Agenda

- Executive Summary
- Industry Overview
- Pricing Strategies
- Recommendations
Executive Summary

Industry Overview

Pricing Strategies

Recommendations
# Executive Summary

## Why choose the airline industry?

<table>
<thead>
<tr>
<th><strong>Information Asymmetry</strong></th>
<th>Dynamic pricing makes it hard for consumers to know how prices are set</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Industry Margins Lead to Creative Pricing</strong></td>
<td>Unique cost structure, high regulation, and demand shocks lead to lower margins</td>
</tr>
<tr>
<td><strong>Leverage Available Data</strong></td>
<td>Research trends and apply pricing concepts</td>
</tr>
</tbody>
</table>

## Key results

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td><strong>Seasonality</strong> – Q3 highest unique routes</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td><strong>Price per mile vs. Miles</strong> – 50% decrease (500 to 1500 miles)</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td><strong>Power Law</strong> – price per mile</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td><strong>Correlation</strong> – prices in substitutable airports</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td><strong>Mergers</strong> – increase price / mile</td>
</tr>
</tbody>
</table>
U.S. Domestic Airline Industry Overview

### Hub and Spoke Model
- **Network Carrier** - Provide majority of flights from at least one hub, where connecting flights are made
- **Regional Carrier** - Provide service from small cities
- **Hub** – Airport network carriers uses as a transfer point to get passengers to their intended destination
- **Spoke** – Airports served by regional or contracted airlines that support a hub with connecting flights

### Top Costs and Drivers

1. **Labor Cost (31.3%)**
   - Heavily unionized industry
   - High wage premiums and long-term union contracts
   - Non-union competitors emerged after deregulation
   - Unions challenged by bankruptcies for wage concessions

2. **Fuel Cost (17.3%)**
   - Crude Oil Prices
   - Fuel burn efficiency of aircraft (age of aircraft)
   - Route flown (length of time at cruising altitude)
   - Hedge with forward contracts

3. **Aircraft Leasing Cost (2.9%)**

### Unique Cost Structure
- **Majority Fixed Costs** - aircraft leases or purchases, fuel, labor cost, leasing space from airports
- **Minority Variable Costs**
- **Aim to increase** passenger load factor (measure of utilization in seat capacity)

### Revenue and Cost Breakdown (2016)

- **Wages**: 17.30%
- **Other**: 19.10%
- **Profit**: 23.10%
- **Purchases**: 31.30%
- **Marketing**: 2.00%
- **Depreciation**: 2.90%
- **Rent & Utilities**: 4.30%
Financial Performance

Revenue has been increasing, and employment has recovered after layoffs during the financial crisis.
Average net profit has been increasing due to lower crude oil prices and increased demand after the recession.
Financial Performance

The U.S. domestic airline industry has experienced growing operating income, but still remains less profitable than other industries.

Average EBIT in U.S. Airline Industry

EBIT ($ bn) | EBIT Margin
--- | ---
2010: 0.057 | 2011: 0.03
2012: 0.034 | 2013: 0.068
2014: 0.118 | 2015: 0.143
### Industry Organization

There are three main types of airlines, with the four **Major Carriers** dominating about 67% of the total market share. Major Carriers also offer full service to customers without the extra charges.

<table>
<thead>
<tr>
<th>Examples</th>
<th>Description</th>
<th>Distinguishing Factors</th>
<th>Market Share (per airline)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Airline</td>
<td>Full service airlines that usually have multiple hubs and destinations to all 50 states. These airlines have high fares that include baggage, food, and other costs.</td>
<td>Hubs, Large market share, Higher prices, All-inclusive pricing</td>
<td>14% - 20%</td>
</tr>
<tr>
<td>Low Cost Carrier</td>
<td>Low cost carriers focus on providing cheap flights to most states. These airlines use homogenous aircrafts and no frills ticket pricing structure to eliminate unnecessary costs.</td>
<td>Low cost tickets, Homogenous fleets, No hub and spoke, No frills pricing</td>
<td>1% - 5%</td>
</tr>
<tr>
<td>Regional Airline</td>
<td>Regional Airlines only service a specific geographic area within the United States. These airlines are usually small and sometimes operate for a major airline.</td>
<td>Centered to region, Can operate as part of larger airline, Small aircrafts</td>
<td>Less than 2%</td>
</tr>
</tbody>
</table>
Competition

*U.S. domestic airline industry has moderate competition over price, routes, and frequency in flights.*

**Industry Rivalry**

**Bargaining Power of Buyers - High**
- Leisure customers (non-business) extremely price sensitive
- Low customer loyalty
- Limited product differentiation and large number of substitutes
- Low switching cost

**Bargaining Power of Suppliers - High**
- Suppliers along value chain: manufacturers (Airbus, Boeing), aircraft lessors, gas/petr. wholesalers, maintenance, GDS, travel agents
- Limited number, high profit margin

**Threat of New Entrants - Low**
- Capital intensive (aircraft, hangar, airfield space, labor, etc.)
- Incumbents benefit from network alliances, economies of scale, proven safety record

**Threat of Substitutes - Medium**
- High competition with cars, trains, buses for regional airlines and those that primarily travel short distances
- Low substitutability for long-distance travel
## Industry Concentration

*U.S. domestic airline industry is highly concentrated among four airlines.*

<table>
<thead>
<tr>
<th>Company</th>
<th>Market Share</th>
<th>HHI</th>
<th>CR4</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>0.199</td>
<td>0.040</td>
<td>0.199</td>
</tr>
<tr>
<td>Southwest</td>
<td>0.182</td>
<td>0.033</td>
<td>0.182</td>
</tr>
<tr>
<td>Delta</td>
<td>0.170</td>
<td>0.029</td>
<td>0.170</td>
</tr>
<tr>
<td>United</td>
<td>0.147</td>
<td>0.022</td>
<td>0.147</td>
</tr>
<tr>
<td>JetBlue</td>
<td>0.053</td>
<td>0.003</td>
<td>-</td>
</tr>
<tr>
<td>Alaska</td>
<td>0.045</td>
<td>0.002</td>
<td>-</td>
</tr>
<tr>
<td>Spirit</td>
<td>0.026</td>
<td>0.001</td>
<td>-</td>
</tr>
<tr>
<td>SkyWest</td>
<td>0.024</td>
<td>0.001</td>
<td>-</td>
</tr>
<tr>
<td>Frontier</td>
<td>0.019</td>
<td>0.000</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>0.014</td>
<td>0.000</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1296.81</strong></td>
<td><strong>0.70</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Excluding "Other" in HHI calculation**
## Main Competitors

There are four major players in the market, three full service airlines and one low-cost carrier.

<table>
<thead>
<tr>
<th><strong>American Airlines Group Inc.</strong></th>
<th><strong>Delta Air Lines Inc.</strong></th>
<th><strong>United Continental Holdings Inc.</strong></th>
<th><strong>Southwest Airlines Co.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share: 19.7%</td>
<td>Market share: 18.4%</td>
<td>Market share: 14.8%</td>
<td>Market Share: 13.7%</td>
</tr>
<tr>
<td>Relevant Hubs: DFW, LGA, JFK, LAX</td>
<td>Relevant Hubs: ATL, LGA, JFK, LAX</td>
<td>Relevant Hubs: ORD, EWR, SFO, LAX</td>
<td>Relevant Hubs: DAL</td>
</tr>
<tr>
<td>Based in Fort Worth, Texas, American Airlines is the largest domestic airline by market share. It has a strong geographic presence in southern states with hubs in Phoenix, Charlotte, Dallas, Miami, as well as New York City and Los Angeles.</td>
<td>Based in Atlanta, Georgia, Delta is one of the world's largest airlines. It has a strong geographic focus in the Midwest, with hubs in Cincinnati, Detroit, Minneapolis, Salt Lake City, as well as New York City and Los Angeles.</td>
<td>Based in Chicago, Illinois, United Airlines became one of the world's largest airlines by revenue after its merger with Continental. The airline has a strong presence on the east coast as well as the west coast with hubs in New York City, Washington D.C., San Francisco, and Los Angeles</td>
<td>Based in Dallas, Texas, Southwest Airlines is the largest low-cost carrier in the United States. While it is still considered a low-cost carrier, it has operations similar to full service carriers. The carrier only uses one type of aircraft and services 41 states.</td>
</tr>
</tbody>
</table>
Major Mergers

Each major carrier undergoes one major merger each after 2008, with two small transactions occurring before then, consolidating the main players in the industry to four major airlines.
Determinants that Affect the Industry

Supply Chain and Drivers of the Industry are main determinants of prices that go into downstream services.

**Upstream**
- Maintenance and Repair
- Engine Parts and Manufacturing
- Aircraft Transportation Equipment
- Airport Operations and Security
- Gasoline and Petroleum

**Midstream**
- **Airline Industry**
  - Labor and Personnel
  - Operations
  - Maintenance
  - Sales and Marketing
  - Reservations and Ticketing
  - Staff Personnel

**Downstream**
- Forwarding Industry
- Travel Agencies
- Consumers
- Courier Industry

Economic Drivers:
- Crude Oil Prices
- Customer
- Disposable Income
- No. Domestic Trips
- No. Incoming Foreign Trips
- Corporate Profit
# Upstream - Aircraft Fleet Financing

*While the majority of aircraft is purchased, leasing has been gaining popularity.*

<table>
<thead>
<tr>
<th>Wet Lease</th>
<th>Damp Lease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessor provides: aircraft, complete crew, maintenance, and insurance</td>
<td>Lessor provides: aircraft, maintenance and insurance</td>
</tr>
<tr>
<td>~ Charter plane</td>
<td>No crew</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dry Lease</th>
<th>Sale and Lease Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessor provides: only aircraft</td>
<td>Airlines purchase planes in bulk at a steep discount, sell to lessor at market price, and lease it back</td>
</tr>
<tr>
<td>No crew, maintenance, or insurance</td>
<td>Used by LCCs as profitable leasing model</td>
</tr>
</tbody>
</table>

- **Operating Lease** – Short-term lease (2-7 yr), doesn’t appear on balance sheet
- **Financing / Capital Lease** – Lease to buy; appears on balance sheet

- **Reduce**: depreciation expense, risk of resale, and debt involved in airplane purchases
Downstream - Ticket Distribution Channel

More than 50% of tickets are sold indirectly through reservation systems, which charge airlines high commissions.

**GDS** – global distribution system (> 50% all bookings)
• Created by airlines to keep track of flight schedules, availability, prices
• Used to be owned by airlines, but have become independent
• Automated reservation process for travel agents to help sell tickets
• Used for airlines to sell tickets using third-party websites
• High cost for airlines (~$12/ticket)
Government Regulation and Events Timeline

1978 Airline Deregulation Act is the most significant government regulation.

- 1958: Federal Aviation Agency (FAA) Created
- 1978: Airline Deregulation Act
- Early 1990s: 67% increase in regional airline accidents
- 1995: “One level of Safety”
  - FAA governs regional airlines under same safety regulations as major airlines
- 2001: Aviation and Transportation Safety Act creates TSA
- 2005: US Airways, United, Delta, and Northwest all file for bankruptcy by 2005
- 2009: Airline Safety and Pilot Training Improvement Act

1980s: Bankruptcies and consolidations; begin hub and spoke model
Government Regulation

Prior to deregulation, the U.S. domestic airline industry was less competitive, served fewer passengers, and yielded higher returns.

1978 Airline Deregulation Act dissolved the Civil Aeronautics Board (CAB), which regulated U.S. airlines on where they could fly and fares

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fares, flight schedules, and routes regulated by government</td>
<td>• Airline safety regulated by government</td>
</tr>
<tr>
<td>• CAB guaranteed airlines a 12% return on flights that were 55% full</td>
<td>• Low-cost carriers (LCCs) became popular business model</td>
</tr>
<tr>
<td>• CAB approved few applications for new routes</td>
<td>• Airlines no longer limited to fly in certain regions</td>
</tr>
<tr>
<td>• Airlines competed on service, alone</td>
<td>• Air travel tripled in 30 years</td>
</tr>
<tr>
<td>• Flying reserved for higher-class</td>
<td>• Fares decreased via competitive market forces</td>
</tr>
<tr>
<td></td>
<td>• Consolidation and big four – Delta, United, American, and Southwest</td>
</tr>
<tr>
<td></td>
<td>• Almost all major airlines have filed for bankruptcies or been liquidated</td>
</tr>
</tbody>
</table>
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Industry Overview

Pricing Strategies

Recommendations
# Pricing Strategies – 2nd Degree Price Discrimination

*Second degree price discrimination - each customer pays her own price, depending on characteristics of purchase.*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Versioning</strong></td>
<td>Producing different models of the same product, and then charging different prices for each model</td>
<td>Southwest (Goldilocks Principle)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• First class: $574</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Business class: $545</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Economy class: $369</td>
</tr>
<tr>
<td><strong>Dynamic Pricing</strong></td>
<td>Pricing items at a level determined by a particular customer's perceived ability to pay</td>
<td>Seasonality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mileage programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bulk quantity discounts</td>
</tr>
<tr>
<td><strong>Flight Distance</strong></td>
<td>Depending on the distance of the travel, airlines charge different price/mile</td>
<td>$231 from JFK to BOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$579 from JFK to LAX</td>
</tr>
</tbody>
</table>
# Pricing Strategies – 3rd Degree Price Discrimination

*Third degree price discrimination - charging a different price to different groups of consumers.*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Origin</strong></td>
<td>Pricing based on the location, demographic, and competition of the origin of the flight</td>
<td>Flying out of a city with a higher annual income might be more expensive than flying out of a town with a lower annual income</td>
</tr>
<tr>
<td><strong>Destination</strong></td>
<td>Pricing based on the location, demographic, and competition of the destination of the flight</td>
<td>Flying into a city with high tourism rate might be more expensive than flying into a suburb</td>
</tr>
</tbody>
</table>
**Pricing Strategies – Other**

*The listed strategies are prevalent in the airline industry but not explained further in our presentation.*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
</table>
| Advanced Booking | Discriminating between high-fare and low-fare customers and their target buying times by allowing customers to book in advance | JFK to BOS  
  - $233 1 day in advance  
  - $78 42 days in advance  
  - $88 126 days in advance |
| Overbooking  | Overbooking by the average percentage of no-shows per flight to maximize flight utilization and offset high fixed costs | Southwest  
  “In fact, the majority of overbooked flights depart with empty seats because the formula we use to derive our booking levels is carefully applied and quite conservative.” |
| Predatory Pricing | Pricing below marginal cost to eliminate a competitor and typically occurs when airlines compete for low-fare markets | New York Times, 1999  
  “The Federal Government accused American Airlines Thursday of driving smaller competitors out of one of its most important markets by illegally slashing ticket prices below cost and increasing flights sharply.” |
| Bundling       | Selling set of goods or services for a lower price than they would charge if the customer bought all of them separately | Hotel + Flight  
  Seat + beverages, food, services |
## Additional Factors Affecting Pricing

*Strategies are prevalent in the airline industry and explained further in our presentation.*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mergers</strong></td>
<td>Increasing or decreasing ticket prices after two airline companies merged into one company</td>
<td>American Airlines and U.S. Airways merged and American Airlines could have changed its ticket prices</td>
</tr>
<tr>
<td><strong>Number of Nearby Airports</strong></td>
<td>Pricing influenced by the number of airports located close to one another</td>
<td>NYC has three large airports (JFK, EWR, LGA) that travelers can choose among while LA only has one large airport (LAX)</td>
</tr>
<tr>
<td><strong>Number of Competing Airlines in a Given Airport</strong></td>
<td>Pricing influenced by the number of airlines flying into and out of a certain airport and whether a given airport is a hub for an airline</td>
<td>Bush International Airport is a fortress hub for United Airlines, responsible for 80% of its traffic</td>
</tr>
</tbody>
</table>
Dataset Introduction


10% Sample of U.S. Domestic Flight Tickets
~3M+ Data Points per Quarter

Important Data Fields

1. Unique Itinerary ID
2. Number of Passengers
3. Price per mile
4. Miles flown
5. Airline
The third quarter sees the most number of unique flights, mostly attributable to summer travelers.
Five Most Popular Routes

The remaining data analysis will focus on routes that are consistently in the top five routes for each quarter: SFO to LAX, LAX to SFO, LAX to JFK, and JFK to LAX.
Three Representative Routes

Much of our data analysis will focus on three representative routes based on their flight frequencies to gain a better insight on the overall airline industry’s pricing strategies.

1st most popular route
SFO (San Francisco, CA) to LAX (Los Angeles, CA)
11,028 flights

100th most popular route
ORD (Chicago, IL) to DIA (Denver, CO)
2,983 flights

1,000th most popular route
MCO (Orlando, FL) to MCI (Kansas City, MO)
740 flights
Economies of Scale Factor Into Airline Pricing

Price per mile decreases, linearly after 1,100 miles, as the miles flown increase. However, most of the customers do not benefit from the sharp decline.

\[ y = -1.511x + 23.045 \]

\[ R^2 = 0.5252 \]

There is a strong indication of power rule in airline price per miles (50K random samples per airline).

---

![Graphs showing price dispersion by miles for different airlines](image-url)
**Dynamic Pricing: Seasonality (SFO to LAX)**

*Delta* has consistently charged the **lowest price per mile**, while American and United charge the highest; most airlines have been decreasing price toward Q4, while average prices have increased since 2010.

---

**Average Price / Mile (2010)**  

- Q1: 0.32  
- Q2: 0.35  
- Q3: 0.30  
- Q4: 0.37  
- Q5: 0.34

**Average Price / Mile (2011)**  

- Q1: 0.30  
- Q2: 0.25  
- Q3: 0.28  
- Q4: 0.31  
- Q5: 0.33

**Average Price / Mile (2015)**  

- Q1: 0.35  
- Q2: 0.30  
- Q3: 0.28  
- Q4: 0.31  
- Q5: 0.34
## Effect of Mergers on Price

*Price/mile increased after the completion of all four major mergers.*

### Major Mergers:

- American Airlines & U.S. Airways ➔ American Airlines
- Southwest & AirTran ➔ Southwest
- Delta & Northwest ➔ Delta
- United & Continental ➔ United Airlines

### Price/mile Before and After Mergers

<table>
<thead>
<tr>
<th>Company</th>
<th>Announcement</th>
<th>price/mile</th>
<th>Completion</th>
<th>price/mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>2013, Q4</td>
<td>0.236</td>
<td>2015, Q4</td>
<td>0.256</td>
</tr>
<tr>
<td>Southwest</td>
<td>2010, Q3</td>
<td>0.182</td>
<td>2011, Q2</td>
<td>0.189</td>
</tr>
<tr>
<td>Delta</td>
<td>2008, Q3</td>
<td>0.223</td>
<td>2010, Q1</td>
<td>0.255</td>
</tr>
<tr>
<td>United</td>
<td>2010, Q2</td>
<td>0.227</td>
<td>2011, Q4</td>
<td>0.236</td>
</tr>
</tbody>
</table>
Despite the same number of miles flown, flying from Los Angeles to New York is almost always more expensive than flying from New York to Los Angeles.

Effect of Origin and Destination on Price

Average Ticket Prices in 2010

Average Ticket Prices in 2011

Average Ticket Prices in 2015

Despite the same number of miles flown, flying from Los Angeles to New York is almost always more expensive than flying from New York to Los Angeles.
Correlation Between Nearby Airports

There is positive correlation between ticket prices to **Los Angeles (LAX)** from all pair combinations of **NY airports**. Having another nearby airport affected airlines’ average ticket prices.

### Correlation Coefficient:

- (EWR, JFK): 0.248
- (JFK, LGA): 0.446
- (EWR, LGA): 0.595

**Pricing Strategies**
Effect of Hubs on Price

IAH is the main hub for United Airlines and HOU is a low-cost carrier airport located 29 miles away. The average ticket price from a hub airport is higher than the average ticket price from a smaller airport.

Average Flight Tickets to LAX, 2010

Average Flight Tickets to LAX, 2011

Average Flight Tickets to LAX, 2015

Effect of Hubs on Price

IAH is the main hub for United Airlines and HOU is a low-cost carrier airport located 29 miles away. The average ticket price from a hub airport is higher than the average ticket price from a smaller airport.
Effect of Hubs on Price

There is more variance in hub airports than smaller airports. Firms responsiveness to price dispersion decreases when their market share increases.
Executive Summary

Industry Overview

Pricing Strategies

Recommendations
## Why Invest?

<table>
<thead>
<tr>
<th><strong>1</strong></th>
<th><strong>Favorable crude oil prices</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Low oil prices continue to benefit bottom line</td>
</tr>
<tr>
<td></td>
<td>• Free up capital for investments in growth</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>2</strong></th>
<th><strong>Fare unbundling / “no-frills” pricing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Improve major carriers’ competitiveness with LCCs and continue to increase profit margins</td>
</tr>
<tr>
<td></td>
<td>• May impact customer satisfaction negatively</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>3</strong></th>
<th><strong>Consolidation among carriers</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Alaskan (ALK) / Virgin (VA) merger to increase ALK West Coast penetration and scale</td>
</tr>
<tr>
<td></td>
<td>• Two types of mergers: (1) consolidate overlapping routes, (2) add geographic scope</td>
</tr>
<tr>
<td></td>
<td>• Likely to continue at a modest pace in fragmented regions of the U.S.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>4</strong></th>
<th><strong>Subject to demand shocks</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Passenger demand expected to increase in 2016 from improving U.S. economy</td>
</tr>
<tr>
<td></td>
<td>• However, threatened by headline risk from Zika virus, terrorist attacks, etc.</td>
</tr>
</tbody>
</table>

---

**Investment Recommendation**

International Air Transport Association (IATA) expects the industry to double net profit for 2016, due to cheap oil and increased demand for air travel; we **recommend** investing in fast growth carriers.
## Pricing Strategy Recommendations

*We concluded on **four** main Pricing Recommendations listed below.*

<table>
<thead>
<tr>
<th></th>
<th><strong>Recommendation</strong></th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Test lower prices at hub airports</strong></td>
<td>1.6% decrease in passengers from IAH (Bush). Concurrently HOU (Hobby), a cheaper hub 29 miles away, saw an 8.6% increase.</td>
</tr>
<tr>
<td>2</td>
<td><strong>LCCs improve customer loyalty programs</strong></td>
<td>Partner with credit card companies to accumulate miles for mileage programs.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Offer bulk discounts and packages</strong></td>
<td>Offer discounts for several purchases done at once, especially for tourist destinations, especially on third-party websites.</td>
</tr>
<tr>
<td>4</td>
<td><strong>Explore subscription services</strong></td>
<td>Explore profitability of subscription services similar to OneGo, they might become key differentiators.</td>
</tr>
</tbody>
</table>
Questions?
Sources

In Order of Presentation:

Title Image:
https://tau0.files.wordpress.com/2012/09/terrell_flyin_0912_02.jpg

Industry and Market Share:

IBIS World – Domestic Airlines in U.S.:

Aircraft Leasing:
http://www.globalplanesearch.com/aviation_library/leasing_definition.htm

Product / ticket distribution:

Net Profit, EBIT, and EBIT Margin Graphs:

Deregulation:
http://www.onthecommons.org/magazine/airline-deregulation-triumph-ideology-over-evidence

Government regulation timeline:
http://www.pbs.org/wgbh/pages/frontline/flyingcheap/etc/cronfaa.html

GDS:
http://www.economist.com/node/21560866

Air Carrier Summary Data:
http://www.transtats.bts.gov/databases.asp?Mode_ID=1&Mode_Dese=Aviation&Subject_ID2=0

IAH vs. HOU Prices:
http://www.wsj.com/articles/SB10001424053111904009304576528580064496902

Airlines at Hobby Airport:

Airlines at IAH Airport:

Priceline Ticket Samples:
https://www.priceline.com/home/

Southwest Ticket Samples:
https://www.southwest.com/