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2nd Annual Aerospace & Defense Industry Suppliers Conference

Supply Chain Migration

Diversification in Volatile Markets

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Los Angeles, California
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Alderman & Company
AEROSPACE AND DEFENSE INVESTMENT BANKERS

Agenda

1. **Migration and Diversification**
2. **Demand Statistics**
3. **Equity Performance**
4. **Migration Case Studies**
5. **Closing Remarks**

Introduction

- **Change is certain:**
  - **Original Forbes 100 in 1917 vs. 1987**
  - **Of the Original 100, how many still exist?**

39

  - **Of the survivors, how many have outperformed the market?**

2

GE and Kodak

Introduction

- **Implications of <u>Creative Destruction</u>[1]:**
  - **Firms think linearly and assume continuity**
  - **Time to market declines**
  - **DOD move to COTS procurement**
  - **IT and re-focus on Defense and Homeland Security**

Creative suppliers will destroy the traditional differentiating barriers between defense and commercial markets and adeptly migrate between the two as demand shifts

Source: <u>Creative Destruction</u> by Richard Foster and Sarah Kaplan.

Migration and Diversification

Migration

Like fish and foul searching for warm waters and plentiful food supplies……..

Aerospace suppliers must shift between commercial and military platforms when the cold winds of change flow across their bows.

Migration (as defined herein): the concerted effort by suppliers to replace unexpected declines from one of these markets with new opportunities from the other (defense/commercial).

Migration and Diversification

- **Migration works for wildlife due to the dramatic differences in northern and southern ecosystems based on temperature and sunlight.**

- **Migration can work for nimble aerospace suppliers as different and/or opposing forces tend to drive the defense and commercial segments:**
    - **Defense: Driven by politics and global instability**
    - **Commercial: Driven by economic activity and global stability**

Migration and Diversification

- Few business have the opportunity to have an operational hedge to reduce their Beta
- Beta: the statistical measure of the volatility of a given company's stock price to changes in the overall market
- Airline must buy expensive fuel hedges to reduce the volatility of their earnings and insulate themselves form the unknown potential future shocks in JETA prices
- Auto manufacturers can do little but offer price reductions and financing incentives when the economy is weak.
- Nimble aerospace suppliers can migrate from commercial to defense in times like the recent past

Migration and Diversification

- **A portfolio manager's dream is a portfolio of quality stocks with good return potential that are nominally correlated to the market. The optimal basket of stocks has stocks that are well diversified both in number of companies and in their Beta.**

- **Nimble aerospace suppliers that move from Defense to Commercial can offer a low risk to their shareholders as they will neither decline substantially when the economy falters or terrorists strike (due to stable long term government defense programs) nor will they decline when peace breaks-out or the political winds determine defense spending is too high.**

Migration and Diversification: The Theoretical

"Diversification allows a firm to explore new productive opportunities, while taking advantage of economies of scale and reducing the volatility of its cash flows….."

Optimal Diversification: Reconciling Theory and Evidence, Joao Gomes and Dmitry Livdan The Wharton School University of Pennsylvania† October, 2002

Migration and Diversification: The Tactical

- **Being balanced and able to nimbly shift to the defense supply chain was extremely valuable to many commercial suppliers following 9/11.**

- **As the commercial aviation market rebounds and prospers, defense suppliers able to effectively compete in the commercial market will benefit from increasing demand.**

- **In the event of another terrorist strike and another drop in RPMs and airline profits, commercial suppliers able to produce defense goods would greatly benefit.**

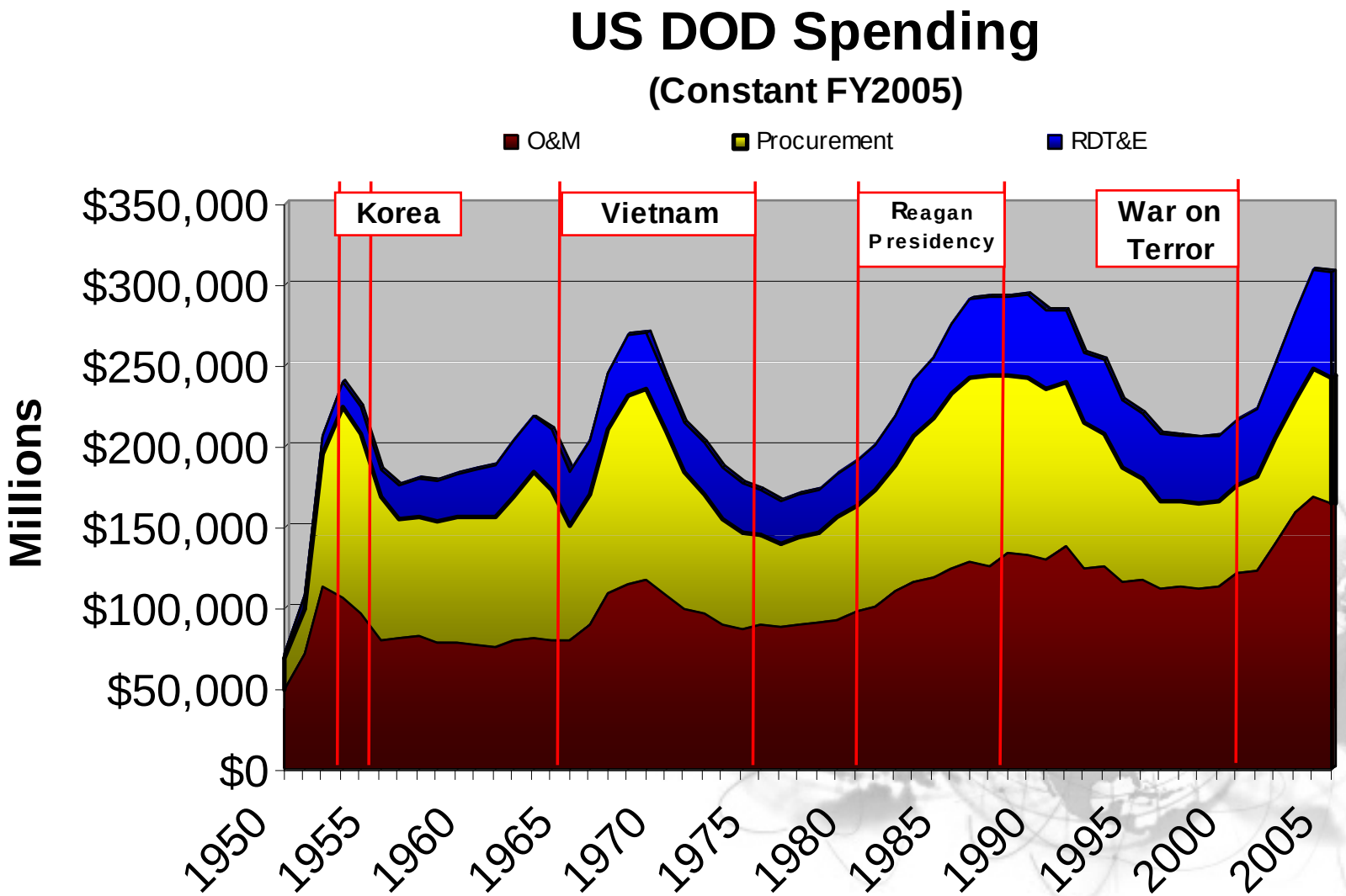
Demand Statistics

1958 – 2003

> DOD Procurement

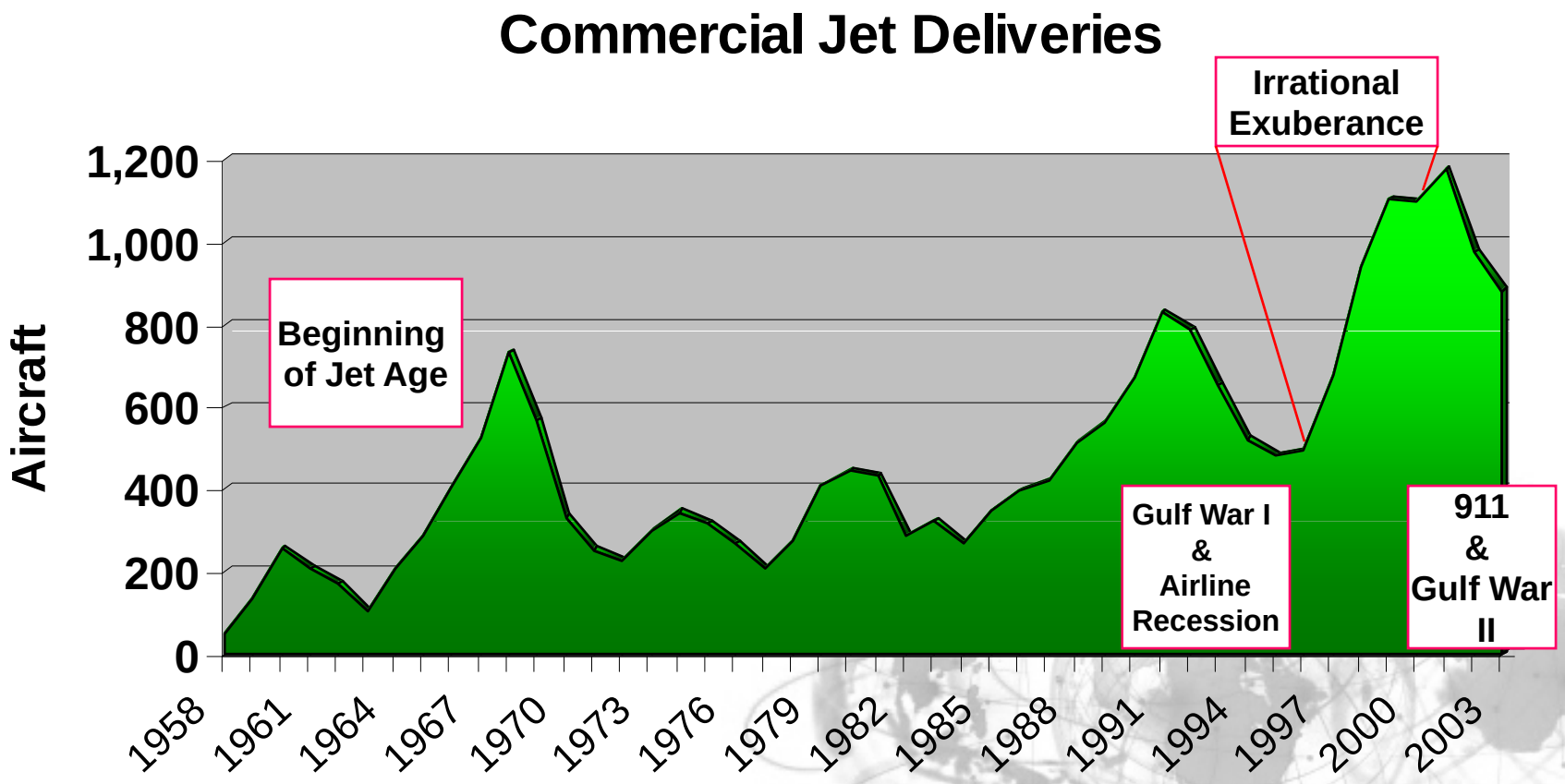
> Commercial Jet Deliveries

Demand Statistics



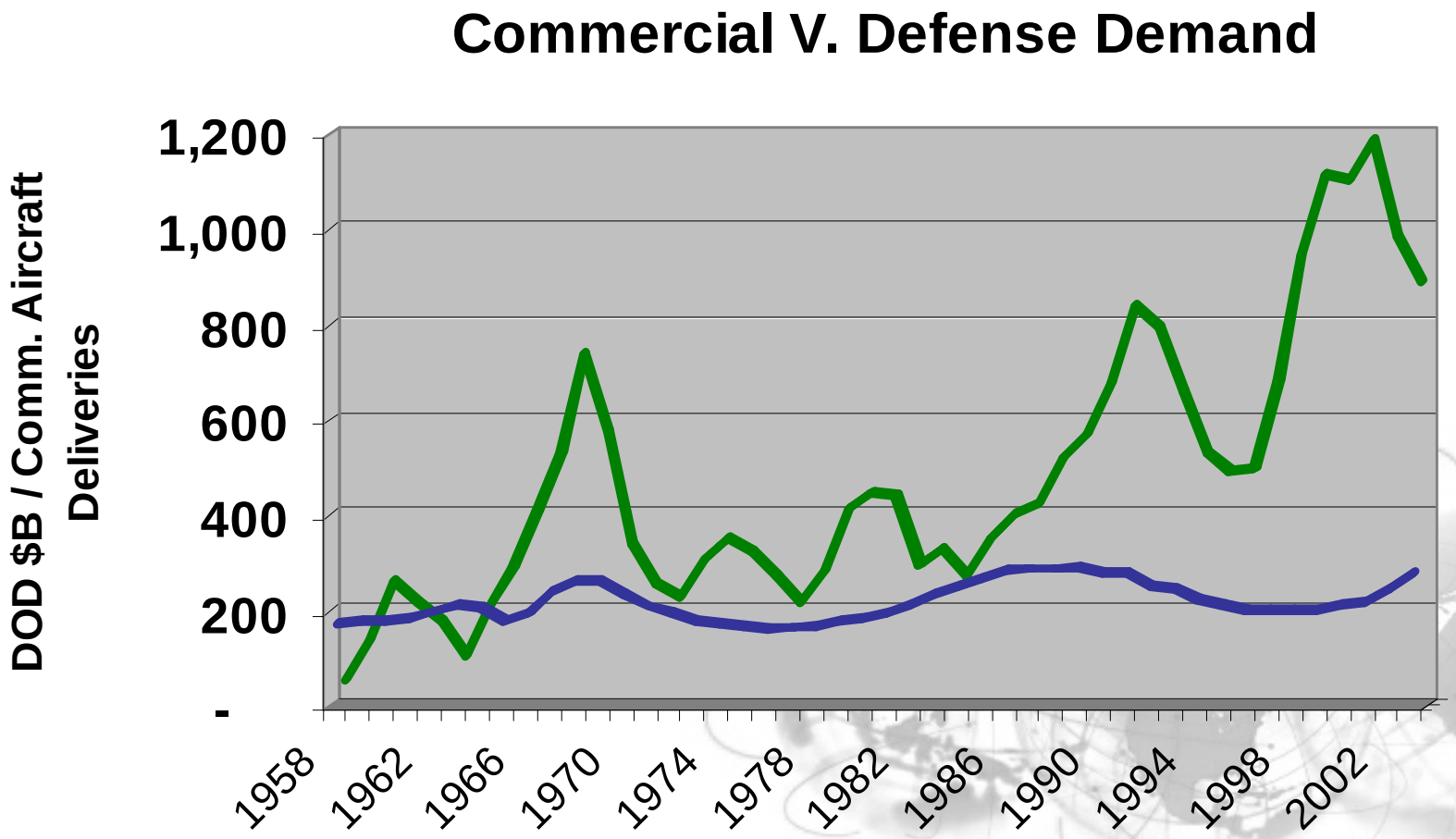
Source: Department of Defense Greenbook FY 2005

Demand Statistics



Sources: Speed news, Airline Monitor, Alderman & Company Analysis

Demand Statistics

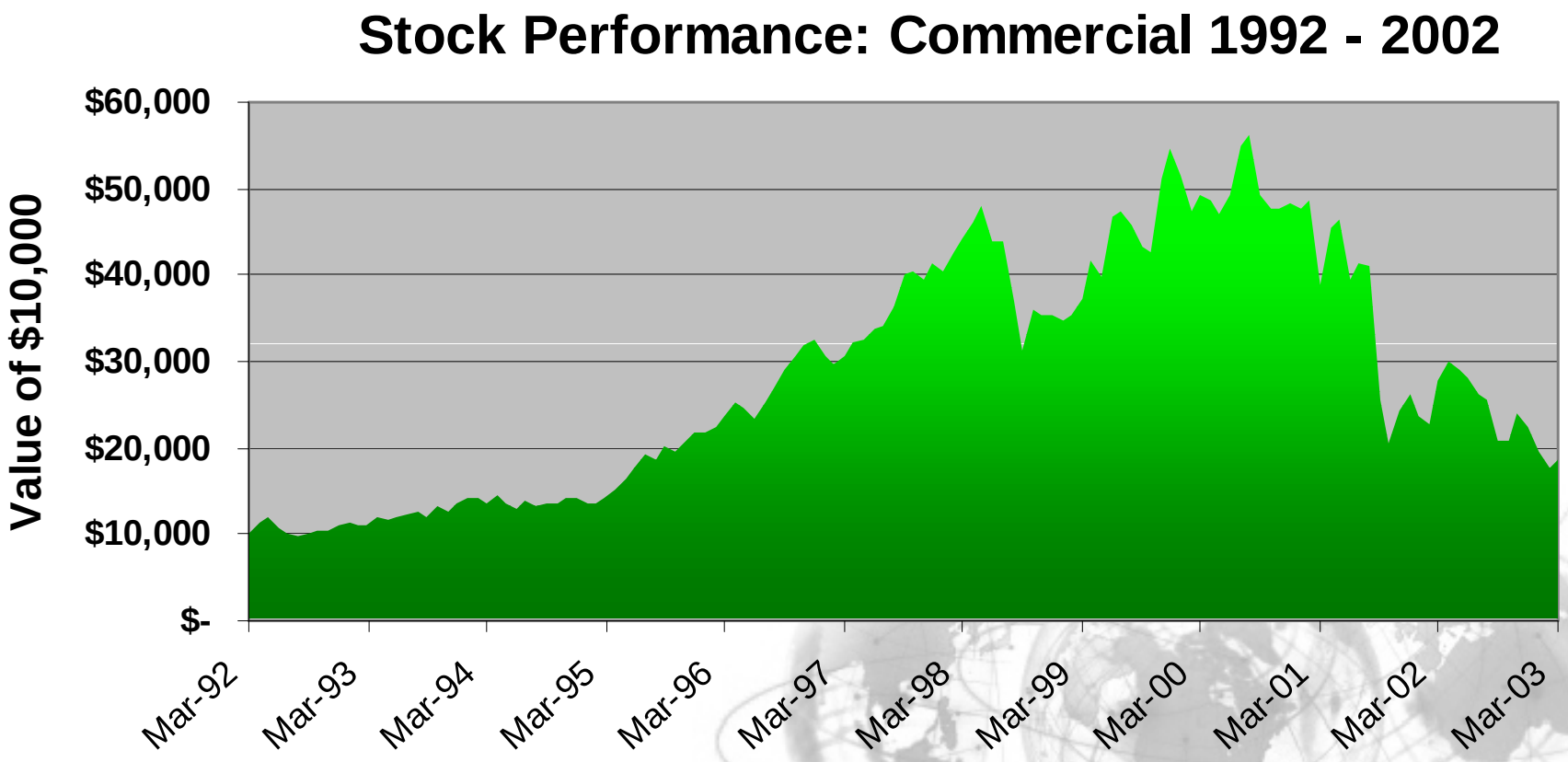


Equity Performance

Empirical Evidence that

Diversification Reduces Risk

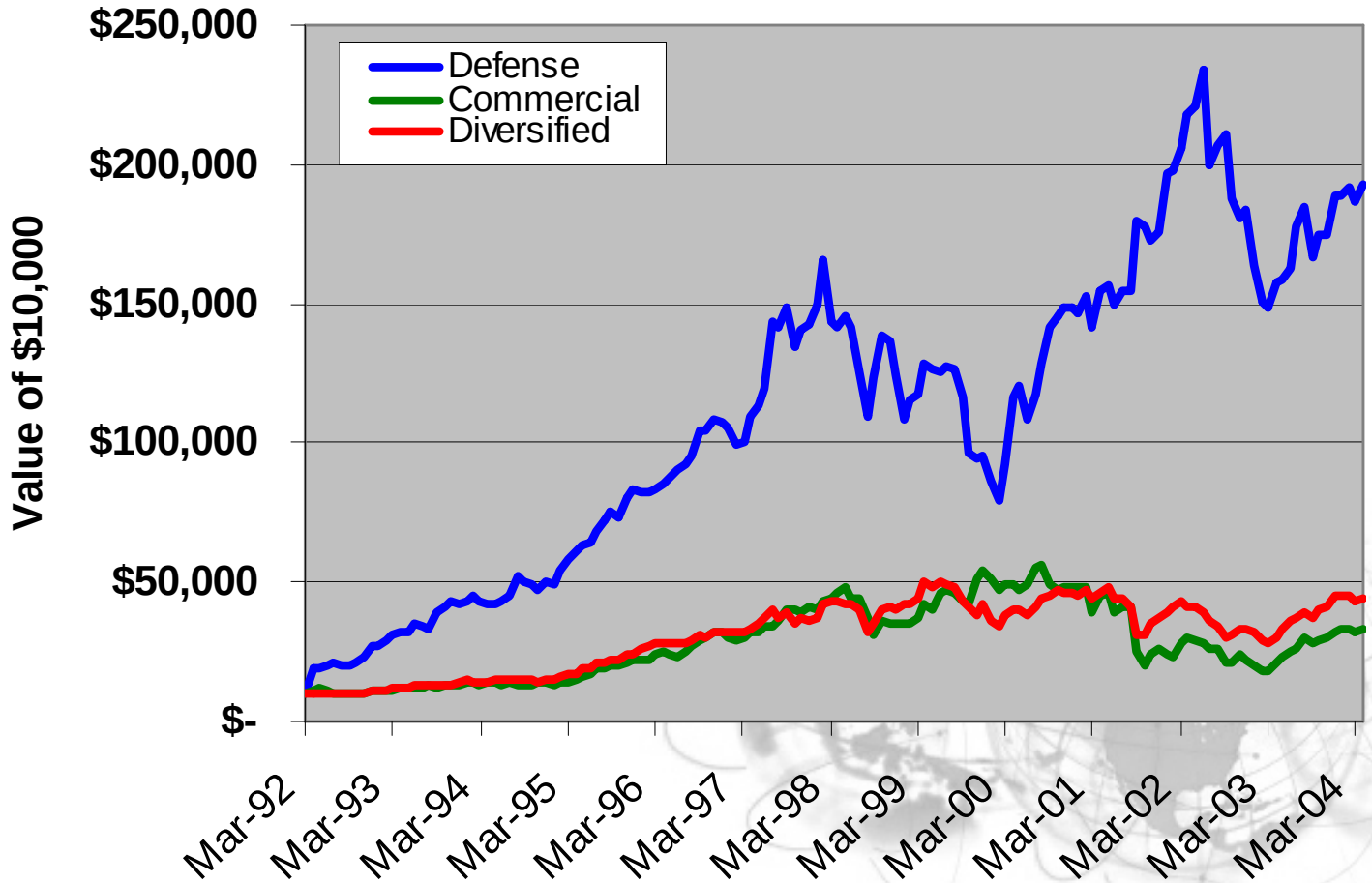
Equity Performance



Source: Alderman & Company research, closing monthly stock prices, Index of BEAV, AAR, AVIAL, HEICO, DAL, AMR, UMECO, BBA, EDAC

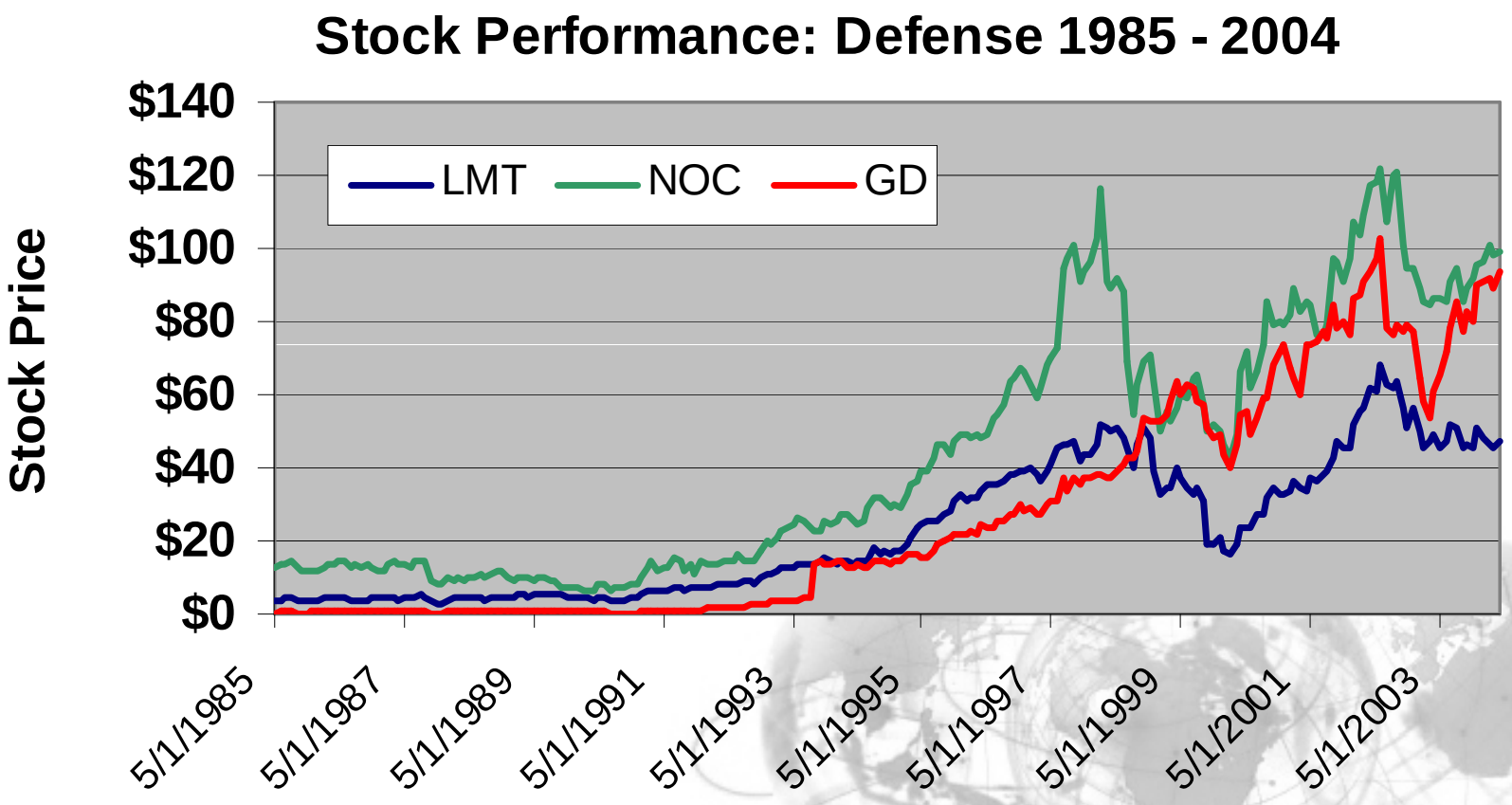
Equity Performance

Stock Performance Comparison: 1992 - 2002



Source: Alderman & Company research, closing monthly average stock prices

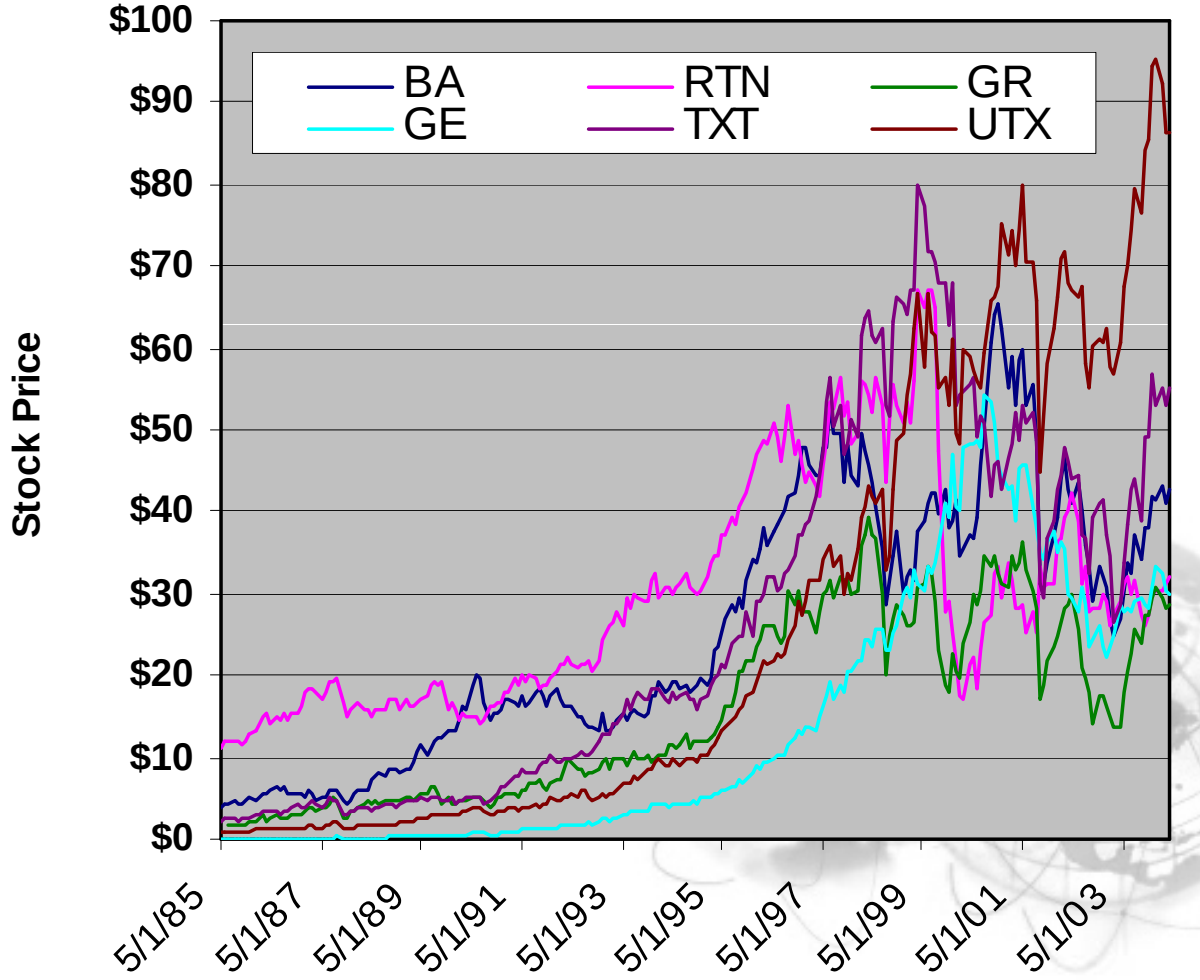
Equity Performance



Source: Alderman & Company research, closing monthly stock prices

Equity Performance

Stock Performance: Diversified 1985 - 2004



Source: Alderman & Company research, closing monthly stock prices

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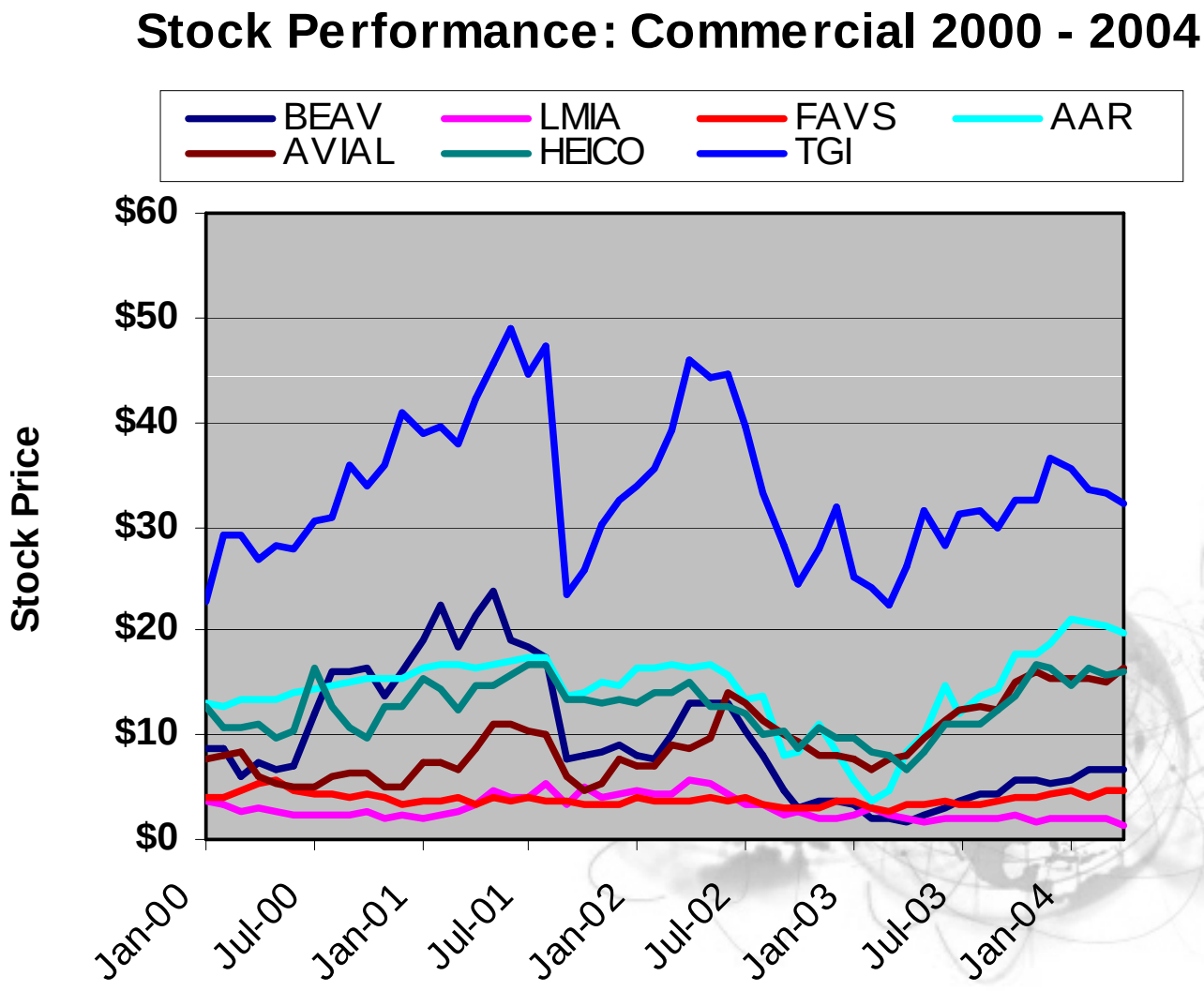
Equity Performance



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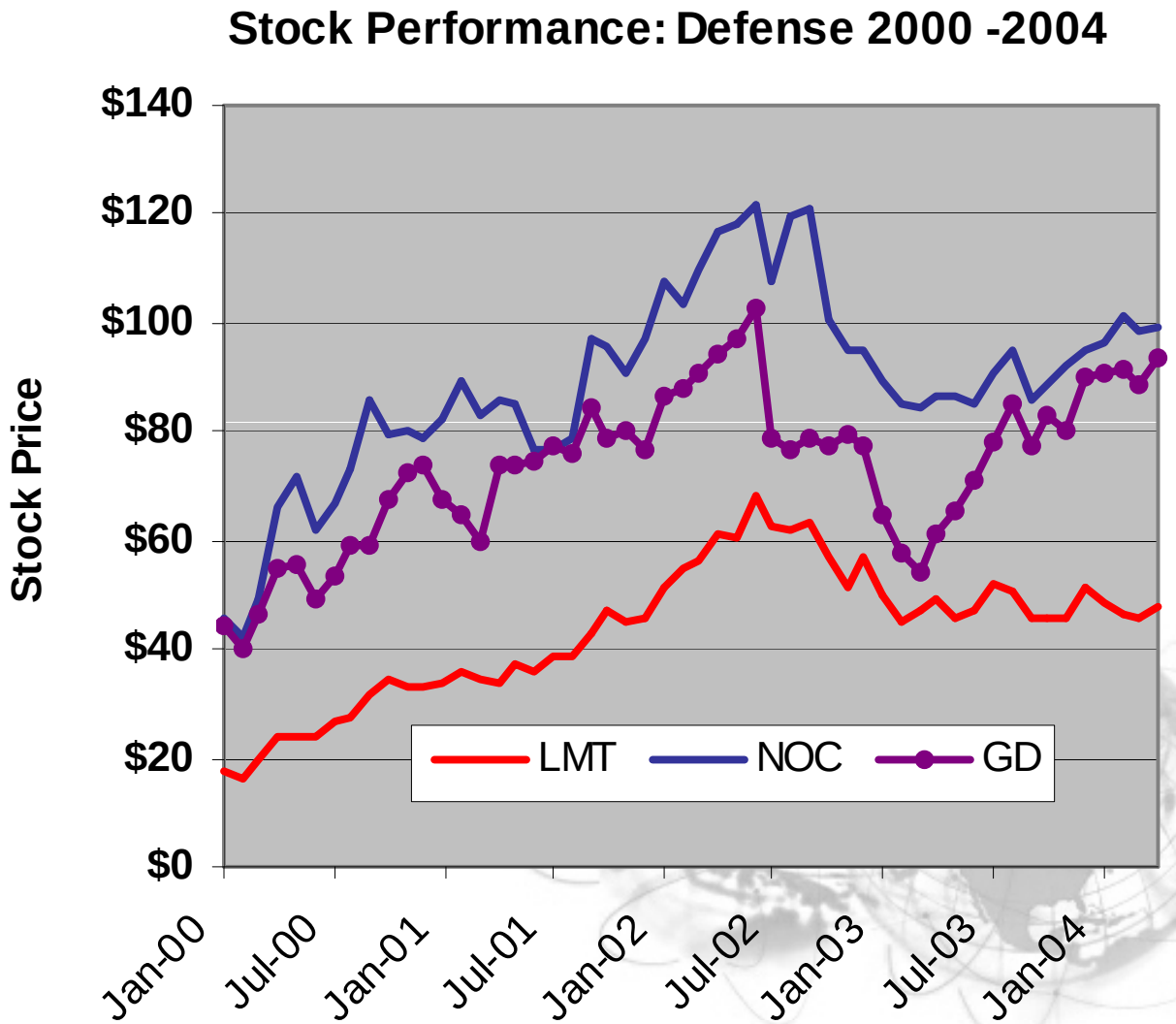
Equity Performance



Source: Alderman & Company research, closing monthly stock prices

Migration Case Studies

Migration Case Studies

Aerostructure's (Vought) Migrates Well

Current Commercial/Business Platforms:

- Gulfstream: G550/G500 and G300/400
- Airbus: A319/320; A330/A340-300-500-600
- Boeing B737, 747, 757, 767, 777
- Cessna: Citation X
- Embraer: EMB 190

Current Defense:

- Global Hawk
- C-17 Globemaster III
- F-35 Joint Strike Fighter
- F-15 Eagle; EA-6B and E-2C
- V-22 Osprey
- F/A-22
- C-130J Hercules
- C-5 Galaxy; C-17
- F-14

Source: Company filings, information, and Alderman & Company research

Migration Case Studies

DUCOMMUN INCORPORATED

Ducommun is migrating

Pre 9/11

- Commercial aerospace 58% of revenue
- Press releases principally announcing recent commercial aviation contract wins (e.g. B1000 seat order in early 2001)

Post 9/11

- Military 65% of revenue
- Press releases principally announcing recent military contract wins (F-15 radar, Apache main rotor blades, F/A-18 content)

Migration Case Studies

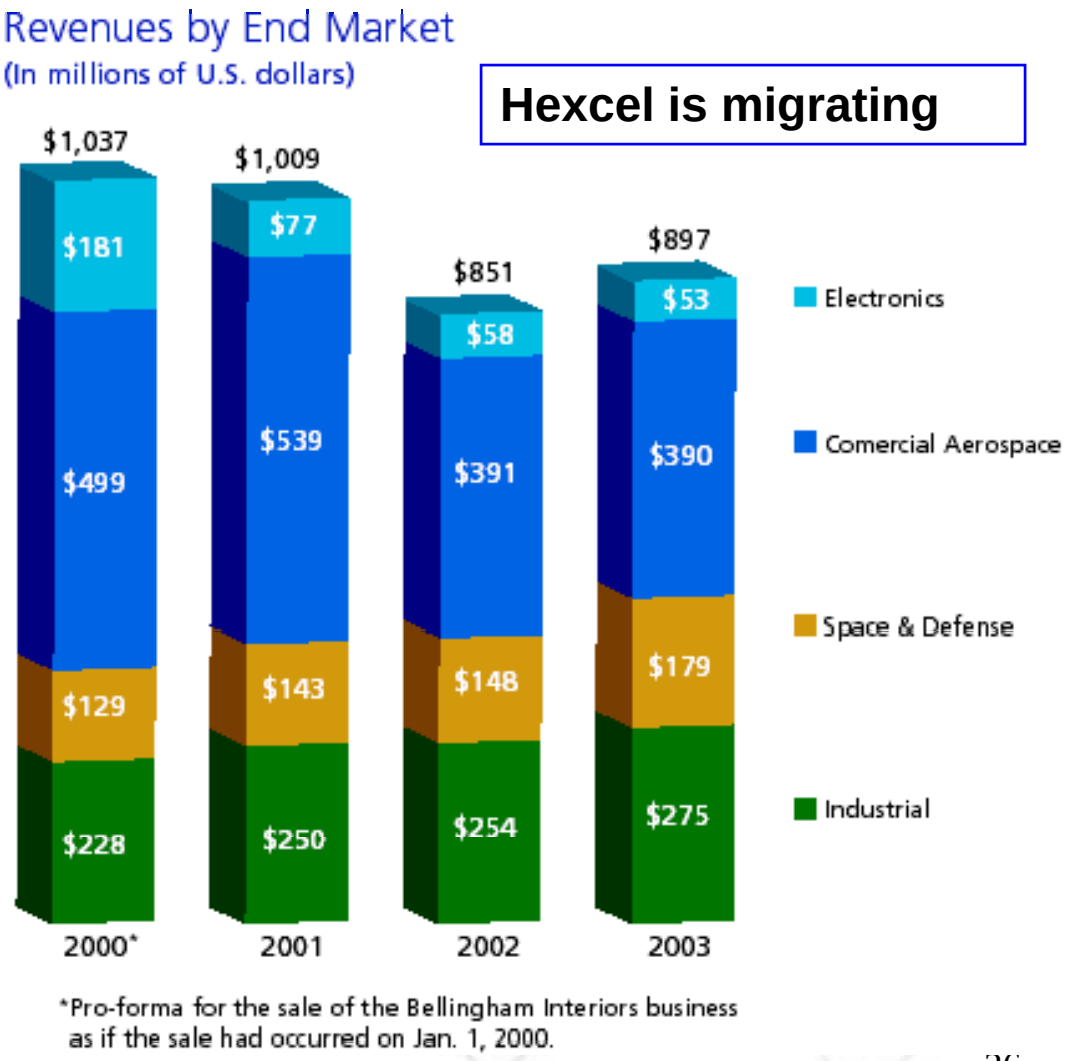
Pre 9/11

57% of revenues from Commercial Aerospace sector (1999)

Post 9/11

•Only 43% of revenues from Commercial Aerospace (2003)

•Space and Defense fastest growing business segment with 21% increase from 2002-2003



Source: Company filings

Case Studies in Migration

From hush Puppies to Army Boots:

March 2003 Wolverine World Wide Inc. won a multi-million dollar contract to supply the US Army with an upgraded infantry combat boot

The Michigan-based company, whose brands include Bates, **<u>Hush Puppies</u>,** and Merrell

The contract is estimated to range between $8.9 million and $22m a year and is extendable to a maximum of five years

The Classic Migration Story: The 747

A Tremendous Success

- **1960's Boeing failed to win the C-5A contract. To avoid taking a substantial loss on its effort, Boeing "bet the ranch" and attempted to convert its soft and hard dollar investments into to the world's largest commercial jetliner**
- **At that time of the launch (1966), the world was convinced the 747 was too large and would not be successful**
- **Until the launch of the A380, the B747 was the world's flagship aircraft and it not only changed the airline industry but it also provided substantial returns to Boeing and its shareholders for more than 30 years**

Closing remarks

- Migration can reduce volatility and enhance long term shareholder return
- Aerospace is a unique industry in that many suppliers can easily serve two uncorrelated markets with limited difficulty
- When migration is attempted from a standing start, long sales lead times and order cycle lag can be very challenging
- To ensure you have the ability to effectively migrate, you must maintain an active presence in both markets, especially during periods when the respective market is placing few orders

Migration can be a sound strategic tool. To be effective it requires advance preparation and continual investment.

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