry	2015	2016	2017
Tax revenues, $billion	113	117	124
% change over year	-1.0%	3.2%	6.6%
% GVA	46%	45%	45%
# of ticket taxes	230	234	236
% of countries requiring full visas	61	58	58

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

Worldwide airline Industry	2015	2016	2017
ROIC, % invested capital	9.9%	9.9%	8.8%
ROIC-WACC, % invested capital	3.0%	3.3%	1.5%
Investor value, $ billion	16.0	17.2	7.9
EBIT margin, % revenue	8.5%	8.8%	7.5%
Net post-tax profits, $billion	35.9	34.8	31.4
% revenues	5.0%	4.9%	4.2%
$ per passenger	10.08	9.13	7.69
Free cash flow, % invested capital	2.4%	1.1%	0.6%
Adjusted net debt/EBITDAR	3.8	3.7	3.7

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**. Source: IATA, McKinsey, ICAO.

Worldwide airline Industry	2015	2016	2017
Aircraft fleet	26,608	27,585	28,645
% change over year	3.1%	3.7%	3.8%
Available seats, million	3.7	3.9	4.2
% change over year	5.0%	6.2%	6.1%
Average aircraft size, seats	140	143	146
% change over year	1.9%	2.4%	2.1%
Scheduled flights, million	34.0	35.8	37.5
% change over year	3.0%	5.2%	4.7%
ASKs, % change over year	6.7%	7.5%	7.0%
Passenger load factor, % ASK	80.3%	80.3%	80.6%
Freight load factor, % AFTK	47.7%	46.9%	47.9%
Weight load factor, % ATK	66.9%	66.9%	67.8%
Breakeven load factor, % ATK	61.2%	61.0%	62.7%

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

Worldwide airline Industry	2015	2016	2017
Fuel spend, $billion	175	133	129
% change over year	-22.1%	-24.1%	-2.6%
% operating costs	26.5%	20.6%	18.8%
Fuel use, billion litres	307	323	339
% change over year	5.3%	5.3%	4.9%
Fuel efficiency, litre fuel/100atk	23.8	23.5	23.3
% change over year	-0.7%	-1.1%	-1.1%
CO_2, million tonnes	773	814	853
% change over year	5.3%	5.3%	4.9%
Fuel price, $/barrel	66.7	52.1	64.0
% change over year	-41.9%	-21.9%	22.8%
% spread over oil price	23.7%	16.8%	18.5%
Upstream oil profits, $billion	15	12	14

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

Region Wise Performance

The strongest financial performance is being delivered by airlines in North America. Net post-tax profits will be the highest at $15.4 billion this year. That represents a net profit of $16.32 per passenger, which is a marked improvement from just 4 years earlier. Net margins, forecast at 7.2%, are down from the previous 2 years, though not by much.

Worldwide airline Industry	2015	2016	2017
Africa			
Net post-tax profit, $billion	-1.0	-0.1	-0.1
Per passenger, $	-12.55	-1.45	-1.50
% revenue	-7.1%	-0.9%	-0.9%
RPK growth, %	0.0%	9.4%	7.5%
ASK growth, %	-0.2%	8.2%	7.9%
Load factor, % ATK	55.4%	56.2%	55.9%
Breakeven load factor, % ATK	57.7%	55.1%	52.9%
Asia-Pacific			
Net post-tax profit, $billion	7.3	8.1	7.4
Per passenger, $	6.03	6.03	4.96
% revenue	3.7%	4.0%	3.4%
RPK growth, %	10.1%	10.9%	10.4%
ASK growth, %	8.4%	9.9%	8.8%
Load factor, % ATK	68.6%	68.8%	70.0%
Breakeven load factor, % ATK	62.4%	61.3%	63.0%

Middle East			
Net post-tax profit, $billion	2.1	1.1	0.4
Per passenger, $	11.05	5.31	1.78
% revenue	3.4%	1.8%	0.6%
RPK growth, %	10.4%	11.3%	7.0%
ASK growth, %	12.9%	13.1%	6.9%
Load factor, % ATK	60.1%	59.1%	60.3%
Breakeven load factor, % ATK	57.9%	57.9%	57.5%
Latin America			
Net post-tax profit, $billion	-1.6	0.6	0.8
Per passenger, $	-6.03	2.15	2.87
% revenue	-5.1%	1.9%	2.6%
RPK growth, %	7.6%	4.5%	7.5%
ASK growth, %	6.9%	3.4%	6.7%
Load factor, % ATK	62.1%	62.3%	63.2%
Breakeven load factor, % ATK	61.2%	59.7%	60.9%
North America			
Net post-tax profit, $billion	21.7	16.5	15.4
Per passenger, $	24.57	18.15	16.32
% revenue	9.9%	7.9%	7.2%
RPK growth, %	5.3%	4.2%	4.0%
ASK growth, %	5.0%	4.6%	4.4%
Load factor, % ATK	64.3%	64.0%	63.9%
Breakeven load factor, % ATK	54.7%	55.5%	56.5%
Europe			
Net post-tax profit, $billion	7.4	8.6	7.4
Per passenger, $	7.91	8.67	6.94
% revenue	3.8%	4.6%	3.7%
RPK growth, %	6.0%	5.4%	7.0%
ASK growth, %	4.8%	5.7%	6.9%
Load factor, % ATK	67.4%	67.7%	68.3%
Breakeven load factor, % ATK	63.8%	63.6%	63.7%

Source IATA Economics