



Third Annual Aviation Industry Suppliers Conference in Europe (AISCE)

Industry Consolidation: Review and Outlook

The Trend Continues

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President

Toulouse, France
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Introduction

Alderman & Company is a specialized investment bank and consulting firm serving the aerospace industry. We conduct our business through three practices:

- Mergers & Acquisitions**
- Strategic Consulting**
- Investment Advisory**

Our focus and experience ensures unparalleled perspective and expertise in navigating the financial opportunities and risks facing aerospace stakeholders. With more than 60 years of combined expertise, our professionals have helped leading aerospace companies and investors from around the world successfully develop and implement financial and strategic plans to preserve and maximize value.

Airline Supplier Consolidation:

1. Historic Perspective
2. Business Cycles
3. Changing Business Models
4. The Future
5. Strategies for Success

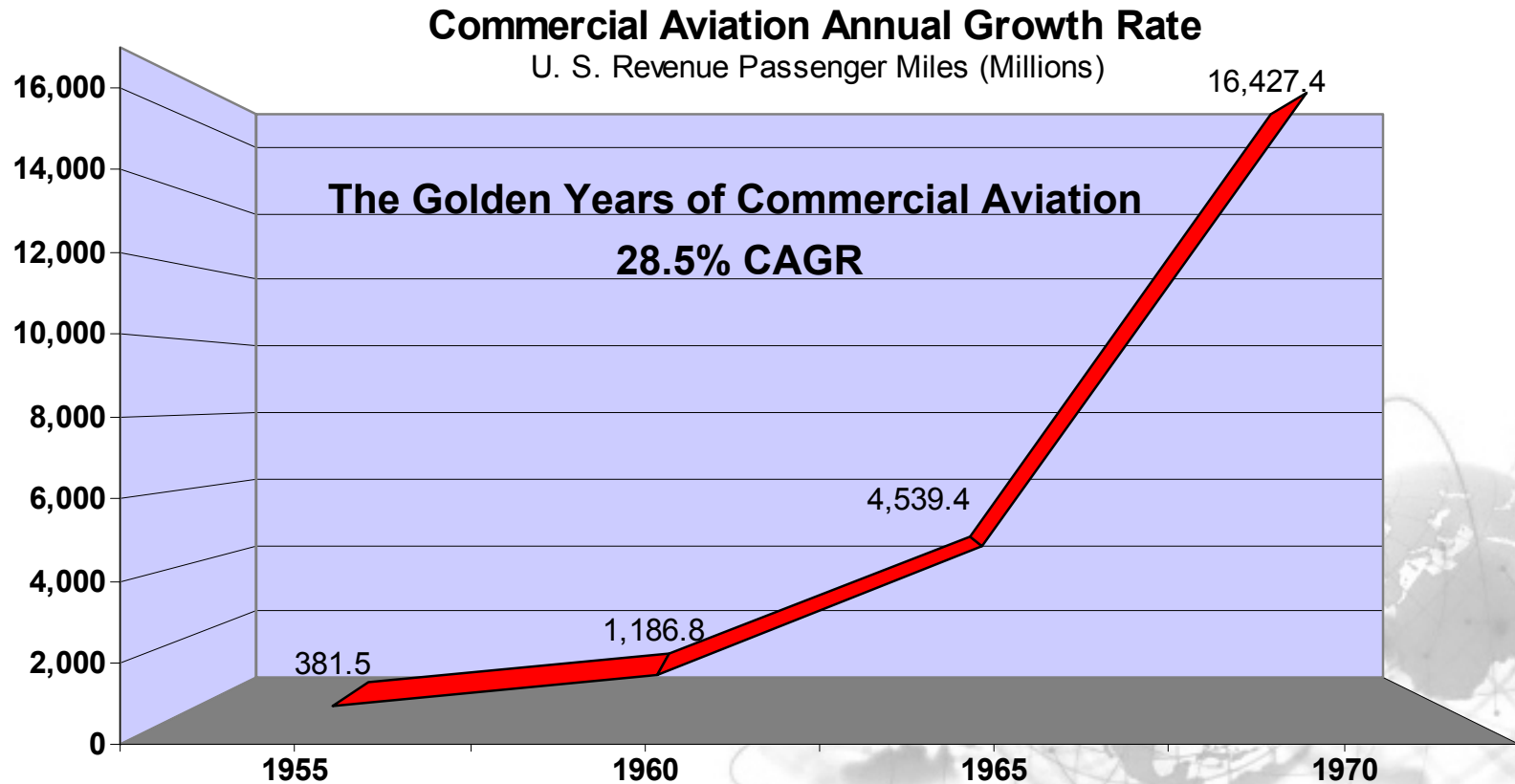


1. Historic Perspective



Historic Perspective

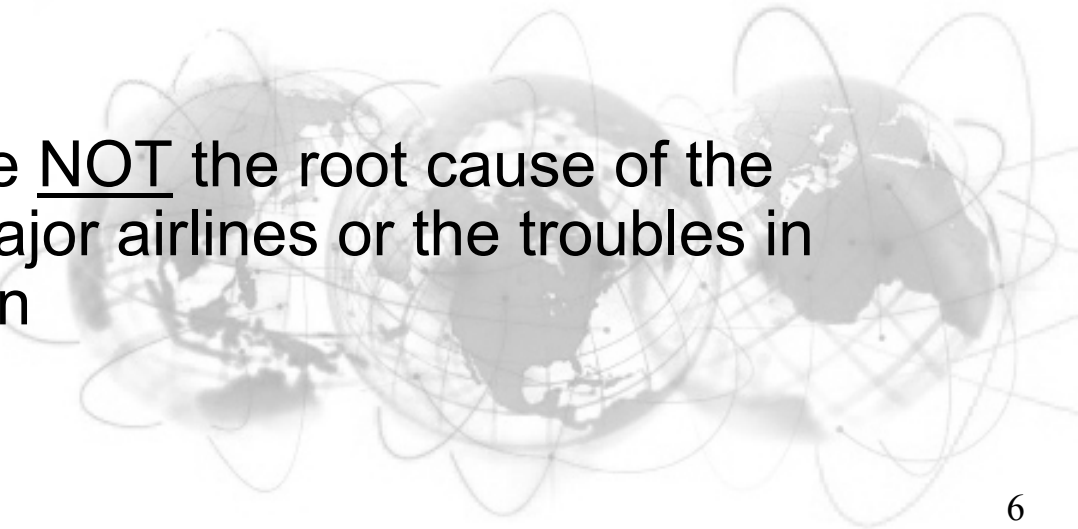
Commercial Aviation was a Growth Industry



Source: US Bureau of Statistics; "Origin and Destination Survey of Airline Passenger Traffic - Table1," U.S. Civil Aeronautics Board

Historic Perspective

- The tragic events of 9/11/2001 had a devastating impact on thousands of lives and forever changed the United States
- 9/11 dramatically accelerated the rate of change in the airline industry, but will have very little impact on the eventual outcome
- The events of 9/11 are NOT the root cause of the trouble with the US major airlines or the troubles in the airline supply chain



Historic Perspective

- The Hassle Factor: The events of 9/11 and the War Against Terrorism caused a severe downturn in demand for air travel in the United States and worldwide due to safety concerns and increased travel inconveniences resulting from heightened airport security.
- Alderman & Company expects the long-term effect of the events of 9/11 to be modest and that solid growth will return to the commercial aviation industry in the intermediate term, as it did in the early 1990s following the Gulf War and the bombing of Pan Am 103.

2. Business Cycles



Business Cycles

Business Cycles are one cause for our current problems:

- Airlines sell a perishable commodity
- Commodity prices are highly dependent upon supply and demand
- Airlines buy new aircraft when they can confidently forecast near term increases in demand
- When demand is high, it can take more than 12 months after purchase order to receive a new aircraft.
- When one airline starts to place new orders, the entire industry tends to follow suit
 - No airline wants to lose market share because they have too few aircraft
 - No airline wants to fly “older aircraft” when its competitor is flying “new” equipment
- The industry enjoys high demand and favorable pricing

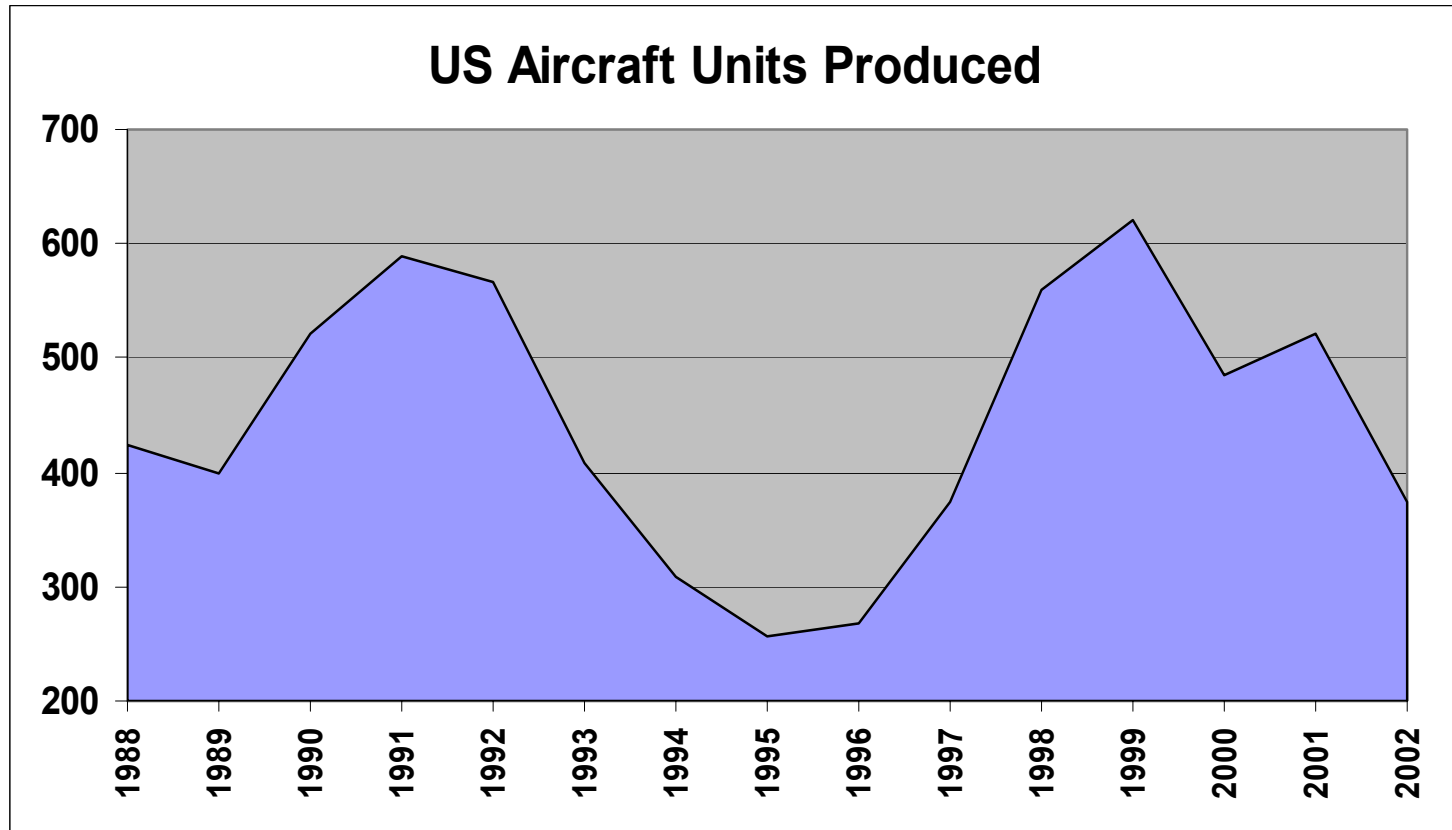
Business Cycles

Business Cycles (continued)

- Eventually...the party ends!
- The economy enters into a slow down, demand falls below the collective forecast and orders, prices and profits plummet
- Production falls
- Prices and profits in the supply chain crash
- Eventually the excess is absorbed, the economy recovers, and the cycle starts again

While the amplitude of this cycle may be reduced over time through better technology and management, commercial aircraft cycles will never be eliminated

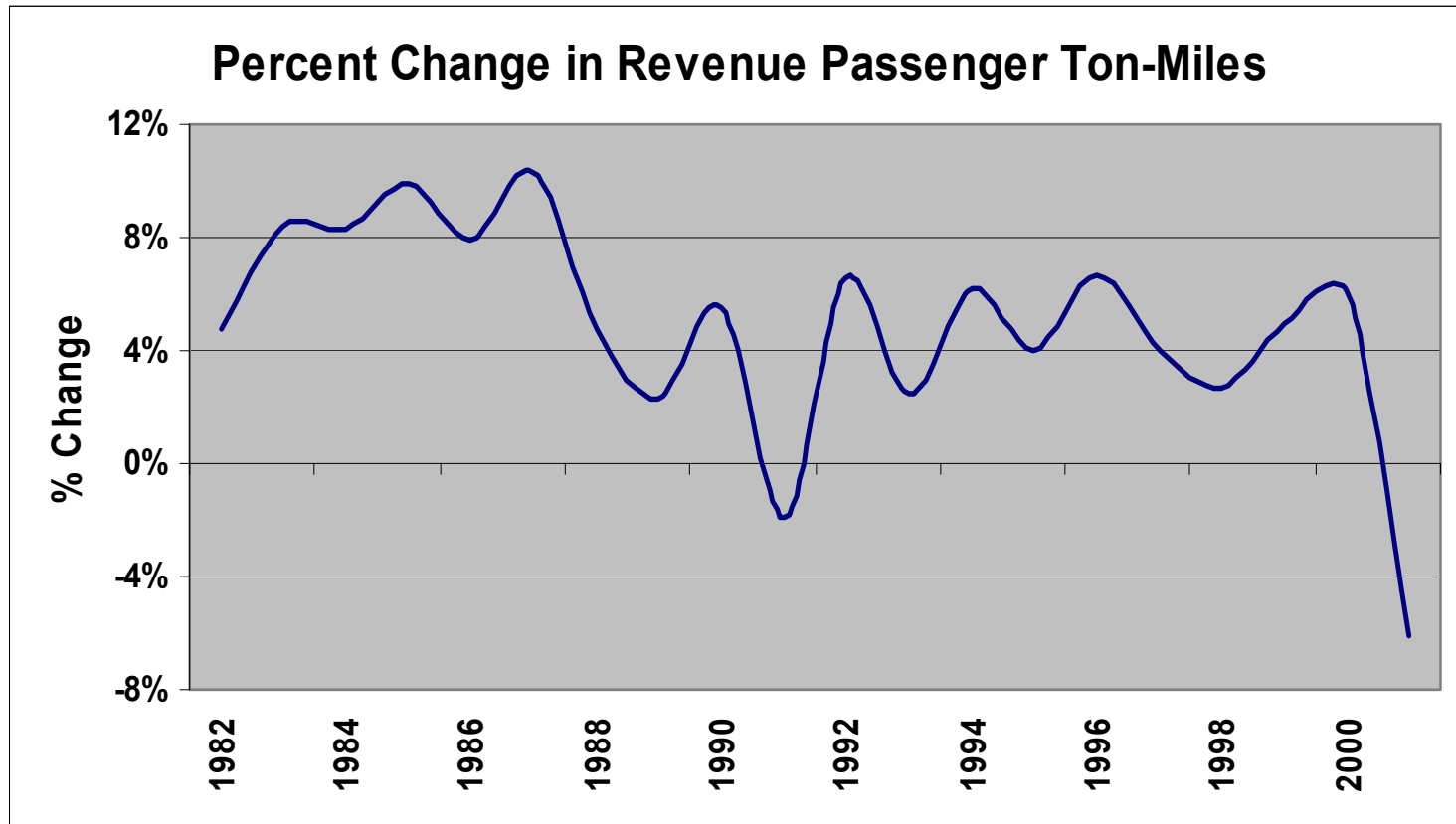
Business Cycles



This may be just another cycle

Sources: Alderman & Company analysis, "Civil Aircraft Shipments" Aerospace industry Association, September 2002.

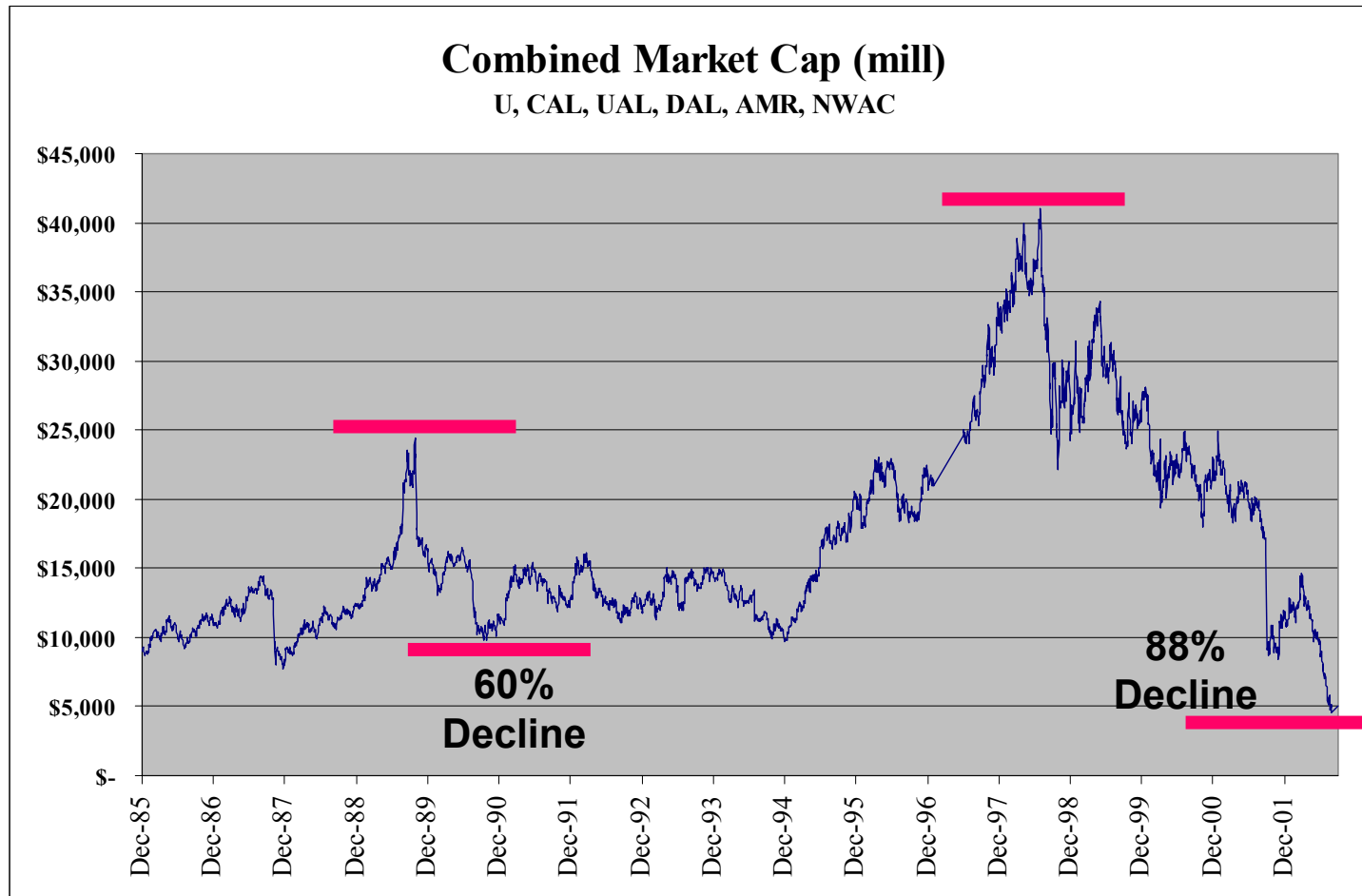
Business Cycles



Maybe this is just a “really bad” Cycle?

Sources: Alderman & Company analysis, "Origin and Destination Survey of Airline Passenger Traffic - Table 1," a publication of the U.S. Civil Aeronautics Board, United States Department of Transportation Bureau of Transportation Statistics Annual Statistics database as of September 16, 2002.

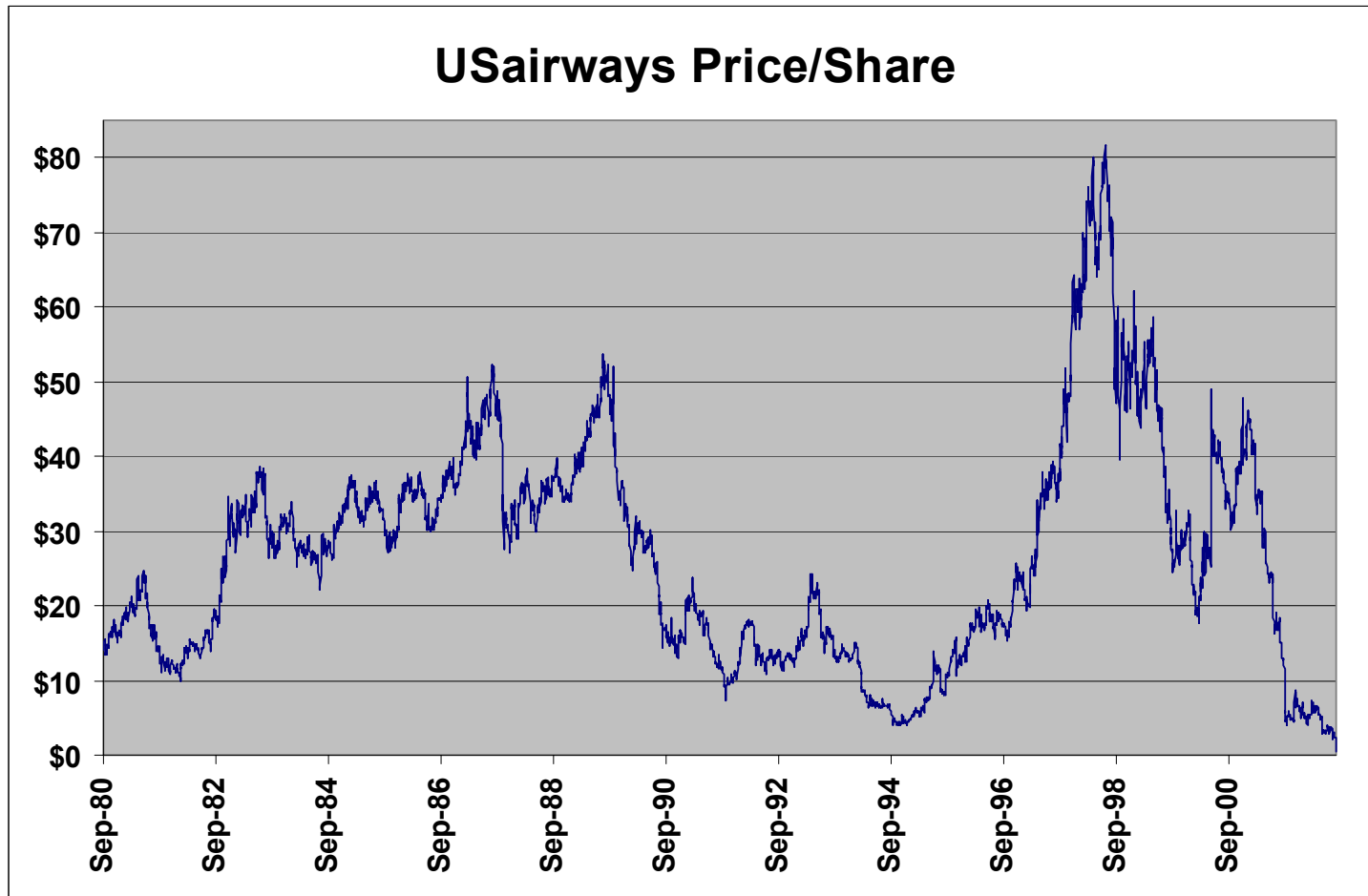
Business Cycles



This May be just Another Cycle

Sources: New York Stock Exchange Data, Alderman Company Analysis

Business Cycles



While deeper than the last, this is probably just another cycle

Sources: New York Stock Exchange Data.

Business Cycles

- The current economic cycle began in 1999 with the end of the era of rapid economic expansion fueled by the telecom and dotcom sectors.
- Airline profitability began to fall long before 9/11.
- But there is more at play than just business cycles.
- There are also major changes taking place to the business models throughout the commercial aviation industry.



3. Changing Business Models

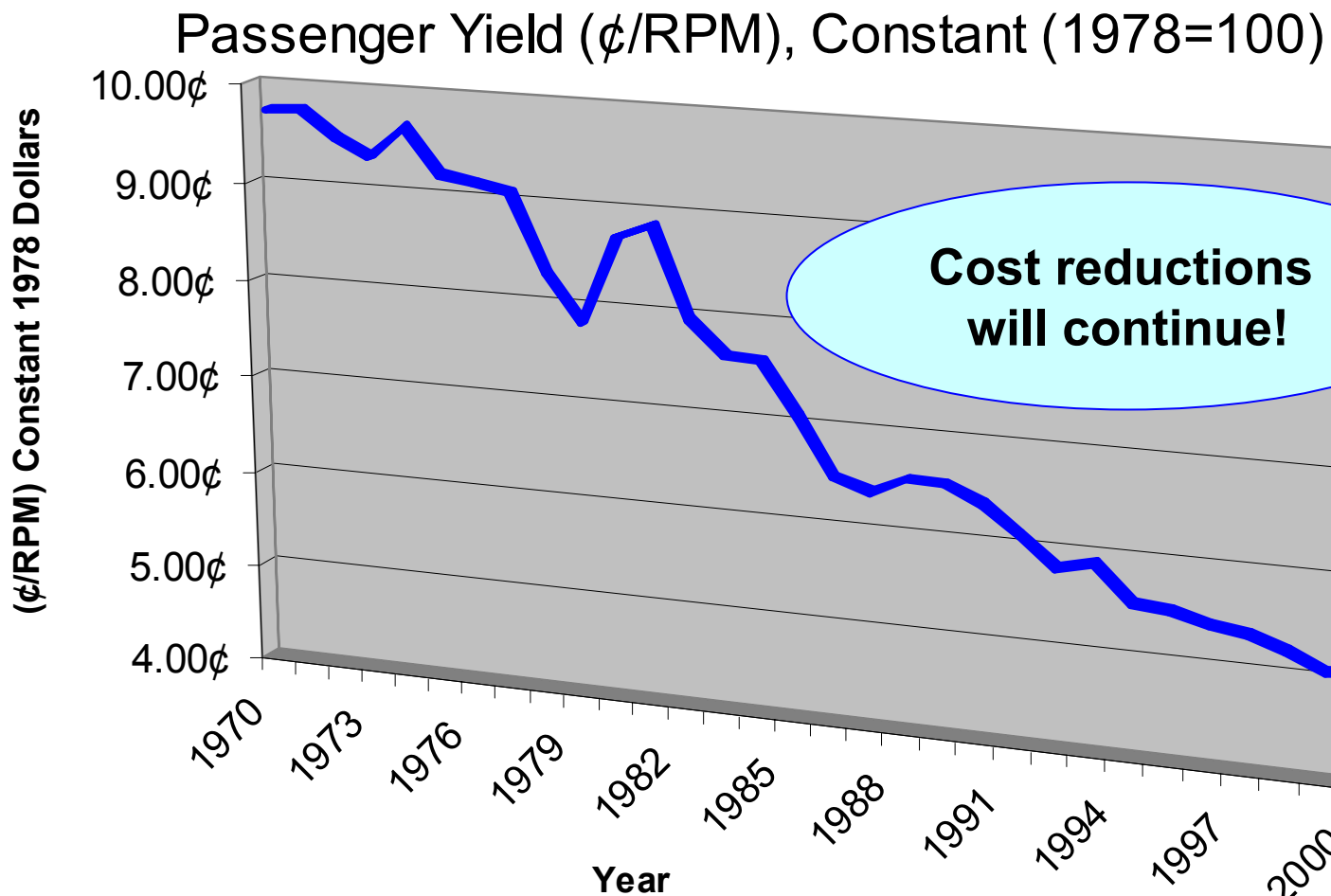


Changing Business Models

Changing Business Models are the other cause for our current problems:

- The economic systems of global commercial aviation were developed 40 years ago and are now outdated.
- New entrants have begun to develop better ways to run their businesses and provide better services with greater efficiency.
- Entrenched labor benefits prevent increased efficiency.
- As the value proposition continues to improve, old line companies unable to meet the challenge will be forced from the market.

Changing Business Models



That line does not look cyclical to me

Source: Air Transport Association

NEW YORK

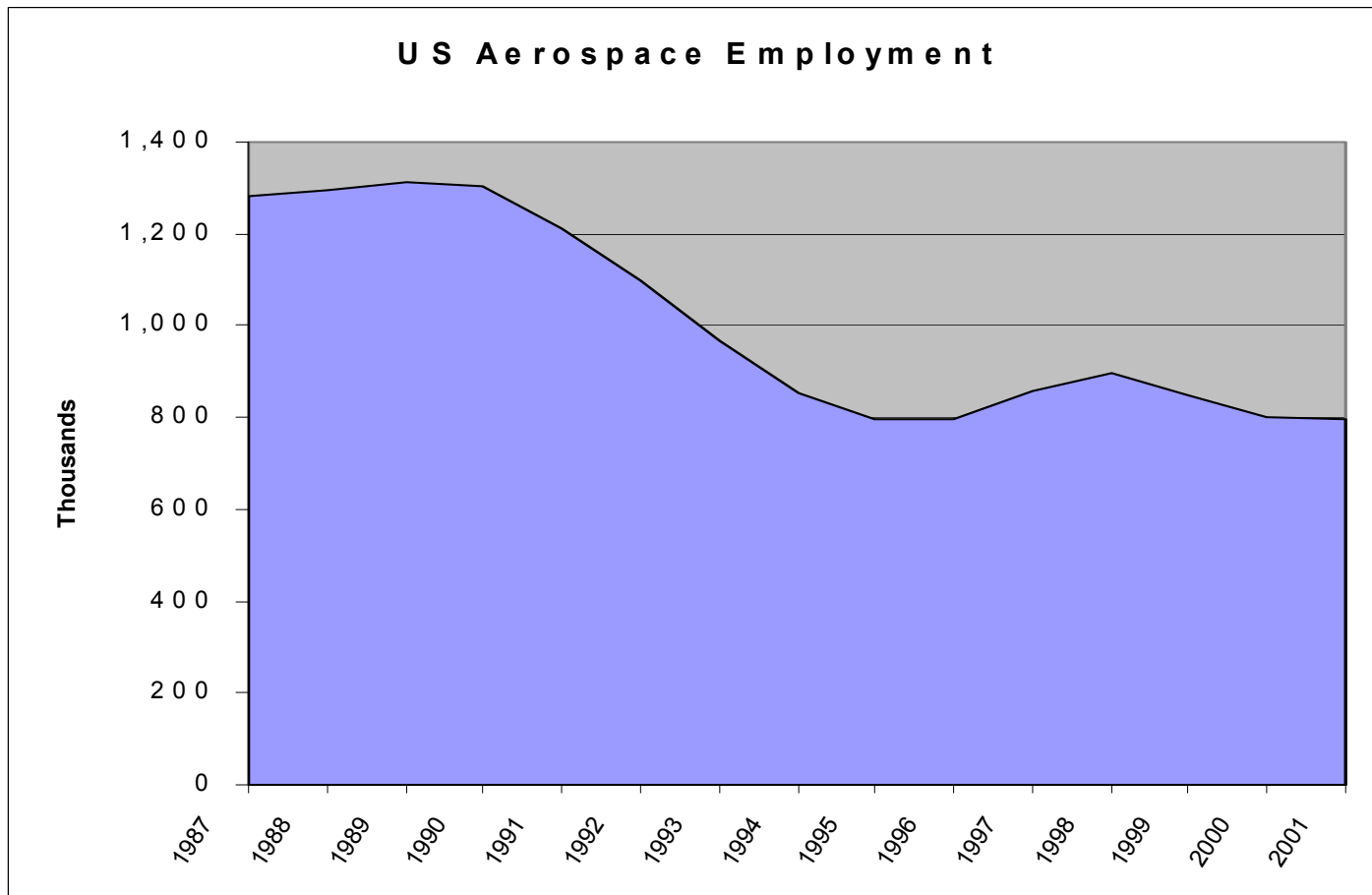
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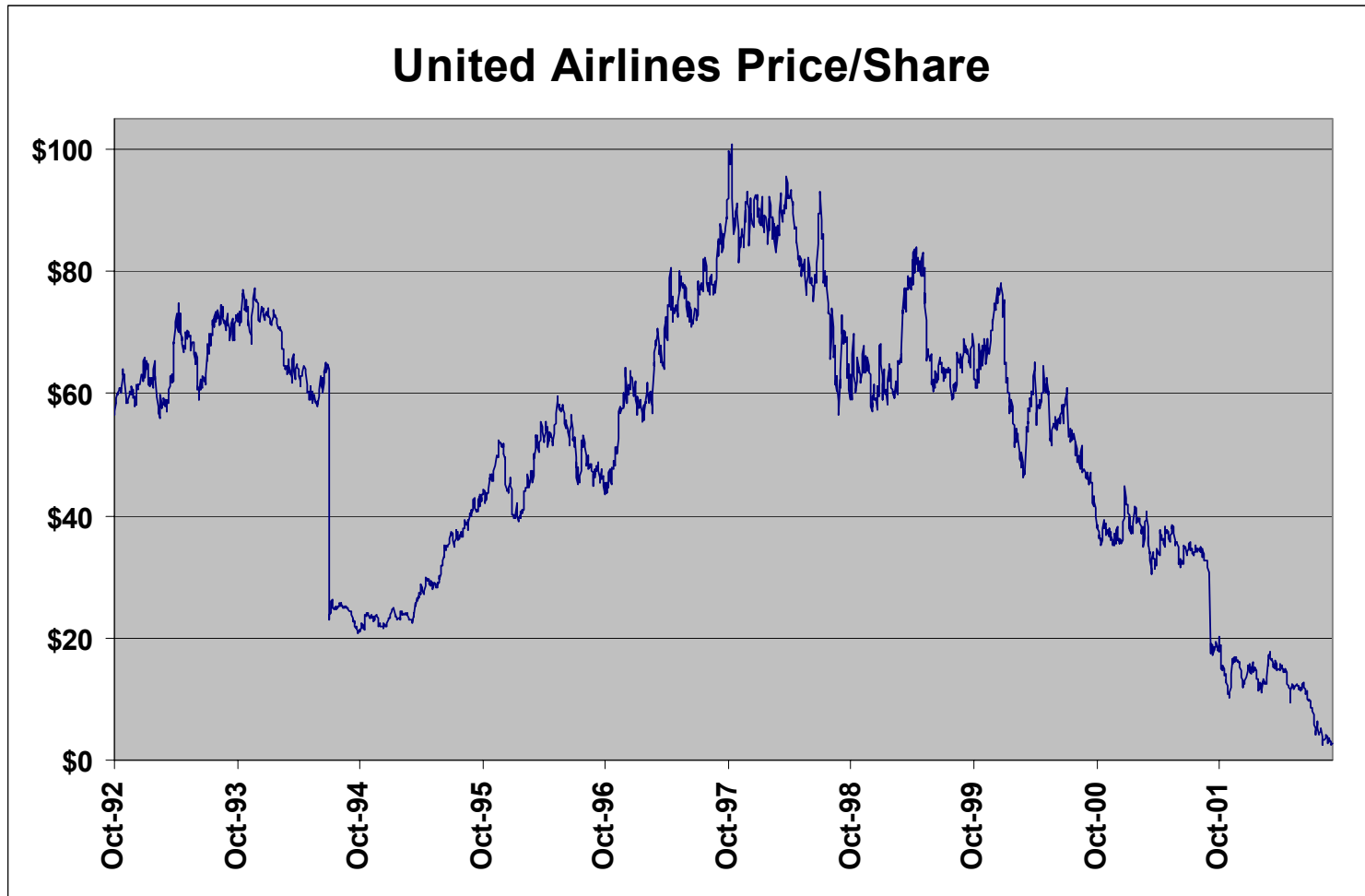
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Changing Business Models



Is this just another cycle?

Changing Business Models

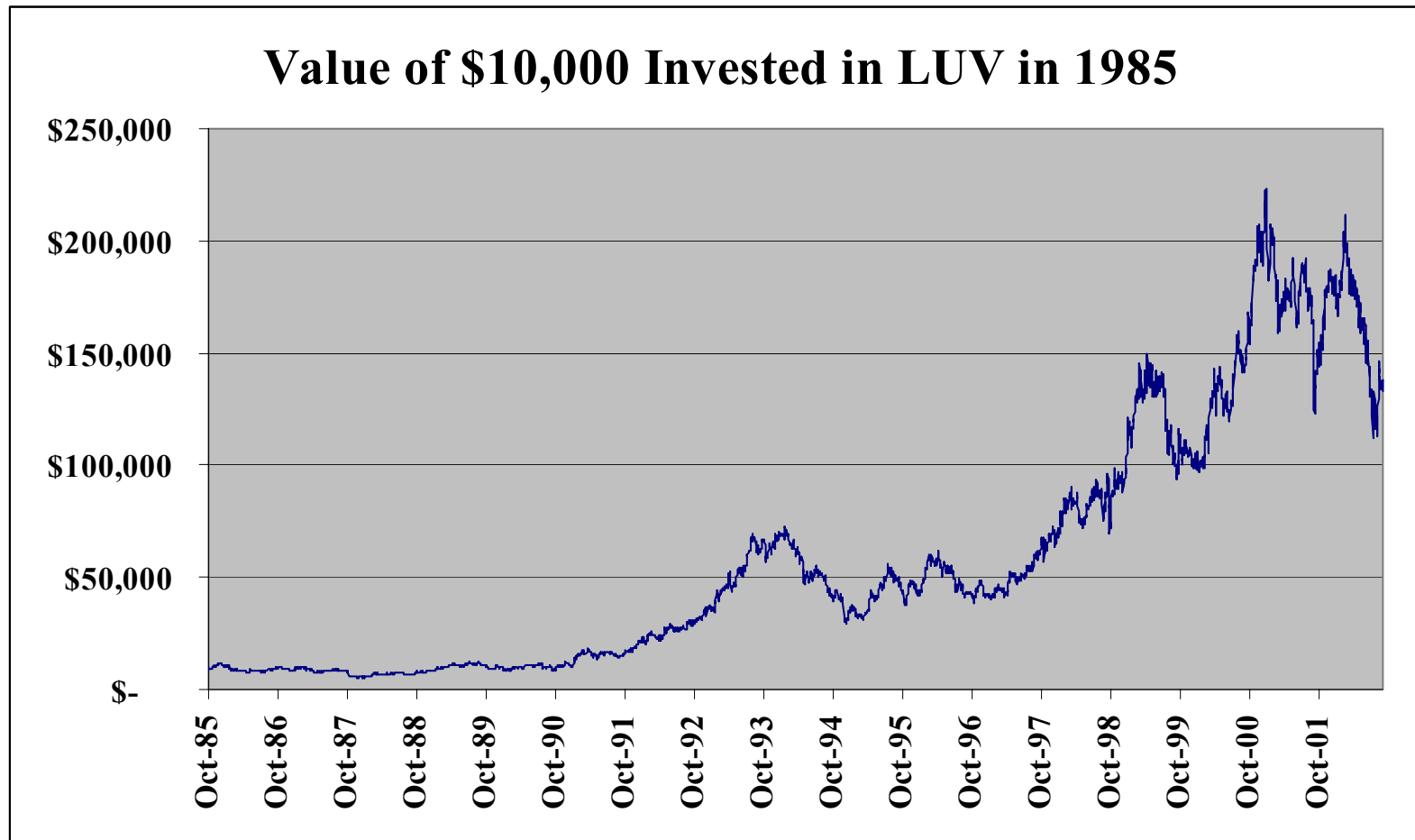


Is UAL going bankrupt? Is this Just a Cycle?

Sources: New York Stock Exchange Data.

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Changing Business Models



The business model is changing

Sources: New York Stock Exchange Data.

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Changing Business Models

Examples of the Paradigm Shift: OEMS

	Pricing	Product Innovation	DOC/ASM	Passenger Appeal	Services	Competitive Positioning
Airbus	Low	Very High	Very Low	Very High	Low	Value
Embraer	Moderate	Moderate	Moderate	High	Low	Value
Boeing	High	High	Moderate	High	High	Reputation
Bombardier	Moderate	High	Moderate	High	Moderate	Reputation
McDonnell Douglas	Moderate	Moderate	High	High	High	Reputation
Fokker	High	Low	Very High	Moderate	Very Low	Reputation
BAE	Moderate	Low	Very High	High	Low	Reputation
SAAB	Low	Low	Moderate	Low	Very Low	Reputation
Fairchild Dornier	High	Moderate	High	High	Very Low	Quality
Lockheed	High	High	High	Low	Very Low	Innovation

Changing Business Models



	B737-800	vs.	A320
Realized Price (mill)	\$43.0		\$42.0
Seats	145		150
Realized Price/Seat (000s)	\$296.55		\$280.00

	B777-200ER	vs.	A340-300
Realized Price (mill)	\$118.0		\$104.0
Seats	335		330
Realized Price/Seat (000s)	\$352.24		\$315.15

Cost is a primary driver!

Sources: Alderman & Company analysis; The Airline Monitor.

Changing Business Models

Examples of the Paradigm Shift: Airlines

	Pricing	Route Structure	Cost Structure	Labor Efficiency	Outsourcing Levels	Aircraft Commonality	Engine Commonality	Fleet Age	Competitive Positioning	Mixed Class
Southwest	Very Low	Pt 2 Pt	Very Low	Very High	Moderate	Very High	Very High	Average	Value	No
jetBlue	Very Low	Hub	Very Low	Very High	Very High	Very High	Very High	Very Young	Value	No
AirTran	Very Low	Hub	Very Low	Very High	Very High	Very High	Very High	Young	Value	Yes
Ryanair	Very Low	Pt 2 Pt	Very Low	Very High	Very High	Very High	Very High	Older	Value	No
EasyJet	Very Low	Pt 2 Pt	Very Low	Very High	Very High	Very High	Very High	Older	Value	No
USAirways	High	Hub	High	Low	Low	Very Low	Low	Middle	Short haul Business	Yes
United	High	Hub	High	Low	Very Low	Very Low	Very Low	Middle	Global Reach	Yes
Pan Am	Very High	Hub	Very High	Very Low	Very Low	Low	Low	Old	Reputation	Yes
Eastern	High	Hub	Very High	Very Low	Very Low	Very Low	Very Low	Old	S.Am Reach	Yes
TWA	High	Hub	Very High	Very Low	Very Low	Low	Very Low	Old	Reputation	Yes
Swiss Air	High	Hub	Very High	Very Low	Very Low	High	High	Middle	Reputation	Yes

Changing Business Models

- **Massive consolidation this past year**
 - Not through M&A, but through business failures
 - Business closures
 - Exits from market
 - Massive Layoffs
 - Winning market share (jetBlue)
- **Companies that deliver “value” continue to win market share**
 - Southwest
 - jetBlue
 - Airbus
 - Ryanair



Changing Business Models

Recent Supplier Bankruptcies / Withdrawals from Market

- Stellex
- Compass (Out of court 100% debt/equity swap)
- Pacific Aerospace
- Kaiser Aluminum
- Kellstrom Industries
- AVTEAM
- Dee Howard
- Fokker
- SAAB
- Fairchild Dornier
- Special Metals Corporation
- American Air Carriers
- Pentacon



Changing Business Models

Recent Airlines Bankruptcies / Withdrawals from Market

- National
- USAirways
- Vanguard
- Midway
- Sabena
- Swiss Air
- TWA
- Ansett
- AOM / Air Liberte
- Kitty Hawk Air Cargo



Changing Business Models

- “Ireland's struggling national flag carrier Aer Lingus (U.AEL) said Wednesday that it made a net loss of EUR140 million last year, against a net profit of EUR72 million the year before. This loss includes an exceptional charge of EUR104 million related to **laying off 2,000 workers**.” *July 31, 2002 DUBLIN (Dow Jones)*
- “Ryanair Holdings PLC (RYAYY) Tuesday reported an almost 60% rise in fiscal first-quarter pretax profit because of the Irish budget airline's aggressive price cuts, rising passenger numbers, additional European routes and tight cost management. Ryanair...will also take delivery on some aircraft sooner than expected, allowing it to grow at the slightly faster rate of 30% for the next two years to just under 20 million passengers in 2003-2004. It had previously forecast 25% annual growth for the next five years. **Ryanair said pretax profit rose 58% to 43.3 million euros**.” *August 6, 2002 DUBLIN (Dow Jones)*

Changing Business Models

- To compete in a deregulated and cost competitive environment, airlines have been forced to dramatically improve efficiency in order to survive.
- Accordingly, airlines are placing intense pressure on their suppliers to do the same and are demanding better performing aircraft and aircraft systems with lower acquisition and operating costs.
- In response, aircraft manufacturers are reducing costs through the consolidation of their supply chains and the optimization of their supplier relationships to maximize efficiency and cost reduction. Increasingly, pressure is being placed on suppliers to major manufactures to increase risk, cut prices, improve quality, and shorten lead times.

Changing Business Models

- Old-line major airlines are being forced to restructure to remain competitive.
- In May 2002, Lufthansa cut fares on domestic routes in response to increasing competition from low cost, no-frills airlines Germania, Deutsche BA, Ryanair and easyJet.
- While major airlines like Lufthansa and United are struggling to charge prices sufficient to cover costs, low cost airlines are driving prices down and simultaneously generating favorable profit margins and investor returns.

Changing Business Models

- Due to the success of Airbus and its modern cost efficient aircraft, Boeing has been forced to aggressively reduce costs and improve its products.
- As an example, since 1998, Boeing has undertaken significant programs to reduce fully burdened production costs, such as a complete redesign of the company's B737 production line and the migration to a moving assembly line.
- Through manufacturing and procurement improvements on its B737 line, Boeing has achieved 44% reduction in Flow Time, 64% reduction in Inventory, and 44% reduction in Work In Process. **Since 1998, Boeing has reduced its supplier base from over 3,500 to slightly more than 1,500.** Due to Boeing's successful efforts to reduce costs, the company's operating margin has improved from 3.6% in 1998 to 8.4% in 2001.

Changing Business Models

- Suppliers like General Electric, Goodrich, Honeywell, and Rockwell Collins continue to make strategic acquisitions to consolidate their positions, develop better, cheaper, and faster products, and deliver more value to their customers every day.
- Volume and margins have fallen substantially and will continue to be under intense pressure – forever – regardless of the business cycle.
- Suppliers must develop better products and deliver them with lower fully burdened cost – or loose market share to someone that will.
- Companies that can not keep pace with the advances in net cost reductions will be forced from the market.

Changing Business Models

The Economics of JetBlue Airways (from jetBlue's Web Site)

- Start with a lot of money. JetBlue is the best-capitalized airline start-up in history. This means we are able to invest in the best product available. You'll see it in our new planes, comfy leather seats, free satellite TV and fast check-in technology.
- Fly new planes. Our fleet of new Airbus A320s comes with a host of advantages. New aircraft are more **reliable**, so they spend less time on the ground where they don't make money. They're more **efficient**, so we spend less on fuel than other carriers. In fact, contrary to what you may have heard, the youngest fleet in the sky belongs to JetBlue.
- Hire the best people. JetBlue screens employees rigorously, trains them well and gives them the best tools. That means **our people are motivated and service-oriented**. We love changing the industry for the better! It's what gets us out of bed in the morning.
- Focus on Service. By offering our customers the best experience we can deliver, we find most of them come back regularly and tell their friends and family about us. **It's not rocket science**...our customers have given us incredible word-of-mouth recommendations. (And for that, we will always be grateful.)

Changing Business Models

Commercial Aviation Winners

- **Airbus**
- **Southwest**
- **Ryanair**
- **jetBlue**
- **EasyJet**

Commercial Aviation Losers

- **Pan Am**
- **TWA**
- **Eastern**
- **Fokker**
- **Lockheed**

Non-Aviation Winners

- **Starbucks**
- **Wal Mart**
- **Dell**
- **Honda**
- **Mercedes**

Non-Aviation Losers

- **Polaroid**
- **Kmart**
- **Wang Computers**
- **Chrysler (in 1980)**
- **Delorian**

Winners Deliver Value to their Customers

Changing Business Models

Leo van Wijk, President & CEO of KLM Royal Dutch Airlines & Chairman of the Association of European Airlines:

- “Each airline needs to re-assess its revenue and cost structures.”
- “Traditional cost cutting is reaching its limits.”
- “Low cost carriers are making inroads.”

Source: EUROPEAN AVIATION: TOWARDS A SUSTAINABLE INDUSTRY European Aviation Club, Brussels 20 June 2002

Changing Business Models

Donald Carty, Chairman & CEO of American Airlines:

- "Our challenge now is to redefine our business model to not only deal with our old rivals, but to prepare our company for long term success in an environment where newer, lower-cost competition represents a much bigger slice of the marketplace."
- "We believe that to get our costs to truly competitive levels, we need to effect a permanent, structural cost reduction, over the next several years, of at least \$3 billion annually."

Source: 9/6/02 DALLAS (AP)

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Changing Business Models

- OEMs and their major suppliers throughout the commercial aircraft market are working to dramatically reduce costs, including reducing the size and complexity of their supply chains, and are beginning to rely heavily on long-term suppliers that can provide turn-key solutions, higher-level assemblies, and more comprehensive product and service offerings.
- Accordingly, value added to final products in the aerospace industry has increased to 65-70% from approximately 50% ten to fifteen years ago. This upward trend will continue as prime contractors increasingly become system integrators and outsource larger levels of work to subcontractors and suppliers that can accomplish this work more efficiently.

Source: John W. Douglass, President and Chief Executive Officer, Aerospace Industries Association of America, Inc. before the House Armed Services Subcommittee on Military Procurement, March 19, 2002. 37

4. The Future

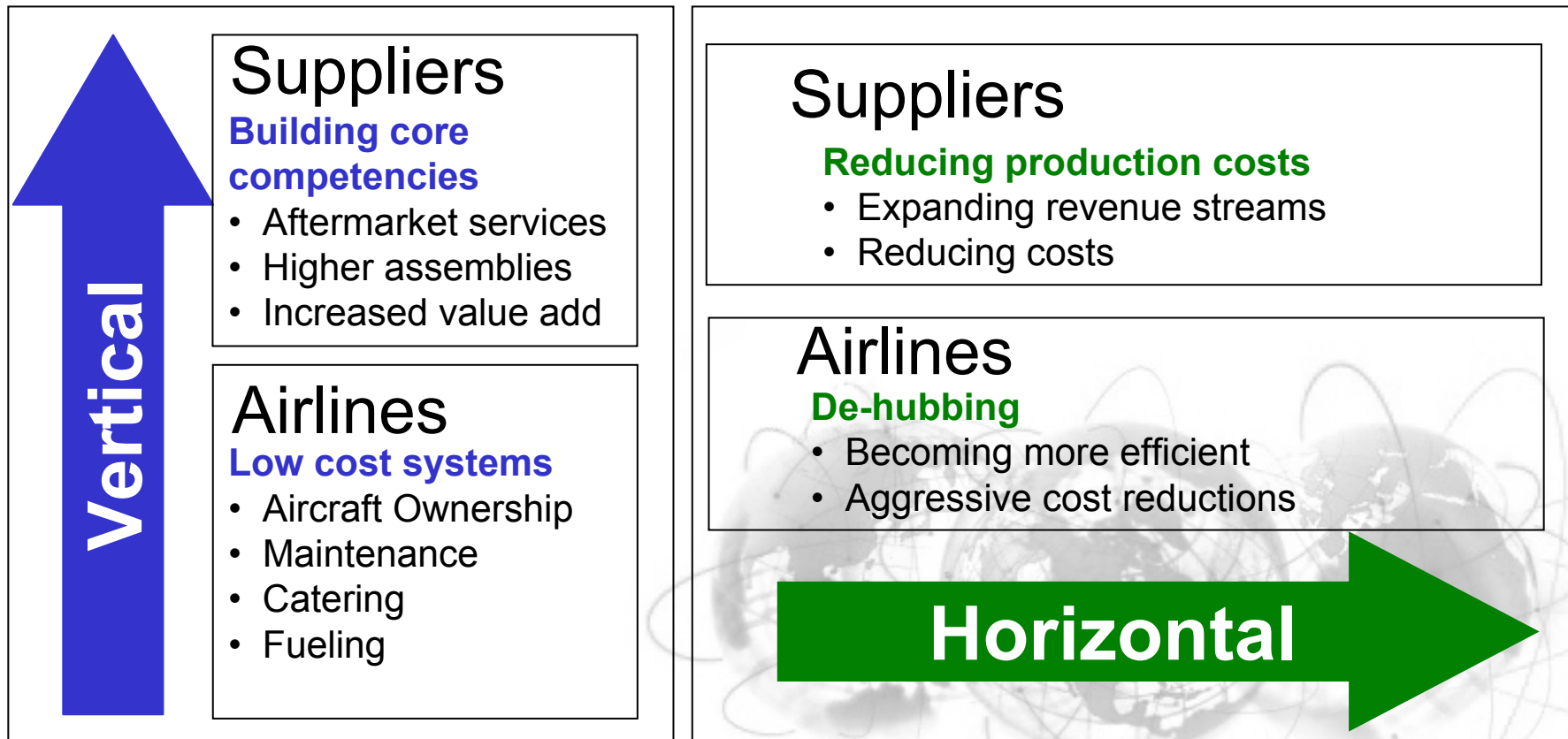


The Future

Free Markets: **Specialization** and **free trade** are forces of the free market that provide increasing economic benefit for the entire economic system

- Outsourcing to technology and process specialists will increase.
- OEMs will continue to search globally for the lowest possible suppliers that can meet world class standards.
- Airlines and their suppliers that continue to offer “value” to their customers while reducing operating costs will continue to win market share.
- Airlines and their suppliers that fail to rise to the ever increasing standard of “value” will lose market share and be forced from the market

The continuing search for an optimal system



What does the future Hold?

– 3-5 Global Airlines

- With 2,500+ aircraft each

– 2 Large aircraft manufacturers

- Providing “nose-to-tail” services

– 2 Large engine manufacturers

- Providing “power-by-the-hour”



What does the future Hold? *(cont.)*

– 2 Mega-Leasing companies?

- Owning \$Billions in aircraft

– A few systems manufacturers & service providers

- Providing global reach, low costs, and world class quality

– A Very Lean Supply Chain

- With exceptionally low costs and world class quality



5. Strategies for Success



Strategies for Success

Alderman & Company works with clients to develop new business models to foster survival and prosperity during the downturn

Strategies can include:

- Vertical integration
- Operating and Supply-chain rationalization
- Labor content minimization through automation and strategic sourcing
- Capital restructuring
- Divestiture of non-core assets/businesses
- Product-line expansion
- Technology sharing and joint ventures



Strategies for Success

We continue to sing the same song:

- The industry will continue to consolidate.
- Low cost quality providers will dominate the market.
- The aviation industry will eventually be a market of only efficient suppliers.
- We have seen the power of the low cost quality model: Southwest, Ryanair, JetBlue, Airbus.
- We have seen the demise of old-line business models: Fokker, SAAB, Pan Am, Sabena, Swiss Air.

Consolidation will continue

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