U.S. Airline Industry Update and Perspective on the Implications of Forecast Uncertainty

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FAA-NEXTOR: “Global Challenges to Improve Air Navigation Performance”
Feb. 11, 2015 Workshop at Asilomar
Contents

- Where We’ve Been
- Where We Are Now
- Ways to *Think* About Where We *Might* Be Headed
In the Deregulated Period, U.S. Airline “Earnings” Have Been Cyclical and Volatile

Source: A4A Passenger Airline Cost Index
This Decade, U.S. Airline Flights Need to Be ~80 Percent Full to Avoid Losing Money

Over Multiple Decades, the Rising Costs of Running an Airline – Without a Commensurate Increase in Fares – Have Meant That Airlines Have *Had* to Fill More Seats to *Break Even*

![Breakeven Load Factor Graph](chart.png)

Source: A4A Passenger Airline Cost Index
Jet-Fuel Spot Prices Fell in 2014, Boosting Seats, Wages and Product Investment
Every Penny per Gallon per Year Equates to $190M in Annual Fuel Expenses

Daily Spot Price per Gallon (U.S. Gulf)

Annual Spot Price per Gallon (U.S. Gulf)

Source: A4A and Energy Information Administration (U.S. Gulf Coast)
After Its Post-2008 Decline, Jet Fuel Price Volatility Returned in 2014

Annual Standard Deviation of U.S. Jet Fuel Spot Price (Cents per Gallon)

Source: U.S. Energy Information Administration
The Airline Industry Remains a Low-Margin Business, Lagging S&P 500 Average
For Every Dollar of Revenue Collected, U.S. Airlines Keeping a Nickels as Profit

2014 Net Profit Margin (% of Operating Revenues)

<table>
<thead>
<tr>
<th>Company</th>
<th>2014 Net Profit Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford</td>
<td>2.2%</td>
</tr>
<tr>
<td>Whole Foods</td>
<td>4.1%</td>
</tr>
<tr>
<td>Airlines*</td>
<td>4.5%</td>
</tr>
<tr>
<td>Boeing</td>
<td>6.0%</td>
</tr>
<tr>
<td>ExxonMobil</td>
<td>7.9%</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>9.0%</td>
</tr>
<tr>
<td>Royal Caribb.</td>
<td>9.5%</td>
</tr>
<tr>
<td>Samsonite</td>
<td>9.6%</td>
</tr>
<tr>
<td>Chipotle</td>
<td>10.8%</td>
</tr>
<tr>
<td>Starbucks</td>
<td>12.6%</td>
</tr>
<tr>
<td>CSX</td>
<td>15.2%</td>
</tr>
<tr>
<td>Walt Disney</td>
<td>15.4%</td>
</tr>
<tr>
<td>McDonald’s</td>
<td>17.3%</td>
</tr>
<tr>
<td>Apple</td>
<td>21.6%</td>
</tr>
</tbody>
</table>

* A4A analysis of reports by Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest and United
Sources: Standard & Poor’s and company SEC filings; S&P is trailing twelve months.
"...it would be unreasonable to assume that all airline risks have just disappeared... [T]he business model requires a large cushion of cash and significant reinvestment."

Alexander MacLennan
The Motley Fool
Feb. 3, 2014

* SEC filings of Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United; includes capitalized operating leases at 7x annual aircraft rents
Improving Finances Enabling Significant Reinvestment in Customer Experience
Airline Capital Spending Exceeding $1 Billion per Month – Highest in 13 Years

U.S. Airline* Capital Expenditures ($ Billions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>5.2</td>
</tr>
<tr>
<td>2011</td>
<td>6.6</td>
</tr>
<tr>
<td>2012</td>
<td>9.8</td>
</tr>
<tr>
<td>2013</td>
<td>12.4</td>
</tr>
<tr>
<td>2014E</td>
<td>13.9</td>
</tr>
</tbody>
</table>

- Aircraft (317 deliveries in 2014; 367 in 2015)
- Premium seats, new aircraft interiors
- Ground equipment, loading bridges
- Airport lounges and gate amenities
- Bag carousels, carts, scanners
- In-flight entertainment and Wi-Fi
- Computers, kiosks, mobile technology

* SEC filings of Alaska, Allegiant, American, Delta, Hawaiian, JetBlue, Southwest, Spirit and United
As Airlines Generate Normal Returns on Capital, Customers Are Seeing More Seats
Domestic Supply Is at Highest Point in Seven Years; International Supply at All-Time High

Domestic USA (Million Daily Seats)

<table>
<thead>
<tr>
<th>Year</th>
<th>Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2.55</td>
</tr>
<tr>
<td>2008</td>
<td>2.45</td>
</tr>
<tr>
<td>2009</td>
<td>2.40</td>
</tr>
<tr>
<td>2010</td>
<td>2.35</td>
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<tr>
<td>2011</td>
<td>2.30</td>
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<td>2012</td>
<td>2.25</td>
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<tr>
<td>2013</td>
<td>2.30</td>
</tr>
<tr>
<td>2014</td>
<td>2.35</td>
</tr>
<tr>
<td>2015</td>
<td>2.40</td>
</tr>
</tbody>
</table>

Source: Innovata (via Diio Mi) published schedules as of Feb. 6, 2015 for all airlines providing scheduled passenger service from U.S. airports to all destinations

International (Thousand Daily Seats)

<table>
<thead>
<tr>
<th>Year</th>
<th>Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>260</td>
</tr>
<tr>
<td>2008</td>
<td>270</td>
</tr>
<tr>
<td>2009</td>
<td>280</td>
</tr>
<tr>
<td>2010</td>
<td>290</td>
</tr>
<tr>
<td>2011</td>
<td>300</td>
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<td>2012</td>
<td>310</td>
</tr>
<tr>
<td>2013</td>
<td>320</td>
</tr>
<tr>
<td>2014</td>
<td>330</td>
</tr>
<tr>
<td>2015</td>
<td>340</td>
</tr>
</tbody>
</table>

Highest Since Recession

Highest Ever

Source: Innovata (via Diio Mi) published schedules as of Feb. 6, 2015 for all airlines providing scheduled passenger service from U.S. airports to all destinations
International Air Travelers to/from USA Reached a Record 197.3 Million in 2014
Up 6.5 Percent from 2013; U.S.-Europe Led Overseas Traffic at ~78K Per Day Each Way

Foreign Gateways to/from USA, 2014
Average Daily Passengers (000) Each Way

Top 10 Country Gateways to/from USA, 2014
Average Daily Passengers (000) Each Way

Source: Department of Commerce (National Travel & Tourism Office) and DHS Advance Passenger Information System (APIS)
Airline industry pours millions into new terminals

For business travelers, crisscrossing the country or the globe, airport terminals can be akin to a second home.

Those beehives where the flying public gets boarding passes, checks bags and waits for flights are also the first and final glimpse a traveler has of a city, a business hub for concessionaires and — depending on the experience — a potentially key factor in whether a passenger boards a jet in a tranquil or testy mood.

Now, airlines and airports are spending hundreds of millions of dollars building and revamping airport terminals across the U.S., from putting in work stations and lounge-like seating to adding Wi-Fi to transforming the building's exteriors into architectural standouts.
Unlike Airports and USG, North American Airline Creditworthiness Remains Deficient

**Investment Grade**

- AA ±
  - BOS HOU* LAS LAX MSP NYC* OMA PDX PHX SEA SNA WAS* + U.S.A.

- A ±
  - ABQ ATL AUS BDL BNA BUR BWI CHS CLE CLT CMH CVG DAY
  - DEN DFW DSM DTW ELP FLL GEG GSO HNL IND JAX LIT MCI
  - MCO MDW MEM MIA MSY MYR OAK OKC ONT ORD PBI PHL PIT
  - RSW SAN SAT SDF SFO SJC SMF STL TPA TYS

**Speculative Grade**

- BBB ±
  - ALB COS CRP FAT FNT GRR GUM MHT
  - MOB PNS PVD PWM TUL VPS

- BB ±
  - Southwest, Alaska, WestJet

- B ±
  - Delta, Allegiant

- Air Canada, American, Hawaiian, JetBlue, United

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1 Describes issuers with relatively high levels of creditworthiness and credit quality
2 Describes issuers with ability to repay but facing significant uncertainties, such as adverse business or financial circumstances that could affect credit risk

Source: Standard and Poor’s

* HOU = HOU/IAH; NYC = EWR/JFK/LGA; WAS = DCA/IAD

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U.S. Airlines Intensely Focused on Several Near-Term Objectives

- Reducing debt
- Returning cash to shareholders (dividends, stock buybacks, ROIC/EPS)
- Shoring up pensions (or comparable underfunded retirement liabilities)
- Increasing employee wages and benefits
- Renewing fleets and improving the product (at home, airport and in-flight)
  - Enhance customer experience
  - Increase operational reliability
  - Achieve voluntary environmental targets
- Restoring/increasing, in a return-justified manner, air service levels (capacity)

It’s not about capacity discipline; it’s about balance sheet discipline.
Relatively Speaking, Airports in Europe and North America Are Mature
Middle East, Africa, Asia-Pacific and Latin America Expected to Lead 20-Year Growth

Projected Average Annual Growth in Air Passengers: 2014-2033/2034

<table>
<thead>
<tr>
<th>Region</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENA</td>
<td>5.8%</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>5.6%</td>
</tr>
<tr>
<td>Africa</td>
<td>5.4%</td>
</tr>
<tr>
<td>Latin America</td>
<td>5.3%</td>
</tr>
<tr>
<td>Europe</td>
<td>3.5%</td>
</tr>
<tr>
<td>North America</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Source: ICF International, using average of IATA, Airbus and Boeing forecasts
But... Be Careful Who’s Listening, or Tweeting

- “A rocket will never be able to leave the Earth’s atmosphere.”

- “Who the hell wants to hear actors talk?”

- “There will never be a bigger plane built.”

- “We don’t like their sound, and guitar music is on the way out.”

- “The concept is interesting and well-formed, but in order to earn better than a ‘C,’ the idea must be feasible.”

- “With over 50 foreign cars already on sale here, the Japanese auto industry isn’t likely to carve out a big slice of the U.S. market.”

- “There’s no chance that the iPhone is going to get any significant market share.”

- “The Federal Reserve is currently not forecasting a recession.”
Whether It’s Economy or the Weather, Forecasts Matter

I thought you were supposed to be an expert on the depression!

Exactly. As soon as we’re in a depression I’ll know what to do.

I survived the blizzard of 2015
Overreliance on *Baseline* Forecasts Can Be Hazardous to Your Wealth

Wall Street economists have been consistently wrong in their forecasts for the ten-year rate over the past decade.

Actual 10y rate and forecasts for the 10y rate from the Fed's quarterly Survey of Professional Forecasters.

Average 12-month forecast error over the past decade: 60bps too high.

Source: FRB, FRBPHIL, Haver Analytics, DB Global Markets Research

Deutsche Bank Research  Torsten Slok, torsten.slok@db.com +1 212 250-2155  December 2014

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U.S. Vehicle Registrations: 1900-1935
One’s View on Traffic Levels Might Differ Based on Where One “Sits”
Musings or Predictions Oft Heard Through the Grapevine

- “Pricing power is here to stay”
- “Cycles are no more”
- “We’re on a path of steady growth”
- “Fuel prices are down…forever”
- “Domestic is where it’s at”
- “Carriers are making lots of money”
- “Equity investors are taking note of the airline space”

Memories can be short – and financial awareness lacking.
What Are Public Policy Goals and Expectations?
Are Stakeholder Interests Aligned or Conflicting?

Stakeholders: Customers, Employees, Investors + Economy and Planet Earth

- Safety comes first, of course
- More air service and economic growth but reduced noise and emissions
- More air service but lowest possible fares/fees
- Maximize air service and minimize price, but take good care of employees
- Attractive price but world-caliber (globally competitive) international product
- Hub cities or small communities, or both?
- Strong airlines or strong non-airline members of the value chain?
- Do American investors matter? Should creating American wealth and luring equity capital to grow and enhance the business be considered?
Considerations for Forecasting and NAS Planning
Sometimes asking the right questions is more important than having all the answers

- Public policy goals and expectations – can they compatibility promote U.S. consumer and economic interests, as seen in some parts of the world?
- What role do taxation and regulation play in promoting or curbing growth of air service in terms of quantity and quality?
- Role of social media – on and off flight – does it stimulate more demand?
- Will aviation community be able to meet customer expectations for automation?
- Foreign ownership – will pressure build for even lower barriers to entry? Will we see partial or full relaxation in 20-year horizon? NAFTA or NAFTA-lite first?
- Pilot pool – will we see one-man cockpits? Military, then air cargo, then…? What is general labor pool mobility in aviation? Will wages get out of hand?
Considerations for Forecasting and NAS Planning (Cont’d)
Sometimes asking the right questions is more important than having all the answers

- Aircraft range – more point-to-point and/or multiplex capability, with implications for U.S. and non-U.S. airports/airspace as well as Customs/Immigration
  - BA @ LHR-AUS/LAS/SAN, Norwegian @ ARN/OSL-SJC, JAL @ NRT-SAN, Korean @ ICN-LAS, ANA @ NRT-SJC, UA @ SFO-CTU, Virgin Atlantic @ LGW/MAN-LAS, Avianca/Condor, NAI @ FLL

- New hubs or larger international widebodies at non-traditional U.S. gateways
  - AA expanding DFW-Asia, DL @ SEA, multiple Asian carriers at BOS, QF @ SYD-DFW

- Small-community service: if long-run fuel prices stay high, will OEMs produce an economical small aircraft? If not, how might market (and policymakers) respond?

- Will ultra-low-cost carriers (ULCCs) one day become the largest domestic carriers?

Lots to think about; let’s prepare for a range of possibilities.