AIRFREIGHT TRENDS

Houston
November 2018

David Cyrus
VP, Network Carrier Management & StarBroker, Americas
Agenda

» Supply – Capacity Development

» Demand – Volume Development

» eCommerce implications

» Crude oil and jet fuel price development

» Regional market overview
Supply – Capacity development

Regional Capacity Development by Configuration

Available capacities increased by +1.7% in July year-on-year.

The overall capacity increase is entirely attributable to additional space on passenger aircraft.

Passenger aircraft: +6.0% year-on-year.

Freighter aircraft: -6.3% year-on-year.

Source: Seabury Market Data

DHL Global Forwarding | Airfreight State of the Industry | November 2018
Out of total available capacities, freighter capacity share has decreased by -11.0% throughout the last 10 years.

Only 23% of future capacity additions are attributable to additional freighters; thereof the most significant portion (77%) is destined for integrators.
Global demand measured in FTKs increased by +2.1% in July year-on-year (+4.3% YTD).

Demand in key regions increased on a year-on-year FTK comparison by +2.6% in EURO, +0.9% in ASPA and +2.6% in AMNO.

Year-on-year FTKs in Latin America increased by +3.0% and in the Middle East by +5.4%. FTKs in Africa decreased by -8.3%.

Source: IATA Air Freight Market Analysis
Volume and Capacity Development

Volume and Capacity Development across key Trade Lanes

% change H1 2017 to H1 2018

Global volume growth: +7.1%

Global capacity growth: +4.5%

Source: DGF Forwin HB Export Volume; Seabury Market Data; Seabury Capacity Data
### Global E-commerce Growth Estimate

- **Global e-commerce sales will double by 2021.**

#### Retail e-commerce sales worldwide

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales in US$ billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2,304</td>
</tr>
<tr>
<td>2018</td>
<td>3,346</td>
</tr>
<tr>
<td>2019</td>
<td>4,208</td>
</tr>
<tr>
<td>2020</td>
<td>4,878</td>
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<td>2021</td>
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</table>

**112% growth 2017-2021**

#### E-commerce online retail sales, USD billions

1. **USA**
   - 2010: 1,000
   - 2015: 1,800

2. **China**
   - 2010: 200
   - 2015: 400

**22% growth per year**

- **China online retail sales annual growth**

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rate</th>
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<tr>
<td>2010</td>
<td>64%</td>
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<tr>
<td>2011</td>
<td>69%</td>
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<tr>
<td>2012</td>
<td>69%</td>
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<td>2013</td>
<td>40%</td>
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<td>2014</td>
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</tr>
<tr>
<td>2015</td>
<td>33%</td>
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</table>

**2-3 times the size**

- China is the biggest e-commerce country with high growth.

*Source: IPC 2017*
Jet Fuel Price Development

Crude Oil vs. Jet Fuel Price Development

Jet fuel price increased from 59.20 USD per barrel in July 2017 (by +51.9%) to 89.91 USD per barrel in July 2018.

The U.S. Energy Information Administration projects the annual average jet fuel price at +29.9% comparing 2017 to 2018.

Source: Global Insight, Copyright © IHS, 2018. All rights reserved; IATA Fuel Price Analysis; Platts; U.S. Energy Information Administration, Short-Term Energy Outlook
## Regional market development

### Market Developments on Key Trade Lanes

<table>
<thead>
<tr>
<th>Country 1</th>
<th>Country 2</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Key comments</th>
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<tbody>
<tr>
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<td>🟢</td>
<td>🟢</td>
<td>Peak season expected to start in September coupled reduced capacity during winter schedule.</td>
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<td>AMNO</td>
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<td>🟢</td>
<td>Capacity bottlenecks expected on key lanes during winter schedule. Expected freighter cancellations to further restrict access to capacity.</td>
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<td>EURO</td>
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<td>🟢</td>
<td>Inbound EURO and ASPA capacity expected to tighten during Q4.</td>
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<td>Demand expected to tighten due to perishable season.</td>
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- 🟢 Demand exceeded capacity
- 🟠 Upward pricing pressures
- 🟡 Demand for capacity is high
- 🟣 Backlogs forming
- ✅ No cargo flow disruptions
- ☰ Normal capacity demand

Source: DHL Global Forwarding Internal Analysis
THANKS FOR YOUR TIME!

Questions?
Back-up
## Summary

### Market
- Global demand measured in FTKs increased by +2.1% in July year-on-year. January to July FTKs combined increased by +4.3% compared to the same period last year.
- Current moderate market growth rates are primarily driven by 2017 being the strongest year in history for airfreight in terms of absolute tonnage flown.

### Capacity
- Taking total available capacities into account, freighter capacity share reached an all-time low of 30.7%.
- Further reduction of capacity expected due to cancellation of freighter flight movements (especially ex ASPA).

### Carriers
- Carriers are communicating peak season rate increases starting end of Q3/ beginning of Q4 2018.
- Rate increases are applicable to spot rates, Block Space Agreements (BSA) and charters.

### Jet Fuel
- Jet fuel price increased from 59.20 USD per barrel in July 2017 (by +51.9%) to 89.91 USD per barrel in July 2018.
- The U.S. Energy Information Administration projects the annual avg. jet fuel price at +29.9% comparing 2017 to 2018.

### Airfreight Buying Rates
- Avg. buy rates increased in H1 2018 compared to H1 2017 by:
  - AMNO to World: + 10.5%
  - ASPA to World: + 19.6%
  - EURO to World: + 24.2%

### Airports Cargo Volumes
- LAX + 2.0% Jul 2018 YTD
- MIA + 4.4% Jul 2018 YTD
- SIN + 2.6% Jul 2018 YTD
- AMS + 2.7% Jul 2018 YTD

### Regulation
- Japanese government authorities grounded Nippon Cargo Airlines’ freighter fleet (11 Boeing 747F) due to violation of safety procedures, simultaneously causing a sudden loss of capacity ex Asian markets. Until now only two aircraft resumed limited service.

Source: IATA Market Analysis; IATA Cargo IS Market Focus; Seabury Market Data; Cargo Facts Update; Airport Websites; Air Cargo News; US Energy Information Administration
Global demand measured in FTKs increased by +2.1% in July year-on-year.
Jet fuel price further increased by +51.9% in July year-on-year.
Global freighter capacity share reached an all-time low of 30.7% in July 2018.

Source: Global Insight, Copyright © IHS, 2018. All rights reserved; IATA Fuel Price Analysis; IATA Air Freight Market Analysis; Seabury Market Data
DHL Global Forwarding now delivers a new freighter service to move cargo around-the-world from major gateways in Europe, Asia, and North America.

Fully controlled by DHL Global Forwarding this service offers multiple connections across all continents per week

- Own controlled capacity, fixed year-round, utilizing two Boeing 747-400F
- Up to 4 flights from China to the USA, 2 flights from the USA to China, daily flights from the US to Europe and 2 roundtrips from China to Europe
- Life Sciences capabilities, compatible with DHL Air Thermonet and DHL LifeConEx
- Aircraft will be part of the pool of capacity we offer ex-CVG into Europe, as part of the existing well-developed DHL Aviation network
- RFS services available to main stations in the USA:
  - (ORD, DFW, IAH, ATL, MIA, DTT, MSP, JFK)
- RFS services available to main stations in Europe:
  - (AMS, CDG, FRA, STO, LYS, DUS, MAD, MXP)
Around the World Freighter Service