

<http://www.icao.int/sustainability/Pages/Air-Traffic-Monitor.aspx>

GLOBAL KEY FIGURES

AUG 2019
(versus AUG 2018)

RPK ▲ +3.8% **ASK** ▲ +3.5% **FTK** ▼ -3.9% **LF:** 85.7% ▶ 0.0 pt

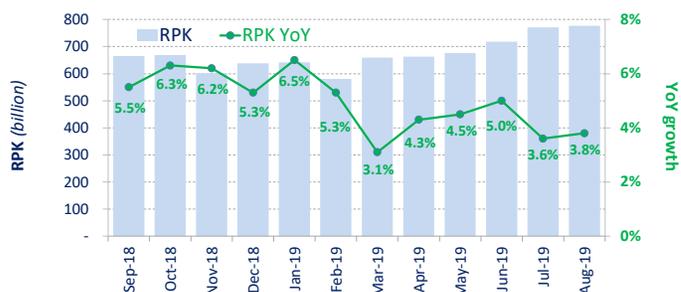
OUTLOOK* - SEP 2019
(versus SEP 2018)

ASK ▲ +3.1% * Source OAG

PASSENGER TRAFFIC

Revenue Passenger-Kilometres - RPK

World passenger traffic grew by +3.8% YoY in August 2019, +0.2 percentage point higher than the growth in the previous month. Performance by region was a mix, with Europe and Latin America/Caribbean posting improvements while Asia/Pacific, the Middle East and North America trending downward and Africa remained unchanged. Asia/Pacific continued to be the fastest growing region albeit with slight slowdown, followed by Africa. China remained as the strongest growing domestic market, followed by the Russian Federation.



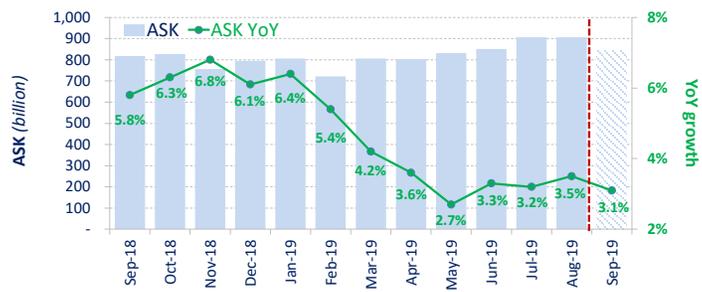
(Source: ICAO, IATA, OAG)

CAPACITY

Available Seat-Kilometres - ASK

Capacity worldwide increased by +3.5% YoY in August 2019, +0.3 percentage point higher than the growth in the previous month (+3.2%).

According to the airline schedules, capacity expansion is expected to slow down slightly to +3.1% in September 2019.

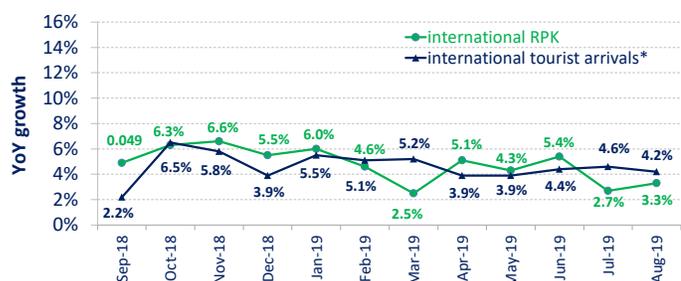


(Source: ICAO, IATA, OAG)

International Traffic vs. Tourist Arrivals

International passenger traffic grew by +3.3% YoY in August 2019, +0.6 percentage point higher than the growth in the previous month. Unlike total passenger traffic, all regions, except for Latin America/Caribbean, accelerated in international passenger traffic growth, with the most notable increase in the Middle East.

The growth of international tourist arrivals* remained relatively stable.



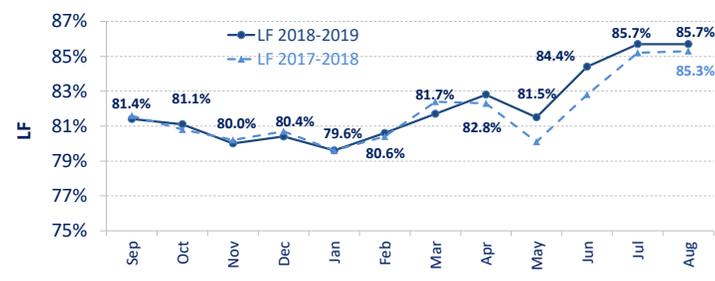
*UNWTO Definition

(Source: IATA, UNWTO)

Load Factor - LF

The passenger Load Factor reached 85.7% in August 2019, same as previous month. It was the highest LF recorded in the last twelve months.

As traffic growth outpaced the capacity expansion, the August LF was +0.4 percentage point higher compared to the rate in the same period of 2018.

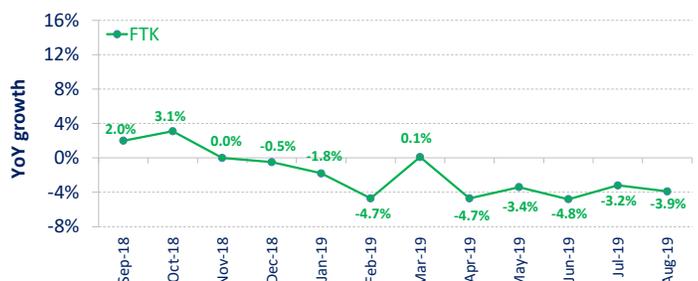


(Source: IATA)

FREIGHT TRAFFIC

Freight Tonne-Kilometres - FTK

World freight traffic reported a decline of -3.9% YoY in August 2019, -0.7 percentage point lower than the growth in the previous month. Freight traffic has been impacted by the sluggish global trade and softening economic conditions in some key markets. On the positive side, Africa continued to expand solidly despite a slowdown, supported by the strengthening in trade between Africa and Asia/Pacific. For the fourth consecutive month, the Middle East experienced the slowest growth, followed by Asia/Pacific. Accounting for over one third of the world freight traffic, Asia/Pacific was the main contributor to the overall decline.



(Source: IATA)

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TOP 15 AIRPORTS (Ranked by aircraft departures, passengers and volume of freight)

AUG 2019: +2.0%, +1.3%, and -5.8% YoY in terms of aircraft departures, passengers and freight for the Top 15

AUG 19

| Airports (ranking by number of departures) | Departures | YoY | Airports (ranking by number of passengers) | Passengers* | YoY | Airports (ranking by tonnes of freight) | Freight** | YoY |
|---|------------|---------|---|-------------|---------|--|-----------|----------|
| Chicago IL, US (ORD) | 41,508 | ↑ 1.7% | Atlanta GA, US (ATL) | 4,942,616 | ↑ 2.2% | Hong Kong, CN (HKG) | 373,000 | ↓ -11.9% |
| Atlanta GA, US (ATL) | 40,495 | ↑ 0.3% | Beijing, CN (PEK) | 4,513,500 | ↓ -0.2% | Memphis TN, US (MEM) | 363,897 | ↓ -7.0% |
| Dallas/Fort Worth TX, US (DFW) | 33,010 | ↑ 9.9% | Dubai, AE (DXB) | 4,112,528 | ↓ -1.8% | Shanghai, CN (PVG) | 292,180 | ↓ -5.3% |
| Los Angeles CA, US (LAX) | 30,895 | ↓ -2.1% | Chicago IL, US (ORD) | 4,096,808 | ↑ 1.2% | Louisville KY, US (SDF) | 233,546 | ↑ 9.3% |
| Denver CO, US (DEN) | 29,146 | ↑ 7.0% | Los Angeles CA, US (LAX) | 4,068,438 | ↓ 0.0% | Anchorage AK, US (ANC) | 226,823 | ↓ -9.5% |
| Beijing, CN (PEK) | 25,815 | ↓ -1.4% | Tokyo, JP (HND) | 4,004,318 | ↓ -7.3% | Incheon, KR (ICN) | 219,672 | ↓ -6.5% |
| Charlotte NC, US (CLT) | 24,717 | ↑ 1.6% | London, GB (LHR) | 3,840,514 | ↑ 0.1% | Dubai, AE (DXB) | 202,900 | ↓ -7.6% |
| Paris, FR (CDG) | 23,601 | ↑ 3.0% | Paris, FR (CDG) | 3,737,103 | ↑ 4.3% | Taipei, CN (TPE) | 182,892 | ↓ -7.0% |
| Amsterdam, NL (AMS) | 23,331 | ↓ -0.9% | Frankfurt, DE (FRA) | 3,458,371 | ↑ 1.8% | Doha, QA (DOH) | 174,136 | ↓ -0.8% |
| Frankfurt, DE (FRA) | 23,198 | ↑ 0.0% | Dallas/Fort Worth TX, US (DFW) | 3,436,534 | ↑ 10.1% | Los Angeles CA, US (LAX) | 169,133 | ↓ -9.8% |
| San Francisco CA, US (SFO) | 22,350 | ↑ 0.0% | Amsterdam, NL (AMS) | 3,405,380 | ↓ -0.5% | Singapore, SG (SIN) | 169,000 | ↓ -8.1% |
| Seattle WA, US (SEA) | 21,615 | ↑ 2.6% | Istanbul, TR (IST) | 3,370,301 | → 0.0% | Miami FL, US (MIA) | 164,067 | ↓ -0.7% |
| Shanghai, CN (PVG) | 21,234 | ↑ 0.2% | Shanghai, CN (PVG) | 3,354,382 | ↑ 1.0% | Frankfurt, DE (FRA) | 163,213 | ↓ -5.9% |
| Guangzhou, CN (CAN) | 21,142 | ↑ 3.4% | Guangzhou, CN (CAN) | 3,290,413 | ↑ 6.4% | Beijing, CN (PEK) | 161,040 | ↓ -8.1% |
| London, GB (LHR) | 21,068 | ↑ 0.5% | Denver CO, US (DEN) | 3,228,337 | ↑ 8.1% | Guangzhou, CN (CAN) | 153,935 | ↑ 2.3% |

Note: Total scheduled and non-scheduled services

(Source: ACI)

In terms of **aircraft departures**, the Top 15 airports reported a growth of **+2.0%** YoY. Twelve out of the Top 15 airports posted YoY increases. **Chicago** ranked **1st** with a modest growth of **+1.7%**. The strongest growth in operations was recorded by **Dallas/Fort Worth** at **+9.9%**, followed by **Denver** at **+7.0%**.

In terms of **passengers**, the Top 15 airports reported a growth of **+1.3%** YoY. Nine out of the Top 15 airports posted YoY increases. **Atlanta** remained at **1st** with a growth of **+2.2%**, followed by **Beijing** and **Dubai**, albeit with declines. The most significant increase was recorded by **Dallas/Fort Worth** at **+10.1%**. **Tokyo** continued to post decreases and further contracted by **-7.3%**.

In terms of **freight**, the Top 15 airports reported a decline of **-5.8%** YoY. All the Top 15 airports posted declines, except for Louisville and Guangzhou. The most significant decrease was posted by **Hong Kong** at **-11.9%**, followed by **Los Angeles** (**-9.8%**) and **Anchorage** (**-9.5%**). Owing to the strengthening of its hub position of UPS, **Louisville** continued to record strong growth at **+9.3%**.

TOP 15 AIRLINE GROUPS (Ranked by RPK)

AUG 2019: +4.3% YoY in terms of RPK for the Top 15

AUG 19

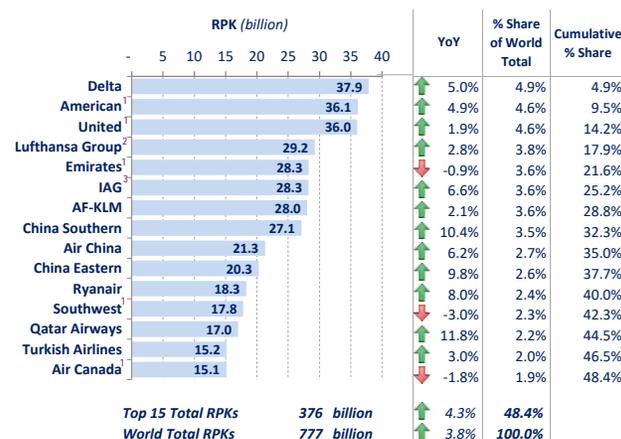
In terms of **RPK**, the Top 15 airline groups accounted for **48.4%** of the world's total RPK in August 2019 and grew by **+4.3%** YoY. This growth was +0.5 percentage point higher than the world's average on scheduled services. Twelve out of the Top 15 airline groups posted YoY growth.

Delta remained at **1st** with a solid growth of **+5.0%**. Followed were **American** and **United**, growing at **+4.9%** and **+1.9%**, respectively. **Southwest** continued to post a decline and was 2 positions down to **12th**. **Air Canada** remained at **15th**, albeit with a negative growth of **-1.8%**.

Despite a decline of **-0.9%** YoY, **Emirates** remained at **5th**. The other carrier in the region, **Qatar Airways**, recorded the fastest growth among the Top 15 with an increase of **+11.8%**, and maintained its position at **13th**.

Lufthansa, **IAG** and **AF-KLM** retained their position of **4th**, **6th** and **7th**, and grew at **+2.8%**, **+6.6%** and **+2.1%**, respectively. **Ryanair** continued to show strong growth at **+8.0%** and went up 1 position to **11th**. **Turkish Airlines** grew modestly at **3.0%** and remained at **14th**.

China Southern and **China Eastern** recorded the second and third strongest growth at **+10.4%** and **+9.8%**, respectively. The former remained at **8th** while the latter improved 1 position to **10th**. **Air China** grew solidly at **+6.2%** and maintained its **9th** position.

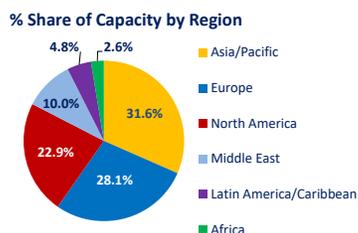


(Source: ICAO, airlines' websites)

Note: Total scheduled and non-scheduled services

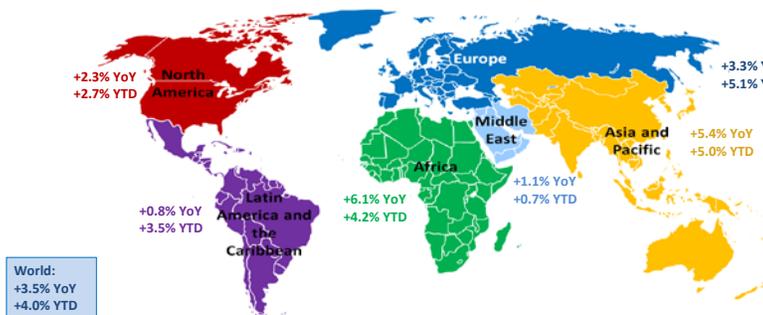
CAPACITY BY REGION (ICAO Statistical Regions)

AUG 2019: +3.5% YoY in terms of World ASK



(Source: ICAO, IATA, OAG)

Note: Total scheduled services



Worldwide capacity expanded by **+3.5%** YoY in August 2019. All regions posted acceleration in capacity expansion, except for **Latin America/Caribbean**, which slowed down slightly and became the slowest growing region. **Africa** remained as the fastest expanding region in terms of capacity, followed by **Asia/Pacific**.

The YTD capacity expansion was at **+4.0%**, with **Europe** being the fastest growing region.

* Embarked Passengers ** Loaded and Unloaded Freight in Tonnes 1. ICAO estimates 2. Lufthansa Airlines, Eurowings, SWISS, Austrian Airlines, Brussels Airlines, Sun Express, and Lufthansa Cargo 3. British Airways, Aer Lingus, Iberia, and Vueling