Market Outlook

Michael Warner
Director, Market Analysis
Boeing Commercial Airplanes
October 2012
Agenda
Aviation environment
Current products
Product strategy & development

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2012
719 net orders through September 25
380 deliveries through August 31
4,057 in backlog through August 31
JFK to LAX

Oct 2012

...and 1932

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World economic outlook

- Weak growth outlook 2012-2013
- Global growth increasingly driven by performance of emerging economies
- Watch Items
  - EU sovereign debt
  - US fiscal outlook
  - Oil/jet fuel prices
  - Iran
  - World trade

Real GDP growth rate forecasts

Year-over-year

%
Passenger traffic remaining resilient

![Chart showing passenger traffic and capacity comparison from July 2010 to July 2012. The chart indicates a period of resilience in traffic with slight fluctuations in capacity across different months and years.](chart.png)
Load factors at record highs

- Airlines adjusting capacity in response to demand, route profitability
- Load factors near record highs
- Parked fleet - typical seasonal trends
- Utilization near peaks, single-aisle more seasonal
Cargo traffic growth

Monthly % change in world air cargo traffic over prior year

Sources: IATA Carrier Tracker (Industry international scheduled freight) and A4A US domestic cargo traffic, Boeing
Robust market demand continues

**Geographic balance**

*China, Emerging Asia, Middle East, Africa*

**Business model balance**

*Geographic expansion of Low Cost model, Gulf 6th Freedom carriers*

**Replacement requirements**

*Replacement of older fleet driven by historically high fuel prices*
Production rates are rising
Large demand for new, efficient aircraft to replacing the aging fleet

Units, 25-year retirement age

*362 Single Aisle and 87 Twin Aisle already >25 years old and still in service

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World air travel has grown 5% per year since 1980

- 4 recessions
- 2 financial crises
- 2 Gulf wars
- 1 oil shock
- 1 near pandemic (SARS)
- 9/11

RPKs (trillions)

RPKs = Revenue Passenger Kilometers

Sources: ICAO Scheduled Traffic

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Airlines will need 34,000 new airplanes valued at $4.5 trillion

Airplane deliveries: 34,000
2012 - 2031

- Regional jets: 2,020 (6%)
- Single-aisle: 23,240 (68%)
- Twin-aisle: 7,950 (24%)
- Large: 790 (2%)

Market value: $4.5T
2012 - 2031

- Regional jets: $80B (2%)
- Single-aisle: $2,030B (45%)
- Twin-aisle: $2,080B (47%)
- Large: $280B (6%)

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Air travel becoming more diverse geographically

Air traffic, RPKs (billions)

- 1991: 2,000 (72%)
- 2011: 5,000 (53%)
- 2031: 14,000

Regions:
- North America: 40%
- China: 53%
- Asia Pacific (excl. China):
- Europe:
- Middle East:
- Other:

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787 innovation delivers the most value

787-8
210 to 250 passengers
14,200-15,200 km
(7,650-8,200 nmi)

787-9
250 to 290 passengers
14,800-15,750 km
(8,000-8,500 nmi)
787 in-service routes

As of October 1, 2012
777 is the preferred choice
1,379 firm orders and 1,039 deliveries to 63 customers

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*as of August 31, 2012
777 inspires passenger loyalty
Advanced technology for improved performance

- 787-wing design
- Innovative interior design
- Next-generation materials
- 787 technology engines
- Modern flight deck

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“Passengers are loving the Intercontinental”

- New seats in all sections
- Larger carry-on bins
- Huge jump in premium seat capacity-- from 60 to 92 per plane
  - Upper deck entirely business class, some additional on main deck
  - First class section closest to the nose giving premium passengers greater privacy
- Upgraded seat-back entertainment in economy

Source: USA Today article by Bart Jansen, 9/5/2012, Lufthansa
Quote source: Helmuth Schabel, Lufthansa’s regional director for the East Coast
747-8F performance-to-date

- 21 delivered to 7 customers
- 45,500+ total flight hours*
- 8,200 cycles*
- Dispatch reliability targets exceeded during first six months

*Total hours/flights through August 27, 2012
737 MAX is designed for maximum advantage

- Local empennage strengthening
- Local fuselage strengthening
- Systems revisions
- Wing modifications
- Flight deck revisions
- Aft body aero improvements
- New strut and nacelle
- CFM LEAP-1B engine
- Main landing gear strengthening
- Nose landing gear lengthening

Changes relative to Next-Generation 737 MTOW increase under study

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MAX passenger appeal is available only on the 737
754 MAX firm orders from eight customers
737 MAX on track to deliver

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Agenda

Product strategy & development

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Delivering more value to the market

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Product opportunity drivers

- Market Requirement
- Financial Viability
- Technical Readiness
- Resource Availability

Product Opportunity → New Airplanes
Widebody market coverage

- **Future Boeing**
  - 787-8
  - 777-200LR
  - 777-300ER
  - 777X
  - 787-10X

- **Airbus**
  - A380
  - A350-1000
  - A350-900
  - A330-300
  - A350-800
  - A330-200

Seats:
- 500
- 450
- 400
- 350
- 300
- 250

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Much more at: www.boeing.com/cmo