The MFG Meeting

March 3 - 6, 2011 · Chandler, Arizona

Manufacturing for Growth

Insights Into the Customer

Medical

Don Urbanowicz

Principal

Urbanowicz Consulting, LLC

Trends in MedTech

Manufacturing For Growth Conference

March 4, 2011

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Trends In MedTech

Introduction

Trends, Implications and Future

- Regulatory
- Hospitals & Physicians
- VCs, Start-Ups and More

Overview of Orthopaedics

- Hips
- Knees
- Spine

What To Do, Opportunities, Final Thoughts

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Introduction

Background

30 year track record

Leadership roles - GM, Marketing, Sales, Strategic Planning, BD

Former companies - SYK, SNN, Sofamor Danek, Aircast

Newest Adventure

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Medical device advisory firm

- Musculoskeletal Focus
- Business Growth Strategy & Transactions
- Offer unique perspective from "a strategics" POV

Regulatory Trends

US

More stringent regulatory landscape

510k's under dramatic scrutiny

- burden-of-proof required
- reclassification + PMA's

OUS

Becoming more attractive as product development pathway

- more predictable re: time & clinical requirements
- less costly

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Regulatory Implications

Greater obstacles to approval & commercialization in US
- timelines extended
- cost to innovate increasing
- entry barriers raised for some devices

Increasing need for clinical evidence

Competency required for clinical studies

Continued investment in compliance, systems and processes

Companies looking to bypass FDA
- generate sales and build clinical experience OUS
- conduct PMA study at later date

Companies seeking alternative approval routes

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Regulatory – The Future

Only technologies with a clear potential to improve patient outcomes cost effectively will be funded

Device companies will integrate key departments at very earliest stages of product development process

Comparative effectiveness will increase scrutiny on existing & potential future treatments & products

Leadership in MedTech will shift away from US to Israel, Europe and China
- Innovation will be increasingly outsourced
- OUS acquisitions will accelerate

Implant registries will gain traction in US

FDA will become more predictable and transparent

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Hospital & Physician Trends

Incentives in Federal Healthcare Law accelerating “alignment”

Share of hospital owned physician practices
- 55% in 2010
- 50% in 2008
- 30% in 2003

Share of physician searches for hospital positions
- 51% in 2010
- 45% in 2009
- 19% in 2004

Trend tied to needs/opportunities of hospital & physician

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Implications for Hospital & Physician

Hospital

Lock-in patient revenue

Grow or maintain share in existing markets

Expand to new markets

"Position" for new methods of payment
- Accountable Care Organizations (ACO's)
- Save $/increase quality by better integrating care
- H/C provider shares financial benefits of new efficiencies

Implications for Physician & Device Company

Physician

Guaranteed salary; regular hours
Elimination of non-medical duties
Focus on patient care
Fewer product choices
Role of “champion” diminished

Device Company

Consolidation of vendors
Continued squeeze on smaller players
Increasing price pressure

Hospitals, Physicians & Device Co.'s The Future

Physicians will continue selling-out to hospitals

Larger hospital organizations will become more powerful, gain greater leverage and force price reductions

Companies will be proactive in driving cost out of development process

New technologies will be easier to use, better and less expensive

Generic implants will be introduced to the market

Companies will emphasize diversification

Innovation in mfg. and distribution will begin to address H/C delivery issues

Team-based care (doctors, nurses and providers) will be incentivized to better track care

Quality outcomes will be reimbursed, not volume

Economy, Reform & FDA Trends: Impact on VC's & Start-Up's

VC's

MedTech model showing cracks
- Fewer deals
- Impact on portfolio companies (Spine)

Movement away from early to later stage investing
Focus on "standard" 510k devices (w/o clinicals)
Insistence on "capital efficiency"

Start-Up's

Bar raised significantly
- prove decrease in costs to H/C System
- existing regulatory pathway WITH clear FDA signals
- reimbursement plan in place
- compelling clinical evidence
- invest own monies

Looking for non-traditional sources of capital

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Economy, Reform & FDA Trends: Impact on Consumers & Device Co's.

Consumers

Uncertain employment outlook
Fewer visits to specialists
Higher deductible health care plans
Expiration of COBRA benefits
Less aggressive consumption of healthcare

Unemployment Rate
9.0%

Device Co.'s

Surgical volumes soft
Chasing fewer procedures
Continuing pricing pressures
Facing reimbursement changes (Spine)
Capital spend environment improving

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Overview Of Device Business

Maturing Markets

Structural Changes

Decelerating Trends

Top Line Burdened By:
- moderating volumes
- price headwinds
- reduced innovation

Focus On:
- sourcing earnings growth internally
- non-operating leverage

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Overview Of Orthopaedic Business

Glory days are over

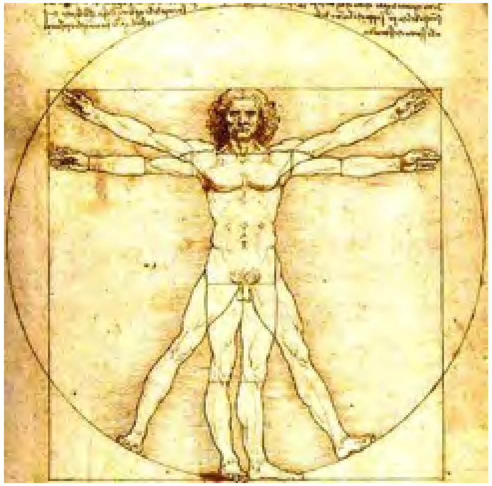
Traditional model severely challenged

Commoditization

Steady price degradation

Demographics favorable

Opportunities will exist!



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Overview of Hips

M-O-M fall-out
Greater price pressures than knees
New product launches continuing
Anterior approach gaining transaction
2010 WW Market Growth of 3% (cc)
-- JNJ and Biomet winners
-- 3 to 4% range in 2011 and 2012
2010 US Market Growth of 2.5%
-- 3 to 4% range in 2011 and 2012

Overview of Knees

Patient-specific instruments gaining popularity

2010 WW Market Growth of 4% (cc)

-- JNJ and Biomet winners

-- 4 to 4.5% range in 2011 and 2012

2010 US Market Growth of 4%

-- 4 to 5% range in 2011 and 2012

Overview Of Spine

A perfect storm

-- greater insurer reimbursement push-back (Blue Cross)

-- pre-approval criteria

-- clinical efficacy questions

-- volume and ASP decline

Movement toward improved fusion care outcomes

Biologics remain critical

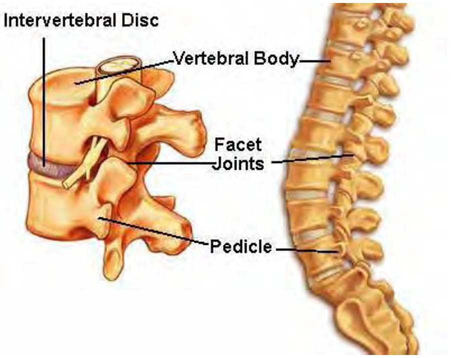
2010 WW Market Growth of 2-3%

-- 4% range in 2011 and 2012

-- NUVA and Globus winners

2010 US Market Growth of 1-2%

-- 4-5% range in 2011 and 2012



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What Can Device Co.'s Do?

Challenge:
Stay innovative. Demonstrate value. Fuel growth.

Address By:
Diversifying
- new product lines (in alignment with trends)
- expansion into non-product offerings

Investing Capital
- different business models
  - incubator
  - VC arm

Foster Relationships w/ non-traditional partners

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Where Will the Opportunities Be?

Medical Device

Bolt-On's

Emerging Markets

Faster, less expansive diagnostics

Orthopaedics

Extremities

Sports Medicine

- new POC's
- new procedures & products

Biologics

- soft tissue transplants & repair
- stem cells

Final Thoughts

Incorporate issues, trends & opportunities into planning process. Confirm whether each validates, alters or completely changes go-forward strategy.

Things will continue to change. The winners will always be those who best adapt!

Best wishes for continued success. Thank you!!!

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Insights Into the Customer

Aerospace

Richard Aboulafia
Vice President
Analysis

Teal Group

Aircraft Markets

Sunshine And Happiness. Really.

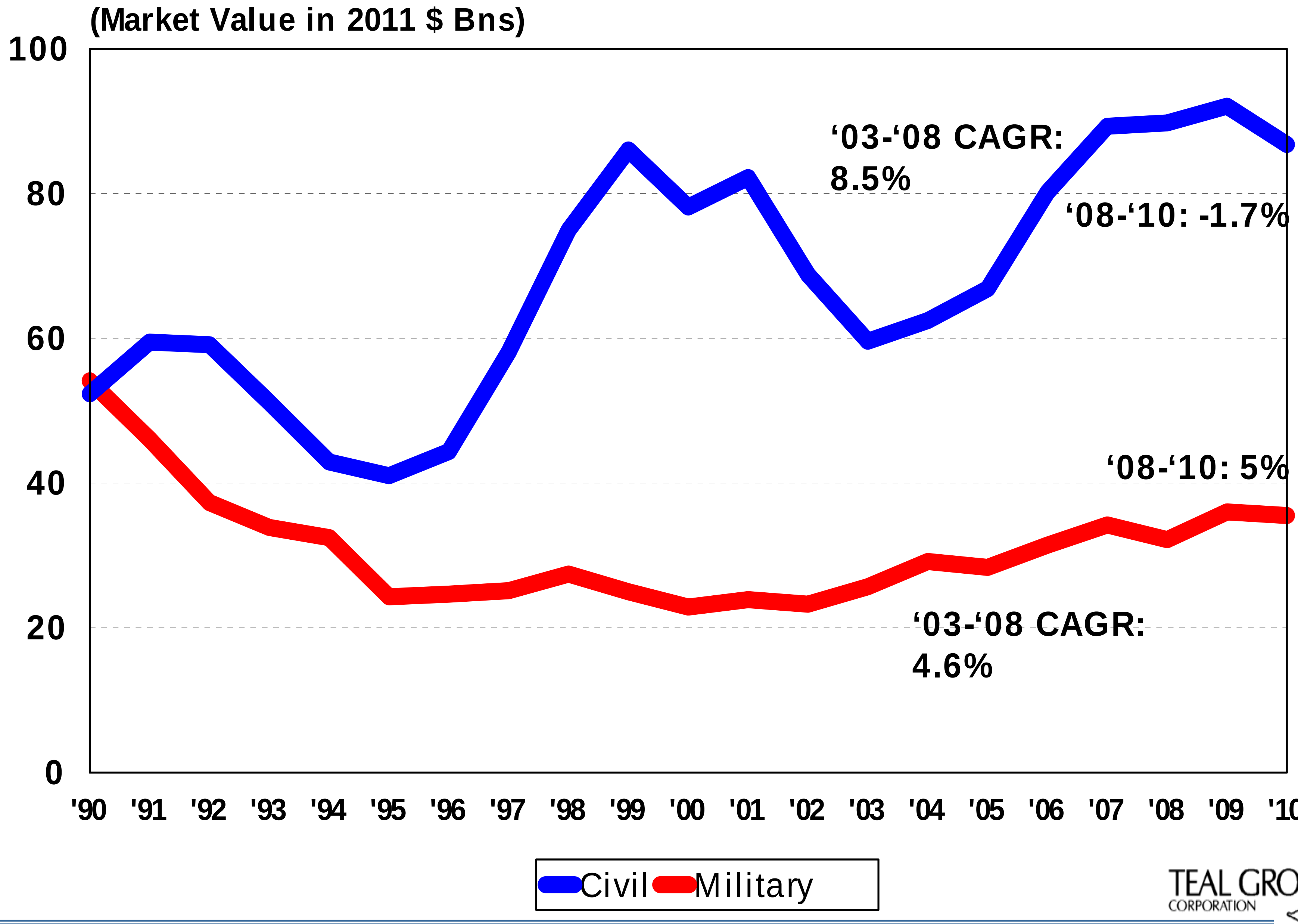
Presentation To AMT's Manufacturing For Growth Meeting

Chandler, AZ

Richard Aboulafia
Vice President, Analysis
Teal Group Corporation
www.tealgroup.com

March 2011

Civil And Military Aircraft Deliveries



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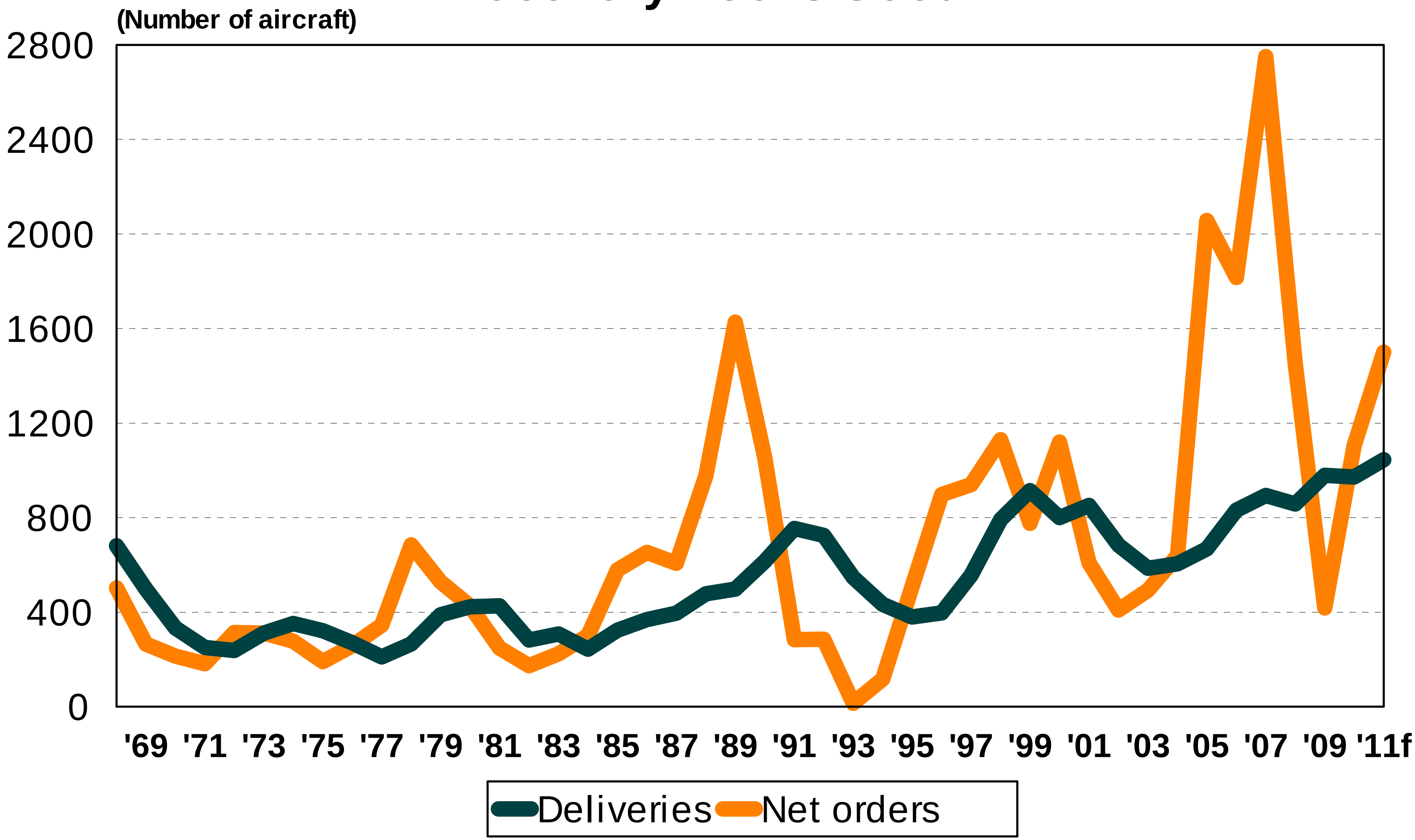
The Great Boom, Followed By Wildly Divergent Markets

Market	CAGR ’03-‘08	CAGR ‘08-‘09	CAGR ’09-10
Large Jetliners	7.0%	13.6%	-2.3%
Business Aircraft	17.3%	-23.0%	-13.2%
Regionals	1.2%	-4.9%	-19.6%
Civil Rotorcraft	17.1%	-13.4%	-14.4%
Military Rotorcraft	7.9%	22.1%	5.5%
Fighters	2.2%	12.8%	-2.2%
Military Transports	3.2%	6.9%	2.1%
Total	**7.4%**	**5.0%**	**-4.5%**

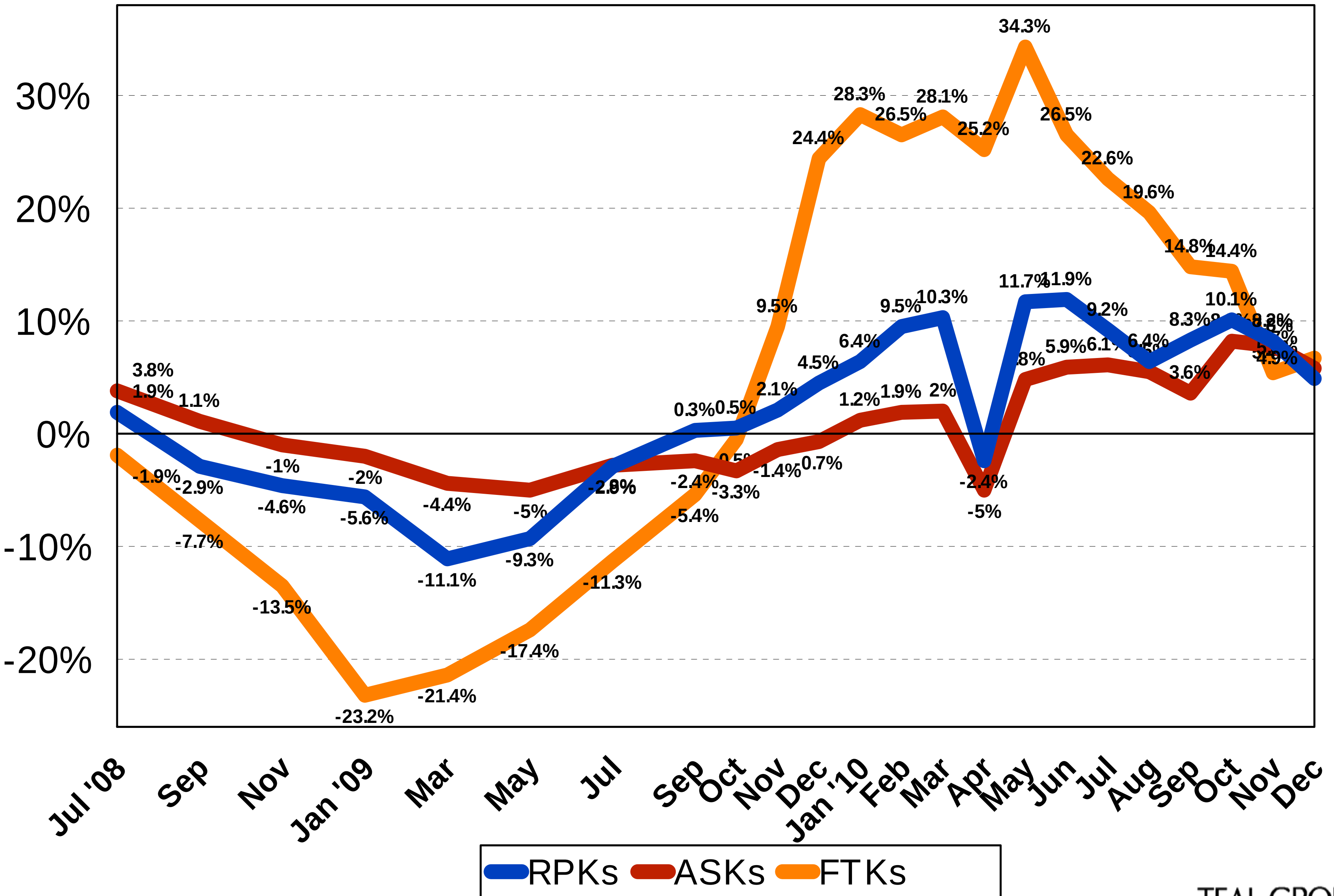
Historical Jetliner Orders And Deliveries

Four Great Book-To-Bill Years, Followed By A Cliff Dive; Recovery Looks Good



All Airbus and Boeing aircraft

Y/Y Traffic: Strong Recovery; Comps Diminishing



Source: IATA

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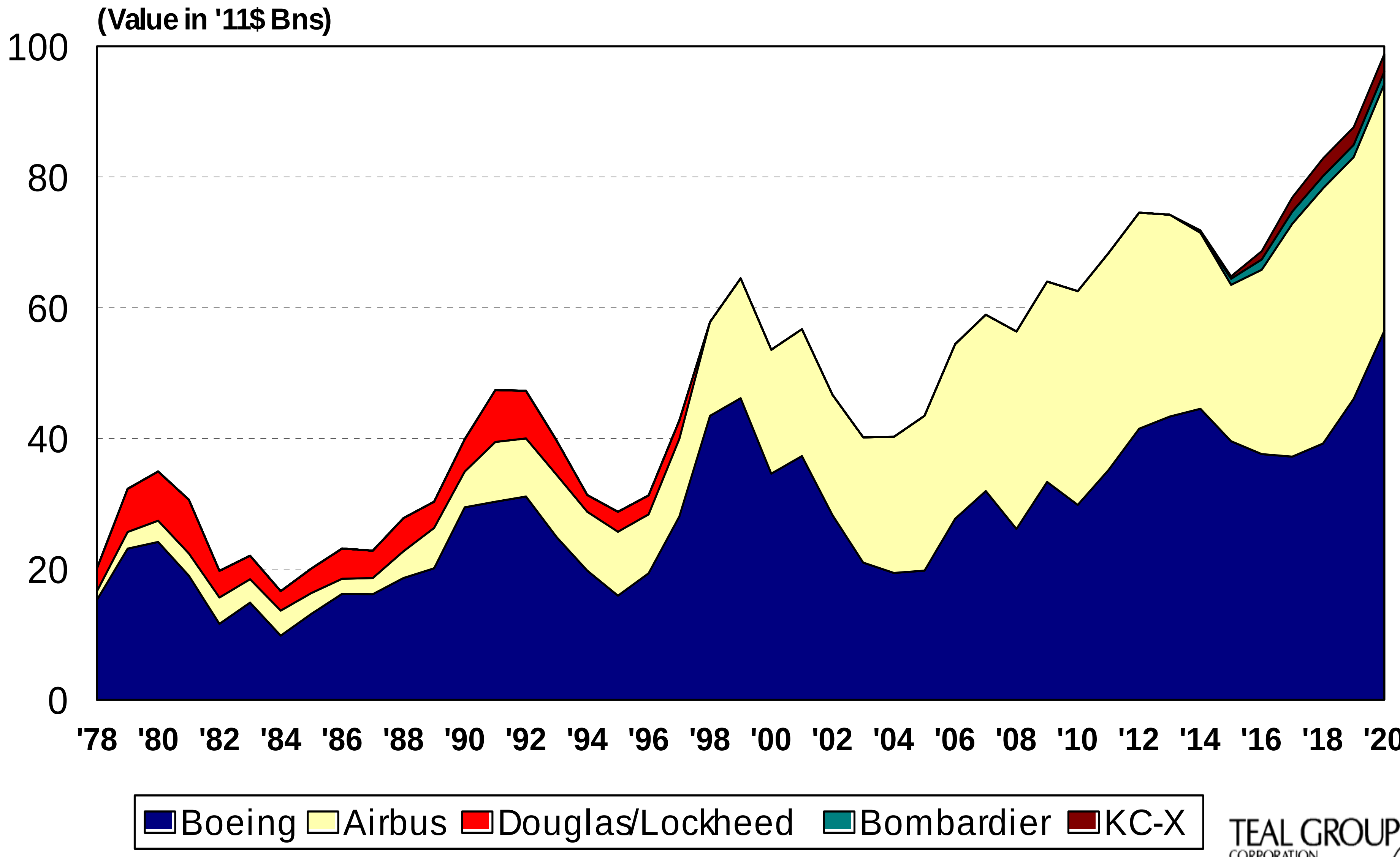
What's Different With This "Cycle"

- High fuel prices.
- Stronger emerging markets.
- Government export credit finance.
  - From 15% to 35%.
- Other government support (sovereign funds, government banks and airlines).
- Global flight to safe assets ("excessive demand"?).
- Need to forestall emerging competition?
- The primes really need cash.

Market Share Outlook By Deliveries Value

Assumes 787 EIS 4Q2011; A350 XWB EIS 2H2015



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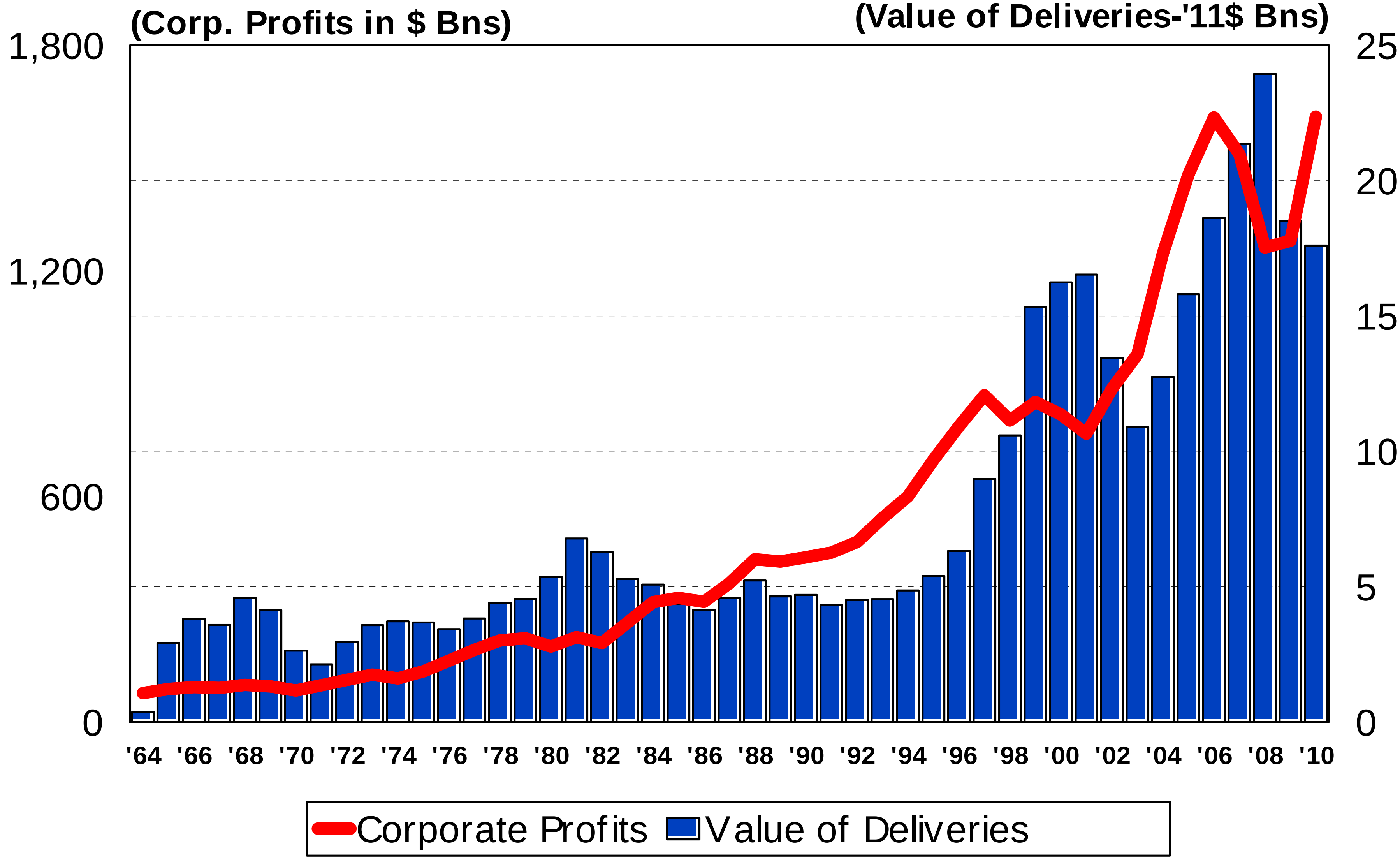
Business Aircraft Deliveries And Corporate Profits



Source: US BEA, Teal Group Research

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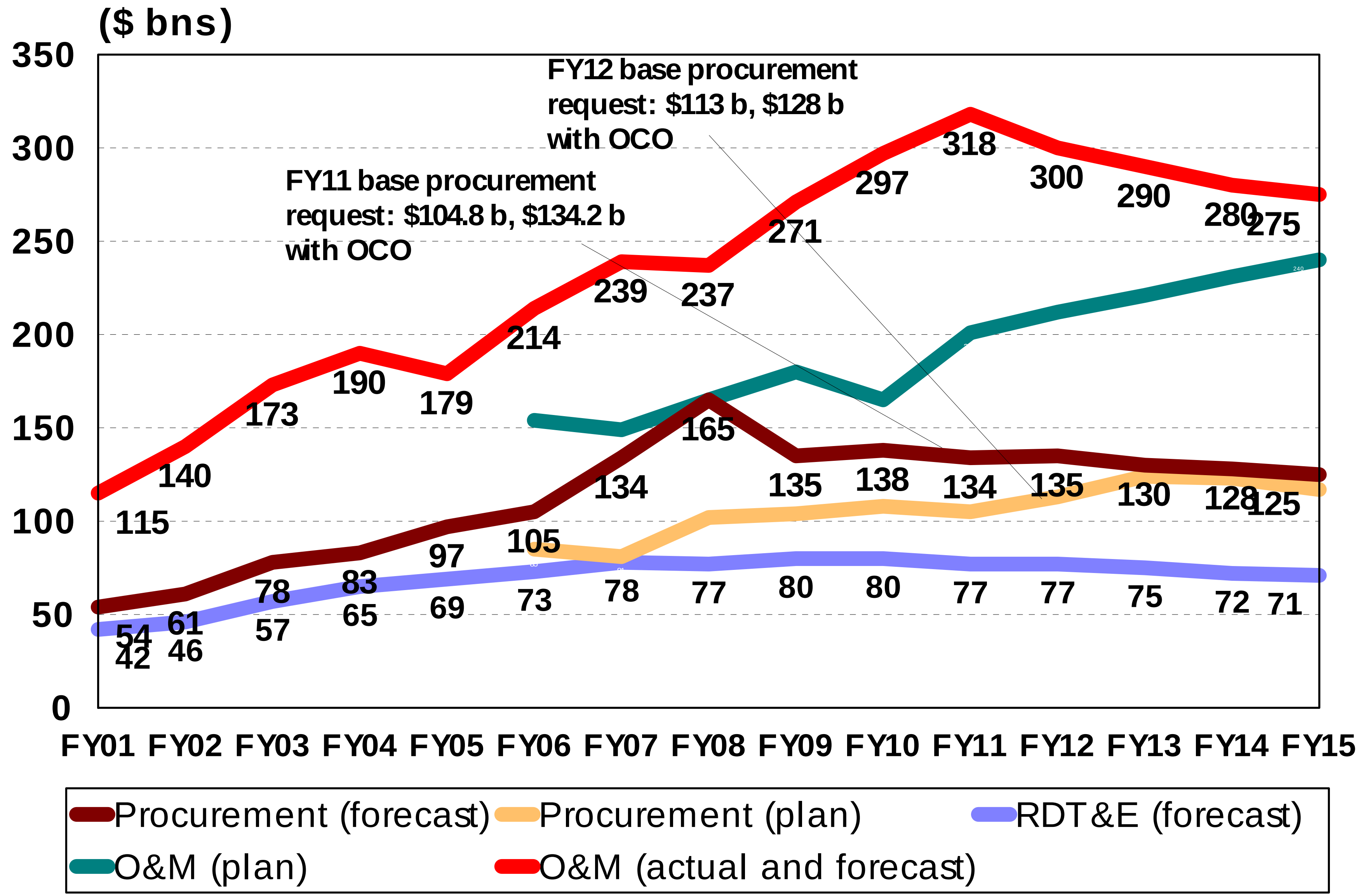
DoD Investment, O&M Funding



Budget Authority; Forecasts include supplementals

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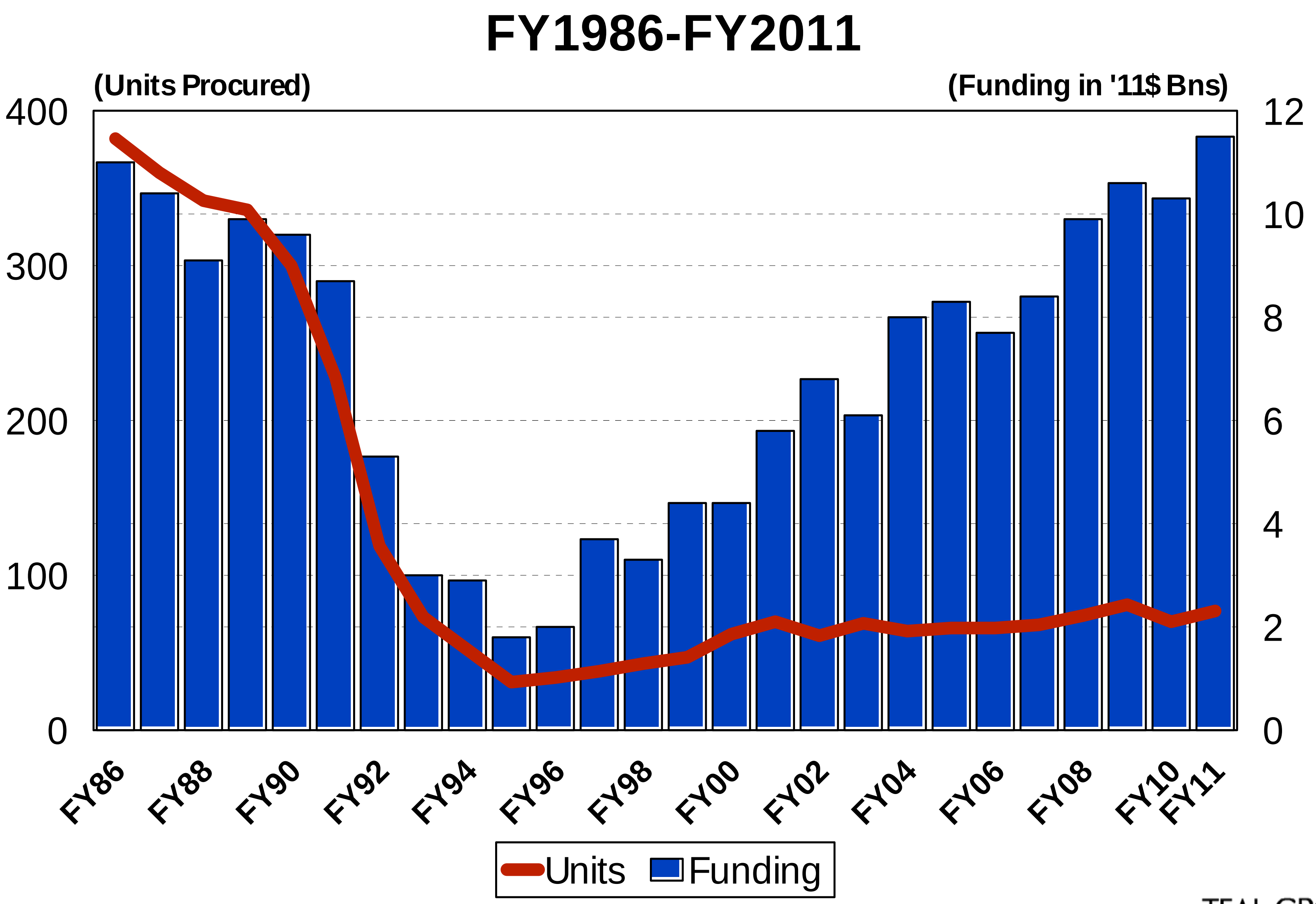
DoD Tactical Aircraft Procurement



With FY2011 OCO Supplement.

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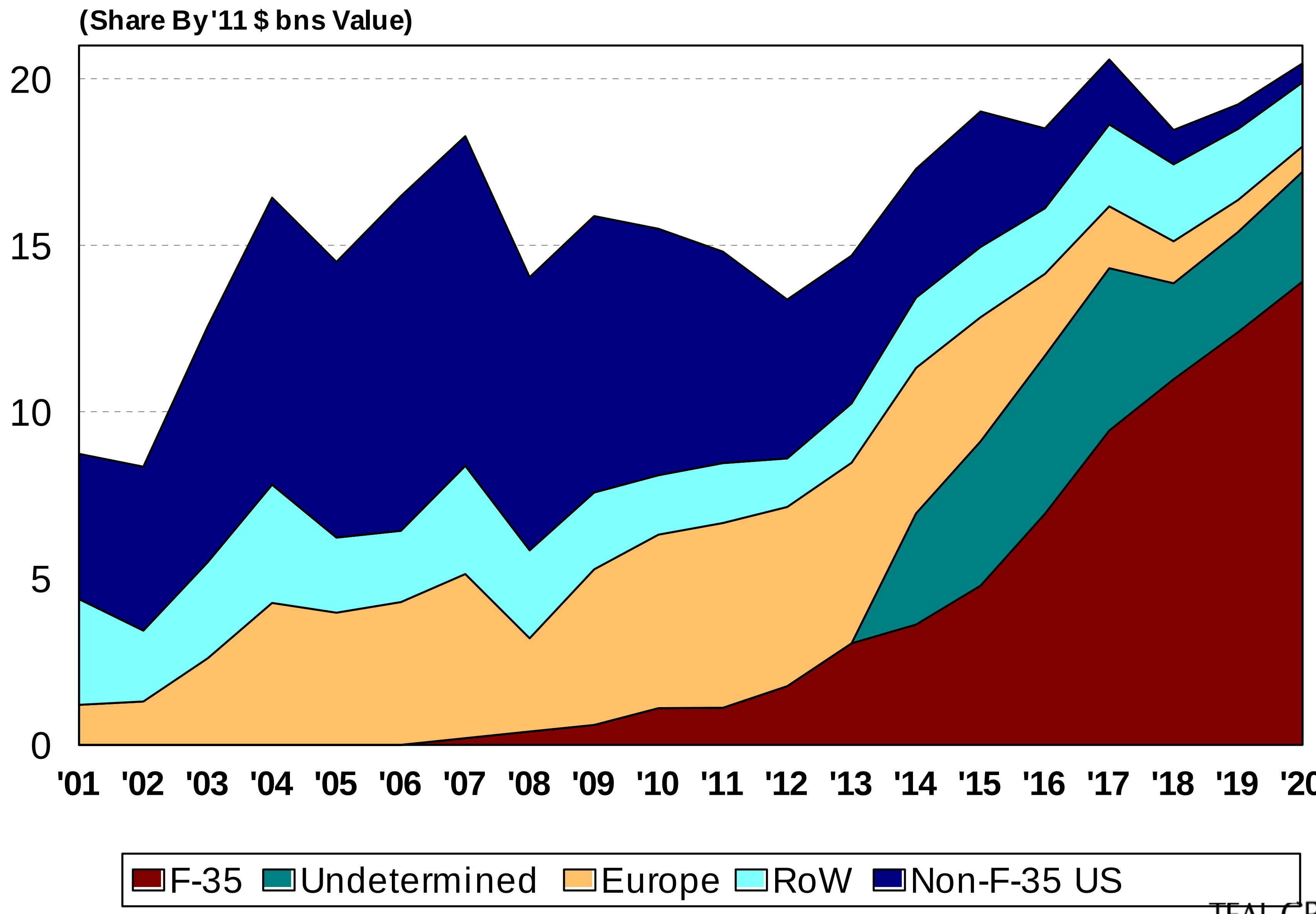
World Fighter Production Shares



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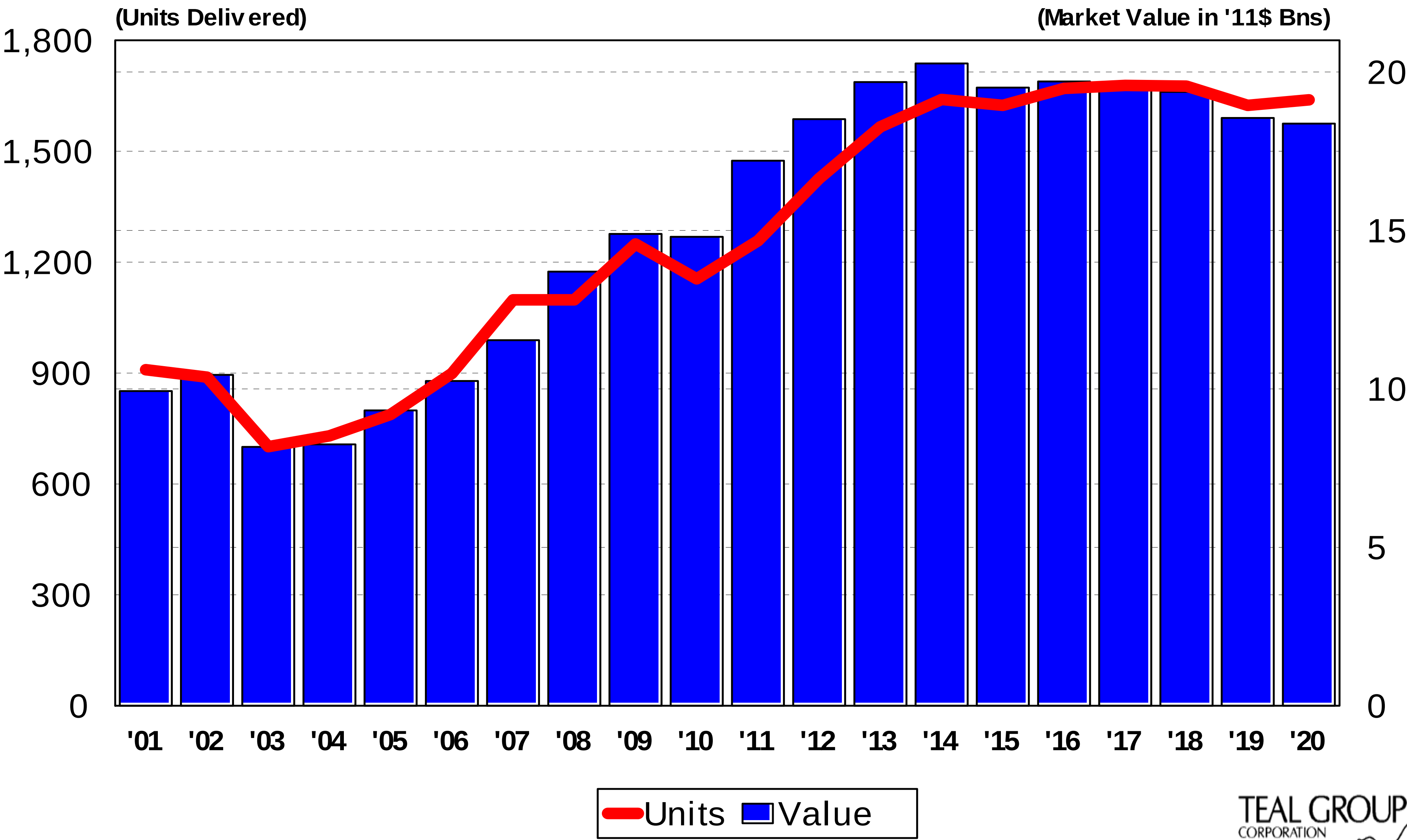
The World Rotorcraft Market

Firing On A Single Turbine, But It's A Big One



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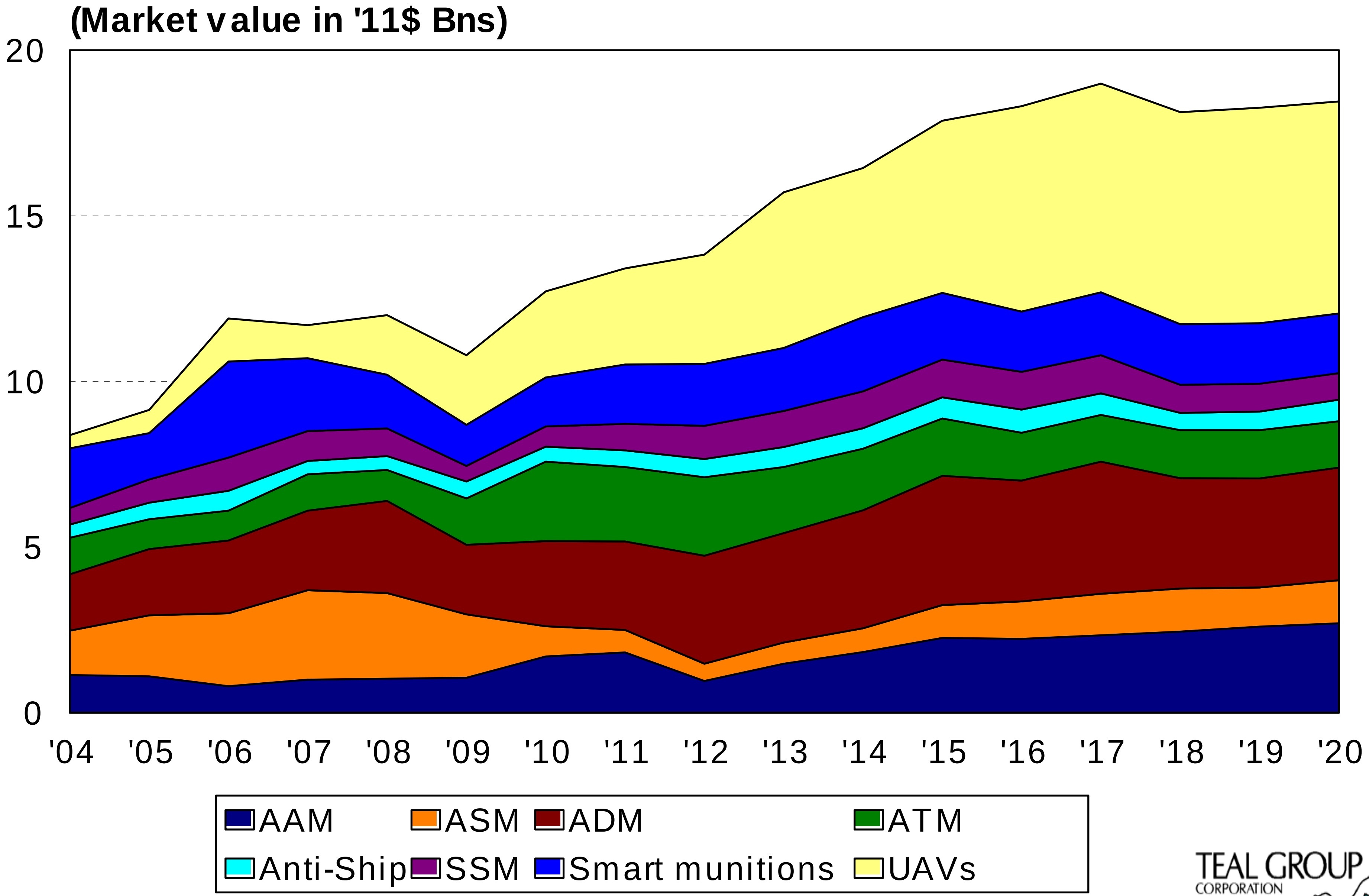
Missile/Munition/UAV Forecast



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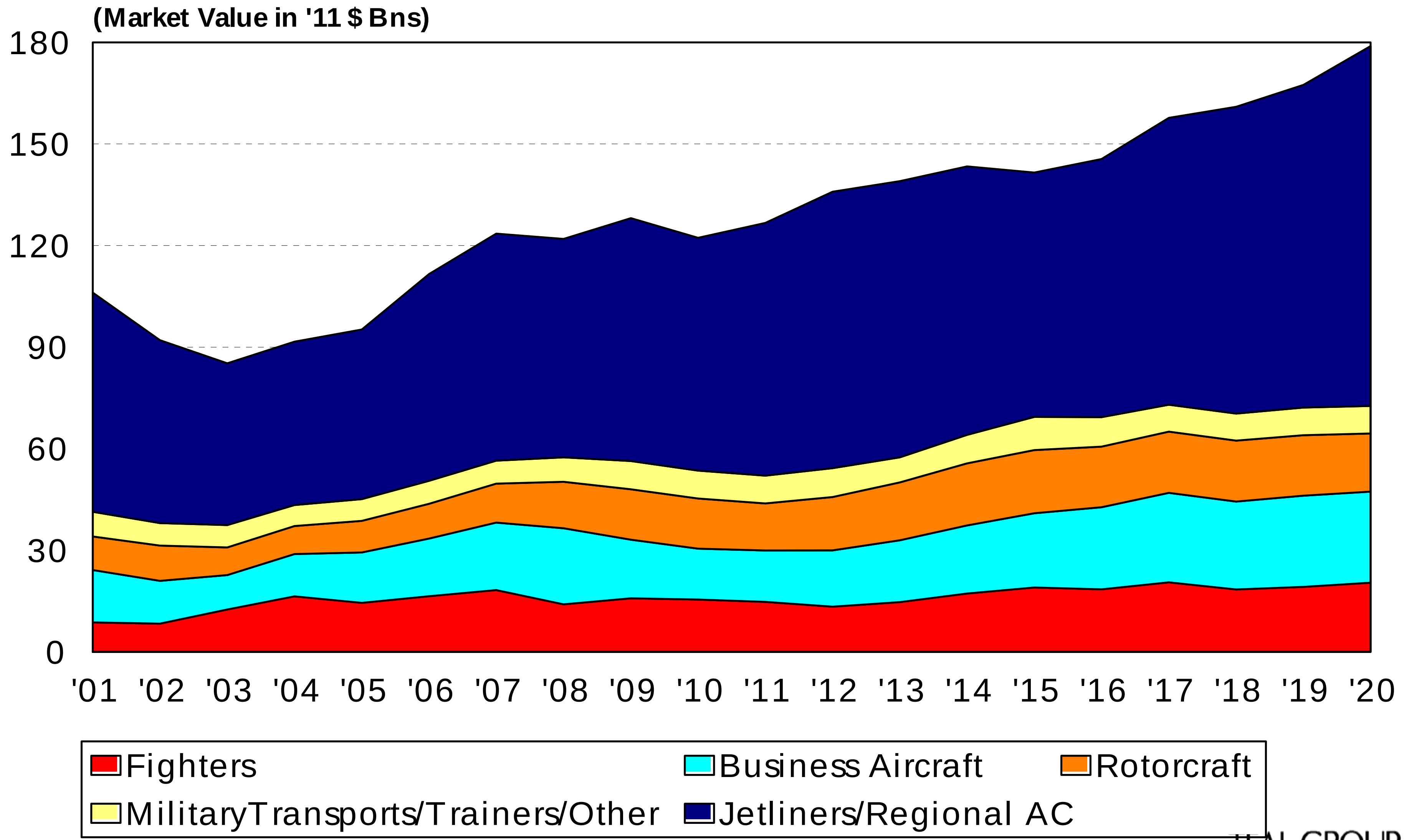
What Happens Next

Market	Growth '10-'11	CAGR '11-'16	Comment
Large Jetliners	8.9%	0.1%	5-year CAGR weakened by SA gap
Business Aircraft	0.8%	9.8%	Equal bottom half recovery; big structural change
Regionals	0.8%	4.0%	Still not a great market
Civil Rotorcraft	-14.5%	10.6%	Strong recovery
Military Rotorcraft	27.0%	0.6%	Strong plateau
Fighters	-4.5%	4.6%	Gradual F-35 ramp-up; export-driven growth
Military Transports	1.7%	1.1%	C-130J grows, C-17 shrinks; A400M lives
Total	**6.1%**	**2.6%**	**No bust, but less boom**

Aircraft Production 2001-2020

Largely Sheltered From The Storm; Long-Term Growth, Too



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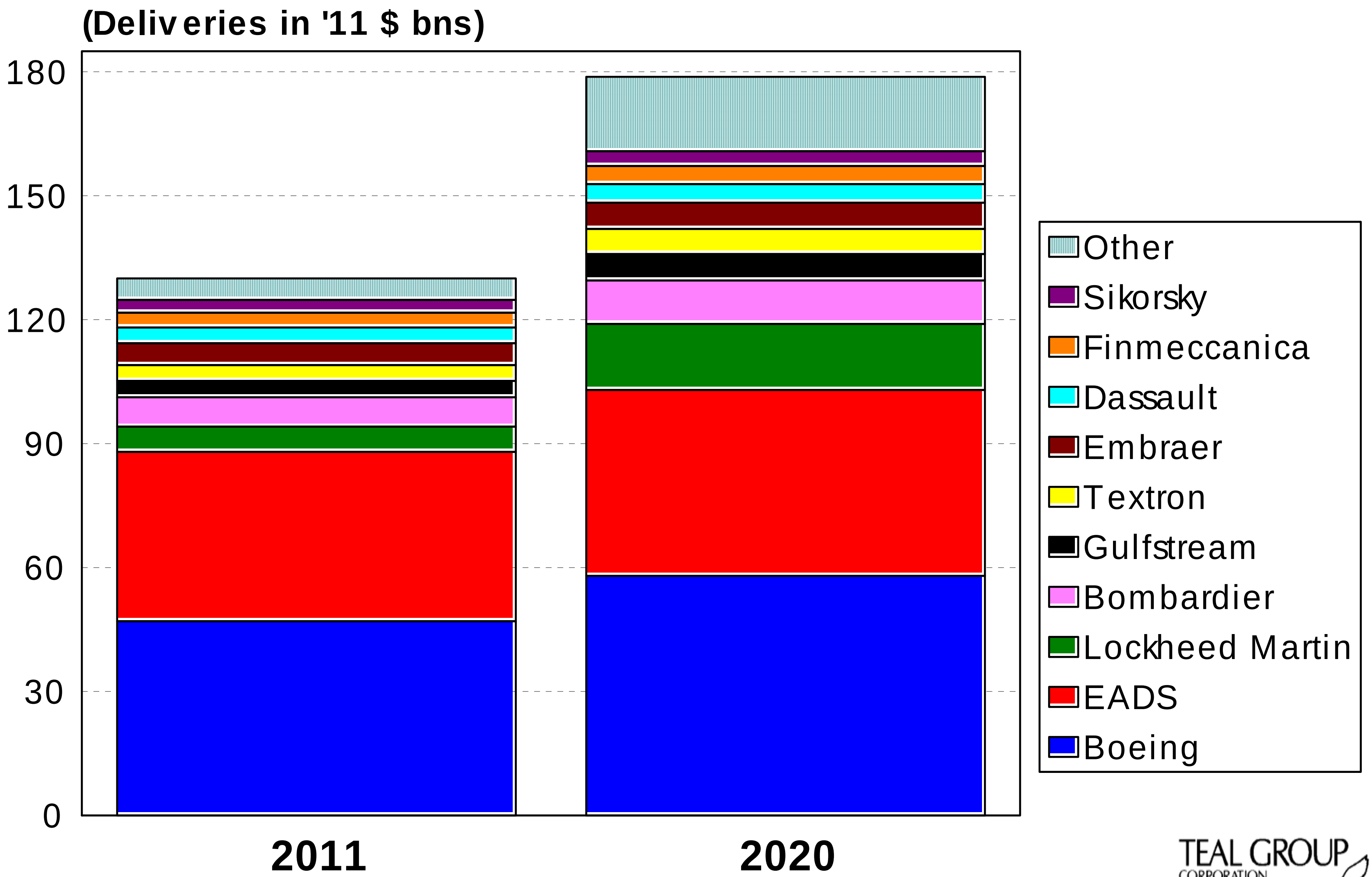
The Big Aircraft Builders



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Insights Into the Customer

General Industrial Machinery

Eli S. Lustgarten

Senior V.P. and

Senior Research Analyst

Longbow Research

Industrial Markets Outlook:

Will Equipment Demand Surge in 2011 As We Search for the New Normal

Speech to AMT MANUFACTURING CONFERENCE

MARCH 4, 2011

Eli S. Lustgarten

Senior Vice President, Longbow Securities

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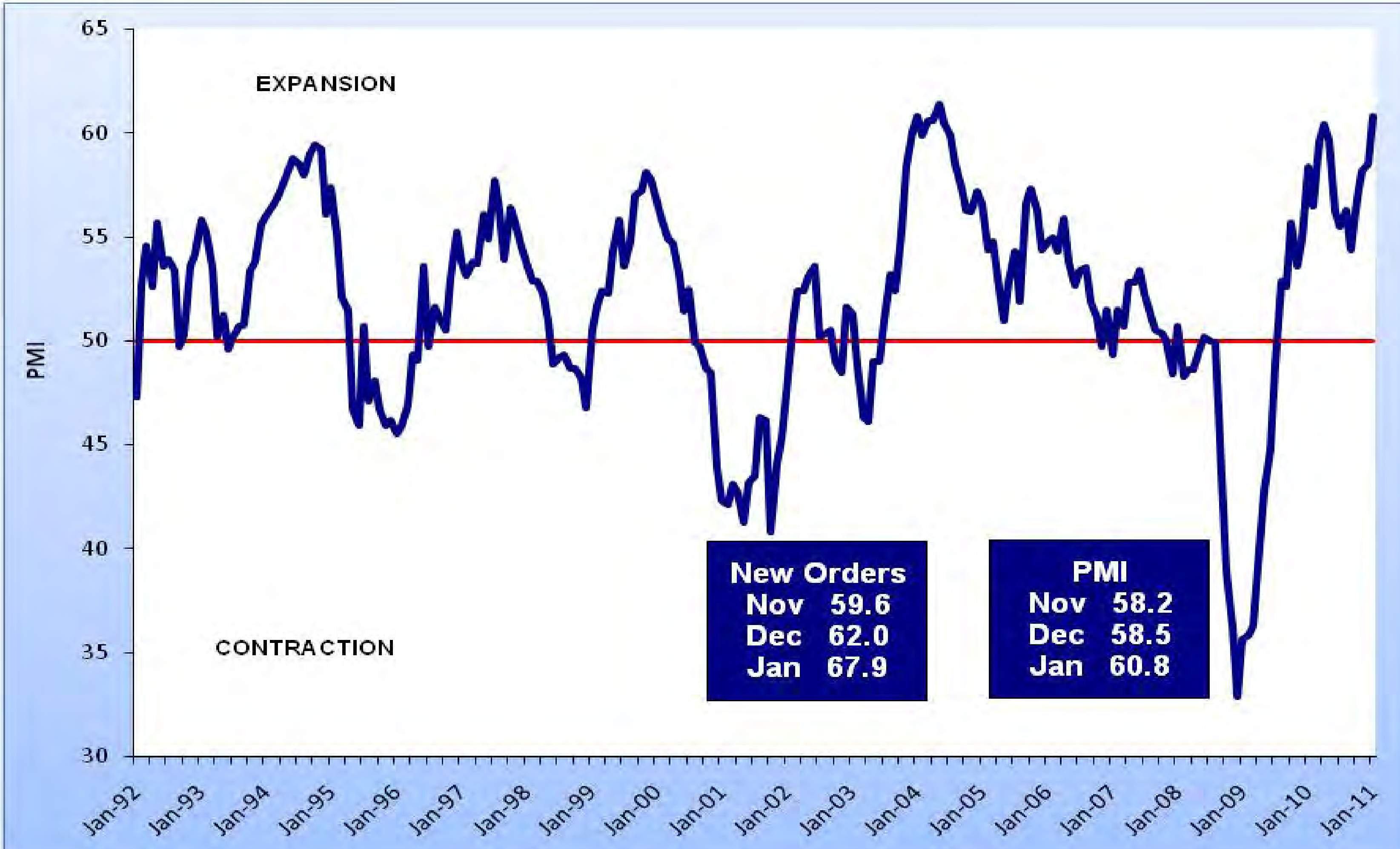
U.S. ISM PMI SAW A SLIGHT DIP IN MID-2010 BUT HAS PICKED UP AGAIN FROM THERE

U.S. ISM PMI INDEX – 1992 TO PRESENT



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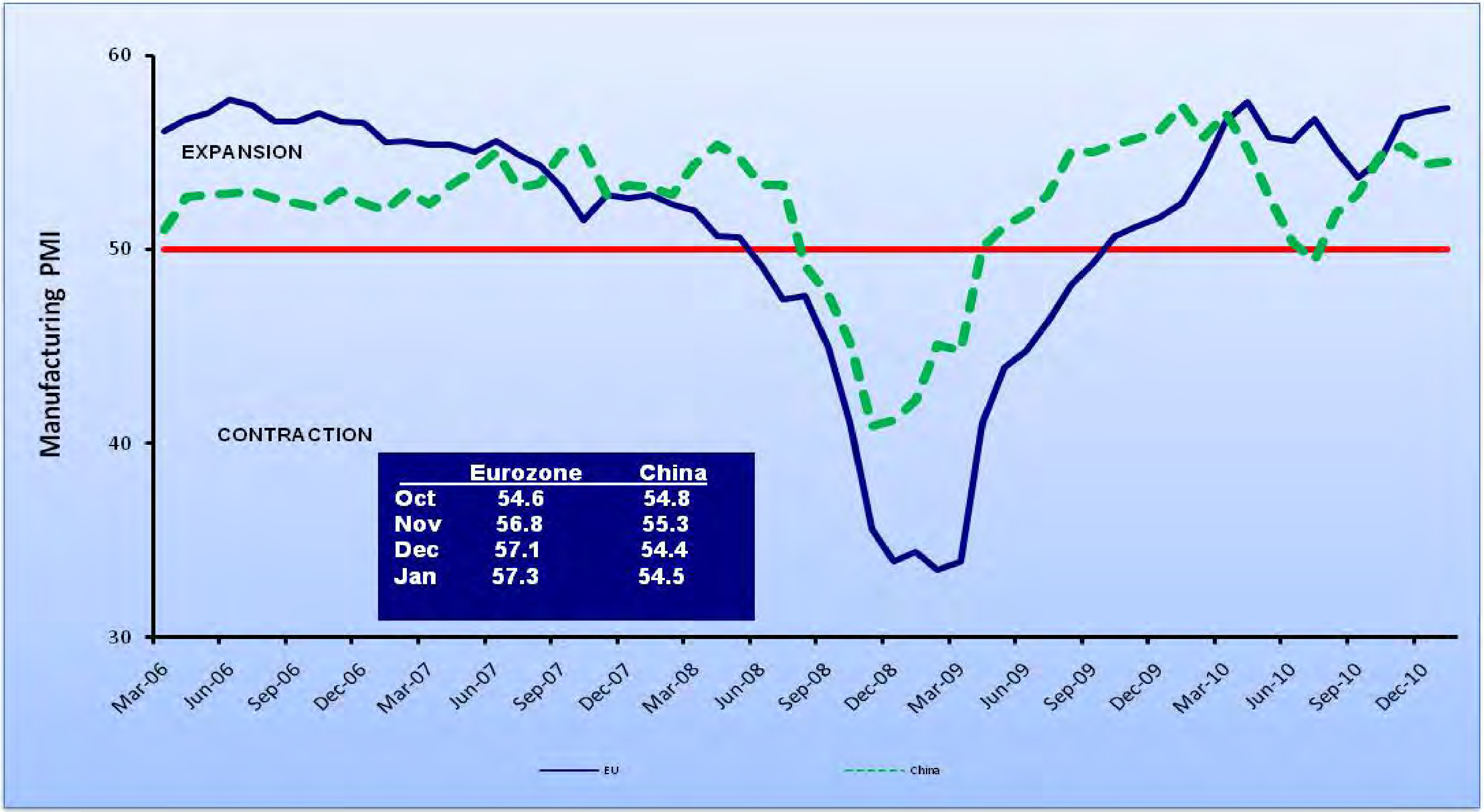
IN RECENT MONTHS EUROZONE AND CHINA PMIs HAVE DIVERGED FROM ONE ANOTHER

EUROZONE PMI AND CHINA PMI - MARCH 2006 TO PRESENT



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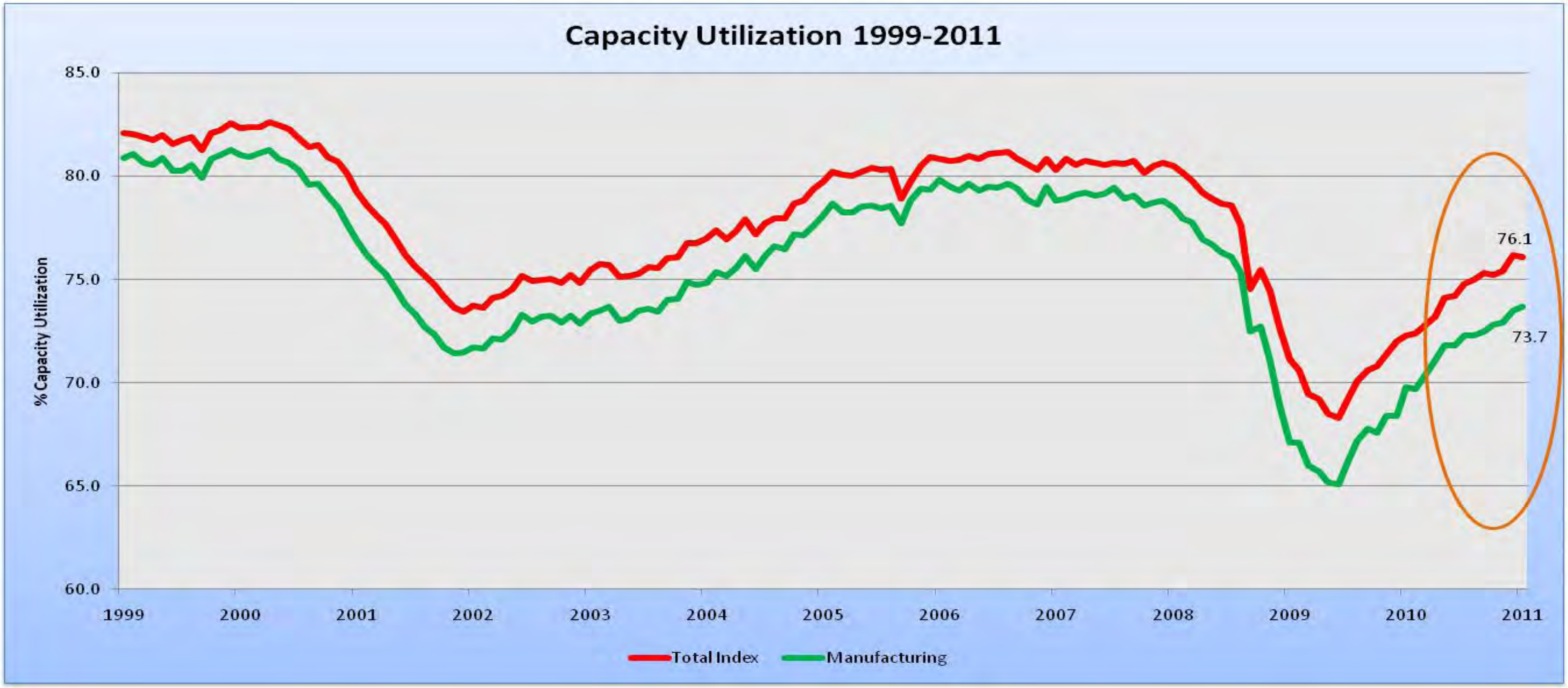
SLOW INDUSTRIAL CAPACITY UTILIZATION RECOVERY IN 2010

- We have dug a deep hole to climb out of in 2011
- Manufacturing Capacity Utilization is still in the Low 70's compared to more normal upper-70s levels of past decade
- Virtually Every Industrial Sector is Currently Over-Capacitized Globally



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2011-2012: FINDING THE NEW LEVEL OF NORMAL DEMAND

- New more NORMAL level of demand perceived to be lower than end market demand realized in 2006-2008; Note: 2006 was recent peak for housing, trucks, autos, construction equipment
  - **Auto** unlikely to return quickly to 16 to 17 million car sales that prevailed from 1999-2005; **perhaps 12.0 million to 14.0 million is the new norm**;
  - **Housing** unlikely to return quickly to 2 million starts; **New norm may be 1.3 to 1.6 million** over the next few years with cautious funding keeping starts well below 1 million at least through 2011 if not 2012.
  - Truck market likely to return to more normal levels of demand as early as 2011 e.g. class 8 trucks in the 200,000 to 240,000 range. Prior level peaks of over 300,000 unlikely until at least the next emission cycle;
  - Construction and mining, engines and turbines, railcars and other **heavy equipment** will see renewed recovery through 2012 to levels likely below 2006 to 2008; 2011 gains will likely be stronger than previously expected due to tax write-offs. Will demand be borrowed from 2012?
  - Steel production follows heavy equipment and infrastructure spending.
- Electrical markets probably resume growth post 2010 driven by improving capital spending trends and the initial recovery of both residential and non-residential markets.
- Energy/Alternative Energy market growth awaits resolution of Government policies and priorities
- Farm equipment end market demand growth dependent on global economic growth, global demand and weather. Growth likely in 2011 and 2012 as recent global weather issues have tightened global supplies amid rising demand. Potential for shortages exists!

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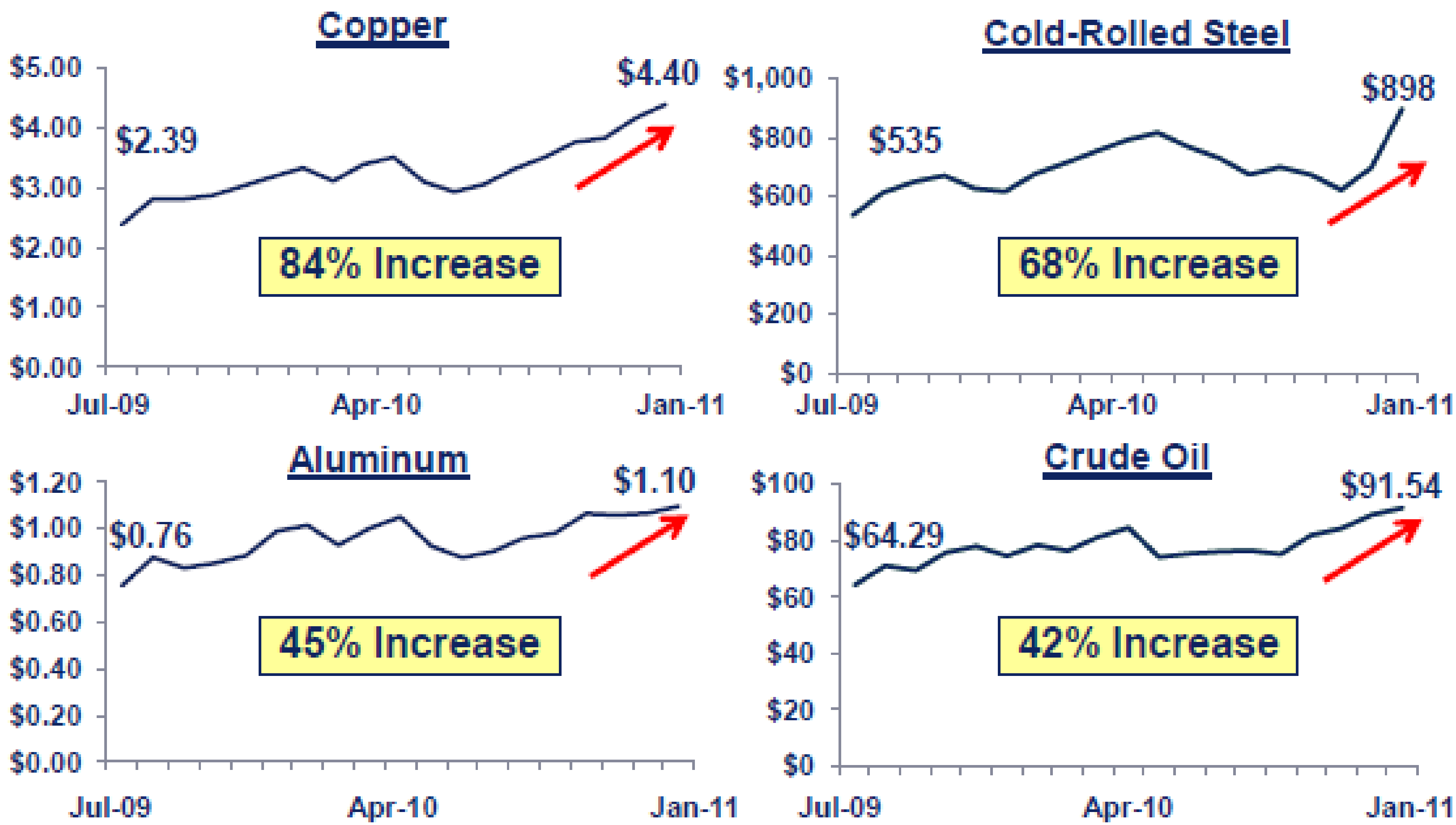
MANUFACTURING INPUT COSTS ARE RISING SIGNIFICANTLY

Commodity Prices for Previous 18-Months



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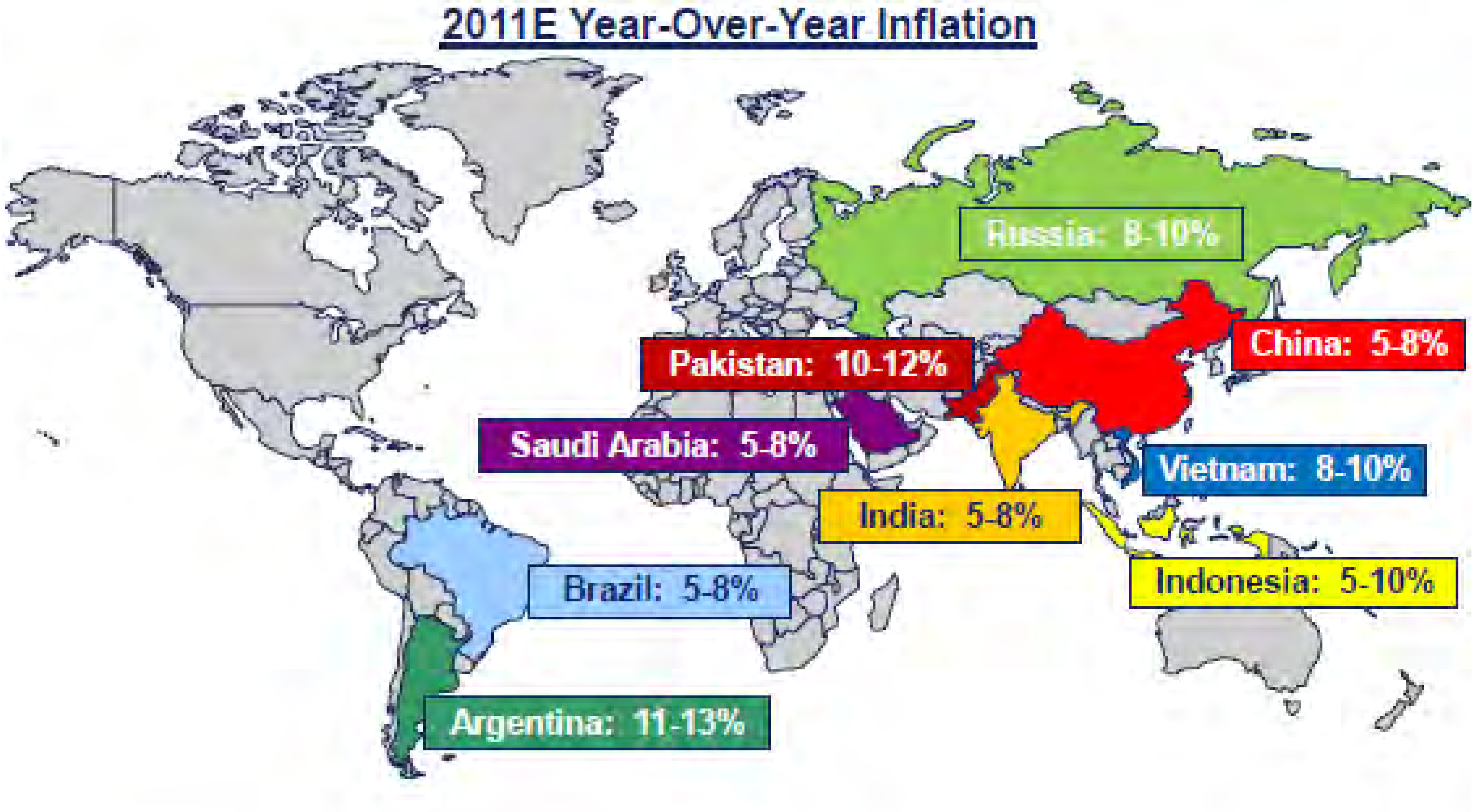
Source: Emerson

INFLATION IS GROWING CONCERN GLOBALLY



Source: Global Insight Consumer Price Index year-on-year % change

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TWO TYPES OF PRESSURES DRIVING EQUIPMENT PRICES HIGHER

- **Type I** – Manufacturing Input costs are increasing as commodity prices surge
  - Pricing effect is mostly low to mid single-digit increases
- **Type II** – Regulatory Driven Price Increases
  - New emission regulations for off-road equipment
    - Interim Tier 4 effective January 2011 for equipment over 174 hp; all other equipment effective January 2012
    - Similar to 2007 Truck emission; but regulations will be phased into the off-road sector for multiple years
    - Final Tier 4 effective January 2014; similar to 2010 truck emission and also will likely be phased in over multiple years
  - Energy efficiency regulations e.g. motors
  - New CAFÉ RULES FOR TRUCKS; EPA RULES FOR EMISSIONS
  - **<u>Price impact of new regulatory driven changes appear to be low to mid double digits (10% to 15% plus)</u>**

New Stimulus Package Can Drive Equipment Demand in 2011

- **2010 was the Year of the Component Supplier**
  - Bull-Whip effect was a key as supply chain was rebuilt and rebalanced
  - Demand for Fluid Power Components, Cutting tools etc. were up at least 35-40% more
- **Real increase in demand will likely be the driver of growth in 2011**
- **Virtually all industrial end markets will grow at least low double-digits in 2011; trucks strongest (+ over 50%); defense weakest (minimal)**
- **2011 Can be the Year of the Equipment Supplier**
  - New Industrial Stimulus bill on December 17, 2011 as part of tax cut extension
  - R&D tax credit extended retroactively for 2010 and for 2011 lowering US corporate tax bills for the most recent quarterly reports and 2011;
  - New Benefit for corporate America is 100% depreciation write-off for new equipment retroactive to September 9, 2010 through December 31, 2011
  - Bonus Depreciation deduction reverts back to 50% for 2012
- Higher Depreciation likely to bring demand forward from 2012 into 2011
  - The 100% write-off benefit will help offset the impact of the ongoing price increases for equipment that will prevail for at least the next several quarters.

Geographic Mix is Changing

- **2010: Emerging Markets strength drove world economic growth**
- **2011: Less Robust Outlook for Most Emerging Markets**
  - Brazil – Terrific longer-term outlook with World Cup in 2014 and Olympics and 2016; but recent budget cuts will hamper demand over the next few quarters
  - China – Rate Increases to rein in inflation will slow economic activity; Government cut projected 2011 growth to 7%.
- **Mature Markets Growth will Help Drive World Economies led by US**

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Gross Fixed Investment (GFI) In Mature Markets Will Likely Grow At Least Through 2012

- Pressure to reduce costs, increase productivity and expand capacity will drive multi-industry companies to increase capital spending as part of their ongoing competitive positioning;

- Companies that reduce their CAPEX during the downturn will now be forced to "catch-up"

- Industrial inflation will spur productivity investments

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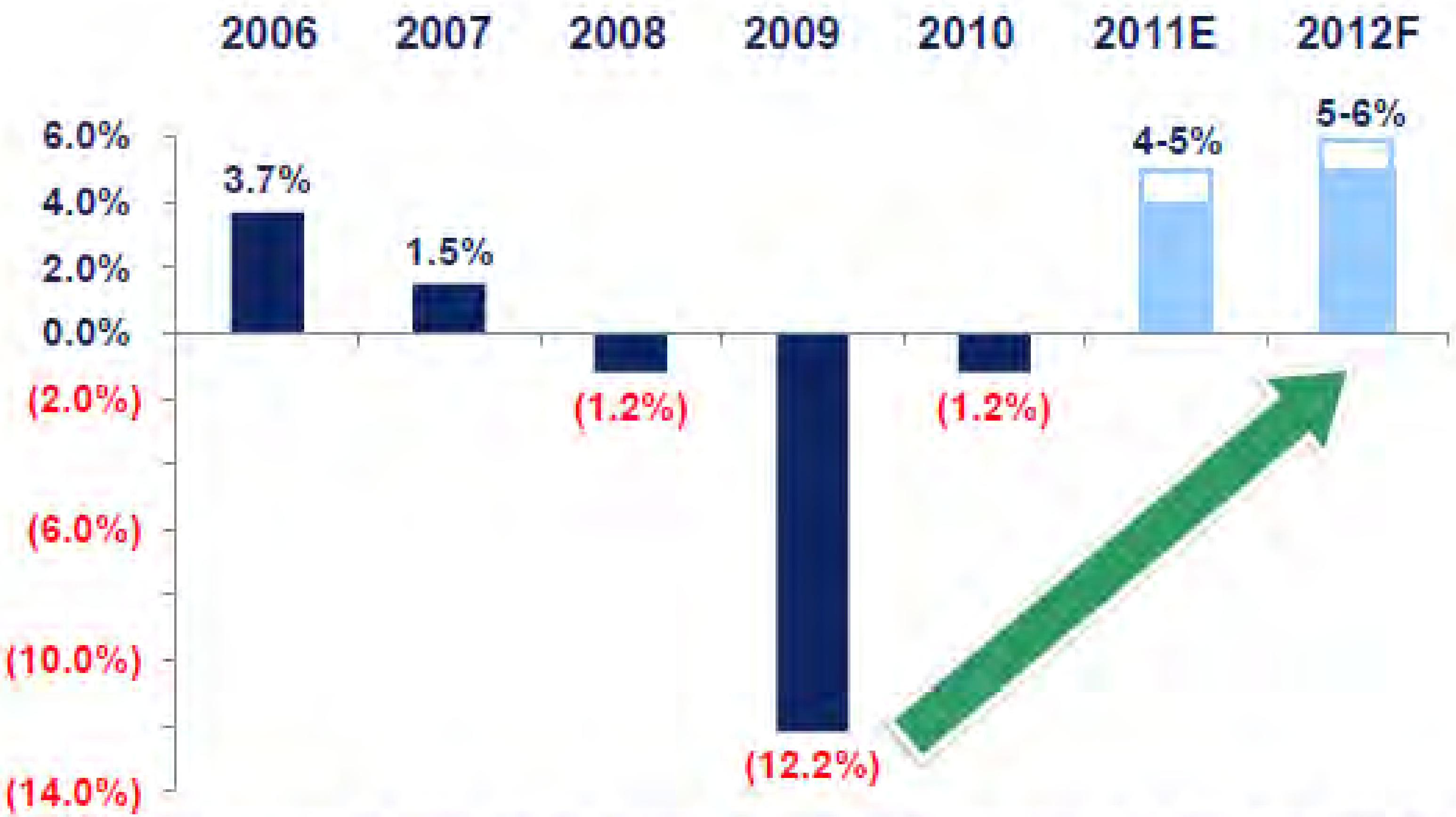
Gross Fixed Investment Will Grow For At Least the Next Two Years



We Expect 4-5% GFI Growth this Year and 5-6% in 2012

Data source: Global Insight, Real Dollars, Emerson, presented by Emerson Fiscal Year

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Emerging Markets and Mature Markets Are Now of Similar Size

	GFI 2009/10 % Change	GFI 2010 $	GFI 2010/11E % Change
United States	(1.1%)	$2.3T	5-6% ↑
Residential	(5.5%)	$0.5T	(1-2%) ↓
Non-Residential	(0.5%)	$1.6T	8-9% ↑
Europe	(3.2%)	$3.8T	3-4% ↑
UK	(2.5%)	$0.3T	5-6% ↑
France	(3.5%)	$0.5T	1-2% ↑
Germany	1.2%	$0.6T	8-9% ↑
Italy	(0.0%)	$0.4T	2-3% ↑
Japan	(2.7%)	$1.1T	2-3% ↑
Canada	3.1%	$0.3T	6-7% ↑
Mature Markets	(2.3%)	$6.7T	Approx 4% ↑
			↑
China	17.2%	$2.5T	11-12% ↑
India	14.2%	$0.5T	8-9% ↑
Eastern Europe/Russia	(1.5%)	$0.8T	5-6% ↑
Latin America	7.1%	$0.9T	8-9% ↑
Middle East and Africa	0.4%	$0.5T	5-6% ↑
Emerging Markets	9.7%	$6.5T	8-9%

Data source: Global Insight; Emerson

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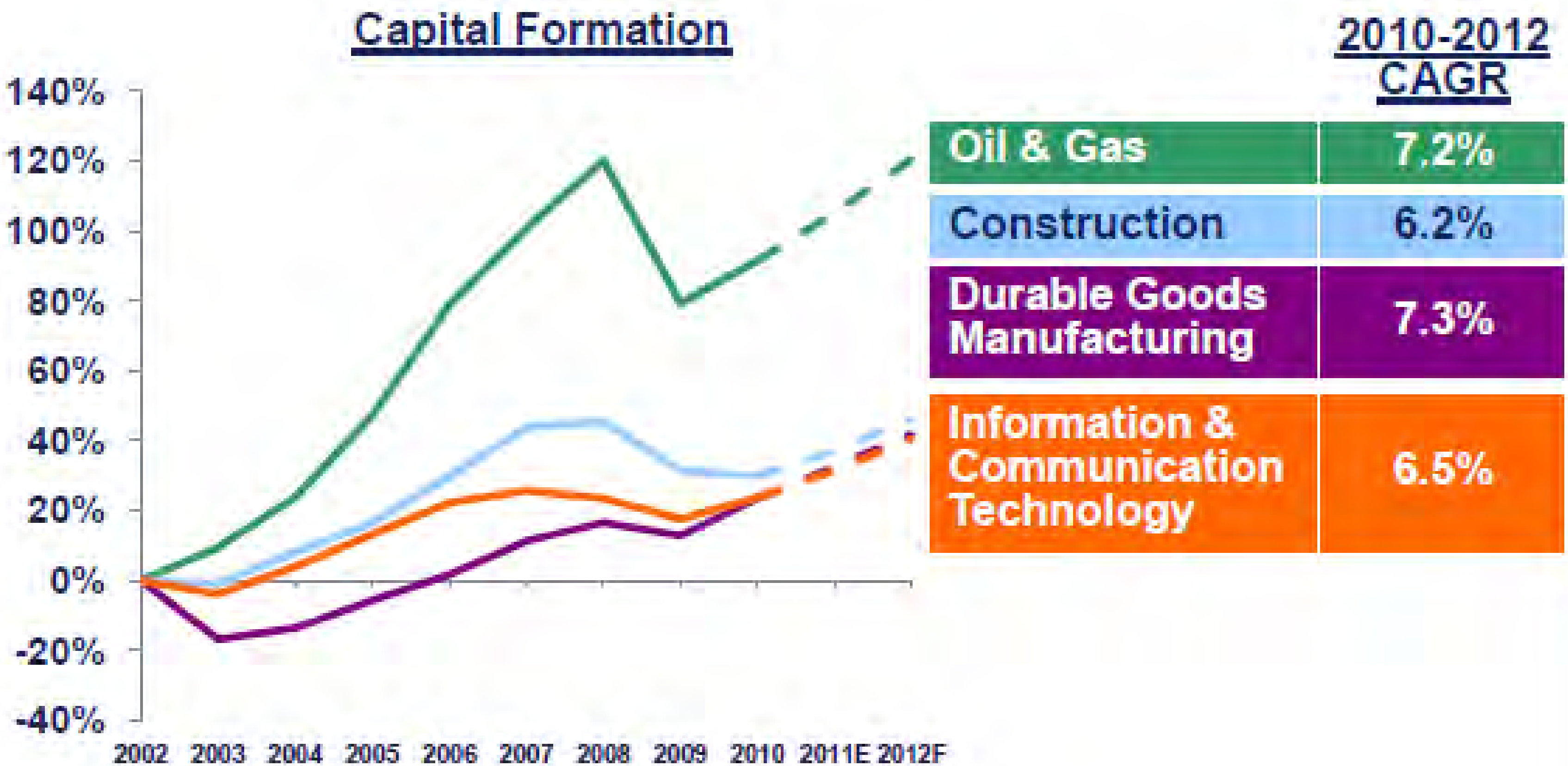
Global Capital Spending Will Be Strong Led By Energy And Infrastructure/Durable Goods



Source: Global Insight, Real Global Fixed Capital Formation Scaled to Year 2002 Levels

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Major Industrial Companies Will Increase Capital Spending Sharply in 2011-2012

	2007	2008	2009	2010	2011	2012
AGCO	10%	78%	-14%	-22%	46%	-5%
AIT	1%	-25%	-17%	3%	224%	-6%
CAT	14%	32%	-42%	12%	16%	-3%
CBE	35%	19%	-8%	-22%	23%	-1%
CMI	42%	77%	-45%	18%	39%	9%
DE	33%	9%	-18%	-16%	26%	-7%
EMR	13%	5%	-26%	-1%	23%	9%
ETN	-2%	27%	-56%	-5%	176%	12%
FAST	-28%	71%	-45%	40%	-8%	12%
GWW	44%	-1%	-27%	-15%	50%	6%
IN	-29%	-13%	-20%	29%	-10%	6%
IR	-44%	156%	-33%	-12%	55%	20%
ITW	17%	1%	-30%	16%	17%	4%
KMT	16%	78%	-36%	-46%	39%	7%
MSM	16%	-21%	9%	33%	14%	12%
NAV	36%	-44%	-14%	65%	19%	7%
PCAR	33%	22%	-37%	-9%	-52%	10%
PH	20%	18%	-3%	-52%	151%	12%
TKR	6%	-13%	-58%	1%	75%	13%
TRMB	-20%	23%	144%	-36%	-7%	12%

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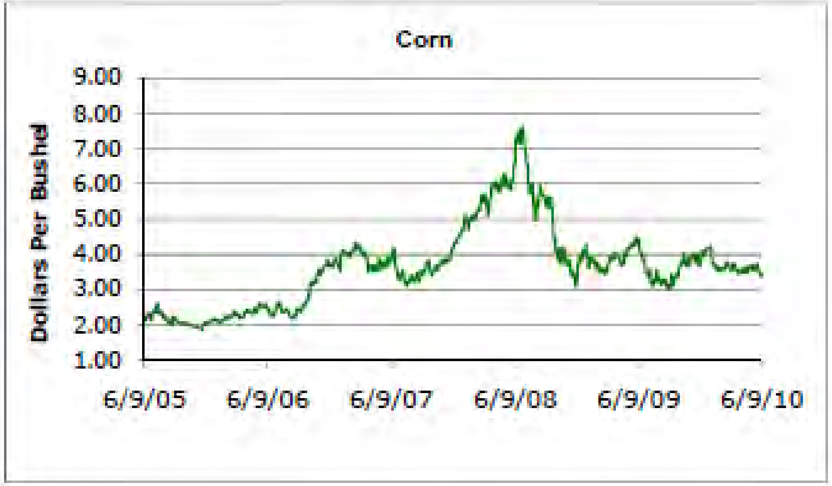
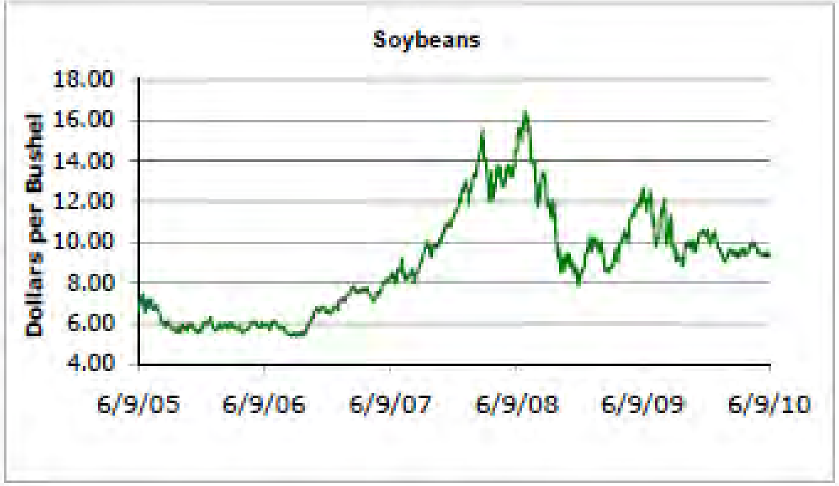
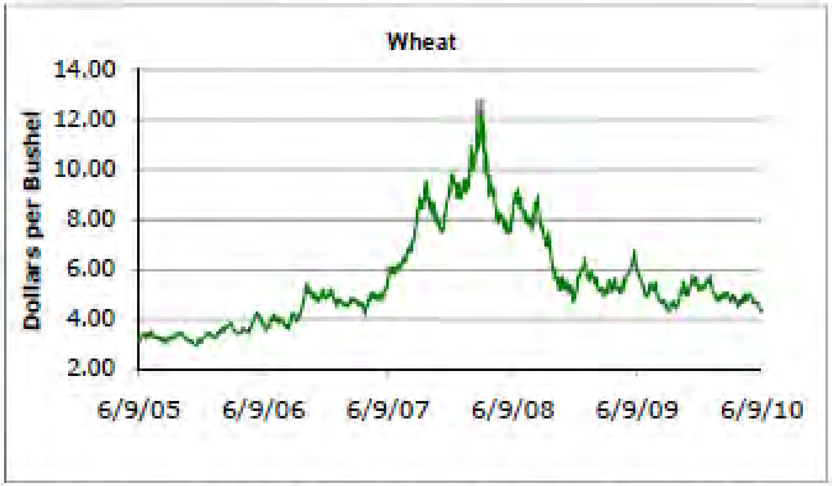
Farm Equipment

GLOBAL WEATHER PROBLEMS STRENGTHEN MULTIPLE YEAR OUTLOOK

THROUGH JUNE 2010, FARM COMMODITY PRICES WERE SOFTENING







Source: Chicago Board of Trade – Corn, Soybeans & Wheat; Intercontinental Exchange – Cotton

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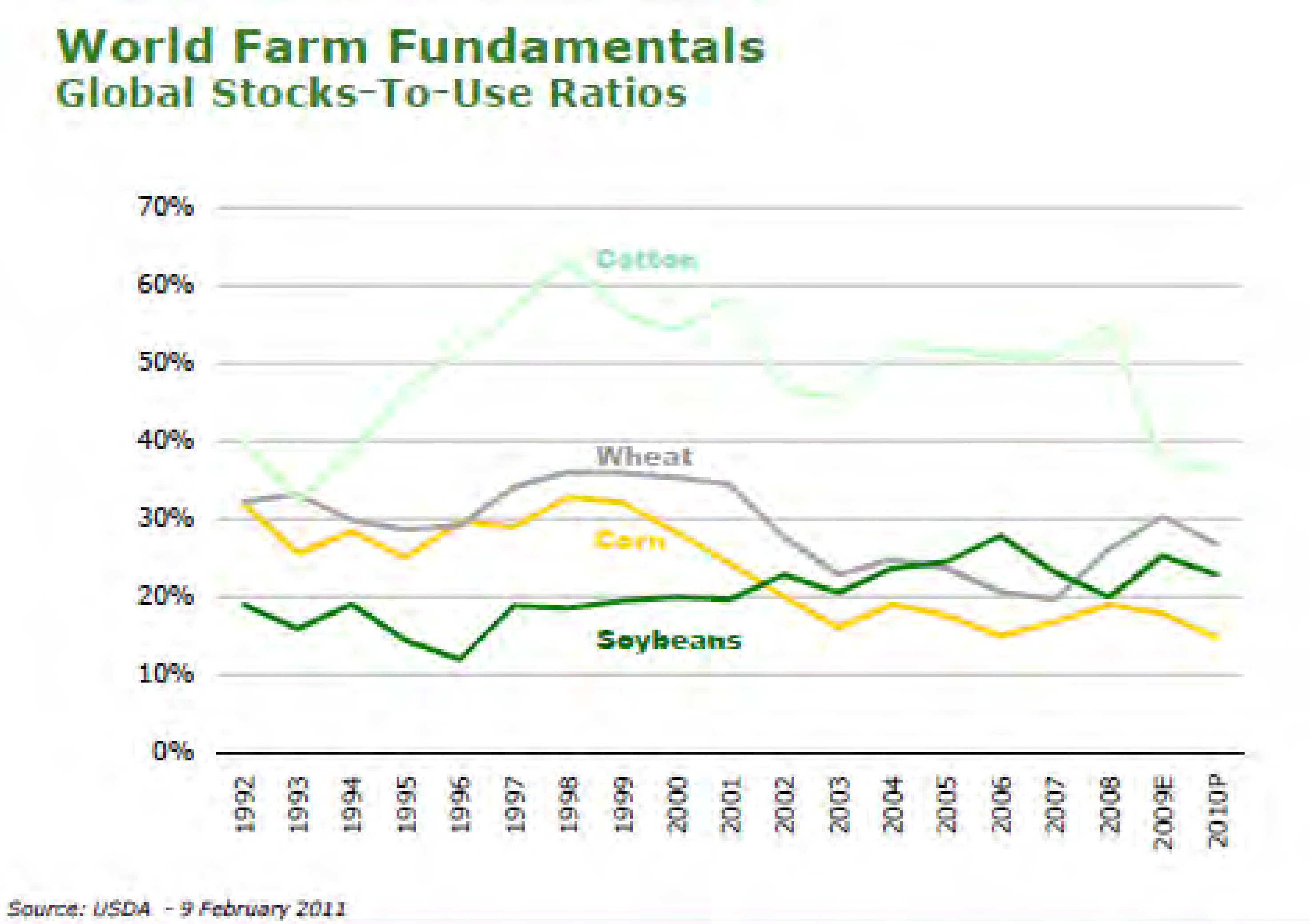
USDA CROP OUTLOOK TIGHTENING

Crop	May 2010	July 2010	Nov 2010	Feb 2011
Wheat Carryover	997	1093	848	818
Price	$4.10 - $5.10	$4.20 - $5.00	$5.25 - $5.75	$5.60 - $5.80
Corn Carryover	1,818	1,373	827	675
Price	$3.20 - $3.80	$3.45 - $4.05	$4.80 - $5.60	$5.05 - $5.75
Soybean Carryover	365	360	185	140
Price	$8.00 - $9.50	$8.10 - $9.60	$10.70 -12.20	$11.20 -12.20

WORLD FARM FUNDAMENTALS STILL STRONG



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RISING FARM CASH RECIEPTS BODE WELL FOR FARM EQUIPMENT INDUSTRY

(in billions of dollars)	2009	2010 Forecast	Previous 2010	2011 Forecast	Previous 2011
Crops	$163.7	$171.2	$173.7	$205.1	$198.1
Livestock	$119.8	$137.5	$135.9	$142.2	$136.9
Government Payments	$12.3	$12.4	$12.4	$11.9	$11.9
Total Cash Receipts	$295.8	$321.1	$322.0	$359.2	$346.9

Deere & Company Forecast as of 16 February 2011 (Previous Forecast as of 24 November 2010)

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FARM EQUIPMENT OUTLOOK FOR 2011 (and 2012) IS IMPROVING

Tractors	Growth	Combines	Growth
Worldwide	+5%	Worldwide	+5% to 10%
North America	+5%	North America	+5% to 10%
<40HP	+5% to 10%		
40 to 100HP	+5% to 10%		
100HP+	+0% to 5%		
W. Europe	+10%	W. Europe	+10%
Latin America	Flat	Latin America	+0% to 5%
Rest of World	+0% to 10%	Rest of World	+10% to 15%

Power Generation

STILL IN DESPERATE NEED OF AN ENERGY POLICY

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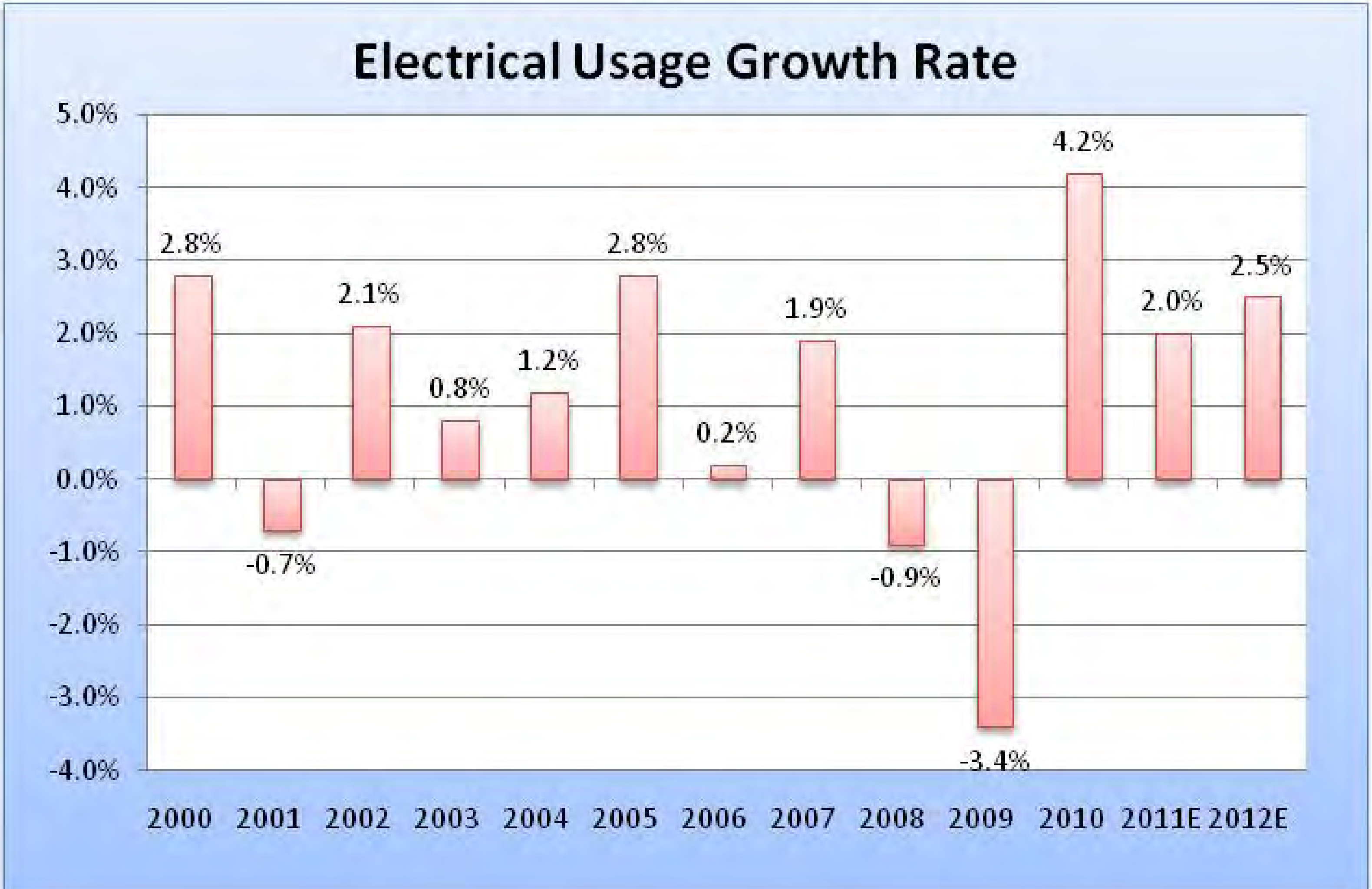
AFTER 2 YEARS OF USAGE DECLINE..



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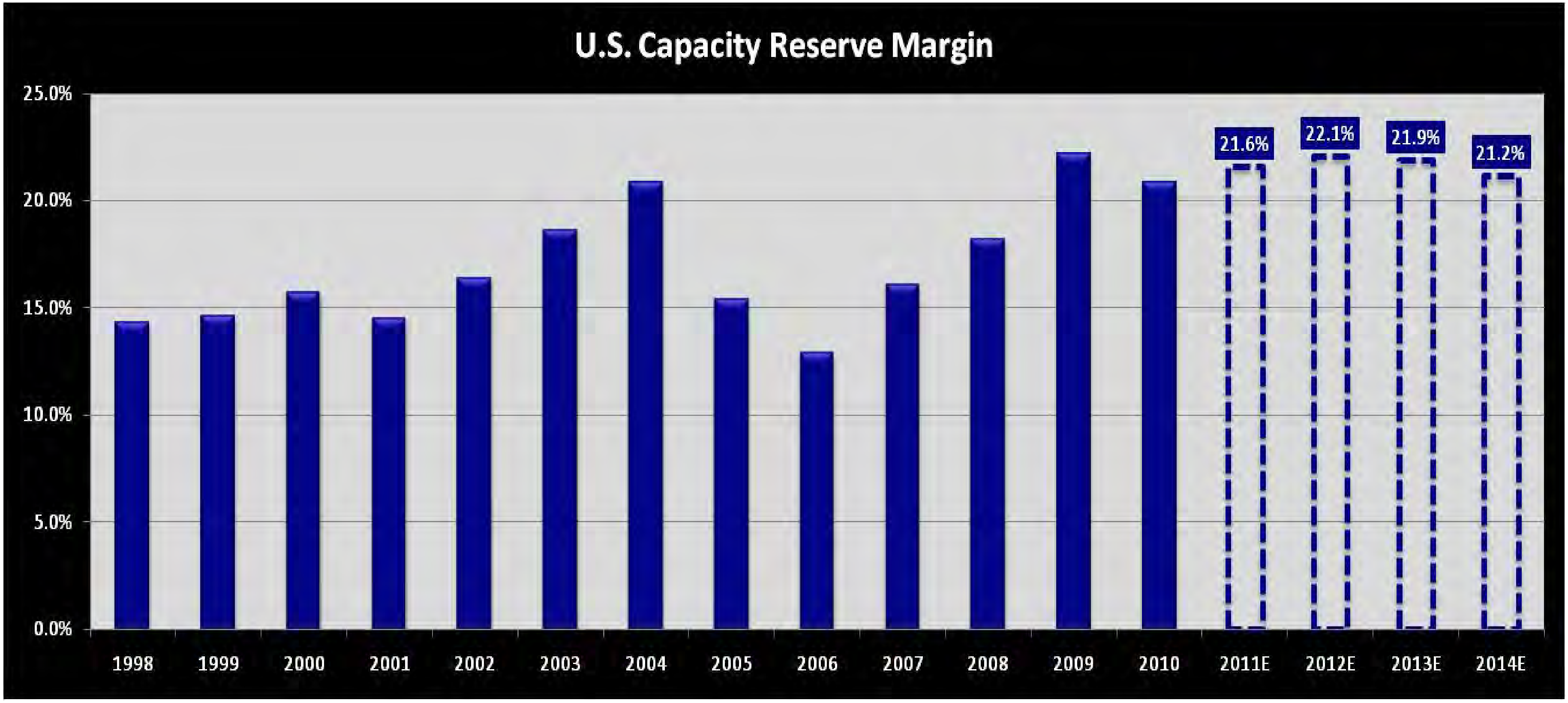
RESERVE MARGINS CONTINUE TO IMPROVE…



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PLANNED CAPACITY ADDITIONS HAVE SLOWED: GOV'T USES PLUG DATA FOR 2012-13

FUEL (IN MW)	2010	2011E	2012E	2013E
COAL	5.7	7.8	11.5	11.5
COMBINED CYCLE	1	4.4	6.4	6.4
COMBUSTION TURBINE	1.3	2	2	2
NUCLEAR	0	0	0	1.1
RENEWABLE	0	0.2	0.4	0.7
TOTAL	**7.9**	**14.3**	**20.3**	**21.7**
UNPLANNED				
RENEWABLE	6	10.2	20.2	20.3
OTHER	0	0	2	4.4
TOTAL	**14**	**24.5**	**42.5**	**46.4**

SOURCE:EIA

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WIND FACES UNCERTAIN GROWTH IN 2011 (AGAIN)

- WITH FAVORABLE STATE AND FEDERAL POLICIES
  - US wind sector on path for 165GW of installed capacity by 2025
  - Total wind capacity would be about 200 GW representing about 5% of US energy sources.

- NEAR-TERM POLICIES CREATE UNCERTAINTY
  - Problems include Transmission congestion and fall electrical demand
  - Need Coordinated NATIONAL Transmission policies and National Renewable Energy Policy/Federal Energy Policy

- BIG CAPACITY ADDITION DROP LIKELY IN 2010 TO 5,155MW FROM 10,010 MW IN 2009
  - Only 547MW installed in 1Q10
  - Only 700MW installed in 2Q10
  - Only 670MW installed in 3Q10
  - 3,195MW installed in 4Q10 for a FY2010 Total of 5,115MW
  - 5,600 MW currently under Construction in U.S.

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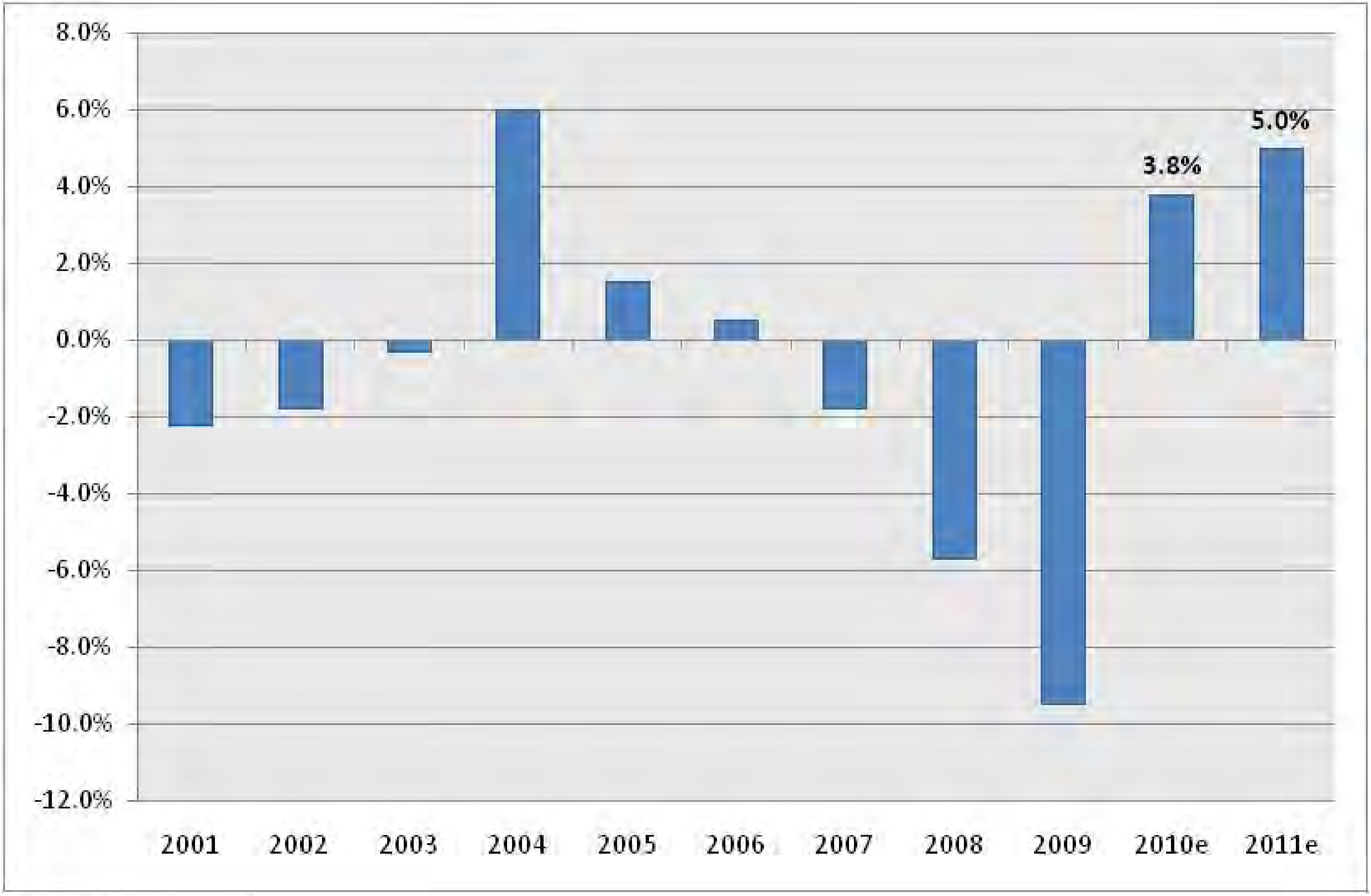
ON HIGHWAY VEHICLES:

The Slow Recovery Will Gain Steam in 2011

US TRUCK FREIGHT MOVEMENT IN MODERATE RECOVERY



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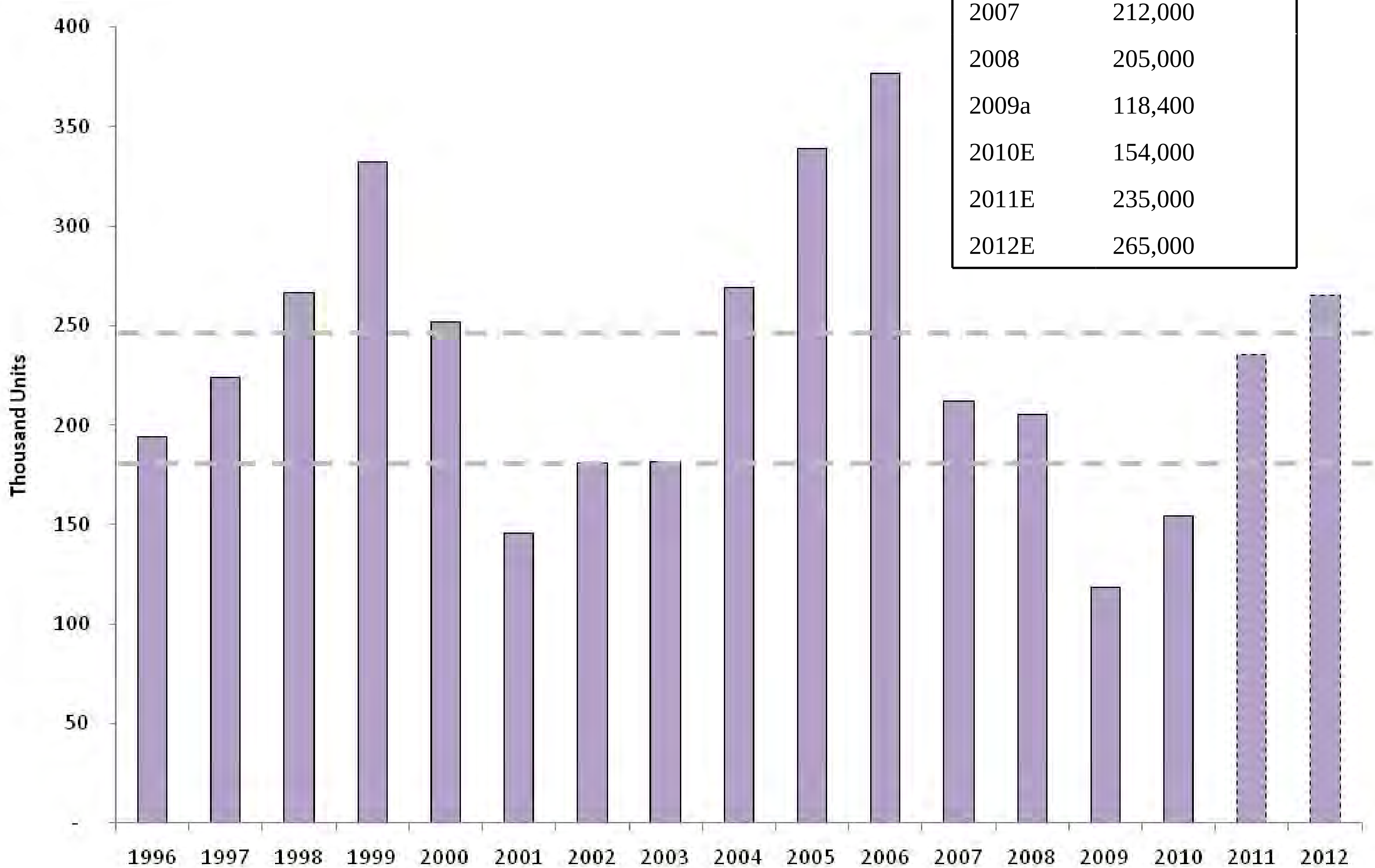
Class 8 Heavy-Duty Diesel Truck Demand:
A Return To Normal Levels?

2007	212,000
2008	205,000
2009a	118,400
2010E	154,000
2011E	235,000
2012E	265,000



Source: ACT/FTR

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TRUCK SECTOR SHOULD LEAD INDUSTRIAL MARKET GROWTH IN 2011

- Why do you a buy a truck? The answer, to “Move Freight “(Class 8) or for the “Delivery of goods/services and support a business” (Class 4 to 7). Economic growth will drive an increase in truck demand
- Truck tonnage continues to grow; Excess capacity still in the industry for now but shrinking; driver shortage is a key to the level of future demand
- Large fleets are now making money and have access to capital; medium/small fleets are still having a hard time getting capital
- Recent surge in orders is for near-term production; BUT, 2011 production schedules still have many unfilled slots (60%) and are still at least 15% below likely production of 2011.
- **New regulations such as CSA2010, and HOS could require more trucks on road (about 6%) to service freight to OFFSET reduced hours of work**
- Tax benefits may drive a surge in demand in 2H201 possibly borrowing some from 2012 purchases perhaps favoring a more conservative increase next year.

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NAFTA Truck Production Forecast

Year	Class 8	Medium Truck	Trailers
2006	376,000	241,000	283,000
2007	212,000	196,000	222,000
2008	205,000	143,000	152,000
2009	118,400	94,000	78,000
2010E	154,000	97,000	134,000
2011E	235,000	155,000	174,000
2012E	265,000	205,000	220,000

SOURCE: FTR; WARD'S AUTOMOTIVE GROUP, LBR FORECASTS

RAIL EQUIPMENT

RAIL CAR INDUSTRY COMES BACK TO LIFE

REBOUND IN RAIL CAR PRODUCTION

Rebound in Rail Car Production			
2006	74,943	**2010**	16,523
2007	63,185	**2011E**	25,000 to 28,000
2008	59,906	**2012E**	30,000 to 35,000
2009	21,682		

TYPE OF CAR	2009	2010	2011E	2012E
BOX CAR	388	488	500	500
COVERED HOPPERS	4,861	6,343	10,000	10,000
INTERMODAL (Flat)	234	1,066	6,000	7,500
GONDOLAS	3,657	2,289	2,500	3,500
OPEN HOPPERS	3,600	1,521	1,000	2,500
TANK	8,942	4,839	7,000	9,000
TOTAL	**21,682**	**16,523**	**27,000**	**33,500**

SOURCE: ARCI; Economic Planning Associates; LBR

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CONSTRUCTION EQUIPMENT

STRONG DEMAND IN 2011 BY TAX INCENTIVES

2010 Recovery for Construction Equipment Driven from Demand Abroad

CONSTRUCTION EQUIPMENT	2009	2010	2011E
LIGHT EQUIPMENT WORLDWIDE	**-45%**	**35%**	**+8% TO 12%**
North America	-49%	20%	+25% TO 30%
Western Europe	-49%	23%	+15% TO 20%
Latin America	-54%	89%	0% TO 5%
Rest of World	-36%	50%	0% TO 5%
HEAVY EQUIPMENT WORLDWIDE	**-30%**	**59%**	**+5% TO 10%**
North America	-47%	14%	+25% TO 30%
Western Europe	-56%	17%	+10% TO 20%
Latin America	-56%	86%	0% TO 10%
Rest of World	-14%	71%	0% TO 10%
WW CONSTRUCTION EQ	**-38%**	**47%**	**+5% TO 10%**

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CONSTRUCTION ACTIVITY REMAINS THE MOST CHALLENGED SECTOR WITIN THE U.S. ECONOMY

- Housing activity continues to remain muted and the recent rise of mortgage rates to over 5% is not helping the meager recovery underway.
  - The National Association of Home Builders has further reduced its 2011 housing start outlook to 688,000 (from 739,000) though still about 17% above the preliminary 586,000 in 2010.
- Non-Residential Spending fell 13.9% in 2010 with Private Non-Residential down 23.3% and Public Non-Residential down 3.4%;
  - In 2011 we look for a modest mid-single digit gain in the non-residential sector.
- Infrastructure spending will likely be flat at best in 2011 or at least until a new highway bill is passed. History suggests that growth will resume about a year after the new Highway bill has been funded.
- Improving global economic activity continues to place pressure on input costs to the construction sector with prices rising for most commodities including copper, diesel fuel, steel and components such as concrete reinforcing bars and structural products placing further pressure on contractor profitability and a major headwind to the recovery of non-residential activity.

Construction Equipment Spending will be Far Stronger than Underlying Activity

- While construction expenditures will still only see modest recovery, spending on new construction machinery may accelerate and be far stronger than originally anticipated.
- Our original forecast for sales and production of all classes of machines to rise at least double digits (10-15%) is too conservative with gains in the 25% to 30% or more possible driven by several factors spurring more intense buying, particularly in the second half of 2011:
  - The new, more generous 100% bonus depreciation which is set to expire at the end of 2011
  - Price increases for new equipment being driven by two key factors –higher input costs (steel, copper aluminum) raising prices by about 2%; and regulatory driven cost increases such as the implementation of Interim Tier 4 over the next several years which we believe will ultimately drive up equipment prices by about 12%; these higher prices will likely be phased in about 4% increments
  - With rising, albeit modestly, construction outlays, the need for normal replacement will occur as most construction equipment fleets have aged (and shrunk), particularly in the rental sector.

2012: REPLACEMENT MARKET AND UNDERLYING ACTIVITY KEY TO NA DEMAND

- Current Sales in NA Well Below Replacement Levels even at current level of construction activity
- Classic Recovery Signs
  - Used Equipment Prices are Rising
  - Rental Fleets Expanding
    - (CAT's rental fleets are down 40% and aging)
  - Aftermarket demand improving
- <u>With More Normal Industry Activity, Construction Equipment demand should rise materially</u>

MINING CAPITAL EXPENDITURES WILL REMAIN STRONG GLOBALLY AT LEAST IN 2011

Mining Capital Expenditures				
Company	**2009**	**2010**	**2011E**	**2012E**
Massey Energy	$275	$512	$458	$433
Peabody	$317	$633	$820	$800
Consol (coal only)	$500	$500	$478	$500
Arch Coal	$323	$315	$368	$334
International Coal Group	$88	$112	$214	$257
Alliance Resources Partners	$329	$289	$317	$308
Alpha Natural	$307	$343	$389	$413
Patriot Mining	$78	$141	$159	$195
	$2,217	$2,845	$3,203	$3,240
Y/Y Change	*-16%*	*28%*	*13%*	*1%*
BHP Biliton	$ 8,751	$ 12,216	$ 12,442	$ 12,186
Rio Tinto	$ 5,000	$ 5,120	$ 10,275	$ 9,870
VALE	$ 9,013	$ 12,800	$ 17,954	$ 17,555
Freeport	$ 1,600	$ 1,412	$ 2,434	$ 2,447
Southern Copper	$ 439	$ 408	$ 1,216	$ 1,120
Cliffs Natural Resources	$ 116	$ 596	$ 435	$ 360
Xstrata	$ 3,568	$ 5,226	$ 6,557	$ 4,996
Shenhua	$ 4,413	$ 5,137	$ 4,152	$ 5,000
	$32,900	$42,915	$55,465	$53,534
Y/Y Change	*-21%*	*30%*	*29%*	*-3%*

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MACHINE TOOLS: A STRONG REBOUND

Machine tool markets should still see strong growth into 2011 as they climb out of deep hole POSSIBLY SURPASSING 2006

	2001	2002	2003	2004	2005	2006	2007	2008	2009E	2010E	2011E
Metalcutting	$2,369	$1,906	$1,737	$2,775	$2,935	$3,703	$3,982	$3,897	$1510	3007	$3,909
% Ch	-33%	-20%	-9%	60%	6%	26%	7.5%	-2.1%	-61%	99%	30%
Metalforming	$347	$345	$295	$366	$397	$395	$441	$501	$236	$229	$277
% Ch	-45%	0.5%	-15%	24%	8%	-0.5%	12%	13.5%	-53%	-3.0%	21%
Total	$2,716	$2,251	$2032	$3,143	$3,332	$4,098	$4,423	$4,398	$1,746	$3,236	$4,186
% Ch	-35%	-17%	-10%	55%	6%	23%	8%	-0.5%	-60%	85%	29%

THE MFG MEETING

March 3 - 6, 2011 · Chandler, Arizona

Manufacturing for Growth