

Global Aviation Monitor (GAM)

Analysis and Short Term
Outlook of Global, European
and German Air Transport

June 2019



Main Results of Global Air Transport Supply Analysis and Outlook

Background:

- Covers about 3,500 airports worldwide
- Covers about 850 airlines worldwide
- Air transport supply of 2018: More than 38 M flights (non-stop) worldwide, new record value
- Busiest month 2019: June with 3.4 M flights
- Air traffic increases slowly since April 2013
- Forecasting methodology: Time series analysis
- The mean absolute forecast error over a twelve month period typically lies in a range of between 0.5 and 1.5 percentage points for a forecast horizon of 1, 2 & 3 months.

Analysis: July 2018 – June 2019

Global

- History: About 5 % growth per year before financial crisis 2008/2009, then a rapid decline of more than 9 % between February 2008 and February 2009, followed by a rather slow recovery until 2011 (7.2 % increase between February 2009 and February 2011). Since 2011, the number of flights grows only very slowly; stagnation between September 2012 and March 2013, small growth rates since April 2013; growth rates of around 3 % since March 2015, 3.0 %- 6.3 % between December 2015 and February 2019; only 1.5 % in June 2019
- June 2019: 3.4 M flights supplied (+1.5 %)
- Airports: Heterogeneous development of no. of flights offered; strong growth e.g. at Dallas/Fort Worth and Denver (5 % and more)
- Airlines: Heterogeneous development of no. of flights offered; strong growth e.g. of ANA, Aeroflot and IndiGo

World Regions, Europe

- In Europe, 1.3 % traffic increase; in Asia growth around 3 %
- Airports: Heterogeneous developments of no. of flights offered; strong increase e.g. at Moskau Sheremetyevo and Vienna, however, decline at some airports, e.g. Paris Orly and Oslo
- Airlines: Heterogeneous developments of flights, some airlines, e.g. Aeroflot with strong growth, strong growth in the low cost segment, e.g. Ryanair and Easyjet; new: Eurowings (former Lufthansa and germanwings flights in Germany and Europe are now operated by Eurowings except at Frankfurt; long-haul low cost flights from Munich and Dusseldorf). Air Berlin: insolvency: parts of Air Berlin went to Lufthansa/Eurowings: LGW; Easyjet acquired parts of Air Berlin. Some airlines, e.g. TAP with decreasing supply; Some additional flights of Ryanair with Laudamotion flightnumber

Germany

- Airports: Some bigger airports, e.g. Dusseldorf and Tegel with growth, some small airports e.g. Memmingen, with traffic growth; some German airports with downward trend, e.g. Hahn
- Airlines: Heterogeneous developments of number of flights offered; strong growth of e.g. Easyjet; Laudamotion and Ryanair with decreasing traffic

Outlook: July 2019 – September 2019

Global

- For the next few months, a traffic growth around 1 % is expected

World Regions, Europe

- For the next few months, a traffic growth around 1 % is expected

Germany

- For the next few months, a stagnation of traffic growth is expected

Trend for the next 6 month



Stable with low downside risk



Stable with low downside risk



Unstable with high downside risk

| Rank | Airport | 06/2019 | Growth rate |
|------|--------------------------------------|---------|-------------|
| 1 | Chicago O'Hare International | 39.952 | 0,9 |
| 2 | Atlanta Hartsfield-Jackson Intl | 38.311 | 0,9 |
| 3 | Dallas/Fort Worth Intl | 31.137 | 9,6 |
| 4 | Los Angeles International | 27.799 | -3,5 |
| 5 | Denver Intl | 27.165 | 7,3 |
| 6 | Beijing Capital | 24.574 | -4,0 |
| 7 | Charlotte | 22.693 | 3,2 |
| 8 | Frankfurt International | 22.431 | -0,8 |
| 9 | Amsterdam | 21.131 | -0,3 |
| 10 | Shanghai Pudong International | 21.058 | -2,1 |
| 11 | Paris Charles de Gaulle | 20.721 | 3,4 |
| 12 | London Heathrow | 20.455 | 1,0 |
| 13 | Guangzhou | 19.741 | 1,1 |
| 14 | Seattle/Tacoma International | 19.324 | 1,3 |
| 15 | Tokyo Haneda | 19.104 | 3,7 |
| 16 | Istanbul Ataturk | 19.011 | 1,6 |
| 17 | Houston George Bush Intercontinental | 18.915 | 0,0 |
| 18 | San Francisco International | 18.792 | -1,6 |
| 19 | New York J F Kennedy International | 18.770 | -3,2 |
| 20 | Delhi | 18.089 | -5,3 |
| 21 | Jakarta Soekarno-Hatta | 17.900 | -15,9 |
| 22 | Toronto Lester B Pearson Intl | 17.887 | -7,0 |
| 23 | Mexico City Juarez International | 17.835 | 3,3 |
| 24 | Newark Liberty International | 17.788 | -2,5 |
| 25 | Munich International | 17.363 | -1,4 |

Tab. 1: Number of monthly Take-offs at the largest Airports in the World

| Rank | Airport | 06/2019 | Growth rate |
|------|--------------------------|---------|-------------|
| 1 | Frankfurt International | 22.431 | -0,8 |
| 2 | Munich International | 17.363 | -1,4 |
| 3 | Dusseldorf International | 9.576 | 2,4 |
| 4 | Berlin Tegel | 8.334 | 4,0 |
| 5 | Hamburg | 6.038 | -2,2 |
| 6 | Stuttgart | 5.378 | 4,6 |
| 7 | Cologne/Bonn K.A. | 4.464 | -2,0 |
| 8 | Berlin Schoenefeld | 3.116 | -12,7 |
| 9 | Hanover | 2.503 | -2,4 |
| 10 | Nuremberg | 1.652 | -14,8 |
| 11 | Leipzig/Halle | 1.097 | 2,4 |
| 12 | Bremen | 936 | -15,0 |
| 13 | Dortmund | 784 | 16,1 |
| 14 | Dresden | 658 | -22,5 |
| 15 | Memmingen | 486 | 20,3 |
| 16 | Frankfurt Hahn | 467 | -31,0 |
| 17 | Munster | 445 | -16,4 |
| 18 | Karlsruhe/Baden Baden | 440 | 4,3 |
| 19 | Dusseldorf Niederrhein | 371 | -28,2 |
| 20 | Paderborn | 349 | 24,2 |
| 21 | Saarbrücken/Ennsheim | 278 | -12,6 |
| 22 | Friedrichshafen | 247 | -17,9 |
| 23 | Westerland | 182 | 24,7 |
| 24 | Mannheim | 168 | 44,8 |
| 25 | Rostock-Laage | 74 | -60,8 |

Tab. 3: Number of monthly Take-offs at the largest Airports in Germany

| Rank | Airport | 06/2019 | Growth rate |
|------|-----------------------------------|---------|-------------|
| 1 | Frankfurt International | 22.431 | -0,8 |
| 2 | Amsterdam | 21.131 | -0,3 |
| 3 | Paris Charles de Gaulle | 20.721 | 3,4 |
| 4 | London Heathrow | 20.455 | 1,0 |
| 5 | Istanbul Ataturk | 19.011 | 1,6 |
| 6 | Munich International | 17.363 | -1,4 |
| 7 | Madrid Barajas | 17.334 | 2,9 |
| 8 | Moscow Sheremetyevo International | 16.963 | 20,7 |
| 9 | Barcelona | 15.030 | 0,4 |
| 10 | Rome Fiumicino | 14.211 | 5,1 |
| 11 | London Gatwick | 12.932 | -0,6 |
| 12 | Vienna | 11.869 | 11,3 |
| 13 | Palma Mallorca | 11.671 | -6,0 |
| 14 | Copenhagen | 11.186 | 1,1 |
| 15 | Zurich | 10.817 | -1,2 |
| 16 | Athens Intl Eleftherios Venizelos | 10.342 | 7,8 |
| 17 | Dublin | 10.313 | 0,0 |
| 18 | Paris Orly | 10.204 | -2,1 |
| 19 | Istanbul Sabiha Gokcen | 10.117 | 6,9 |
| 20 | Oslo | 10.058 | -4,1 |
| 21 | Dusseldorf International | 9.576 | 2,4 |
| 22 | Lisbon | 9.507 | 0,5 |
| 23 | Stockholm Arlanda | 9.495 | -0,8 |
| 24 | Manchester International | 9.260 | 6,3 |
| 25 | Brussels | 9.133 | 1,5 |

Tab. 2: Number of monthly Take-offs on the largest Airports in Europe

Source: OAG 2018/19, DLR 2018/19

| Rank | Airline | 06/2019 | Growth rate |
|------|------------------------------|---------|-------------|
| 1 | American Airlines | 203.641 | 2,6 |
| 2 | Delta Air Lines | 171.639 | 1,7 |
| 3 | United Airlines | 154.260 | 0,7 |
| 4 | Southwest Airlines | 118.179 | -1,1 |
| 5 | Ryanair | 72.335 | 10,3 |
| 6 | China Eastern Airlines | 65.432 | 8,2 |
| 7 | China Southern Airlines | 64.916 | 3,2 |
| 8 | easyJet | 55.856 | 5,3 |
| 9 | Lufthansa German Airlines | 47.591 | -3,0 |
| 10 | Air Canada | 47.414 | -8,4 |
| 11 | Turkish Airlines | 43.810 | 1,2 |
| 12 | IndiGo Air | 42.081 | 23,1 |
| 13 | Air China | 41.628 | 1,7 |
| 14 | Alaska Airlines | 40.933 | 1,4 |
| 15 | LATAM | 37.556 | 4,7 |
| 16 | All Nippon Airways | 34.143 | 10,8 |
| 17 | British Airways | 32.249 | -1,0 |
| 18 | Aeroflot Russian Airlines | 31.786 | 8,5 |
| 19 | JetBlue Airways Corporation | 30.953 | -2,2 |
| 20 | Air France | 29.279 | -0,2 |
| 21 | SAS Scandinavian Airlines | 25.330 | -3,0 |
| 22 | Japan Airlines International | 24.820 | 0,4 |
| 23 | Hainan Airlines | 23.696 | 0,9 |
| 24 | Azul | 22.989 | 6,9 |
| 25 | Qantas Airways | 22.787 | 2,9 |

Tab. 4: Number of monthly Take-offs by the largest Airlines in the World

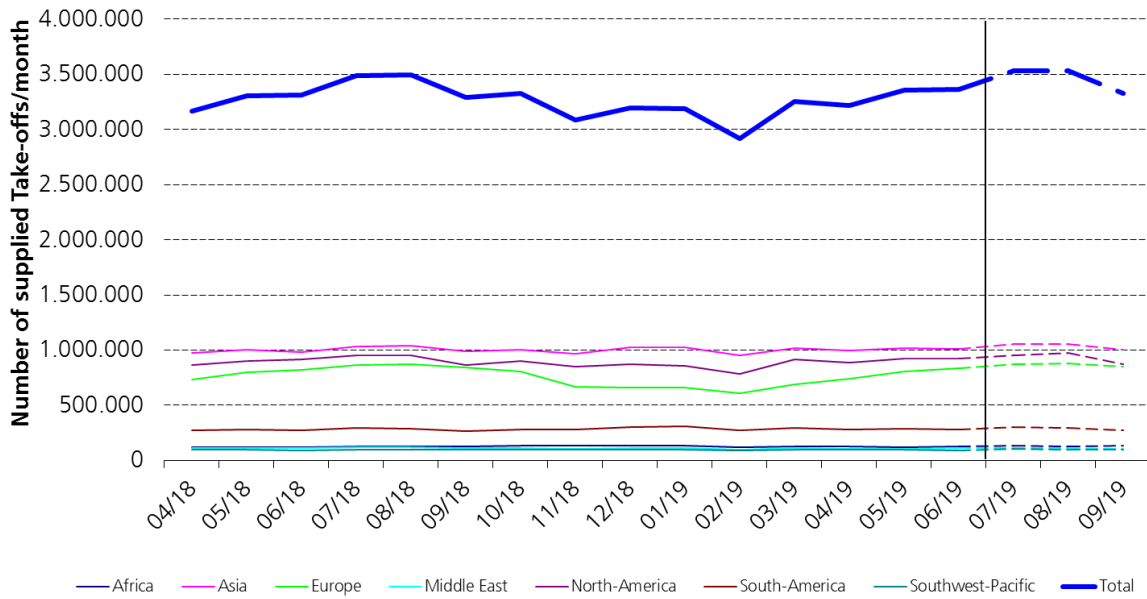
| Rank | Airline | 06/2019 | Growth rate |
|------|---------------------------|---------|-------------|
| 1 | Lufthansa German Airlines | 29.119 | -3,1 |
| 2 | Eurowings | 13.745 | 0,1 |
| 3 | Ryanair | 5.343 | -1,7 |
| 4 | easyJet | 5.169 | 17,3 |
| 5 | Condor Flugdienst | 2.607 | -4,9 |
| 6 | TUIfly | 1.835 | 8,2 |
| 7 | Austrian Airlines AG | 1.682 | 8,3 |
| 8 | SunExpress | 1.578 | 16,4 |
| 9 | Swiss | 1.558 | 17,4 |
| 10 | British Airways | 1.481 | 5,2 |
| 11 | Turkish Airlines | 1.423 | 4,0 |
| 12 | KLM-Royal Dutch Airlines | 1.405 | 2,4 |
| 13 | Wizz Air | 1.320 | 27,8 |
| 14 | Air France | 1.221 | -1,8 |
| 15 | Air Dolomiti | 1.128 | 67,6 |
| 16 | Laudamotion | 1.000 | -30,2 |
| 17 | SAS Scandinavian Airlines | 989 | 3,0 |
| 18 | Aeroflot Russian Airlines | 861 | 5,6 |
| 19 | Pegasus Airlines | 761 | 63,3 |
| 20 | SunExpress Deutschland | 573 | -1,9 |
| 21 | LOT - Polish Airlines | 556 | -15,5 |
| 22 | TAP Air Portugal | 463 | -3,5 |
| 23 | United Airlines | 450 | 0,0 |
| 24 | Aegean Airlines | 437 | 24,1 |
| 25 | Finnair | 423 | 7,4 |

Tab. 6: Number of monthly Take-offs by the largest Airlines in Germany from German airports

| Rank | Airline | 06/2019 | Growth rate |
|------|---------------------------|---------|-------------|
| 1 | Ryanair | 70.981 | 9,9 |
| 2 | easyJet | 55.334 | 5,1 |
| 3 | Lufthansa German Airlines | 43.810 | -3,2 |
| 4 | Turkish Airlines | 38.140 | 0,3 |
| 5 | Aeroflot Russian Airlines | 26.949 | 8,9 |
| 6 | British Airways | 26.789 | -1,6 |
| 7 | Air France | 25.673 | -0,1 |
| 8 | SAS Scandinavian Airlines | 24.919 | -3,1 |
| 9 | Eurowings | 22.039 | -0,2 |
| 10 | Vueling Airlines | 21.051 | 2,2 |
| 11 | KLM-Royal Dutch Airlines | 20.367 | 2,0 |
| 12 | Wizz Air | 17.338 | 5,7 |
| 13 | Iberia | 17.299 | 1,9 |
| 14 | Alitalia | 16.933 | 6,0 |
| 15 | Flybe | 14.834 | -7,0 |
| 16 | Pegasus Airlines | 14.532 | -0,7 |
| 17 | Swiss | 12.636 | 6,3 |
| 18 | Austrian Airlines AG | 12.527 | 3,2 |
| 19 | TAP Air Portugal | 10.852 | -2,0 |
| 20 | Finnair | 10.701 | 4,2 |
| 21 | LOT - Polish Airlines | 10.613 | 0,9 |
| 22 | Jet2.com | 10.176 | 10,3 |
| 23 | Norwegian Air Shuttle | 10.012 | -3,8 |
| 24 | Aer Lingus | 9.555 | 2,7 |
| 25 | Wideroe's Flyveselskap | 9.398 | -4,3 |

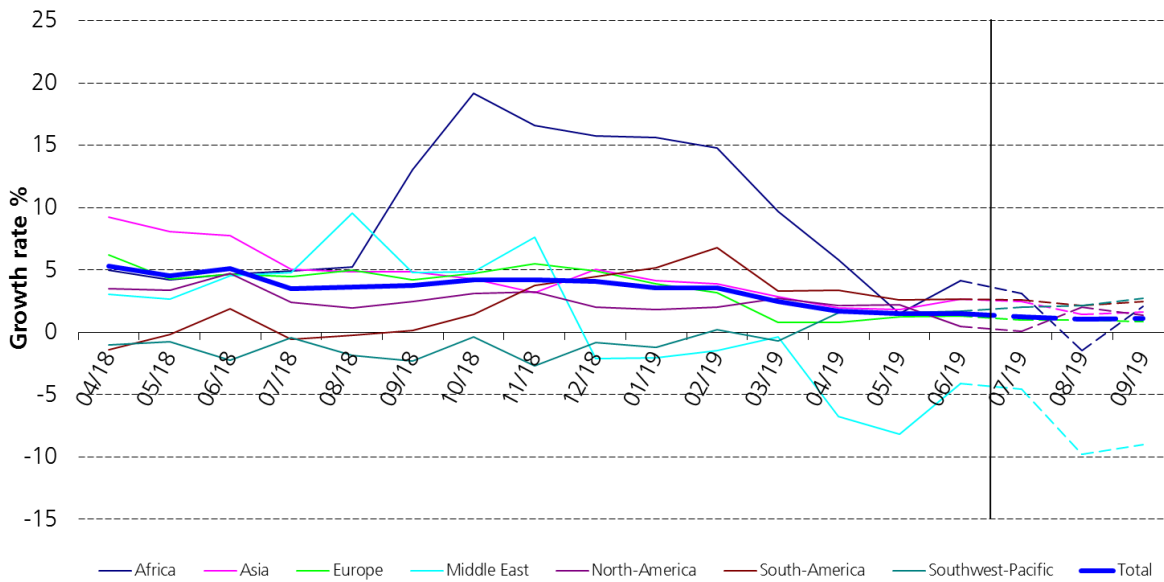
Tab. 5: Number of monthly Take-offs by the largest Airlines in Europe from European airports

Source: OAG 2018/19, DLR 2018/19



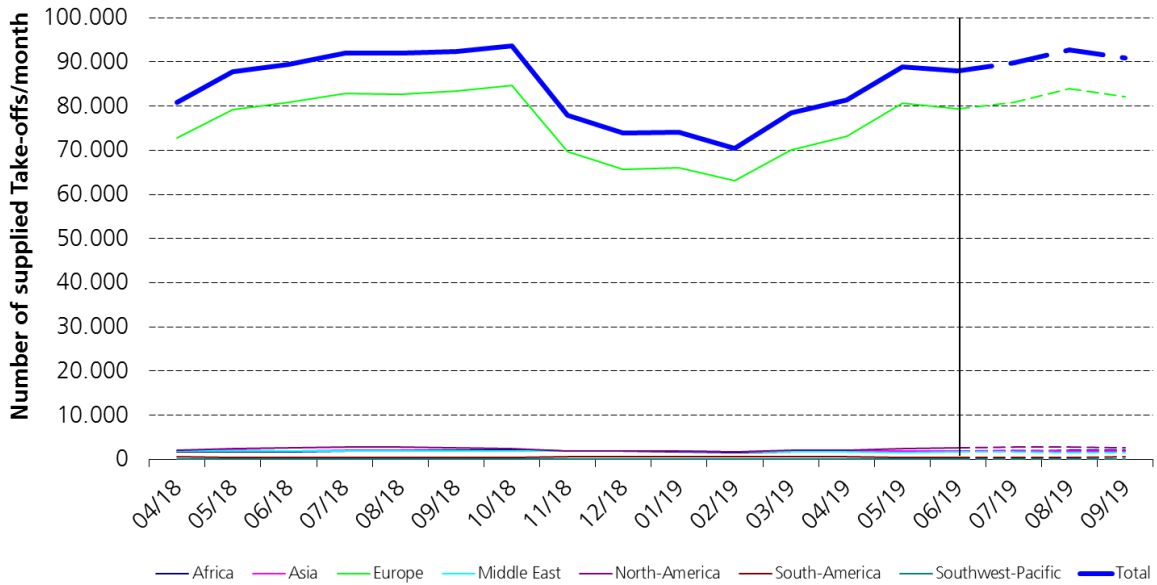
Source: OAG 2018/2019, DLR 2018/2019

Fig. 1: Development of the Global Air Transport Supply



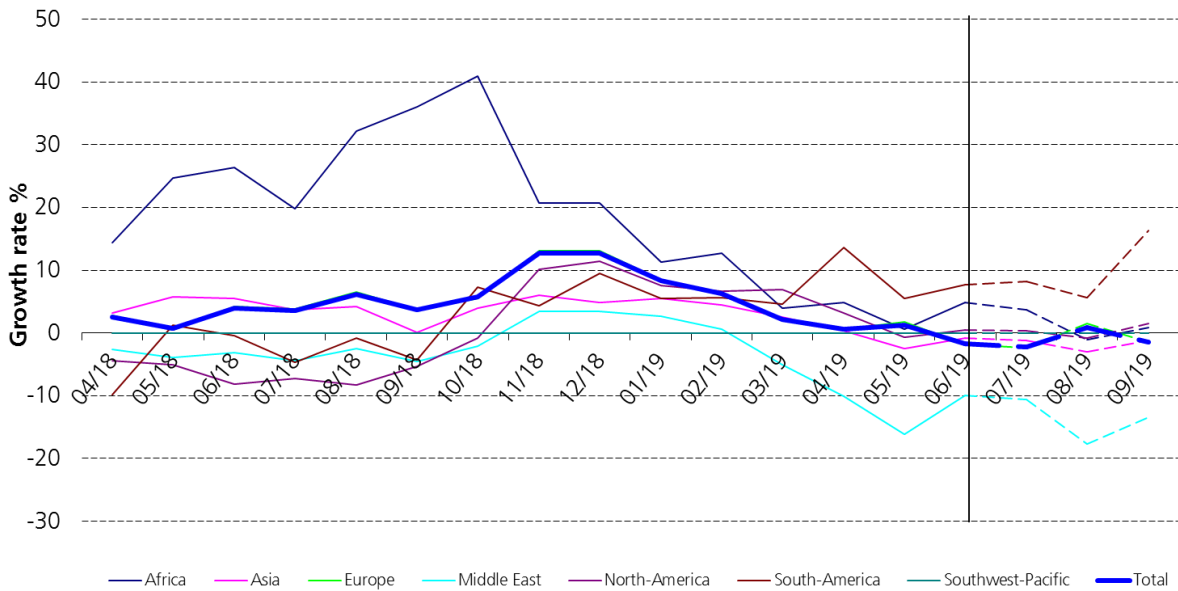
Source: OAG 2018/2019, DLR 2018/2019

Fig. 2: Changes in the Global Air Transport Supply



Source: OAG 2018/2019, DLR 2018/2019

Fig. 3: Development of the German Air Transport Supply



Source: OAG 2018/2019, DLR 2018/2019

Fig. 4: Changes in the German Air Transport Supply

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