World Financial Symposium

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Aircraft Financing - The Future Looks Bright, or Does it?
The Continued Evolution of Commercial Operating Leasing

Edward (Ted) O’Byrne,
CIO, Aercap
The Continued Evolution of Commercial Operating Leasing

Edward O’Byrne, Chief Investment Officer, AerCap

September 27, 2017
Evolution of Operating Leasing
Today AerCap is the global leader in aircraft leasing and aviation finance

Over 40 Year Legacy
AerCap’s legacy stems from the two founders of aircraft leasing: GPA (1975) and ILFC (1973)

Quick Facts¹:
• ~200 customers in ~80 countries
• 10 offices across the globe
• Listed on the NYSE since 2006
• Only independent lessor to hold Investment Grade Rating with S&P, Fitch and Moody’s
• ~$41 billion in total assets

Leading Lessor
AerCap has deployed capital/assets to facilitate the growth of aviation in all regions of the world

• 1,110 owned and managed aircraft
• Order book of 429 new technology aircraft
• World’s largest A320neo family lessor
• World’s largest 787 overall customer
• World’s 2nd largest A350 lessor

AerCap buys, sells, or leases over one aircraft per day

¹ As of June 30, 2017.
1,539 owned, managed or committed aircraft

Attractive Portfolio

1,110 OWNED & MANAGED

- Boeing 787: 49
- Boeing 777: 61
- Boeing 767: 35
- Airbus A350: 12
- Airbus A330: 100
- Airbus A320 Family: 440
- Other: 50

AERCAP

429 AIRCRAFT ON ORDER

- Boeing 787: 67
- Embraer E-Jet: 50
- Boeing 737MAX: 109
- Airbus A320neo Family: 189
- Airbus A350: 14

(1) As of June 30, 2017
Despite recent consolidations among major lessors, the market is less concentrated than it was almost a decade ago.

Lessor Competitive Landscape

AerCap’s scale and order book continues to provide a key competitive advantage

(1) Flightglobal's Portfolio Tracker, June 2017 - Owned and managed aircraft of top 40 lessors (ranked by fleet value, excluding Boeing Capital).
Increasing Demand for Operating Lease

Over the past 20 years, the world fleet DOUBLED while the operating lease fleet QUADRUPLED

Proportion of Global Fleet on Operating Lease

Leasing Increasingly Represents a Significant Share of Major Airlines’ Fleets (% Leased)

(1) Ascend Fleets database as of September 14 for each respective year - Airbus, Boeing, McDonnell-Douglas in service passenger jets.

(2) Financial Reports used where available, otherwise Ascend as of September - Airbus, Boeing, McDonnell-Douglas in service passenger jets, leased summary share.
Why Leasing?
Key Drivers of Continued Growth

Continued Growth of the Aircraft Leasing Market

RESIDUAL VALUE MANAGEMENT

CAPEX & CASH FLOW MANAGEMENT

OPERATIONAL OPTIONALITY

FRONT END: Delivery slots availability shorter than OEMs
BACK END: Ability to right-size fleet to match capacity to actual passenger demand
Residual Value Risk Management

Lessors are better equipped to manage residual values

Proxy 1: A340-600
New Technology Risk

Proxy 2: 747-400
Impact of New Technology Introduction

(1) Avitas Blue Books
Avoid Risk of Ordering from OEMs

**OEM ORDERING RISKS**

- **AIRCRAFT PRICING RISK**
  - Competitive pricing is only achieved through big orders that don’t necessarily match fleet requirements
  - Financial pressure of over commitment

- **PDP OBLIGATION RISK**
  - Heavy capital burden, without matching revenues
  - Impacts ROIC, creates funding risk, deteriorates creditworthiness

- **LONG LEAD TIME RISK**
  - Typical OEM availability: ~5 years
  - More difficult to foresee market demand and fleet requirements

**LESSOR SUPPLY BENEFITS**

- **TAILORED FLEET SUPPORT**
  - Competitive pricing can be achieved matching exact capacity requirements
  - No financial pressure

- **NO UPFRONT INVESTMENT**
  - Cash flow matches revenue, no capital expenditure
  - Cash flow benefit

- **EARLIER DELIVERY SLOTS**
  - Typical lessor availability for new aircraft: ~2 years
  - Easier fleet decisions management

Sourcing new aircraft through lessors avoids any financial pressure, optimizes return on capital to shareholders and lowers operational risks.
Operating lease gives the flexibility to right-size the fleet according to traffic growth and competitive environment, improving load factors and gaining access to new technology aircraft.

**Value of Optionality**

- **BUY**
  - A320-200
  - 145 seats

- **LEASE**
  - A321-200
  - 161 seats
  - Ability to up-gauge & match demand

  - A319-100
  - 138 seats
  - Down-gauge & maintain market share

  - A320-200
  - 145 seats

**Context:**
- Traffic \( \uparrow \) 3%
- Traffic \( \downarrow \) 3%
- New Technology

**NO FLEXIBILITY**
- No ability to increase capacity
- Over capacity
- High operating costs

**Context:**
- Traffic \( \uparrow \) 3%
- Traffic \( \downarrow \) 3%
- New Technology
Lessor Scale Enables Fleet-Wide Solutions

AerCap offers unparalleled access to the most-in-demand new and used aircraft to meet airlines’ fleet needs

Access to Modern, Fuel-Efficient Aircraft

- PLACEMENT OF 24 NEW AIRBUS A320neo FAMILY AIRCRAFT
  - China Southern

- Access to the industry's leading order book with 441 modern, fuel-efficient aircraft\(^1\)
- Attractive delivery positions to match capacity with forecasted demand
- Faster implementation of new technologies
- World's largest lessor customer of Airbus A320neo family, Boeing 787, Embraer E-Jet E2 and 3\(^{rd}\) largest lessor customer of 737 MAX\(^1\)

Access to a Diverse Portfolio of Used Aircraft

- PLACEMENT OF 25 USED AIRBUS A319s
  - United Airlines

- Operating flexibility to incrementally match capacity to actual passenger demand
- Opportunistically add used aircraft on existing routes when the economics are attractive
- Access to a diverse group of mid-life aircraft at attractive lease rates
- Greater flexibility in long-term capital management

(1) As of June 30, 2017.
Conclusions
**Key Drivers of Continued Growth**

- Operating & financial rationale for leasing
- New capital driving pricing down
- Y-on-Y deliveries show 50%+ going to lessors
This presentation contains certain statements, estimates and forecasts with respect to future performance and events. These statements, estimates and forecasts are “forward-looking statements”. In some cases, forward-looking statements can be identified by the use of forward-looking terminology such as “may,” “might,” “should,” “expect,” “plan,” “intend,” “estimate,” “anticipate,” “believe,” “predict,” “potential” or “continue” or the negatives thereof or variations thereon or similar terminology. All statements other than statements of historical fact included in this presentation are forward-looking statements and are based on various underlying assumptions and expectations and are subject to known and unknown risks, uncertainties and assumptions, may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied in the forward-looking statements. As a result, there can be no assurance that the forward-looking statements included in this presentation will prove to be accurate or correct. In light of these risks, uncertainties and assumptions, the future performance or events described in the forward-looking statements in this presentation might not occur. Accordingly, you should not rely upon forward-looking statements as a prediction of actual results and we do not assume any responsibility for the accuracy or completeness of any of these forward-looking statements. We do not undertake any obligation to, and will not, update any forward-looking statements, whether as a result of new information, future events or otherwise.

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The Impact of Today’s Multifaceted Financing and Uncertainties

Munawar Noorani,
Head of Aviation EMEA & APAC, Citi
Financing for Growth

Munawar Noorani, Managing Director, Head of Aviation Banking EMEA & APAC

IATA 4th World Financial Symposium: 27 September 2017
Air Travel Continues to be Supported by Global GDP Growth

Demand for air transport has historically grown at ~1.5x global GDP growth with only three periods at negative growth since 1970. Growth will continue to be driven by the Emerging Markets.

Air Travel has Proved to be Resilient to External Shocks

Air Traffic and Global GDP Growth; 1990 = 100

Growth Driven by Emerging Markets

2016–2036 Annual GDP Growth (%)

- Asia: 3.9%
- Middle East: 3.5%
- Africa: 3.5%
- LatAm: 3%
- World: 2.8%
- North America: 2.1%
- CIS: 2%
- Europe: 1.7%

APAC Lead in World Traffic will Increase by 2035

RPK Traffic by Airline Domicile (Bn)

- Asia-Pacific: 6,000
- Europe: 4,000
- North America: 2,000
- Middle East: 600
- LatAm: 400
- CIS: 200
- Africa: 100

Global Air Traffic Demand Growth is a Multiplier of Underlying GDP Growth

Global Demographics to Underpin Future Demand for Air Travel

Travel propensity increases more than proportionally with income. Currently, the Emerging Markets have \sim 80\% of the world population but only 25\% of passenger trips.

Propensity to Travel …

### Propensity to Travel ...

<table>
<thead>
<tr>
<th>Region</th>
<th>2015: Trips per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>1.2</td>
</tr>
<tr>
<td>North America</td>
<td>1.8</td>
</tr>
<tr>
<td>India</td>
<td>0.3</td>
</tr>
<tr>
<td>China</td>
<td>0.3</td>
</tr>
</tbody>
</table>

#### Is Driven by the Growing Global Middle Class and Increased Discretionary Spending

Middle Class Forecast (Millions of People) and Emerging Economies Spending on Recreational Goods and Services (2010 $US, PPP)

<table>
<thead>
<tr>
<th>Year</th>
<th>Mature Countries</th>
<th>Developing Countries</th>
<th>Emerging Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995E2</td>
<td>23% of World Population</td>
<td>55% of World Population</td>
<td>23% of World Population</td>
</tr>
<tr>
<td>2005</td>
<td>455</td>
<td>66</td>
<td>4,830</td>
</tr>
<tr>
<td>2015</td>
<td>776</td>
<td>826</td>
<td>4,830</td>
</tr>
<tr>
<td>2025</td>
<td>1,297</td>
<td>1,867</td>
<td>4,830</td>
</tr>
<tr>
<td>2035E</td>
<td>2,792</td>
<td>2,602</td>
<td>4,830</td>
</tr>
</tbody>
</table>

#### Travel propensity increases more than proportionally with income. Currently, the Emerging Markets have \sim 80\% of the world population but only 25\% of passenger trips.

- **Europeans and North Americans are currently the most willing to fly given higher GDP.**
- **By 2035, trips per capita for China will quadruple from 0.3 to 1.3.**

Source: Airbus Global Market Forecast, Oxford Economics

Long-term Air Traffic Growth Drives Demand for Aircraft

Global aircraft fleet expected to double over the course of the next 20 years with 41,030 deliveries ($6.1 trillion market value). A significant proportion of the aircraft requirements are for growth.

Source: Boeing Capital Current Aircraft Finance Market Outlook 2017 – 2036
Recent geopolitical events such as Brexit and terrorists attacks have become key focus areas for airlines. The impact on demand from Brexit remain to be seen. Heightened security concerns in a specific country or region can significantly reduce demand, as witnessed in Turkey during 2016.

**Brexit Recent Developments**

- The House of Lords has released a new *Brexit* report, in which it concluded that:
  - In negotiating a UK-EU FTA, the UK government should pursue a deal where UK airlines should be able to fly to any point within the EU and provide intra-EU services
  - This would be achieved via either full voting membership of the European Common Aviation Area (ECAA), or via a comprehensive bilateral UK-EU agreement
- Should the UK leave the ECAA without a new bilateral agreement with the EU, UK airlines would lose the right to freely operate within the ECAA, and vice versa

**Potential Models for UK-EU Cooperation Post-Brexit**

<table>
<thead>
<tr>
<th>Continued EU Membership</th>
<th>Access to Single Aviation Market</th>
<th>Validity of EU Horizontal Agreements</th>
<th>Influence on EU Policy</th>
<th>Policy Freedom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full access</td>
<td>Full validity</td>
<td>High</td>
<td>Very limited</td>
</tr>
<tr>
<td>ECAA Membership</td>
<td>Full access</td>
<td>Would likely remain valid</td>
<td>Very limited</td>
<td>Limited</td>
</tr>
<tr>
<td>Bilateral Air Services Agreement</td>
<td>Limited Access</td>
<td>May need to be negotiated</td>
<td>None</td>
<td>Potentially limited</td>
</tr>
<tr>
<td>No Formal Agreement</td>
<td>Excluded</td>
<td>Would need to be negotiated</td>
<td>None</td>
<td>High</td>
</tr>
</tbody>
</table>

**Country Snapshot: Turkey**

- Since Jan ’16, Turkey has experienced the perfect storm of geopolitical events
- Demand for passenger travel was significantly dampened during 2016, though signs of recovery appear as of April 2017

Source: Citi Research, State Airports Authority (DHMI). All figures include transit/transfer passenger traffic, KPMG.
Sources of Aircraft Finance
Each financing source is susceptible to both credit market and regulatory shocks which can reduce the supply and increase the cost of financing.

It is therefore prudent to pursue a diverse funding strategy.
Sources of Aircraft Finance – by Ultimate Financing Market

Long-term demand forecast of 41,030 aircraft over the next 20 years is currently valued at $6.1 trillion. A significant amount of deliveries (~$730 billion) require financing over the next five years.

Financing Forecast for Global Commercial Airplane Deliveries
USD in Billions

Type of Financing Varies Significantly Across Regions
Financing for Boeing Aircraft 2012–2016 (USD in Billions)

Aviation Markets Snapshot

Aircraft financing market conditions have been extremely robust in 2017, with many inaugural and innovative financings coming to market. The current coupon environment provides competitive capital markets financing opportunities.

<table>
<thead>
<tr>
<th>Source</th>
<th>Outlook</th>
<th>Overview</th>
<th>Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsecured</td>
<td></td>
<td>• The recent migration in many airlines corporate ratings profiles are facilitating more issuers accessing the unsecured market</td>
<td>• Delta Airlines - $2,000m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Strong demand for investment grade airlines lead to yield compression and attractive financing</td>
<td>• LATAM Airlines - $700m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• International demand remains robust for international IG airlines</td>
<td>• RyanAir - €750m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• easyJet - €500m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• WestJet Airlines - $400m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Air France KLM - €400m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Southwest Airlines - $300m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Delta Airlines - $2,000m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• LATAM Airlines - $700m</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>• RyanAir - €750m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• easyJet - €500m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• WestJet Airlines - $400m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Air France KLM - €400m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Southwest Airlines - $300m</td>
</tr>
<tr>
<td>Commercial Bank Loans</td>
<td></td>
<td>• Aircraft finance increasingly global and home country banks in Asia, Australia, and US have become active</td>
<td>• United Airlines - $3,500m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• European banks turning to aircraft portfolio backed structures in search of yield</td>
<td>• American Airlines - $3,050m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pricing currently historically attractive, given improved airline credit profile</td>
<td>• Alaska Airlines - ~$2,500m</td>
</tr>
<tr>
<td>Private Placement (EETC or Secured)</td>
<td></td>
<td>• Certain markets, such as the U.S. PP market, are quite standardized</td>
<td>• Air Canada - $1,020m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Low rates in Europe, Korea, and Japan offer independent terms and pricing that may be attractive opportunistically, subject to FX basis</td>
<td>• South African Airways – ZAR1,500m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• US market is ~$65bn in annual issuance</td>
<td>• Hawaiian Airlines - $225m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Southwest Airlines - $215m</td>
</tr>
<tr>
<td>EETC</td>
<td></td>
<td>• Long-established, large-scale institutional capital market structure, 99% USD</td>
<td>• Goshawk Aviation - $566.5m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Global airlines and regionals alike have evaluated various markets, the EETC has become a universal product</td>
<td>• Jackson Square Aviation - $300m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Availability and cost highly transparent once benchmarks are established</td>
<td>• American Airlines - $227m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Nordic Aviation Capital - $200m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Rolls Royce - $150m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• LATAM Airlines - $140m</td>
</tr>
</tbody>
</table>

Secured  Not Secured  Weak, Less Issuance  Healthy, More Issuance
Debt Capital Markets Considerations
Airline and Lessor Usage of Capital Markets Continues to Grow

Total Capital Markets Issuance by Airlines and Lessors

USD in Billions

2012
Total: $18 Billion

2016
30% US Airlines
25% Non-US Airlines
45% Lessors
Total: $51 Billion

US Airlines
Non-US Airlines
EETC 42%
Other Secured 3%
China Big 3 Unsecured 52%
Other Unsecured 41%
Unsecured 58%

Source: Boeing Analysis, Boeing Capital Current Aircraft Finance Market Outlook.
## Airline Market Cap & Corporate Ratings (2014)

### Top 20 World Airlines Ranked by Market Cap as of January 1, 2014.

<table>
<thead>
<tr>
<th>Airline</th>
<th>Market Cap ($mm)</th>
<th>LTM Revenues ($mm)</th>
<th>S&amp;P</th>
<th>Moody’s</th>
<th>Fitch</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DELTA</strong></td>
<td>$23,149</td>
<td>$37,773</td>
<td>BB-</td>
<td>B1</td>
<td>B+</td>
</tr>
<tr>
<td><strong>UNITED</strong></td>
<td>13,690</td>
<td>38,279</td>
<td>B</td>
<td>B2</td>
<td>B</td>
</tr>
<tr>
<td><strong>American Airlines</strong></td>
<td>13,490</td>
<td>25,664</td>
<td>BB-</td>
<td>B1</td>
<td>–</td>
</tr>
<tr>
<td><strong>LUFTHANSA</strong></td>
<td>13,126</td>
<td>17,699</td>
<td>BBB-</td>
<td>Ba3</td>
<td>–</td>
</tr>
<tr>
<td><strong>Ryanair</strong></td>
<td>11,963</td>
<td>6,925</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>EasyJet</strong></td>
<td>9,986</td>
<td>7,137</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Lufthansa</strong></td>
<td>9,821</td>
<td>41,360</td>
<td>BBB-</td>
<td>Ba1</td>
<td>–</td>
</tr>
<tr>
<td><strong>Air France KLM</strong></td>
<td>9,699</td>
<td>12,107</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Air Baltic</strong></td>
<td>8,320</td>
<td>12,959</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Cathay Pacific</strong></td>
<td>8,221</td>
<td>12,925</td>
<td>BB</td>
<td>–</td>
<td>BB</td>
</tr>
<tr>
<td><strong>Copa Airlines</strong></td>
<td>7,100</td>
<td>2,608</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>LATAM</strong></td>
<td>6,954</td>
<td>14,869</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>American Airlines</strong></td>
<td>6,565</td>
<td>14,319(1)</td>
<td>B</td>
<td>B1</td>
<td>B+</td>
</tr>
<tr>
<td><strong>TAM</strong></td>
<td>5,095</td>
<td>4,964</td>
<td>BB+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Qantas Airways</strong></td>
<td>4,278</td>
<td>16,209</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Southwest Airlines</strong></td>
<td>4,137</td>
<td>8,747</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Air New Zealand</strong></td>
<td>3,400</td>
<td>3,447</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Air Transat</strong></td>
<td>3,299</td>
<td>1,562</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Air France KLM</strong></td>
<td>3,092</td>
<td>35,158</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Total
- **Market Cap:** $173,718
- **LTM Revenues:** $354,061
- **Total Investment Grade Airlines:** 2

## Airline Market Cap & Corporate Ratings (Today)

Top 20 World Airlines Ranked by Market Cap as of today.

<table>
<thead>
<tr>
<th>Airline</th>
<th>Market Cap ($mm)</th>
<th>LTM Revenues ($mm)</th>
<th>S&amp;P</th>
<th>Moody’s</th>
<th>Fitch</th>
</tr>
</thead>
<tbody>
<tr>
<td>44DETA</td>
<td>$33,986</td>
<td>$39,880</td>
<td>BBB-</td>
<td>Baa3</td>
<td>BBB-</td>
</tr>
<tr>
<td>44YRAANIR</td>
<td>31,251</td>
<td>20,842</td>
<td>BBB+</td>
<td>A3</td>
<td>BBB+</td>
</tr>
<tr>
<td>American</td>
<td>25,801</td>
<td>7,839</td>
<td>BBB+</td>
<td>Ba3</td>
<td>BBB-</td>
</tr>
<tr>
<td>United</td>
<td>17,822</td>
<td>37,385</td>
<td>BB+</td>
<td>Baa2</td>
<td>BB-</td>
</tr>
<tr>
<td>ANA</td>
<td>16,230</td>
<td>25,863</td>
<td>BB+</td>
<td>Baa3</td>
<td>BBB+</td>
</tr>
<tr>
<td>Lufthansa</td>
<td>13,408</td>
<td>16,135</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>12,414</td>
<td>38,302</td>
<td>BBB-</td>
<td>Ba1</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>12,214</td>
<td>17,671</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>12,180</td>
<td>11,631</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>9,038</td>
<td>15,941</td>
<td>BB-</td>
<td>Baa2</td>
<td>BBB-</td>
</tr>
<tr>
<td>ANA</td>
<td>8,983</td>
<td>10,951</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>7,976</td>
<td>9,292</td>
<td>BB-</td>
<td>B1</td>
<td>B+</td>
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<tr>
<td>Qantas</td>
<td>7,945</td>
<td>12,322</td>
<td>BBB-</td>
<td>Baa2</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>6,912</td>
<td>2,868</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<tr>
<td>ANA</td>
<td>6,040</td>
<td>2,917</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>6,003</td>
<td>6,818</td>
<td>BB-</td>
<td>Ba1</td>
<td>BB-</td>
</tr>
<tr>
<td>ANA</td>
<td>6,003</td>
<td>11,964</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ANA</td>
<td>5,531</td>
<td>2,365</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<tr>
<td>ANA</td>
<td>5,139</td>
<td>11,871</td>
<td>BB-</td>
<td>Ba3</td>
<td>BB-</td>
</tr>
</tbody>
</table>

Total: 266,223 $mm  $338,108

Total Investment Grade Airlines: 8

Export Credit Agency Considerations
Export Credit Usage has Fallen Sharply under the 2011 ASU

Sources of Financing for Boeing Deliveries

US EXIM Bank / European ECAs Aircraft Sector Update

**US EXIM Bank Update**: While US EXIM Bank has been and remains “open for business” since its most recent reauthorization on December 4, 2015 and is currently accepting applications, approvals for financings greater than US$10 million will require a Board of Directors (“BoD”) of three members quorum (“Quorum”), a requirement which remains currently unfulfilled.

**European ECAs Update**: The ECAs (UKEF, BPI France (formerly Coface), and Euler Hermes) have temporarily halted export credit support for Airbus aircraft since April 2016 due to an ongoing investigation surrounding previous applications for export credit support by Airbus.

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**US EXIM Bank Status Update**

- US EXIM Bank was reauthorized on December 4, 2015 through September 30, 2019 under its new charter
- Due to current vacancies on the Board, the Board does not have a Quorum and cannot approve financial commitments above $10 million
- Three board members are required to constitute a Quorum (There are currently only two board members in place following the appointment of Charles J Hall as acting Chairman and Scott Schloegel as acting Vice Chairman for the purposes of continuity of business)
- In April 2017, President Trump nominated Scott Garrett to serve as President and Chairman of US EXIM Bank and former congressman Spencer T. Bachus III as member of US EXIM Bank’s Board. These nominations were formally sent to the Senate on June 20, 2017 for confirmation. The certainty and timing of these nominations are unclear as Congress enters its summer recess
- On September 15, President Trump announced three more nominations to serve as U.S. Export-Import Bank board members. Whilst these nominations would bring the bank to a full complement of five board members, it should be noted that hearing dates and votes are still pending

---

**European ECAs Status Update**

- According to a press release by Airbus on April 1, 2016, UK Export Finance (UKEF) temporarily ceased support for new Airbus commercial aircraft purchase financings due to concerns raised by UKEF with regard to previous export credit applications. Shortly thereafter, BPI Finance (France) and Euler Hermes (Germany) joined the actions of UKEF (United Kingdom) in temporarily ceasing support
- We understand that the European ECAs intend to resume support for Airbus commercial financings in the future upon resolution of the referenced matters; however, the time table for resolution is uncertain at this point with a resumption unlikely in 2017; however, Airbus indicated earlier this year that it would expect some European ECA support to be considered on case-by-case basis by the end of 2017

**UKEF Support for Boeing 787s powered by Rolls-Royce Engines**

- UKEF has recently announced that it can provide guarantees on Boeing 787s powered by Rolls-Royce engines:
  - UKEF is able to provide a guarantee on the eligible financing amount, which would equal the sum of up to 85% of aircraft purchase price plus the applicable ECA premium
  - The new program has been well-received and Citi understands UKEF has received numerous applications thus far

**Italian ECA (SACE) – Supporting Boeing Aircraft Purchases on a Case-by-Case Basis**

- SACE is able to offer support based on presence of Italian content, such as the case of Italian supplier Leonardo Aerostructure which provides 14% of content for the B787 Dreamliner aircraft program according to SACE
- Format of Support: 100% guarantee is the likely format of support. SACE is considering up to $1.25Bn in annual support under the program
- Recent Transactions: In June 2017, SACE supported Tukey’s SunExpress’ 10-year financing for its purchase of three Boeing aircraft
Commercial Markets are More Efficient than Export Credit

Note: Issuances collateralized by Boeing Aircraft.
Bank Debt Considerations
The Evolution of Aviation Banking

Aircraft banking has become a truly global industry. Whilst German and French banks have been historically active, internationally, a number of banks have entered the aviation financing market creating balance.

Commercial Bank Debt Financing for Airplane Deliveries by Geography

<table>
<thead>
<tr>
<th>2010</th>
<th>2017F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Debt Total: ~ $15Bn</td>
<td>Bank Debt Total: ~ $42Bn</td>
</tr>
<tr>
<td>c. 24% of Global Aircraft Delivery Financing</td>
<td>c. 33% of Global Aircraft Delivery Financing</td>
</tr>
</tbody>
</table>

Note: Historical numbers subject to revision.
Source: Boeing Current Aircraft Finance Market Outlook
AFIC – Insured Aircraft Financing Structure

- New insured aircraft finance structure
- Credit insurance provided by a syndicate of Insurers
- Lenders provide funding by advancing loans
- Insurers take risk on airline and collateral
- Lenders look primarily to Insurers for payment in the event of a Default
- Many similarities with ECA financing, but this is not the same
  - Does not provide the full faith and credit of the Sovereign provided by the ECA guarantees for Boeing and Airbus
- Some important differences

<table>
<thead>
<tr>
<th>AFIC Financing</th>
<th>ECA Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower upfront premium</td>
<td>Higher upfront premium</td>
</tr>
<tr>
<td>Higher loan margin</td>
<td>Lower loan margin</td>
</tr>
<tr>
<td>Structure based on commercial factors</td>
<td>Structure constrained by 2011 ASU</td>
</tr>
</tbody>
</table>
To Summarise

- Passenger traffic is expected to continue outperform GDP growth. Growth driven by emerging markets, particularly within the Asia-Pacific and African markets.

- Currently, emerging markets have ~80% of the world population but only 25% of passenger trips. As the “middle class” grows so will their propensity to travel.

- By 2019, the financing need to support aircraft deliveries will be over 2x the amount of financing needed only a decade before.

- The share of aircraft being financed by the leasing sector continues to rise.

- Both airlines and lessors are taking advantage of the current strong demand in the capital markets for aircraft financing, including accessing the unsecured market in volumes that would have been unthinkable only five years ago.

- Operating lessors are capitalizing on their stronger credit profiles, credit ratings and access to capital markets to take delivery of, or finance via sale-leaseback, a growing share of aircraft deliveries.

- Accessing the deep capital markets is providing a cheaper cost of funding especially for airlines and lessors, besides it being prudent to diversify sources of funding.

- We are very bullish on the aircraft sector, irrespective of exogenous risks and expect diverse funding to continue as the global aircraft fleet doubles in 20 years.
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Airlines and Lessors M&A, Transformative?

Dómhnal Slattery,
Chief Executive Officer, Avolon
Avolon At A Glance

<table>
<thead>
<tr>
<th>Portfolio of Scale</th>
<th>$46bn</th>
<th>921²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owned and Committed Fleet</td>
<td></td>
<td>Owned, Managed and Committed Fleet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High Quality Fleet</th>
<th>4.9 Years</th>
<th>6.8 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted Average Age</td>
<td></td>
<td>Remaining Average Lease Term</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustainable, Efficient Capital</th>
<th>4.0%³</th>
<th>2.0x Net Debt : Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Funds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Available Liquidity</th>
<th>$4.1bn⁴</th>
<th>$2.5bn</th>
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<tbody>
<tr>
<td>Total Available Liquidity</td>
<td></td>
<td>Unrestricted Cash &amp; Unsecured RCF</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strong Ratings</th>
<th>CF Rating (S/M/F/K)</th>
<th>Term Loan B (S/M/F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB+ / Ba2 / BB / BBB+</td>
<td>BBB- / Ba1 / BB+</td>
<td></td>
</tr>
</tbody>
</table>

---

1. Metrics as of 30 June 2017
2. Owned fleet includes aircraft on operating lease, aircraft on finance lease and aircraft classified as held for sale. Excludes spare engine assets. Committed fleet includes 75 B737 Max aircraft for which Avolon has entered into an MoU
3. Not including the effect of upfront fees, undrawn fees, issuance cost amortization or fair value gains/losses on derivative financial instruments
4. Includes $1.6bn undrawn secured debt commitments
Airline M&A Activity

Airline consolidation has been most prevalent in North America and Europe.

North American airlines’ net profits\(^1\) represented ~50% of the total industry 2016.

Other regions limited by ownership & control rules and the lack of unified markets.

\(^1\) Source IATA; net post-tax profits
US Majors’ Credit Rating
Significant Improvements

<table>
<thead>
<tr>
<th></th>
<th>Fitch Ratings</th>
<th>Moody’s</th>
<th>S&amp;P Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Airlines</td>
<td>C</td>
<td>BB-</td>
<td>Caa2</td>
</tr>
<tr>
<td>Delta</td>
<td>B-</td>
<td>BBB-</td>
<td>B2</td>
</tr>
<tr>
<td>United</td>
<td>C</td>
<td>BB</td>
<td>Caa1</td>
</tr>
</tbody>
</table>

Source: Rating Agencies. *All ratings are senior unsecured ratings except for 1) Delta’s 2009 ratings which are as follows: Fitch – “Issuer Default”; Moody’s – “Corporate Family”; S&P – “Credit Rating” and 2) United 2009 Moody’s Rating which is “Corporate Family”*
Principal benefit is scale: purchasing power, market access, credit rating, airline incumbency, portfolio and platform efficiencies.

New Asian entrants, backed by large institutions, enjoy low financing cost despite small scale.
Consolidation in the aircraft leasing industry has been neutralised by new entrants.

Avolon is the only lessor added to >500 aircraft list in 15 years.

Achieving real scale is challenging.

Source: Ascend, Managed Aircraft, In Service
Asian Lessors have grown considerably and now represent 40% of the Top 10.

2007: 0

Today: AVOLON, BOC Aviation, ICBC, SMBC Aviation Capital

*Ascend AIR, March 2007, Ascend Fleets September 2017: Managed In Service Aircraft, Region Signifies Ownership Origin
Significant aircraft financing requirement

2018 = $141Bn

Source: Boeing Capital
Lessors continue to provide a significant share of the aircraft financing requirement

Source: Ascend Fleets September 2017: In Service Passenger Aircraft
<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>76% Capital Markets</td>
</tr>
<tr>
<td>China</td>
<td>35% Bank Debt</td>
</tr>
<tr>
<td>Europe</td>
<td>31% Bank Debt</td>
</tr>
<tr>
<td>Asia (Excl. China)</td>
<td>56% Bank Debt</td>
</tr>
</tbody>
</table>
Institutional investors have looked to alternative investments that offer a higher risk-adjusted return.
Outlook

**Headwinds**
- Interest rates
- Excess Capacity / Yields
- New Entrants
- Macro Events (e.g. Brexit)

**Tailwinds**
- Fuel Price
- Traffic Demand
- Profitability
- Balance Sheets
THANK YOU

Find out more at www.avolon.aero