2017 Current Market Outlook

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Agenda

Market performance, expectations

2017 Current Market Outlook

Product strategy
Market is growing, customers are profitable

**Traffic growth rates (RPKs)**

- 2010: 8%
- 2011: 7%
- 2012: 6%
- 2013: 5%
- 2014: 4%
- 2015: 3%
- 2016: 2%

**Cargo growth rates (RTKs)**

- 2010: 20%
- 2011: 18%
- 2012: 16%
- 2013: 14%
- 2014: 12%
- 2015: 10%
- 2016: 8%

**Net profit (billions)**

- 2010: $30 billion
- 2011: $25 billion
- 2012: $20 billion
- 2013: $15 billion
- 2014: $10 billion
- 2015: $5 billion
- 2016: $0 billion

SOURCE: ICAO / IATA

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Industry-leading delivery performance

![Bar chart showing delivery performance from 2010 to 2016 with numbers 462, 477, 601, 648, 723, 762, and 748. The chart indicates a consistent increase in delivery performance over the years.]

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2017 global market expectations

- **Passenger traffic growth**: 6-7%
- **Cargo traffic growth**: 5-6%
- **Airline profits**: $31B

*SOURCE: Boeing estimates for growth, IATA forecast for airline profits*
Headwinds in the market

Economic
- Wide economic growth variation
- Volatile exchange rates
- Trade / air cargo

Geopolitical
- Populism
- Increased geopolitical uncertainty
- Terrorism frequency, breadth

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What’s in the Current Market Outlook (CMO)?

20-year forecast
- Traffic
- Product

All jets >30 seats
- No turbo props
- No biz jets
- No military

Freighters

All flights
- Scheduled
- Nonscheduled
1997 Boeing CMO analysis results

NOTE: Fleet consists of all jet aircraft with at least 90 seats

Actual deliveries

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1997 Boeing CMO analysis results

Actual Deliveries (1997-2016)

CMO 1997

GMF 1997

LG WB

SM WB

SA
Market forecast drivers and considerations

- Economic growth
- Competitive landscape
- Airport infrastructure
- Environmental regulations
- Airline strategies & business models
- Fuel price
- Emerging markets
- Market liberalization
- Airplane capabilities

CURRENT MARKET OUTLOOK
2017-2036
Resilient, growing market expected to continue

5% long-term growth rate

SOURCE: ICAO scheduled traffic / 2016E IATA December 2016, RPKs = Revenue Passenger Kilometers
20-year forecast: continued long-term growth

Average annual growth

- World economy (GDP): 2.8%
- Number of airline passengers: 4.0%
- Cargo traffic (RTK): 4.2%
- Passenger traffic (RPK): 4.7%
Air travel growth varies by market

RPKs, billions

World GDP growth: 2.8%

World traffic growth: 4.7%

*Does NOT include travel within China

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Airlines will need 41,030 new airplanes valued at $6.1 trillion.

Airplane deliveries: 41,030

2017 - 2036

- Regional jets: 2,370 (6%)
- Single-aisle: 29,530 (72%)
- Small pax widebody: 5,050 (12%)
- Med/Lg pax widebody: 3,160 (8%)
- Freighters: 920 (2%)

Market value: $6,050 billion

2017 - 2036

- Regional jets: $110B (2%)
- Single-aisle: $3,180B (53%)
- Small pax widebody: $1,340B (22%)
- Med/Lg pax widebody: $1,160B (19%)
- Freighters: $260B (4%)
Global fleet will double

- Retained fleet: 5,920
- Replacement: 17,560 (43%)
- Growth: 23,470 (57%)

From 23,480 units in 2016 to 46,950 units in 2036.
Market for new airplanes to become even more geographically balanced

New airplane deliveries by region

<table>
<thead>
<tr>
<th>Region</th>
<th>2017 - 2036 Airplanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>16,050</td>
</tr>
<tr>
<td>North America</td>
<td>8,640</td>
</tr>
<tr>
<td>Europe</td>
<td>7,530</td>
</tr>
<tr>
<td>Middle East</td>
<td>3,350</td>
</tr>
<tr>
<td>Latin America</td>
<td>3,010</td>
</tr>
<tr>
<td>C.I.S.</td>
<td>1,230</td>
</tr>
<tr>
<td>Africa</td>
<td>1,220</td>
</tr>
<tr>
<td>World Total</td>
<td>41,030</td>
</tr>
</tbody>
</table>

Market value by region

<table>
<thead>
<tr>
<th>Region</th>
<th>2017 - 2036 $Billions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>2,500</td>
</tr>
<tr>
<td>North America</td>
<td>1,040</td>
</tr>
<tr>
<td>Europe</td>
<td>1,110</td>
</tr>
<tr>
<td>Middle East</td>
<td>730</td>
</tr>
<tr>
<td>Latin America</td>
<td>350</td>
</tr>
<tr>
<td>C.I.S.</td>
<td>140</td>
</tr>
<tr>
<td>Africa</td>
<td>180</td>
</tr>
<tr>
<td>World Total</td>
<td>$6,050B</td>
</tr>
</tbody>
</table>
Future new freighter deliveries will be led by demand for large widebodies

New freighter deliveries: 920
2017 - 2036

Market value: $260 billion
2017 - 2036

<table>
<thead>
<tr>
<th>Size</th>
<th>Deliveries</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>490 (53%)</td>
<td>$170B</td>
</tr>
<tr>
<td>Medium</td>
<td>430 (47%)</td>
<td>$90B</td>
</tr>
<tr>
<td>Standard</td>
<td>0 (0%)</td>
<td>$0B</td>
</tr>
</tbody>
</table>

Large >80 tonnes 53%
Medium 40-80 tonnes 47%
Standard <45 tonnes
Commercial aviation will demand $8.5 trillion in services over 20 years

Commercial Aviation Services: $8.5T

<table>
<thead>
<tr>
<th>CAGR</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate &amp; External 3.0%</td>
<td>$125B</td>
</tr>
<tr>
<td>Marketing &amp; Planning 4.6%</td>
<td>$450B</td>
</tr>
<tr>
<td>Flight Ops 4.1%</td>
<td>$1,140B</td>
</tr>
<tr>
<td>Maintenance &amp; Engineering 4.0%</td>
<td>$2,110B</td>
</tr>
<tr>
<td>Ground, &amp; Cargo Ops 4.1%</td>
<td>$4,300B</td>
</tr>
</tbody>
</table>

Services by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Services</th>
<th>CAGR</th>
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</thead>
<tbody>
<tr>
<td>Asia</td>
<td>3,200</td>
<td>5.3%</td>
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<tr>
<td>North America</td>
<td>1,775</td>
<td>3.1%</td>
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<tr>
<td>Europe</td>
<td>1,765</td>
<td>2.8%</td>
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<tr>
<td>Middle East</td>
<td>730</td>
<td>5.0%</td>
</tr>
<tr>
<td>Latin America</td>
<td>530</td>
<td>5.0%</td>
</tr>
<tr>
<td>CIS</td>
<td>250</td>
<td>3.9%</td>
</tr>
<tr>
<td>Africa</td>
<td>210</td>
<td>5.3%</td>
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<tr>
<td>World Total</td>
<td>$8,460</td>
<td>4.0%</td>
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</table>
Superior market coverage, exceptional value
The Experience. For luxury and economy passengers alike, the air travel environment has changed significantly over the decades.