The Future Economics of the Airline Industry
A Changing Vernacular

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Isn’t It Interesting?

The US airline industry is marginally profitable when......

– Economic trends are weak
– Consumer confidence is anything but
– Manufacturing activity showing little to no expansion
– Passenger traffic up; cargo traffic is in decline
– European economic activity troubled
– Premium travel trends are exhibiting little growth
IN THE AIRLINE INDUSTRY – IT’S ALWAYS SOMETHING
A Timeline of Events Impacting the Airline Industry
In Relation to the Airline Index

2001: 9/11 creates demand shock; Gov’t offers financial assistance to industry but ultimately many file for bankruptcy protection

2002: US Airways enters first bankruptcy

2002: United Airlines Enters bankruptcy

2003: Iraq War begins

2004: US Airways enters second bankruptcy

2004-2003: SARS outbreak begins; slows travel demand, Mainly in Asia markets

2005: America West and US Airways merge

2005: Dot Com recession weakens industry trends

2005: Delta and Northwest enter bankruptcy

2006: Subprime Mortgage crisis explodes

2006: UK airplane Terrorist plot – carry on Liquids prohibited

2007: Oil begins to rise toward $147/bbl, reached 7/2008

2007: Hurricane Katrina; first oil spike

2007: Iraq surge

2007: Delta and Northwest merge

2008: Madoff scandal

2008: Mumbai terrorist attack

2008: Bear Sterns, AIG, Lehman, Washington Mutual collapse

2009: US unemployment rate reaches highest level since 1983

2009: Afghanistan surge

2009: H1N1 epidemic

2009: Subprime Mortgage crisis explodes

2010: United and Continental merge

2010: Southwest acquires AirTran

2011: Significance industry capacity cuts

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An Industry Structure
30 Years in the Making

- Barriers to entry for new and existing carriers were removed
  - Entry and growth of Low Cost Carriers a major driver of change

- Barriers to exit for inefficient carriers were erected
  - Bankruptcy, government, labor as an internal source of capital

- Finally in the 2000’s, cost reductions and efficiency improvements that were expected during the previous two decades began to happen

- A market share mentality by the air carriers created an industry that grew too big to be sustainable

- Significant capacity cutting/consolidation activity occurs

- The market share mentality has given way to a profit mentality
Some Recent Headlines

- Uruguay airline CEO warns of “collapse”
- US – American deal seen as good for Charlotte
- US – American merger would bring mixed results for CLT
- Qantas tumbles to record low after predicting profit drop
- Delta cleared to buy 4.17% stake in Aeromexico
- Delta buys into an oil refinery
- Turkish Airlines will not invest in LOT Polish Airlines
- Airline stocks pummeled Monday
- WestJet raids Air Canada for New York fliers
- Don’t expect lower fares as fuel costs drop
- S&P 500 falls 10% from 2012 peak amid economic slowdown concern
- Airlines face sluggish long term growth over sluggish demand
- Crude oil prices drop to lowest levels since October
The Best Thing That Happened During the “Lost Decade”

- The volatility in the price of oil and simply the price of oil has forever changed the mindset of airline managers
  - Taught airlines “true capacity discipline”
  - Teaching airlines to focus on “profitability”
  - Teaching airlines the need to be vigilant in balance sheet repair
    - No more “stupid capital”
A New Vernacular

- Diversify the route portfolio
- De-leverage the balance sheet
- De-risk the operation
  - Capacity cuts
  - Cost constraints ex. fuel
- Profitability across the economic cycle
  - Consolidation
    - Pricing power through elimination of duplicative capacity
    - Unbundling as a new and ancillary revenue source
    - Global joint venture agreements
    - Earning a return on invested capital
- Growth of market share v. margin degradation
Smisek said he expects United Continental, a merger last year of United Airlines and Continental Airlines, to shrink in the U.S.

“We'll have the domestic [operations] sized solely to feed the international traffic”
Thinking Outside the [Domestic] Box
The Future Lies Across the Ponds

Airbus Global Market Forecast
Annual Traffic Growth: 2009-2028

Boeing Current Market Outlook
Annual Traffic Growth: 2009-2028

Source: ATA
Diversification of the Route Portfolio Proving Critical to Improved Profitability

Percent of Capacity in International Markets

- American
- Delta
- United
- US Airways
Even for Southwest, Profitable Domestic Opportunities are Minimal
Capacity Cutting/Discipline Critical to Recent Industry Financial Performance
Passenger Commissions and the Internet
A Classic Example of “Competing Away” the Efficiencies
### Consolidation a Most Important Catalyst for Improved Performance

**Selected M&A and/or Cross-Border Investment: 2005-Present**

<table>
<thead>
<tr>
<th>USA</th>
<th>Non-USA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Republic/Shuttle America</strong></td>
<td>Air France/KLM</td>
</tr>
<tr>
<td>US Airways/America West</td>
<td>Copa/AeroRepública</td>
</tr>
<tr>
<td>SkyWest/Atlantic Southeast</td>
<td>Lufthansa/Swiss</td>
</tr>
<tr>
<td><strong>Pinnacle/Colgan</strong></td>
<td>Air China/Cathay Pacific*</td>
</tr>
<tr>
<td>Lufthansa/JetBlue*</td>
<td>Cathay Pacific/Dragonair</td>
</tr>
<tr>
<td>Delta/Northwest</td>
<td>Lufthansa/Brussels*/BMI/Austrian</td>
</tr>
<tr>
<td><strong>Republic/Midwest/Frontier</strong></td>
<td>Avianca/TACA</td>
</tr>
<tr>
<td>United/Continental</td>
<td>British Airways/Iberia</td>
</tr>
<tr>
<td><strong>Pinnacle/Mesaba</strong></td>
<td>LAN/TAM (pending)</td>
</tr>
<tr>
<td><strong>SkyWest-ASA/ExpressJet</strong></td>
<td>LAN/Aires*</td>
</tr>
<tr>
<td>Southwest/AirTran</td>
<td>TAM/TRIP*</td>
</tr>
</tbody>
</table>

* Strategic investment but not full ownership or control

Source: ATA and Deutsche Bank Global Research
A Consolidating US Industry

2005 Revenue Market Share

- American: 53%
- United: 20.2%
- Delta: 17.1%
- Northwest: 15.3%
- Continental: 11.4%
- US Airways: 11.1%
- Southwest: 10.0%
- Alaska: 7.8%
- JetBlue: 2.9%
- AirTran: 1.7%

2011* Revenue Market Share

- United: 27.7%
- Delta: 26.1%
- American: 17.9%
- Southwest/AirTran: 12.2%
- US Airways: 9.7%
- Alaska: 3.2%
- JetBlue: 3.2%

*Data covers last twelve months ending June 30, 2011
Source: SEC Filings and Company Reports. For 2010, United and Southwest are pro forma to include Continental and Air Tran
The Lower Cost Carriers Are Significant In Their Presence Today

Percentage of Total ASMs Flown by US Carriers

1988

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>15%</td>
</tr>
<tr>
<td>United</td>
<td>15%</td>
</tr>
<tr>
<td>Delta</td>
<td>13%</td>
</tr>
<tr>
<td>Continental</td>
<td>10%</td>
</tr>
<tr>
<td>Northwest</td>
<td>9%</td>
</tr>
<tr>
<td>TWA</td>
<td>8%</td>
</tr>
<tr>
<td>Eastern</td>
<td>7%</td>
</tr>
<tr>
<td>Pan Am</td>
<td>7%</td>
</tr>
<tr>
<td>US Airways</td>
<td>4%</td>
</tr>
<tr>
<td>Piedmont</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
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2010

<table>
<thead>
<tr>
<th>Carrier*</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>United</td>
<td>26%</td>
</tr>
<tr>
<td>Delta</td>
<td>24%</td>
</tr>
<tr>
<td>American</td>
<td>18%</td>
</tr>
<tr>
<td>Southwest</td>
<td>14%</td>
</tr>
<tr>
<td>US Airways</td>
<td>8%</td>
</tr>
<tr>
<td>JetBlue</td>
<td>4%</td>
</tr>
<tr>
<td>Alaska</td>
<td>3%</td>
</tr>
<tr>
<td>Frontier</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
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</table>

* Includes AirTran
Globally, Airlines Challenged to Cover Cost of Capital

- ROIC Below WACC Translates to Loss of Investor Wealth

Source: Return on invested capital (ROIC) and weighted average cost of capital (WACC) from IATA (1993-2004) and Deutsche Bank (for 2010-2012 estimates)
Corporate v. Airline Profits
The Performance Improvement in 2011 v. 2008 Is Telling of Progress Made

Corporate Profits (%)

Airline Profits (%)

Barrel Equivalent
Cost of Jet Fuel /1

/1 West Texas Intermediate plus the implicit crack spread
## Different Models of M&A Integration

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>One Brand</th>
<th>Co-Brand</th>
<th>Multi-Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examples</strong></td>
<td><a href="https://www.united.com">United</a></td>
<td><a href="https://www.airfrance.com">Air France/KLM</a></td>
<td><a href="https://www.lufthansa.com/bmi">Lufthansa/bmi</a></td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td>Full integration</td>
<td>Very high integration</td>
<td>High integration</td>
</tr>
<tr>
<td></td>
<td>One management</td>
<td>Integrated management</td>
<td>Management teams</td>
</tr>
<tr>
<td></td>
<td>One brand</td>
<td>Two brands</td>
<td>Multi-brand</td>
</tr>
<tr>
<td><strong>Advantages</strong></td>
<td>Maximum of synergies</td>
<td>Higher synergies</td>
<td>Profit center orientation</td>
</tr>
<tr>
<td></td>
<td>Fast decision processes</td>
<td>Maintain (national) brands</td>
<td>Maintain (national) brands</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>Loss of a potentially well known brand</td>
<td>Higher complexity</td>
<td>Flexibility in growth</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Higher complexity</td>
</tr>
</tbody>
</table>
Lifecycle Development of Networks

Little Differentiation Between Domestic and International Cooperation

Economical Benefit/Complexity

Depth of integration

100%

1. Interline Agreements
2. Special Prorate Agreement (SPA)
3. Sales Incentive Agreement
4. Blocked Seat Agreements (Codeshare)
5. (Free sale) Codesharing
6. Bilateral Joint Ventures (Revenue)
7. Bilateral Joint Ventures (Profit)
8. Merger/ M&A

Alliances

JV

no cooperation
Factors Affecting Future US Networks

- **Factors Airlines Control**
  - Capacity
  - CAPX
    - Aircraft
    - Non-aircraft
  - CASM ex Fuel

- **Factors Airlines Cannot Control**
  - Macro economy
    - Positives ahead?
  - Volatile energy prices
    - Balance sheet pressure
  - Regulatory environment
    - Taxes and fees
A Strong Directional Correlation Between Consumer Sentiment and Airline Profitability Exists

Source: University of Michigan
The Relationship of Passenger Revenue to GDP

Source: MIT Airline Data Project
Isn’t It Interesting?

- The US airline industry is marginally profitable when......
  - Economic trends are weak
  - Consumer confidence is well below optimum levels
  - Manufacturing activity showing little to no expansion
  - Air traffic up; cargo traffic is in decline – but stabilizing?
  - European economic activity troubled
  - Premium travel trends are exhibiting little growth
Conclusion/Thoughts

- **Airline actions to ensure sustainability run contrary to airport interests**
  - None more so than capacity cutting
  - Consolidation is a second order effect negatively impacting

- **Airline winners and losers are being identified**
  - Airport winners and losers less understood although the market is at work
    - Regional sector evolution holds the answers for many airport markets

- **Thinking that much of wholesale capacity cutting done**
  - Regional attrition will rule the day going forward
  - Seasonal capacity adjustments are likely to be a bigger part of the vernacular
    - Shape of the new Southwest/AirTran is certain to impact domestic architecture

- The economy does not promise to turn any marginal route opportunities into profitable opportunities in the immediate term

- It took 30+ years to create the unsustainable network architecture that comprises the US air transport industry today, it will take at least through this decade to determine its scope and scale in the next decade
The Middle East Carriers....
More a Threat to Europe than US Carriers

Source: Airbus
A Case for Foreign Ownership?

- If vendors serving the airline industry are allowed to consolidate into dominant positions with few border restrictions, and …
- If other industries like steel are permitted to consolidate market power around 4 global providers, and……
- If the global airline industry has not one dominant player, and …
- If Joint Ventures only capture 50% of potential synergies, and...
- If the five biggest alliance members produce 60% of the benefits, and ....
- If the new and emerging competition is obvious,
A Case for Foreign Ownership?

- Then why should airline companies be hamstrung in their ability to maximize financial performance?
- Then why should airline companies be forced into band aid solutions like alliances when the new and emerging competition are building truly seamless, organic products?
- Then why should companies that are, or are certain to be, under attack from the new and emerging competition be prohibited from joining hands to mount the strongest competitive reaction possible?
- A far flung alliance formation has less chance to build a global brand than the new and emerging competition
For More Information on the

**MIT Airline Data Project**

**MIT Airline Industry Research Consortium**

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