A Lessor’s View of Aircraft Markets and Global Economics

ITA Conference 2015

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Aircraft Market View at a Glance
## Aircraft Market Health Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Growth</td>
<td>Healthy</td>
</tr>
<tr>
<td>Production Rate</td>
<td>Healthy</td>
</tr>
<tr>
<td>Book to Bill</td>
<td>Healthy</td>
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<tr>
<td>Backlog</td>
<td>Healthy</td>
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<tr>
<td>Level of Retirements</td>
<td>Concern</td>
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<tr>
<td>Avg Age of Retirements</td>
<td>Concern</td>
</tr>
<tr>
<td>Values of Used Aircraft</td>
<td>Concern</td>
</tr>
<tr>
<td>Financing Market Health</td>
<td>Healthy</td>
</tr>
</tbody>
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*Areas of concern, and inconsistent with all the other healthy metrics*
Aircraft Supply / Retirements / Values
Delivery Rates Continually Increasing, Up 50% from Dec 2008

Source: Ascend, as of 6/30/2015
Trends in Retirement Age – NBs & WBs

Retirement Age: Pax Aircraft

Source: Ascend, as of 6/30/2015
Market Value Trends: 737-800

From 2008, market values for constant age aircraft have recovered for new aircraft. While the gap between new and used market values has widened nearly 40% since 2008. A generic value for a 5yr old 737-800 current sits almost $14m below a new aircraft, up from ~$9.5m in 2008.

Source: Ascend, as of 6/30/2015
From 2008, market values for constant age aircraft have recovered for new aircraft. While the gap between new and used market values has widened about 45%. A generic value for a 5yr old A320-200 currently sits almost $16m below a new aircraft, up from ~$11m in 2008.
Storage Details: A320-200 & 737 NextGen w/ Value shifts

Storage & Value Decay: A320 Family & 737 NG

# Aircraft

Implied MV Decay (%Chg Y/Y)

Source: Ascend, as of 6/30/2015
Global Economics
Air Traffic Growth Has Been Resilient

Source: ICAO
In 1995, If You Extrapolated 5.4% Growth…

You Would Have Been Correct!

Source: ICAO
Asian Growth Economies Compared

Indexed GDP of 2 Major Asian Growth Economies

Source: World Bank historical GDP data
Asian Growth Economies Compared

Indexed GDP of 2 Major Asian Growth Economies, extrapolated 20 more years at 7% growth – Seems reasonable, right?

Source: World Bank historical GDP data
Asian Growth Economies Compared

Red Line is Japan indexed to 1970
Green Line is China indexed to 1990

Source: World Bank GDP data
Asian Growth Economies Compared

Red Line is Japan indexed to 1970
Green Line is China indexed to 1990
How do you feel about that extrapolation now? 4 times larger?

Source: World Bank GDP data
China July Domestic Air Traffic up 10.9% (Strong number)

Boeing Completion Center and 300 aircraft order announced 9/23

China Customs Data (Yuan Terms)

August Exports down 6.1% YOY
Improved From July which was down 8.9% YOY
6 of the 8 months of 2015 show a decline to prior year

August Imports down 14.3%
Worse that the July decline of 8.6%
10th month in a row with declining imports compared to prior year

Volumes imported of Coal, Iron, Copper, Aluminum and steel all negative YTD.

There are explainable impacts of the Tianjin port disruption (explosion), and a shutdown of many plants to clear the air in Beijing for the celebration of the 70th Anniversary of the end of World War II, but these data do not point toward a growing economy.
Last Month Boeing released an updated 20 year demand forecast raising the aircraft demand from China

They forecast 6,330 deliveries to China over the next 20 years worth $950B (lots of Titanium!)

China fleet to grow from 2,570 aircraft now to 7,210 in 2034.

Their forecast apparently assumes that China will not hit any of the demographic, banking, resource, pollution or other challenges that have impacted Japan or the rest of the developed economies that are showing much lower growth.