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# **INDUSTRIAL MARKETS 2008-2009 AND BEYOND:**

**How Much Pain Before Any Gain?**

*Speech to NFPA Economic Outlook Conference*

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*August 19-20, 2008*

## **New Safe Harbor/Forward-Looking Disclaimer**

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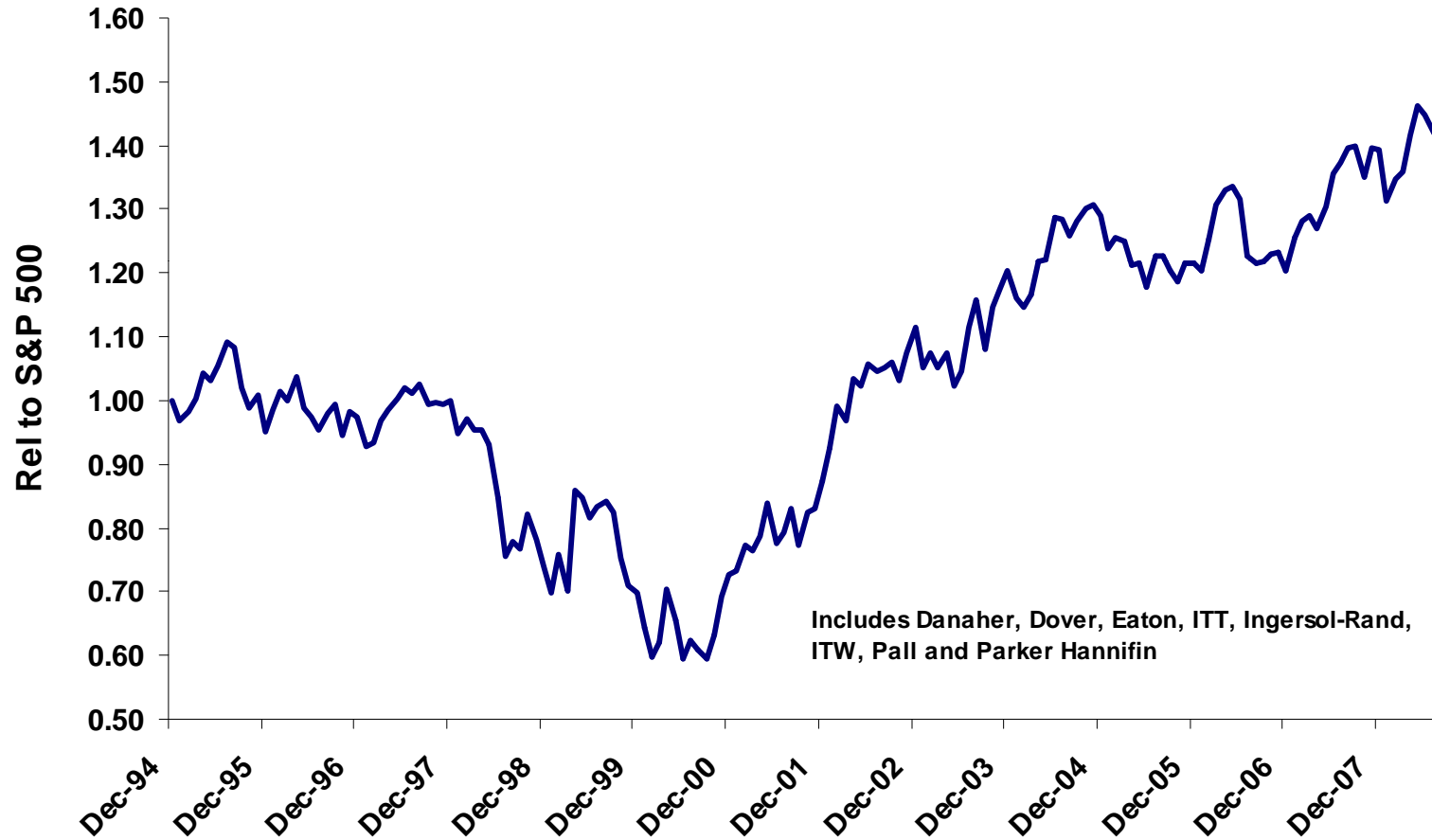
**God, grant me the serenity to accept the things I cannot change, the courage to change the things I cannot accept, and the wisdom to hide the bodies of those people I had to kill today because they ticked me off. Also, help me to be careful of the toes I step on today, as they may be connected to the butt that I may have to kiss tomorrow.**

## 2000-2005: Industrial Stocks Shift From “Old Economy” Castoffs to Being “In Vogue”

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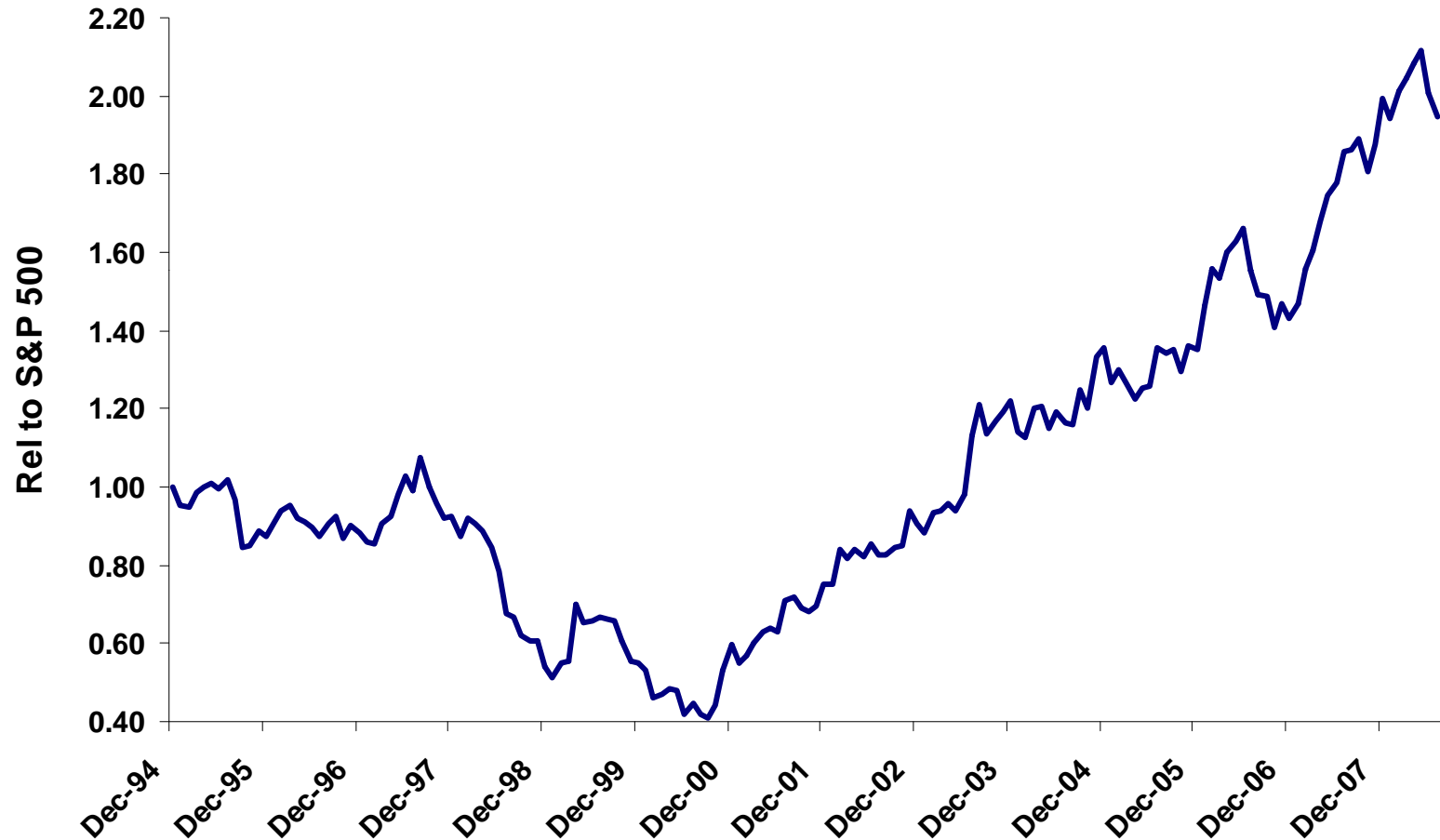
- Over eight years ago, investor ambivalence toward industrial stocks and subsequent single-digit multiples reflected the shadow of the Federal Reserve and signs of an impending slowdown that was finally becoming visible.
- Since the industrial stock price bottom of September/October 2000, most industrial stocks surged strong double digits through the first half of 2001, despite a down stock market.
- After the traditional third-quarter jitters and the September 11th reaction, most industrial stocks performed well from the latter part of 2001 virtually until the domestic economy entered the first of several mid-cycle pauses in mid-2006.

## S&P Industrial Machinery – Relative To S&P 500



## S&P Construction & Farm Machinery — Relative to S&P 500

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## **BLINKING YELLOW LIGHTS FOR INDUSTRIAL MARKETS IN 2008 AND INTO 2009**

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- Q4 2007 through at least 1H:2008 looked like an instant replay of year-end 2006 and early 2007.
- Financial markets remained extremely nervous from the ongoing effects of the spreading sub-prime crisis.
- Weak automotive and housing/light construction markets continued to weigh heavily on the industrial sector.
- The U.S. economy appeared to be in a second round of a Mid-Cycle correction.

# MID-CYCLE CORRECTION ROUND I: ORIGINAL THESIS

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- Original thesis goes back to the upturn in the industrial economy that began in 2004, initially projected to last into 2006 and then extended possibly for the rest of the decade. The only guarantee about this industrial renaissance was that the upturn would not be linear.
- The first non-linear period began in September 2006 and went through Q1:2007. The ISM PMI (old purchasing managers' index) averaged 51% for the last four months of 2006 and 50.5% for the first quarter of 2007 including some months of negative growth for the industrial sector (index below 50%).

# MID-CYCLE CORRECTION ROUND I (CONT'D)

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- This slowdown was defined as a Mid-Cycle correction and can best be explained as placing the standard corporate business model of top-line growth of 7% to 10%, and 12% to 15% bottom-line growth in jeopardy. During Mid-Cycle, top-line growth falls to low- to mid-single digits at best (and it's negative if you are in the wrong economic sectors such as housing, auto, trucks and light construction). We believe 7% to 10% bottom line growth during mid-cycle is good.
- Industrial America and the domestic economy came back to life in the second quarter of 2007. The ISM index was well above 50% from April through August indicative of expanding factory production.
- Only the ISM price index remained very high throughout suggesting the need for higher industrial prices to offset sharply rising raw material and other input costs.



## Déjà vu—4Q07 into 2008 Soft Patch for 2nd Straight Year

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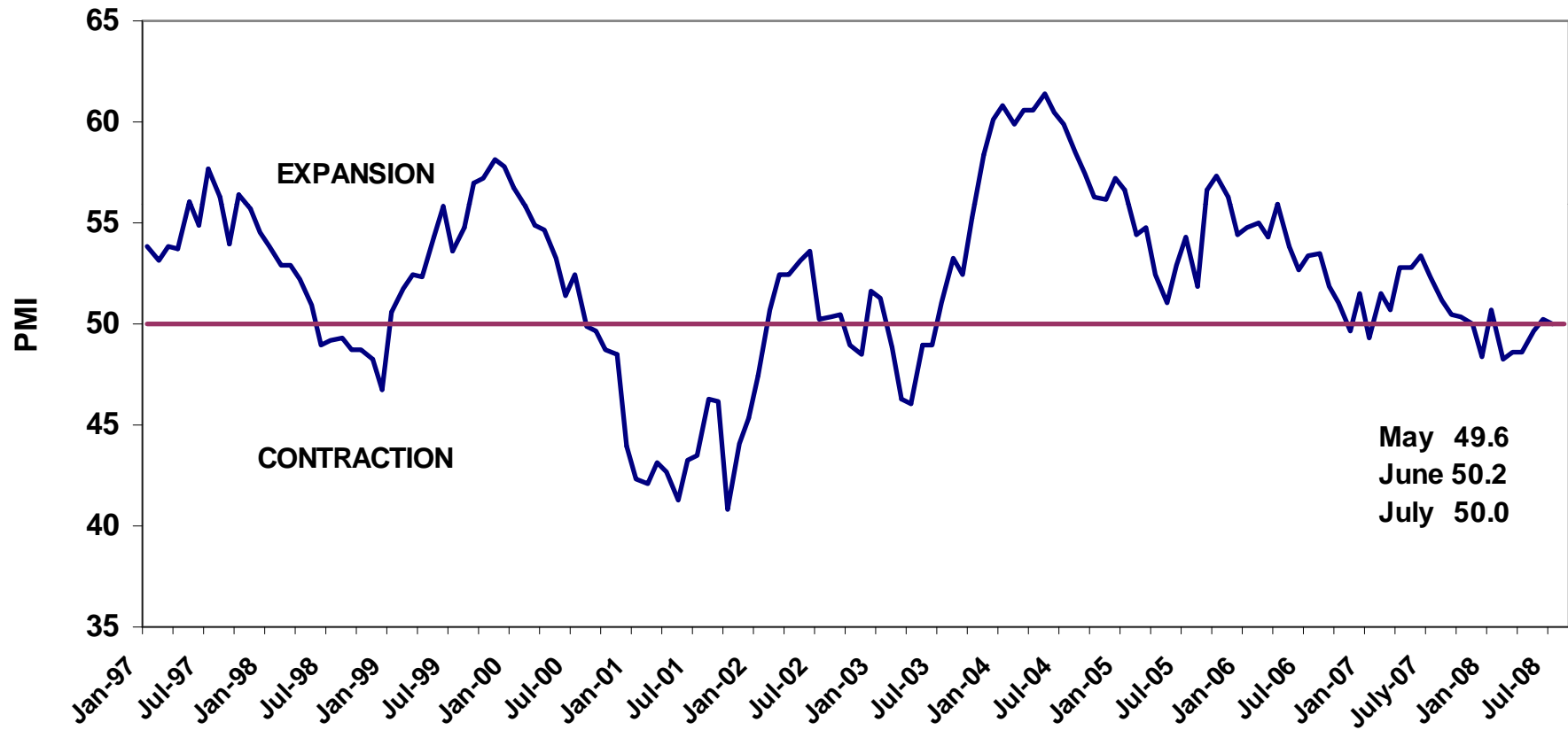
- After 5 months of reasonable growth, the PMI again fell to stagnant levels at 50.5% in September, 50.4% in October, 50.0% in November, 48.4% in December, 50.7% in January 2008, 48.3% in February, 48.6% in March, 48.6 in April, 49.6% in May, 50.2% in June and to 50.0 in July.
- New orders and production weakened and inventory levels rose suggesting an involuntary inventory build at the customer level that needed to be brought under control.
- Only the price index remained very high at around 68% December and surging to 76% in January. 75.5% in February 83.5% in March, 84.5% in April, 87.0% in May, 91.5% in June, and 88.5% in July suggesting that input costs continue to escalate, continuing to drive the need for higher prices.

## Déjà vu—4Q07 into 2008 Soft Patch for 2nd Straight Year (cont'd)

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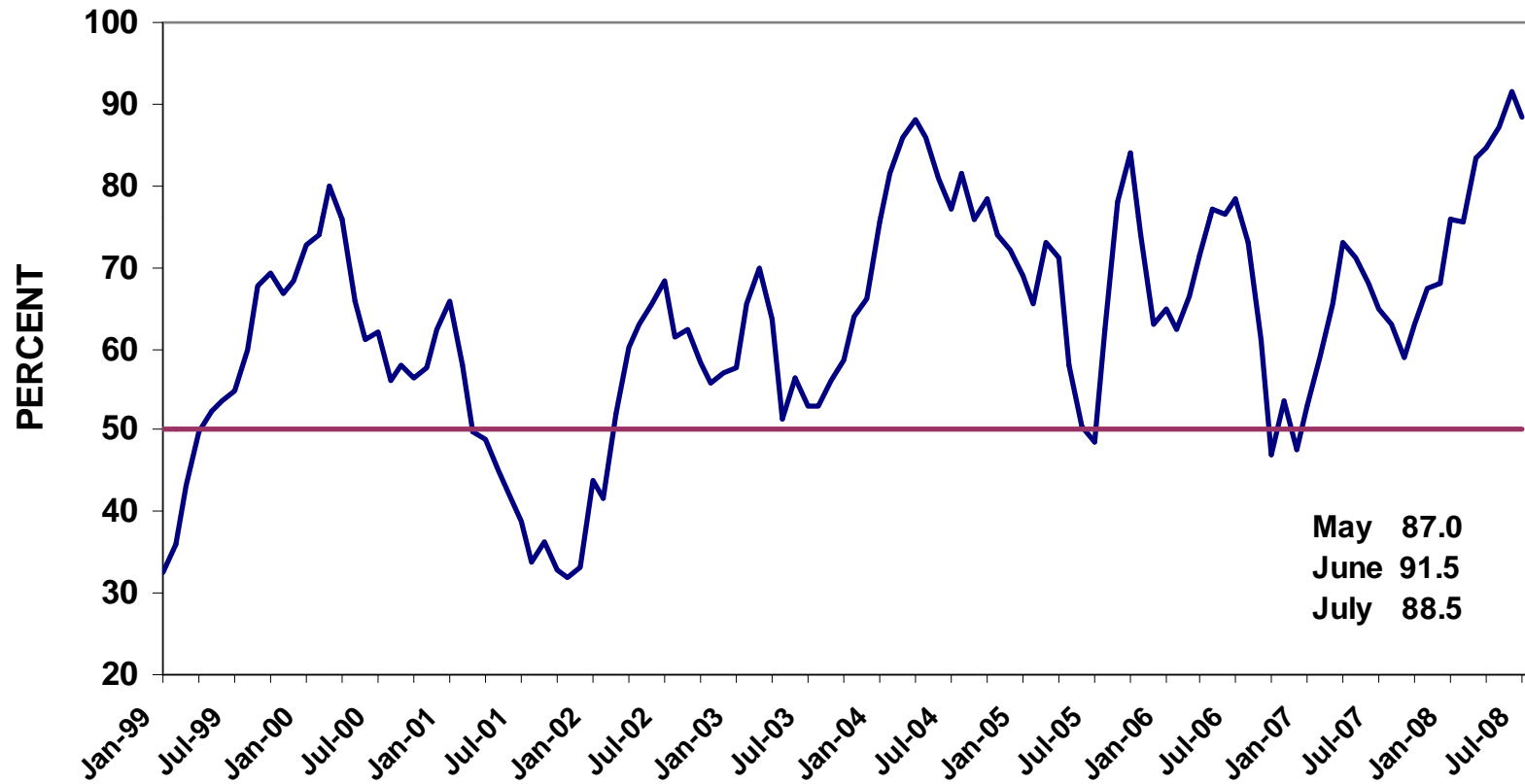
- The strong GDP growth of 4.8% (revised) in Q2:07 and 4.8% (revised) in Q3:07 GDP growth borrowed from Q4:07 and early 2008 economic activity; data showed that inventories were too high.
- Indeed the GDP report for Q4:07 of negative 0.2% (revised) GDP growth reflected a surprisingly sharp inventory correction in the fourth quarter, and slowing export demand.
- GDP growth of Q1:08 of 0.9% (was 0.6%) reflected positive contributions from trade, personal consumption expenditures, federal spending and inventories.
- Q2:08 GDP growth of 1.9% was also driven by trade, personal consumption expenditures and Federal spending. Massive inventory reduction of \$62.2 billion is suspect as is price deflator of 1.1% (vs. 2.6% in Q1:08).

# ISM PMI



# ISM Prices Index

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# Government Economic Data is Revised

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GDP REVISIONS	FULL YEAR		QUARTERS 2007		
	FROM	TO		FROM	TO
2007	2.2%	2.0%	Q4:07	0.6%	-0.2%
2006	2.9	2.8	Q3:07	4.9	4.8
2005	3.1	2.9	Q2:07	3.8	4.8
			Q1:07	0.6	0.1

Source: BEA

## Recent GDP Data Suspect

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	Q2:08	Q1:08	Q4:07
<b>GDP</b>	<b>1.90%</b>	<b>0.90%</b>	<b>-0.20%</b>
<b>PRICE INDEX</b>	<b>1.10%</b>	<b>2.60%</b>	<b>2.50%</b>
<b>PCE</b>	<b>1.50%</b>	<b>0.90%</b>	<b>1.00%</b>
<b>EXPORTS</b>	<b>9.20%</b>	<b>5.10%</b>	<b>4.40%</b>
<b>IMPORTS</b>	<b>-6.60%</b>	<b>-0.80%</b>	<b>-2.30%</b>
<b>FED GOVT</b>	<b>3.40%</b>	<b>1.90%</b>	<b>0.80%</b>
<b>HOUSING</b>	<b>-15.60%</b>	<b>-25.10%</b>	<b>-27.00%</b>

Source: BEA

- Price index falling from 2.6% to 1.1% added 1.5% to Q2:08 GDP
- Inventory liquidation rising from -\$10.2 billion to -\$62.2 billion hurt Q2:08 GDP by 1.92%
- Trade data added 2.4% to GDP growth in Q2:08

## Reasons Why a 2008 Recession is Possible

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A long laundry list of why a recession is possible includes

- A potential free fall in housing
- Energy prices and other commodity prices at record levels
- Consumer confidence and job growth are waning
- Profits and cash flow are lackluster
- The rest of the world growth is slowing
- The stock market is shaky
- A rising concern that inflation has painted the Fed into a corner at a time when the credit crunch may be expanding
- Spreading sub-prime crisis tightening credit markets

## ACTIONS DESIGNED TO MITIGATE SOME OF THESE CONCERNS

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- The weaker job market and credit issues have succeeded in pressuring the FED to swallow concerns about inflation and cut interest rates.
- The Fed continued to work with money authorities on a global basis to try to improve liquidity; The National Federation of Independent Business surveys show no signs yet of banks failing to extend credit to customers. This is one key metric to watch over the next few months.
- During 1H:2008, consumers remained resilient; consumer spending of 1.5% in Q2:08 (driven by rebates) was up from 0.9% in Q1 and 1% in Q4:07.



# TRADE SAVED THE U.S. ECONOMY IN 2007 AND 1H:2008

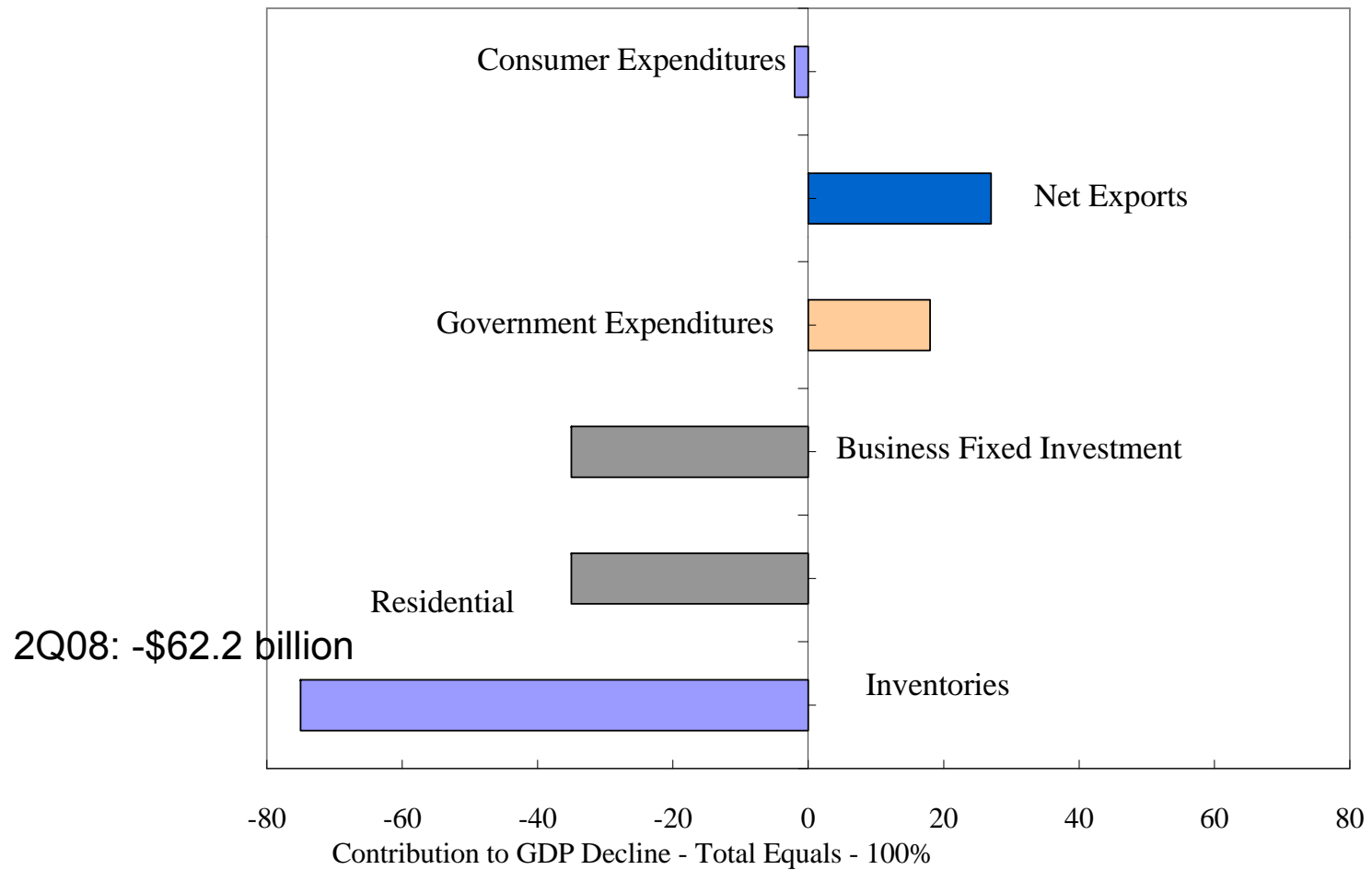
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- The weak U.S. dollar makes our products look very attractive on the global markets.
- Strong exports more than offset housing downturn in 2007.

	Q1:06 to Q4:07	Q4:06 to Q4:07
Residential Const.	-\$173.4B -39.5%	-\$96.7B -34.3%
Exports	+\$183.4B +42.0%	+104.1B +36.9%

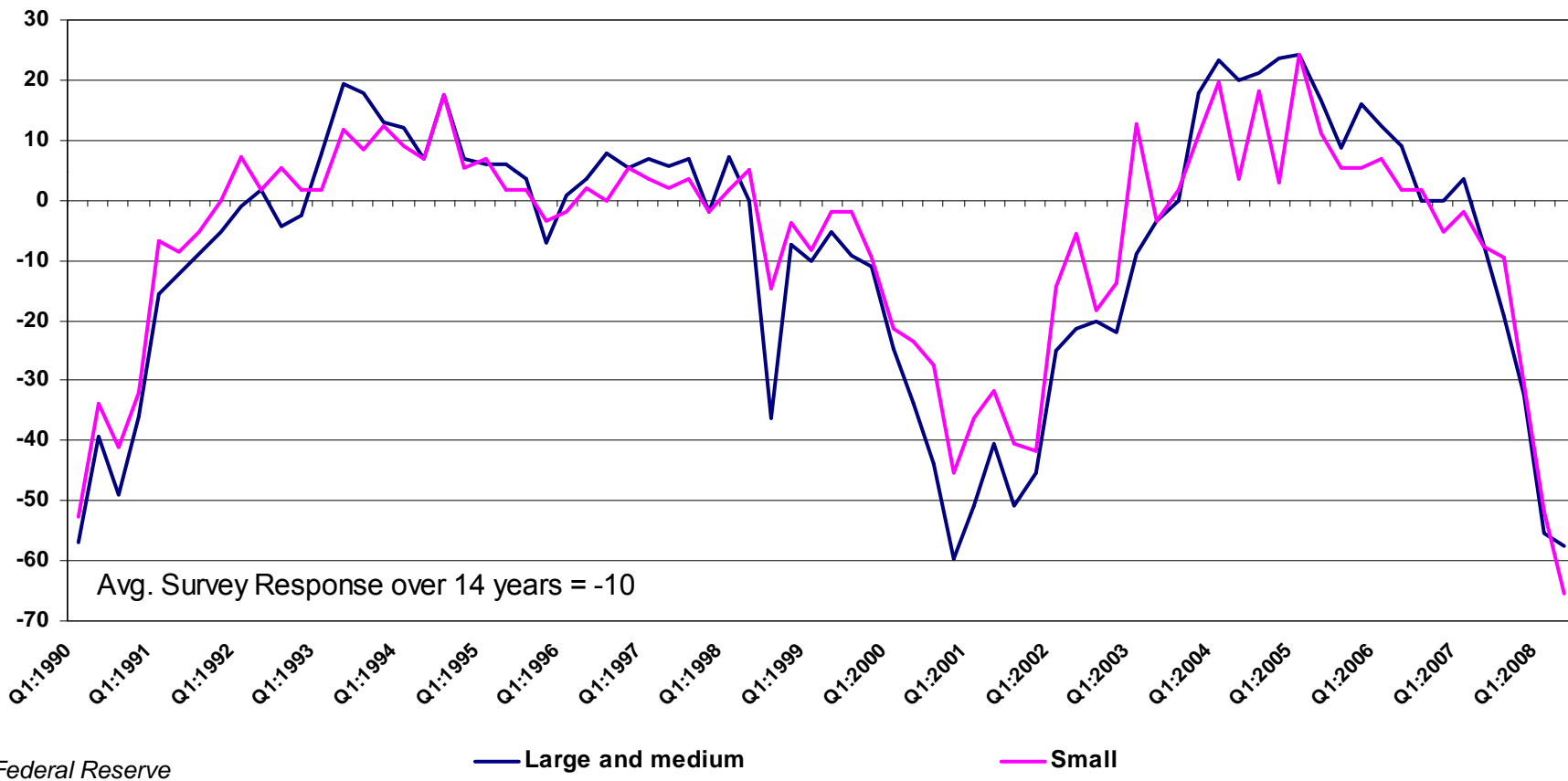
- Trade remained a strong contributor to growth in 1H:2008
- Inventories were being brought into line during the first part of 2008; this is a key metric as inventory liquidation are the dominant cause of manufacturing recession.
- Global growth was expected to subside in 2008, but no one threw a switch to turn off global economic activity as we entered 2008.
  - European Union growth was expected to trend back to more normal levels in 2008 from well above normal growth for the past two years.
  - Developing countries such as China, India and Latin America should look good for 2008

# WHAT CAUSES RECESSIONS: INVENTORY LIQUIDATION AND TIGHT MONEY



# Bank Lending Standards: Borrowing Beginning to Tighten

Easing Minus Tightening % change on C&I Loans



Federal Reserve

Longbow Securities

# IS IT A RECESSION? WE WON'T KNOW OFFICIALLY FOR A WHILE

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- It will take more time to answer the larger overall question as to whether the domestic economy is in a recession.
- In 2001/02 the sharp declines within the manufacturing economy led by massive inventory reduction led to a mild recession even if 70% of the U. S. economy didn't feel it.
- This time around, it's the 70% of the economy that is in recession and the key is whether the "old economy" 30% can carry the load. Statistically that will be difficult without continued very strong international performance.
- The technical definition of a recession is not two negative quarters of GDP growth, rather, according to the NBER,
- It is "a significant decline in economic activity across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales."
- So far only the employment data meets the test.
- However, if it looks like a duck, and quacks like a duck, more lipstick won't make this U.S. economy pig look any better!

## 2H:08 WHAT'S CHANGED IS THE GLOBAL ECONOMY

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- U.S. Economy looks weaker in second half of 2008
  - Consumer spending and manufacturing slowing down
  - Deteriorating consumer and business confidence
  - Credit and housing outlook still uncertain
- Weakening outlook for global markets
  - Major European slowdown has surfaced
  - European Central Bank (ECB) focuses on inflation not growth
  - Japanese economy has slowed markedly
- Dollar has begun to strengthen
  - Weak dollar profits from currency may disappear by early 2009
- Oil has weakened somewhat from all time record, but still at high levels
  - Commodity price volatility

# SECOND HALF UNCERTAINTY FOR U.S. ECONOMY

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- Consumers facing layoffs, stagnant wages, falling home prices, and tighter credit
  - Retail sales under pressure now that rebate check impact is passing
  - Consumer sentiment surveys remain weak
    - » University of Michigan July survey 61.2, up from 56.4 in June but 32% below 90.4 in July 2007
    - » Conference Board July index of 51.9 up from 51 in June (July 2007 was 111.9); at lowest level since February 1992
- Auto and housing sectors still looking for a bottom
- U.S. manufacturing remains stagnant with ISM at about 50 for last 12 months; Industrial production weak if not negative
- Q2:08 CEO Index of Conference Board at 39(vs. 38 in Q1:08), lowest since 31 posted in Q4:2000
  - Non-residential spending has always turned negative at this level of CEO index
- National Federation of Business (NFIB) small business optimism index at 89.2, lowest in 28 years
  - Small business citing rapid deterioration of earnings; not a good time to expand
  - Inflation is the key issue.
  - Current environment akin to credit crunch and real estate led 1990's downturn compared to tech bubble bursting recession at the turn of decade
  - Small firms accounted for 66% (763,000) of the 1.2% (1.162 million) job losses in 1991 recession.

# MAJOR EUROPEAN SLOWDOWN UNDERWAY H2:08 AND 2009

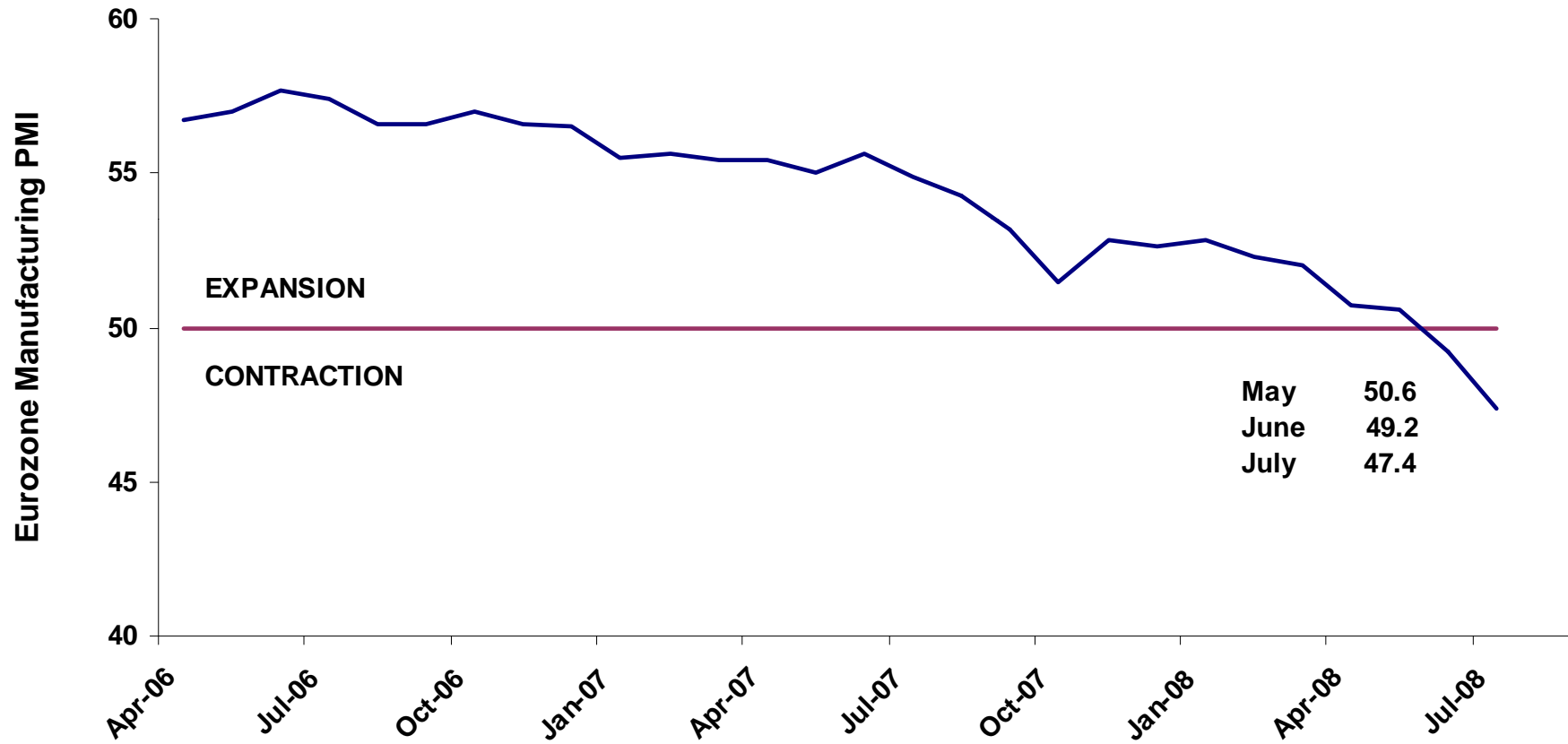
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- European PMI has fallen off a cliff!
  - 14/15 Eurozone PMI were negative in July with Germany at 50.9
- German Orders have plunged
  - Germany June orders were -2.9% compared to -8.4% in May;
  - June was the 7th consecutive monthly order decline
- European consumer sentiment at -29.3 in June is the lowest since 1993
  - Germany -16
  - Greece -60; Portugal -51; Spain -37; UK -50
- Eurozone inflation of 4.1% in July compares to 4.0% in June and a ECB target of 2%
  - ECB focus on inflation despite data pointing to weaker growth
  - UK inflation is 3.8%

**BOTTOM LINE: EUROZONE MAY BE THE FIRST MAJOR ECONOMIC REGION IN RECESSION**

- **SIDE BENEFIT—A STRONGER DOLLAR**
- **BIG MAC IS STILL 22.5% MORE IN EUROPE**

# Eurozone PMI



RBS/Markit



# GLOBAL GROWTH IS LIKELY TO SLOW

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	2006R	2007R	2008ER	2009E
GLOBAL GROWTH	5.1%	5.0%	4.1%	3.9%
U.S.	2.8	2.0	1.3	0.8
EUROPEAN UNION	2.8	2.6	1.7	1.2
CENTRAL/E.EUROPE	6.6	5.6	4.6	4.5
JAPAN	2.4	2.1	1.5	1.5
CHINA	11.6	11.9	9.7	9.8
MID-EAST	5.5	5.9	6.2	6.0
CIS	8.2	8.6	7.8	7.2
AFRICA	5.9	6.5	6.4	6.4
BRAZIL	3.8	5.4	4.9	4.0

IMF 07/08

# GOVERNMENT STIMULUS PACKAGE MAY NOT HELP MUCH 2H:08 VERY MUCH

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- To combat the current domestic economic slowdown, Congress passed a fiscal stimulus program which contains both individual and business incentives. While most of the press focuses on direct cash rebates to 117 million families, Congress provided faster depreciation write-offs for business of 2008.
- Business will be able to write-off an additional 50% of the cost of equipment in the first year.
- Small company deductions using Section 179 election or other aspects of the tax code will enhance the ability of small companies to enjoy greater write-offs.
- The proposals are similar to the stimulation package passed by Congress post 9/11 which first granted a bonus 30% first-year depreciation write-off to business in 2003 which was raised to 50% for 2004. Small business could write-off as much as 73% to 82% of the cost of a piece of equipment the first year.

# GOVERNMENT STIMULUS PACKAGE MAY NOT HELP MUCH (CONT'D)

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- We note that the 2003/04 incentives were granted just as the U.S. manufacturing economy was emerging from the 2001/02 recession and helped accelerate the upturn in demand for equipment in 2004. This time, the domestic manufacturing economy is slowing markedly.
- While economics will still be the ultimate determinant of equipment need, proposed equipment purchases that are borderline decisions will be biased to be purchased in 2008 as will those proposals for 2009 or those needed with any sign of domestic economic recovery may be accelerated into the second half of 2008 under the new tax rules.
- In 2003/04, the major beneficiaries were the farm equipment sector (big equipment sold out in 2008), construction equipment (particularly small and medium sizes; in 2008 large equipment is sold out but production is being cut in other sizes due to weak NA and European demand), trucks (hurt in 2008 by high oil prices), and machine tools (still doing ok).

## **BOTTOM LINE: NEXT 2 TO 4 QUARTERS WILL BE VERY DICEY FOR INDUSTRIAL AMERICA**

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- Domestic economic growth will continue to be slow in H2:08
- European economic growth will slow markedly
- Profits will be under pressure from continuing material inflation as current costs hit most income statements
  - LIFO only accepted in U.S.; most companies are FIFO or average costs based
  - Corporate hedging of materials will expire making 2009 as big or bigger cost push inflation problem compared to 2008
  - Pricing will go up materially or profits will get squeezed
- Dollar strengthening means that foreign currency profit gains will likely disappear no later than early 2009

# PENDING U.S. ELECTION MEANS NOT MUCH RELIEF IN EARLY 2009

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- Either McCain or Obama will likely face a weak economy and the reality of a ballooning Federal budget limiting room to maneuver
- McCain's low tax strategy could be in trouble with a potentially more democratic Congress than today
- Obama's hefty Health Care proposals and other programs could pose problems even with a friendly Congress
- Both candidates revenue raising will fall far short of spending
  - Government spending is about 20% of GDP
  - Tax Policy Center suggest McCain's proposals would cut projected tax revenues to about 17.6% of GDP
  - Obama's proposals would translate into revenue at 18.3% of GDP according to the TPC
  - Note" the potential \$500 million deficit in F2009 is about 3.6% of GDP, well below the 6% reached in 1983

# IT STILL LIKELY TO BE A TWO-TIER ECONOMY: EITHER YOU ARE OUT OF CAPACITY OR CUTTING PRODUCTION

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- The current weak markets will remain stagnant at best for the next several quarters
  - Housing, which will fall another 30% to about 950,000 starts in 2008 will hopefully stabilize over the next 2 to 4 quarters
  - Auto outlook remains soft with 2008 production now about 13.4 million units compared to about 15 million in 2007 as retail sales fall to or below 14 million from 16.1 million last year. 2009 is likely to be more of the same.
  - Construction equipment domestic sales are likely to fall another 15% to 25% as non-residential spending slows in 2008 to about a 2% to 7% gain compared to up 16% last year. Industry production is now projected at down 5% to 10% (was flat to down 5%). International sales remain solid; the markets to worry about are those related to rental sectors and material handling
  - The heavy truck sector looks relatively flat in 2008 compared to the 212,000 NAFTA shipments in 2007 while medium truck demand should fall 12% to 15%. A muted pre-buy is still likely next year.
- Many other industrial sectors should continue to do well
  - Farm machinery sales should see a 15% to 20% plus rise in larger equipment demand reflecting the high level of commodity prices;
  - Mining and oil field machinery demand should also do well with near record metal and energy prices; electrical equipment markets are still improving .
  - Aerospace demand looks solid though commercial aftermarket sales will soften over the next few quarters as domestic fleets are cut.
- The real strength for Industrial America will remain international demand from developing countries though the contribution from Europe will wane over the next two to four quarters

# U.S. ECONOMIC OUTLOOK STILL SHOWS MODEST GROWTH

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- REAL GDP SLOW GROWTH

	2005	2006	2007	2008E	2009E
Year/Year	2.9%	2.8%	2.0%	1.3%	1.8%
Q4/Q4	2.7%	2.4%	1.9%	0.5%	2.3%

- CAPITAL SPENDING TO SLOW

	STRUCTURES	EQUIP.&SOFTWARE	BUS. FIXED INV.
2004	1.3%	7.4%	5.8%
2005	0.5	9.6	7.1
2006	8.4	5.9	6.6
2007	12.9	1.3	4.7
2008E	5.0	0.5	1.9
2009E	-5.2	1.0	-1.0

# U.S. ECONOMIC OUTLOOK STILL SHOWS MODEST GROWTH (CONT'D)

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- MANUFACTURING OUTPUT UNCERTAIN

	2005	2006	2007	2008E	2009E
Year/Year	3.2%	4.0%	1.7%	-0.3%	2.3%
Q4/Q4	3.0%	3.5%	2.1%	-1.7%	3.3%

- INFLATIONS PRESSURES SUBSIDE A BIT

	2005	2006	2007	2008E	2009E
CPI	3.0%	3.2%	2.9%	4.4%	2.3%
CORE PCE	2.2%	2.2%	2.3%	2.2%	1.6%

- CORPORATE PROFITS HOLDING THEIR OWN

S&P	2005	2006	2007	2008E	2009E
%CH	13.7%	15.6%	-4.0%	9.2%	10.5%
OP. PROFIT	\$76.28	\$88.18	\$84.56	\$92.31	\$102.00



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# Farm Equipment

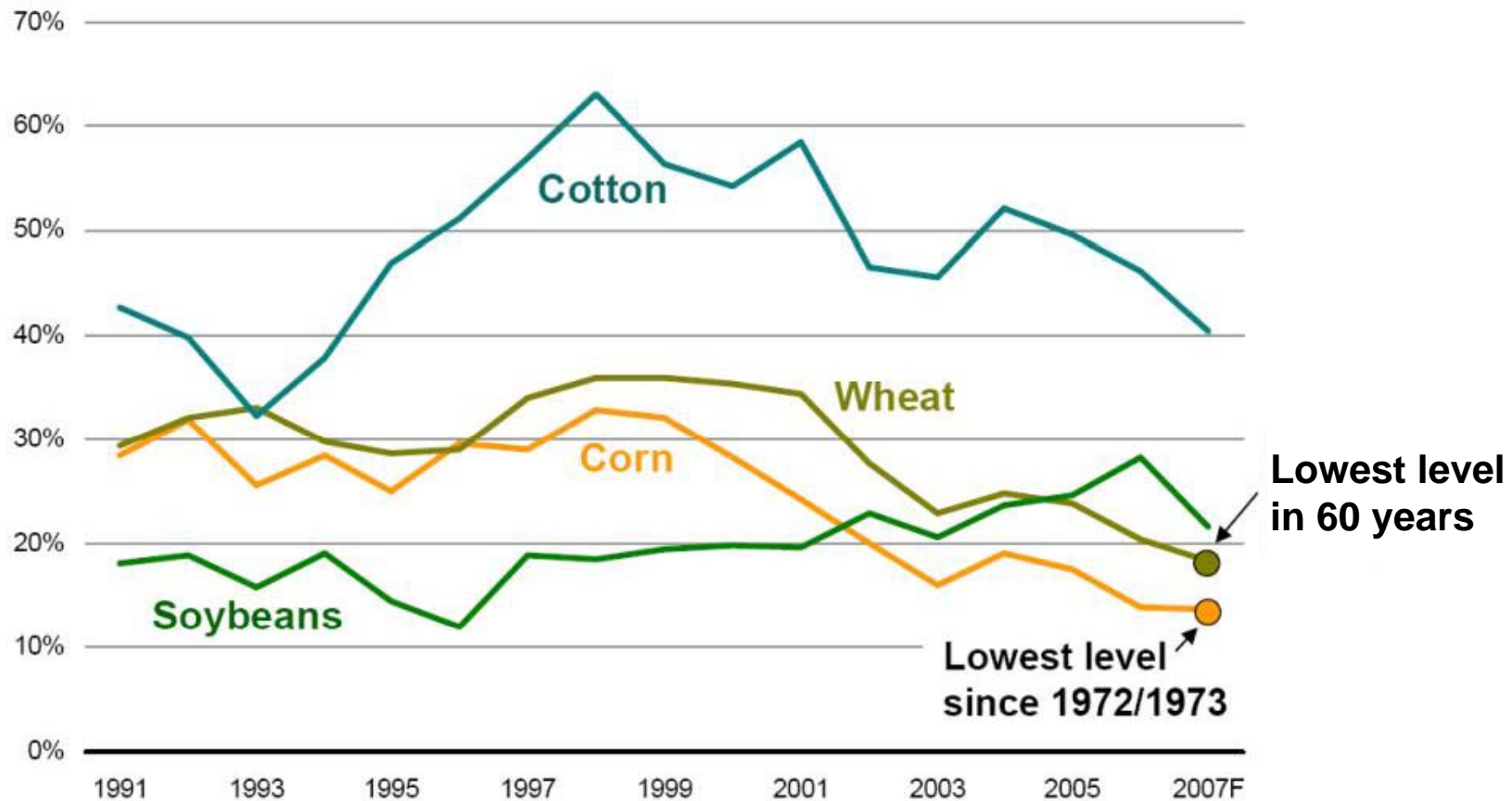
*2008 WILL BE A GOOD YEAR FOR SUPPLIERS*

# FARM EQUIPMENT: FROM CROP SURPLUS TO TIGHT SUPPLIES

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- U.S. grain supplies were well above normal as recently as 2005/06.
- Rising ethanol demand, lower plantings and global weather problems have reduced global carryovers to very low levels for wheat and corn.
- Farm income was relatively flat through 2006 buoyed by government payments. Farmers rebuilt their balance sheets and cash flow during this period was strong.
- 2004 was the last recent strong year for farm equipment demand driven by big Federal depreciation and tax incentives. Demand has been relatively flat in 2005 and 2006
- Farm income grew in 2007 and into 2008 driven by surging commodity prices
- The second half 2007 upturn in farm equipment demand gathered momentum in 2008 with 15% plus gains in large equipment in NA and very strong sales in Brazil.

# Global Grain Stocks-to-Use Ratios are Low



Source: Deere & Co.

## 2008 CROPS ARE NOT AS BAD AS FEARED

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<i>Planted acres/Ending stocks in millions</i>		<b>2006/07</b>	<b>Est. 2007/08</b>	<b>Projected 2008/09</b>	<b>2009-2008Δ</b>
<b>Corn</b>	Planted Acres	78.3	93.6	87.0	-7.1%
	Yield—Bu/Acre	149.1	151.1	155.0	2.6%
	Ending stocks	1,304	1,576	1,133	-28.1%
<b>Wheat</b>	Planted Acres	57.3	60.4	63.8	5.6%
	Yield—Bu/Acre	38.7	40.5	43.5	7.4%
	Ending stocks	456	306	574	87.6%
<b>Soybeans</b>	Planted Acres	75.5	63.6	74.8	17.6%
	Yield—Bu/Acre	42.7	41.2	40.5	-1.7%
	Ending stocks	574	135	135	0.0%
<b>Cotton</b>	Planted Acres	15.3	10.8	9.3	-14.6%
	Yield—Lbs/Acre	814	879	842	-4.2%
	Ending stocks (per 480lb bale)	9.5	10.2	4.6	-54.9%

# U.S. FARM CASH RECEIPTS ARE STRONG IN 2008 AND PERHAPS FLAT IN 2009

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<i>(in billions of dollars)</i>	2006	2007 Estimate	2008 Forecast	Previous 2008	2009 Forecast	Previous 2009
Crops	120.0	144.9	195.8	179.4	206.0	182.9
Livestock	119.3	138.7	137.5	136.9	138.4	135.7
Government Payments	15.8	12.1	13.3	13.3	10.3	10.3
Total Cash Receipts	255.1	295.7	346.6	329.6	354.7	328.9

*Deere & Company Forecast as of 13 August 2008 (Previous Forecast as of 14 May 2008)*

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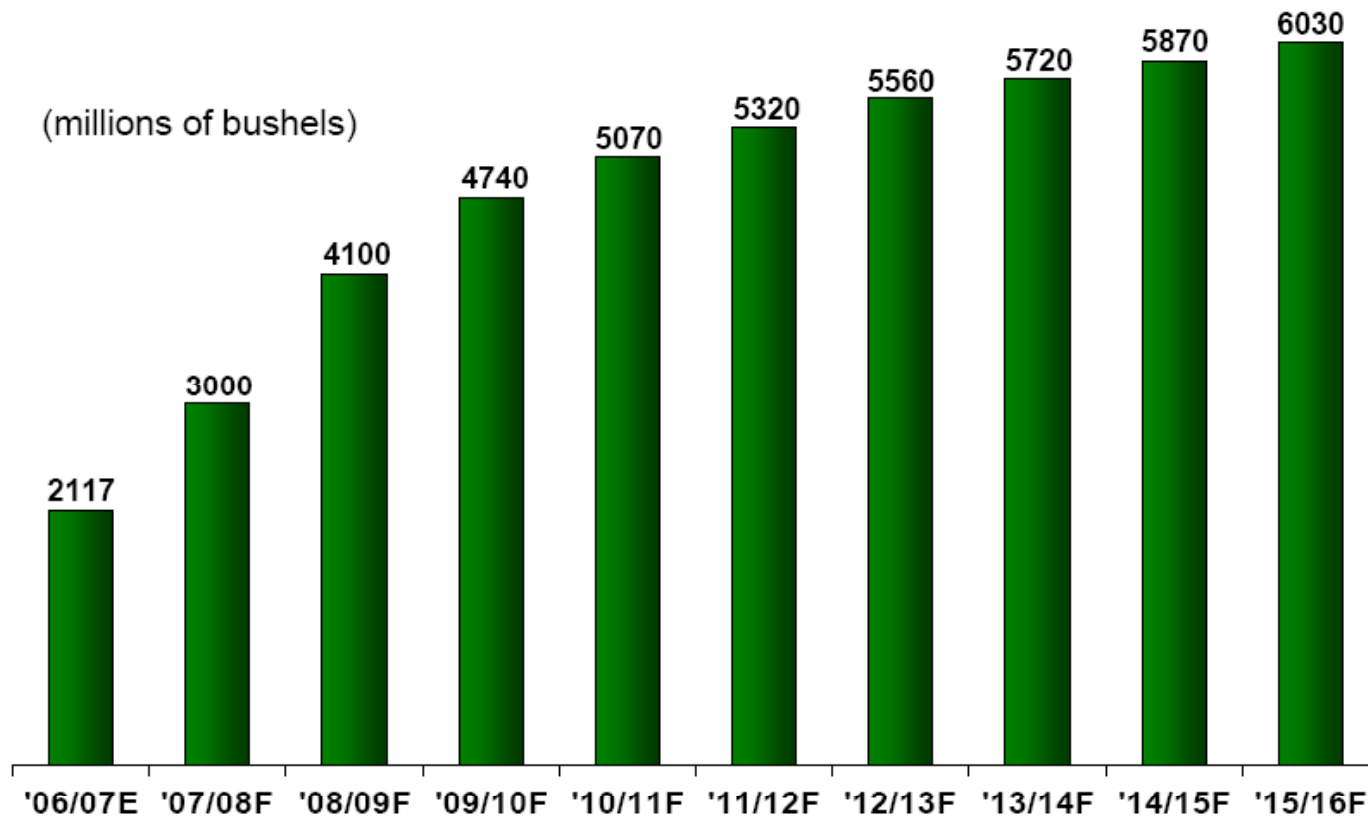
# STRONG FARM INCOME IN LATIN AMERICA

	Brazil			Argentina		
	2006	2007	2008 Forecast	2006	2007	2008 Forecast
<i>(in billions of U.S. dollars)</i>						
Soybeans	(2.0)	3.8	9.9	3.3	3.0	2.5
Cotton	(0.2)	0.4	0.5			
Sugar Cane	3.3	2.4	0.5			
Corn	(1.1)	2.5	4.9	0.2	0.8	1.1
Rice	(0.5)	(0.1)	1.1			
Wheat				0.7	0.8	0.7
Sunflower				0.7	0.5	0.8
Current	(0.5)	9.0	16.9	4.9	5.1	5.1
Previous			13.9			5.5

*Deere & Company Forecast as of 13 August 2008 (Previous Forecast as of 14 May 2008)*

# 2007 ENERGY BILL REQUIRES MORE CORN

- Supports more than doubling of U.S. corn used in ethanol



Sources: Deere & Co., Informa Economics—February 2008

# Farm Equipment Demand Should Finally Improve

	2004	2005	2006	2007	2008E	2009E
<b>NORTH AMERICA</b>						
Tractors	12	0	-3%	1%	-10%	-5% to 0%
Under 40 HP	7	-4	-3%	-4%	-20% to -15%	-5% to 0%
Over 40 HP	19	5	-3%	7%	-5% to 0%	-5% to 0%
Over 100 HP				22%	15% to 20%	5% to 10%
Combines	40	0	-13%	13%	10% to 15%	5% to 10%
<b>WORLDWIDE</b>						
Tractors	18	5	9%	2%	FLAT	0% to 5%
Western Europe	4	-6	3%	3%	0% to 5%	-5% to 0%
Latin America	11	-19	1%	39%	25% to 30%	0% to 5%
Rest of World	12	26	25%	-3%	FLAT	0% to 5%
Combines	40	16	-7%	21%	30%	5% to 15%
Western Europe	-10	6	-6%	4%	20% to 25%	-5% to 0%
Latin America	17	-58	-36%	85%	70%	10% to 15%
Rest of World	15	10	10%	21%	25% to 30%	5% to 10%

Sources: CNH; Deere & Co.; AEM

Longbow Securities



# ETHANOL MANDATE MAY BE HIGHER THAN MARKET CONDITIONS CAN SUPPORT

- Renewable fuels mandates per EISA 2007

Year	Renewable Biofuel	Advanced Biofuel	Cellulosic Biofuel	Biomass-based Diesel	Undifferentiated Advanced Biofuel	Total RFS
2008	9					9
2009	10.5	0.6		0.5	0.1	11.1
2010	12	0.95	0.1	0.65	0.2	12.95
2011	12.6	1.35	0.25	0.8	0.3	13.95
2012	13.2	2	0.5	1	0.5	15.2
2013	13.8	2.75	1		1.75	16.55
2014	14.4	3.75	1.75		2	18.15
2015	15	5.5	3		2.5	20.5
2016	15	7.25	4.25		3	22.25
2017	15	9	5.5		3.5	24
2018	15	11	7		4	26
2019	15	13	8.5		4.5	28
2020	15	15	10.5		4.5	30
2021	15	18	13.5		4.5	33
2022	15	21	16		5	36

Source: EISA 2007

# WHAT CAN DE-RAIL THE FARM ETHANOL EXPRESS?

---

- New government energy mandate specifies 36 billion gallons of renewable fuel.
  - 21 billion gallons from bio-fuels including cellulosic ethanol;
  - Up to 15 billion gallons may come from corn ethanol, up from previous mandate of 7.5 billion gallons
- Currently 147 plants representing 8.5 billion gallons of ethanol in operation; 61 plants representing 5.5 billion gallons under construction for a total of about 14.0 billion gallons.
  - Plant delays/construction halts have been announced representing at least 500 million gallons
  - No new plant has broken ground in the past few quarters
- At \$2.50-\$2.75 per gallon for ethanol and \$6 corn, ethanol plants likely operating near or modestly below break-even at best even with government subsidies.
- Ethanol infrastructure is severely lagging. Problems in moving and distributing ethanol; bottlenecks include tank storage capacity, loading and unloading platforms, forming unit trains, blending capacity, increased track, barges etc. Water demands of ethanol is a growing problem.

## 2008 U.S. ETHANOL PRODUCTION MAY NOT REACH THE RFS MANDATE

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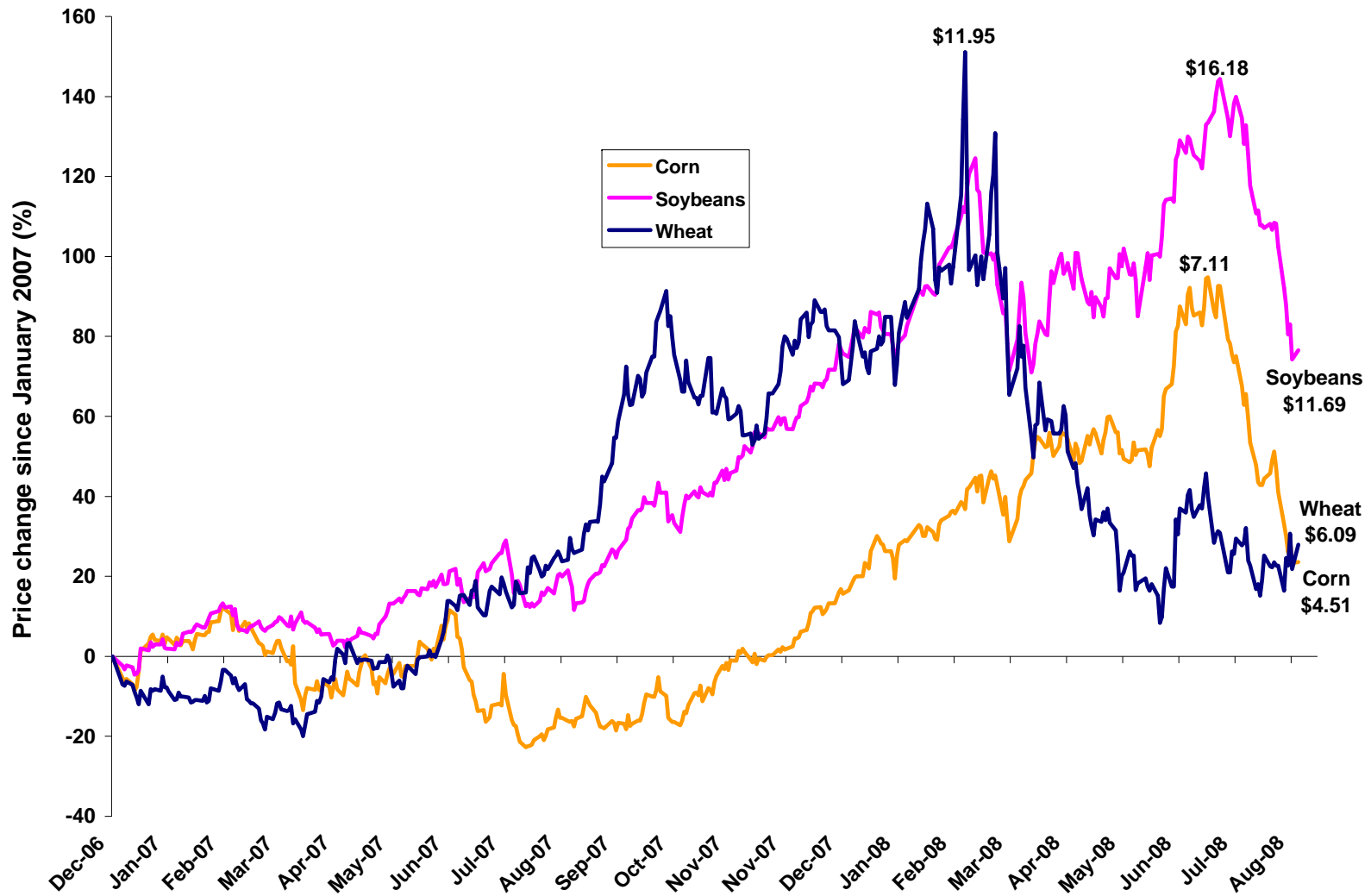
- 2008 U.S. ethanol production MAY not reach the 9 billion gallons called for the RFS mandate; 2009 11.1 Billion gallons is suspect
- Ethanol production capacity will not increase much if at all this year
- Corn usage for ethanol production could be closer to 3.5 billion bushels than the forecasted 4 billion bushels in 2009
- “Even with government intervention, the market is working to ration the available supply of corn as feed grains are being bid away from ethanol production in favor of other uses.”  
*CattleNetwork*

# WILL CROP PRICES MODERATE NEXT YEAR?

---

- Weather will play an inordinately important role in the future of commodity prices and farm equipment demand
- If, if, if...normal weather prevails and yields strengthen as expected, the extreme pressure on commodity prices could be alleviated resulting in potentially materially lower commodity prices next year.
  - Lower prices could mean lower farm income limiting farm equipment demand in 2009.
  - Will stimulus package bring farm equipment demand forward into 2008 thereby borrowing from next year?
  - Could 2008 be a near-term cyclical peak just as occurred in 2004 when the accelerated depreciation tax benefit expired?

# Crop Cash Prices at Historic Highs



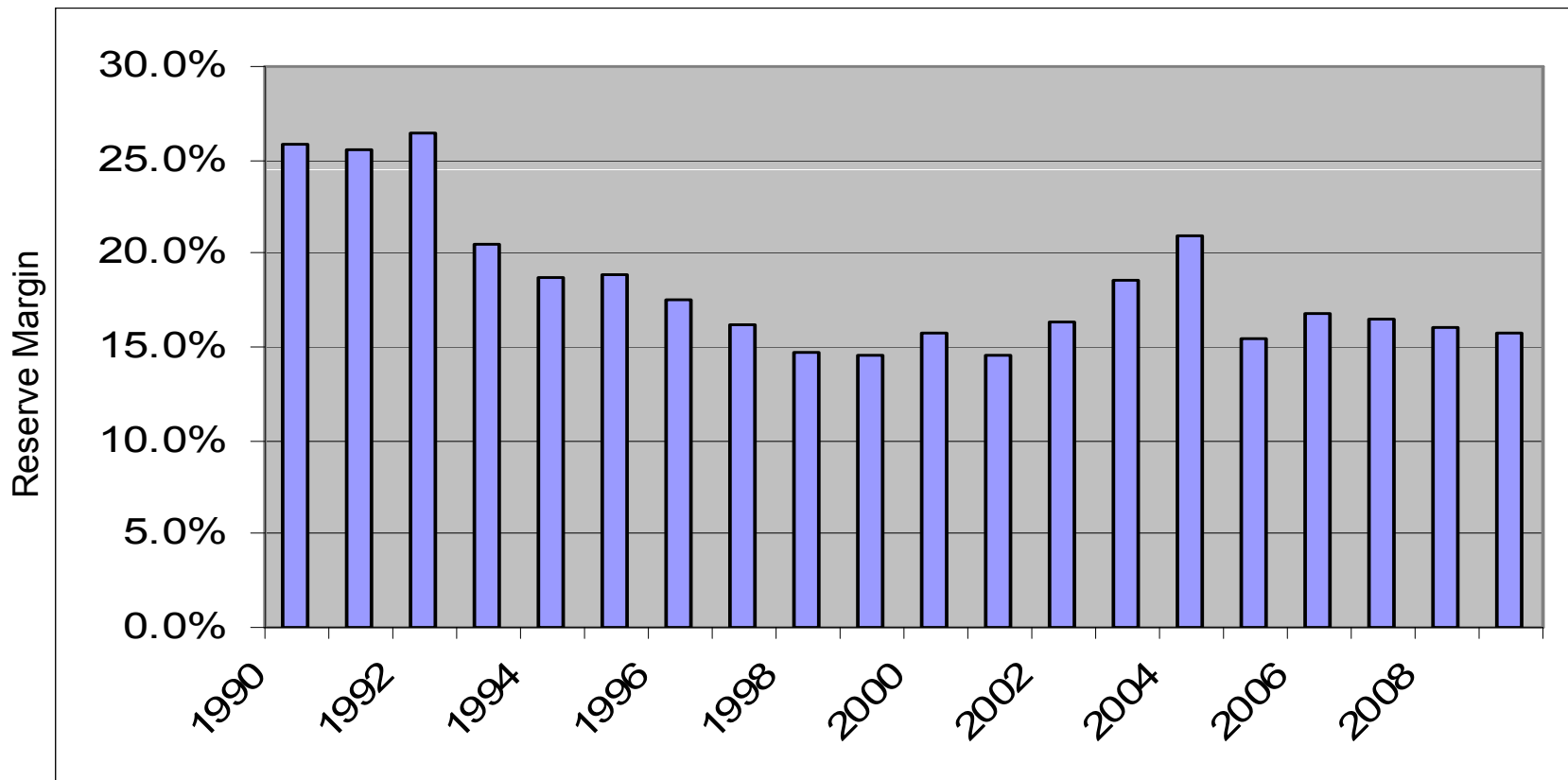
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# **Power Generation**

***IN DESPARATE NEED OF AN ENERGY POLICY***

# Deregulation: Causing Uncertainty

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# CUMULATIVE PLANNED ADDITIONS TO ELECTRICAL GENERATION FACE LOTS OF DELAYS

---

(in GW)	<b>Combined Cycle</b>	<b>Renewable</b>	<b>Coal</b>	<b>Other</b>	<b>Total</b>
2005A	12.05	2.49	0.36	0.18	15.08
2006E	10.66	3.03	0.6	0.29	14.57
2007E	16.89	2.45	1.59	0.47	21.41
2008E	15.05	0.69	1.06	1.33	18.13
2009E	8.51	0.24	15.23*	0.82	24.85
2010E	5.82	--	9.35*	0.30	15.47

\* Now 14 GW by 2012 at best; another 8 GW in development

Source: DOE/ EEI



# COAL FIRED GENERATION PLANTS FACE ENVIRONMENTAL AND COST PRESSURES

---

- 150 plants were planned over the next 10 years as recently as of May 2007
- Many being cancelled or deferred because of environmental cloud
  - TXU buyout caused cancellation of 8 of 11 plants
  - Plans met various opposition efforts in Florida, North Carolina, Oregon, Minnesota, Washington and Colorado
  - Financing of all coal plants now uncertain as lenders worry about emission rules
- Coal companies ratcheted back increased production or big projects because of coal plant delays
- Searching for Alternatives or Supplements to Coal
  - Nuclear
  - Wind Power—won't work around the clock
  - Coal to gas
  - Coal to liquid
  - Environmentally acceptable at a reasonable price

# CURRENT PLANTS UNDER CONSTRUCTION OR PLANNED

United States Fuel Mix of New Plants

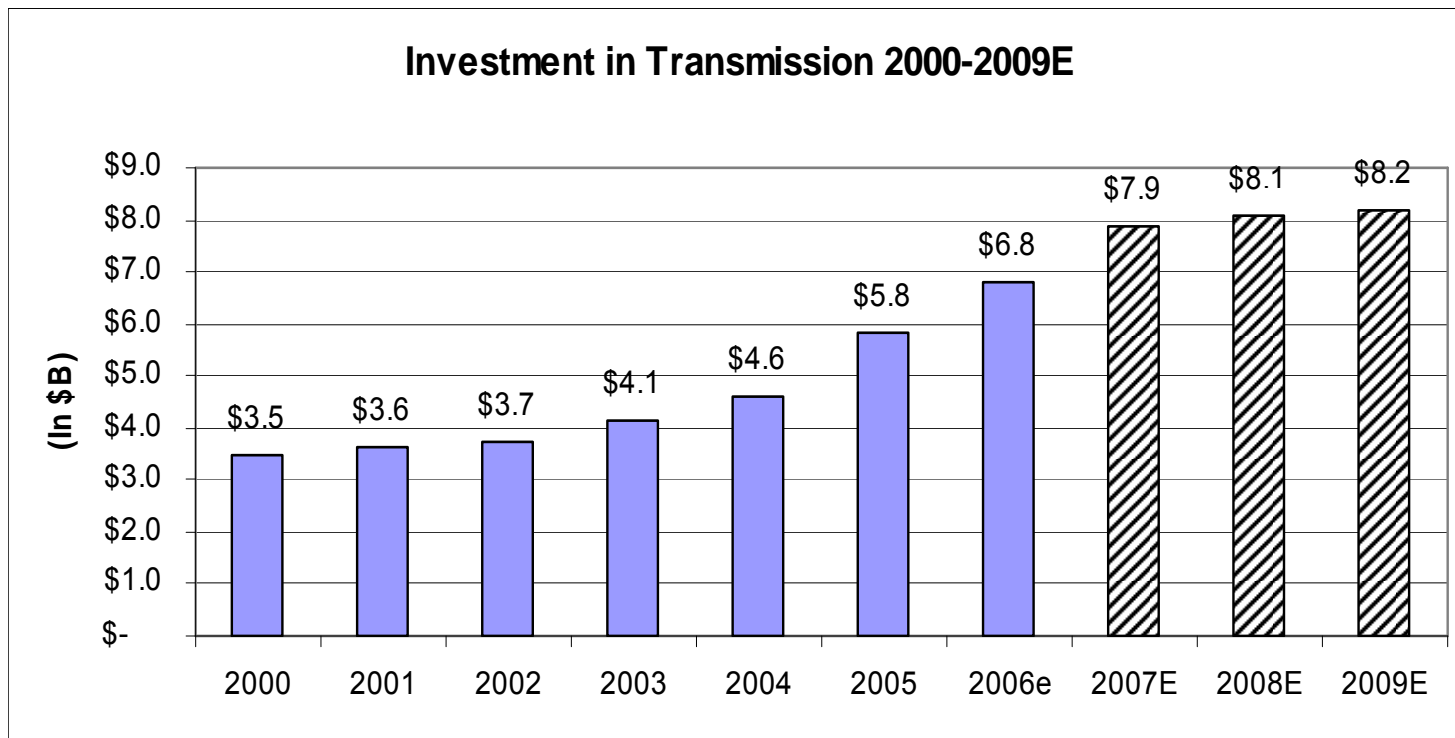
Plants under Construction by:		
Fuel Type	Capacity (MW)	% Total
Natural Gas	16,368.8	49.0%
Coal	13,313.4	39.9%
Wind	2,034.6	6.1%
Petroleum Coke	960.0	2.9%
Waste Heat	330.0	1.0%
Water	187.6	0.6%
Geothermal	115.0	0.3%
Landfill Gas	41.3	0.1%
Wood	25.5	0.1%
Solar	2.0	0.0%
Biomass Gas	1.4	0.0%
<b>Total</b>	<b>33,379.6</b>	<b>100.0%</b>

Source: APPA Report on New Generating Capacity

Pending Application by:		
Fuel Type	Capacity (MW)	% Total
Natural Gas	21,182.9	32.0%
Coal	19,421.0	29.3%
<b>Nuclear</b>	<b>16,270.0</b>	<b>24.6%</b>
Wind	6,739.1	10.2%
Water	1,030.1	1.6%
Solar	627.0	0.9%
Petroleum Coke	230.0	0.3%
Wood	223.9	0.3%
Waste Heat	135.0	0.2%
Waste	126.4	0.2%
Other	90.0	0.1%
Biomass Gas	49.0	0.1%
Biomass Solid	29.0	0.0%
Landfill Gas	26.6	0.0%
<b>Total</b>	<b>66,179.9</b>	<b>100.0%</b>

# UTILITIES INCREASING INVESTMENT IN TRANSMISSION

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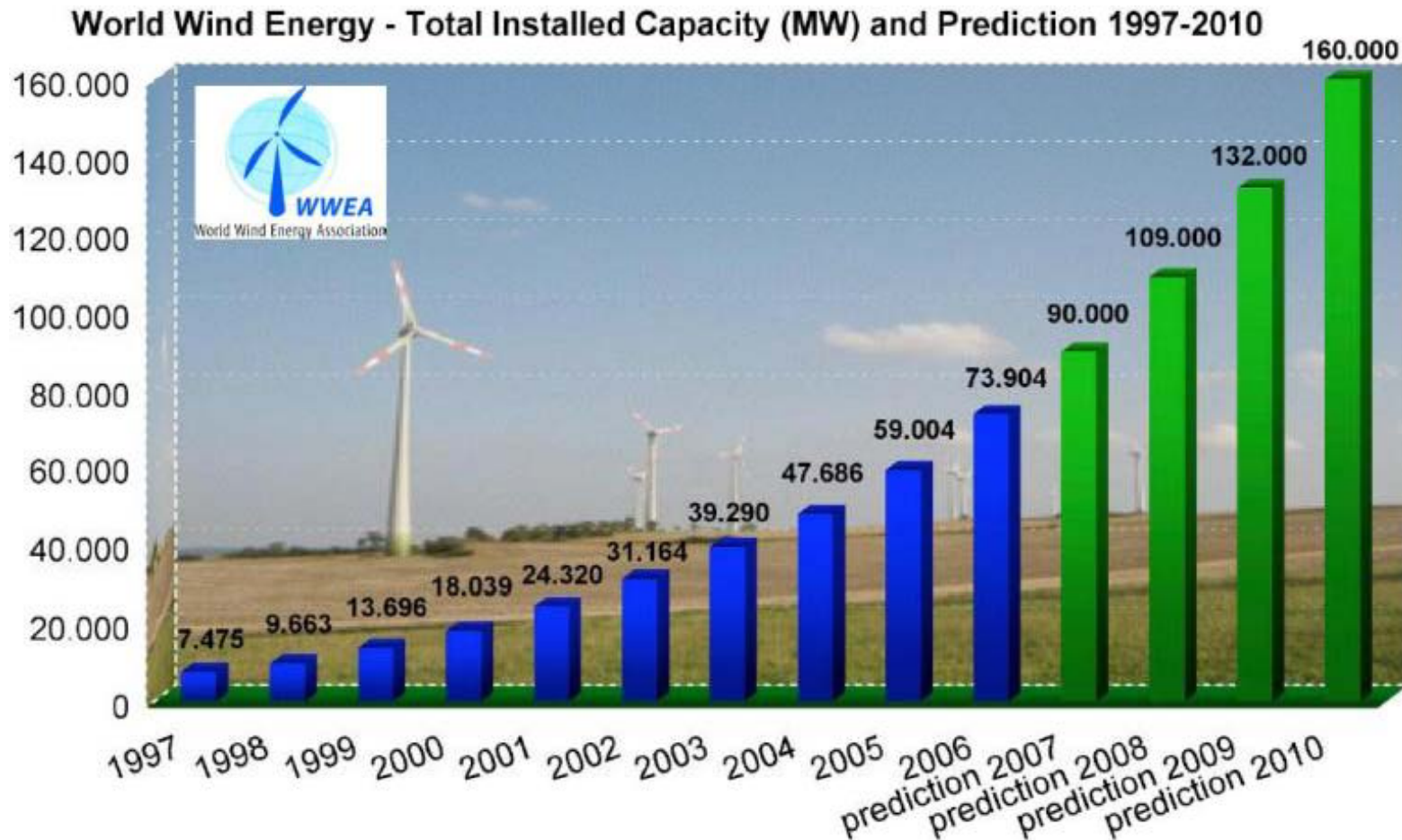


# APPALACHIAN COAL DEMAND HEATS UP FROM ASIA

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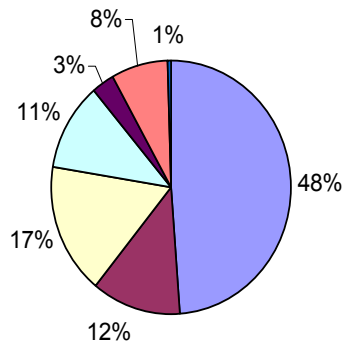
- Despite a weakening U.S. economic outlook, coal prices in eastern U.S. have soared due largely to India and China need for coal to generate electricity and make steel
- China became net coal importer (for now); Indian power plants facing severe coal shortage and bottlenecks in Australian ports.
  - Australian rail and port congestion not likely resolved until 2011
  - China, Russia and South Africa have significant issues with rail capacity
- Will help mining equipment demand in 2008 and 2009; NOTE: lower grade western coal is mostly consumed domestically

# Wind Energy Driving Growth Worldwide



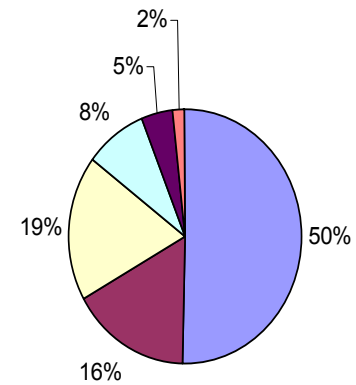
# US Market Share—Turbine Manufacturers: 2006-2007

Turbine Market Share- 2007



■ GE Energy ■ Siemens □ Vestas □ Mitsubishi ■ Suzlon □ Gamesa ■ Clipper

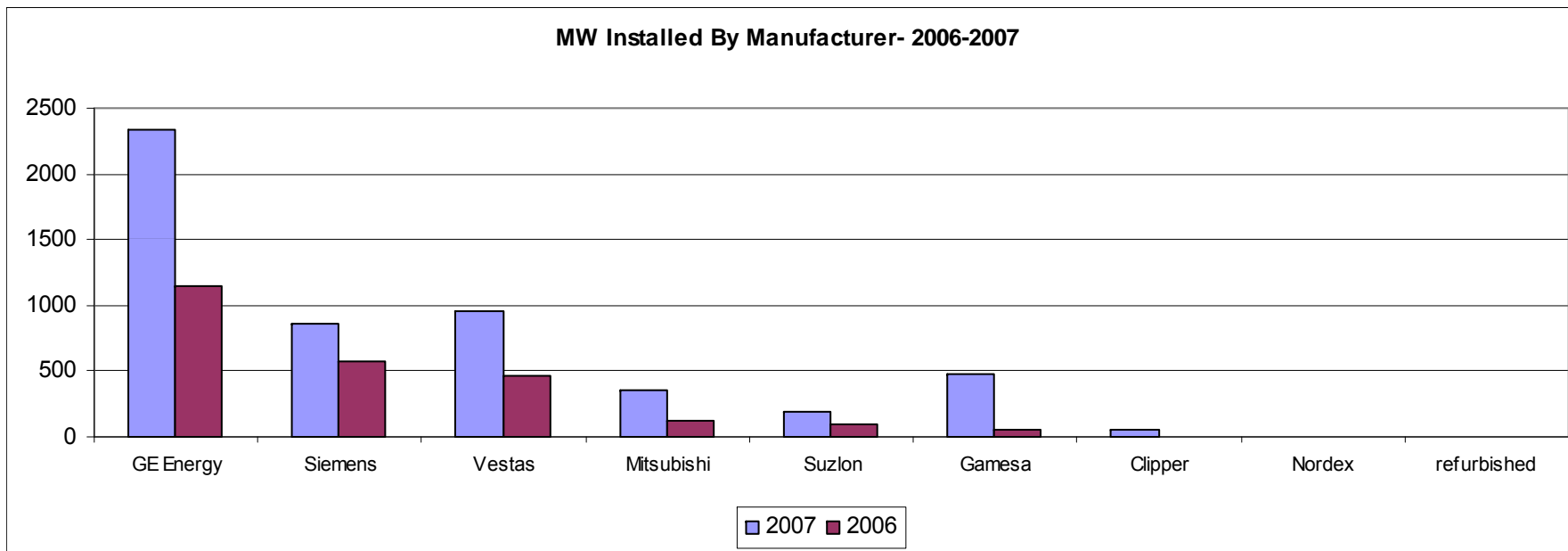
Turbine Market Share- 2006



■ GE Energy ■ Siemens □ Vestas □ Mitsubishi ■ Suzlon □ Gamesa

# US Installations By Manufacturer: 2006-2007

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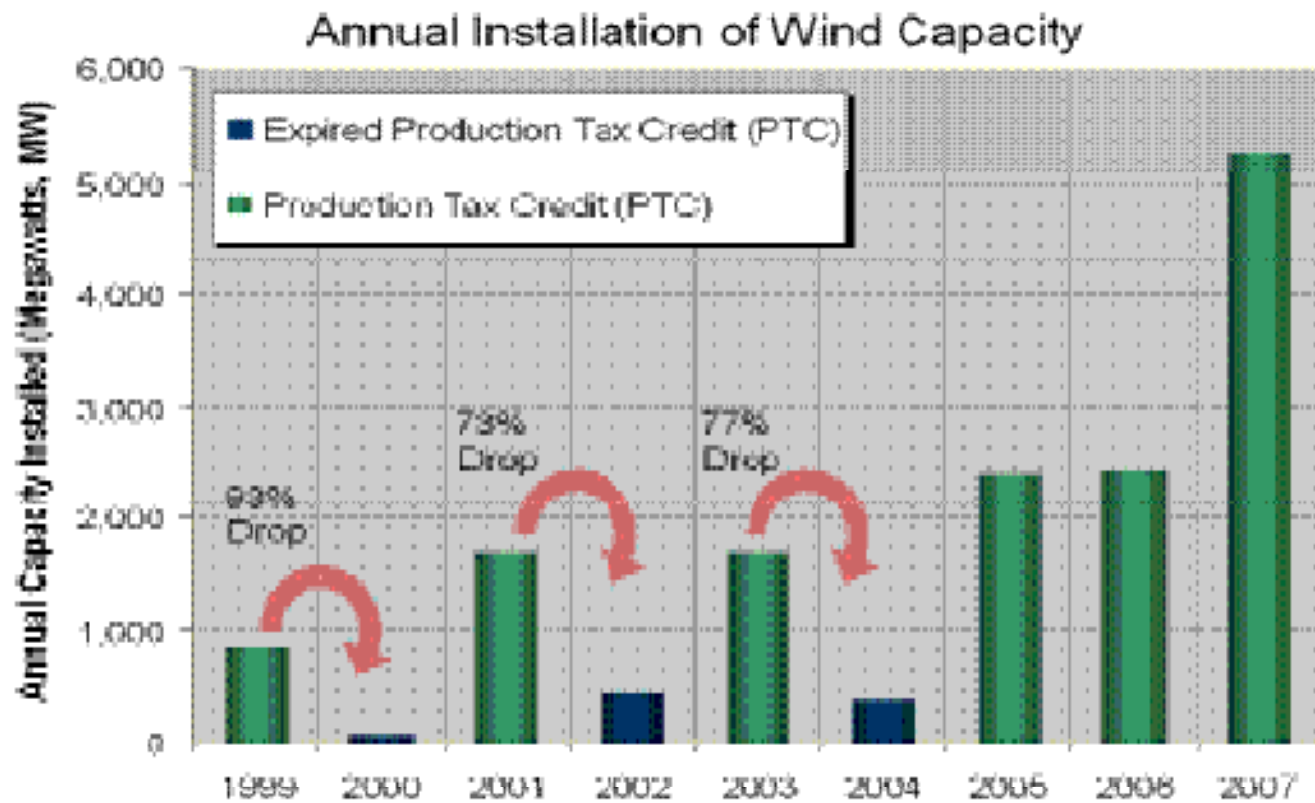
# THERE IS STILL UNCERTAINTY IN WIND FARM OUTLOOK

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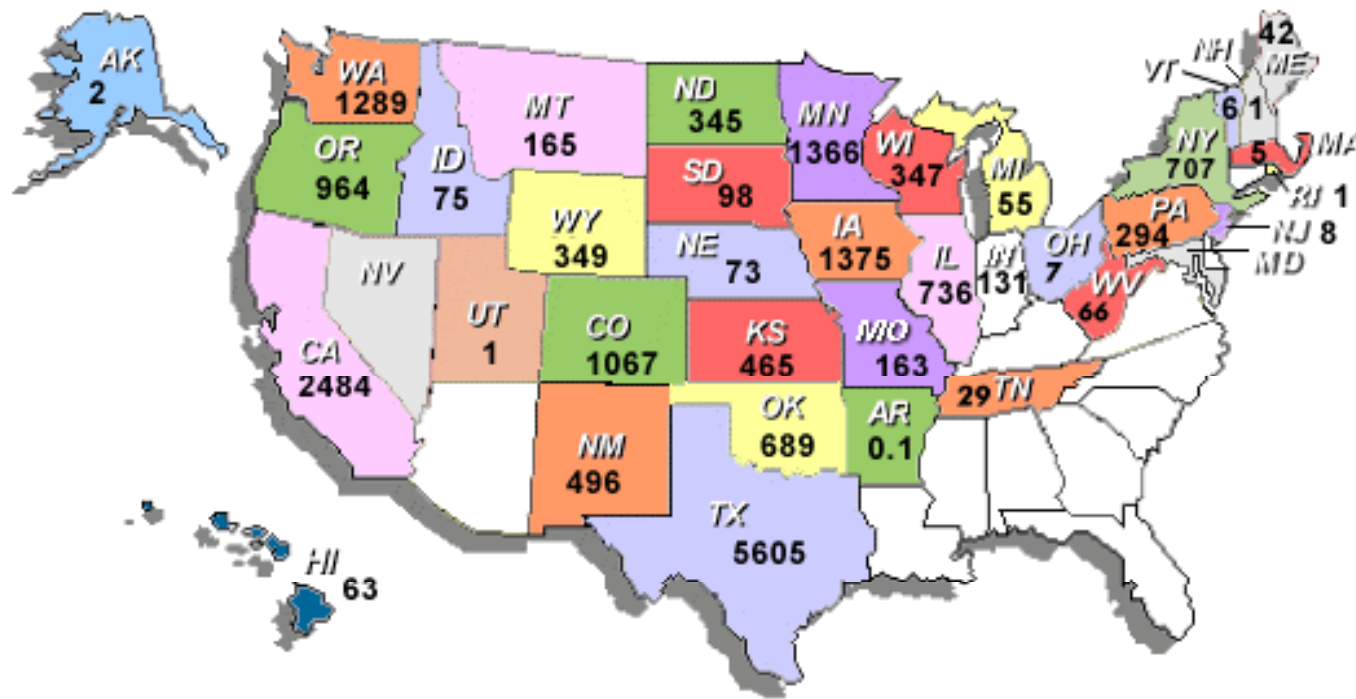
- Wind capacity growing worldwide
  - Global capacity at 94,112 MW
  - Capacity added in 2007 includes U.S. 5,244 MW, Spain 3,515 MW and China 3,449 MW
- U.S. capacity poised to grow near-term
  - U.S. had 16,818 MW on line at year end 2007
  - 19,548 MW on line at end of 2Q08
  - 9,022 MW currently under construction
- AWEA worries about post-2008 growth
  - Wind turbines sold out for the year though more capacity coming on line in late 2008 and into 2009
  - Congress has not yet extended wind energy financial incentives past December 2008



# US Wind Industry Dependent on Tax Credits



# Installed Wind Energy (MW)



Source: AWEA

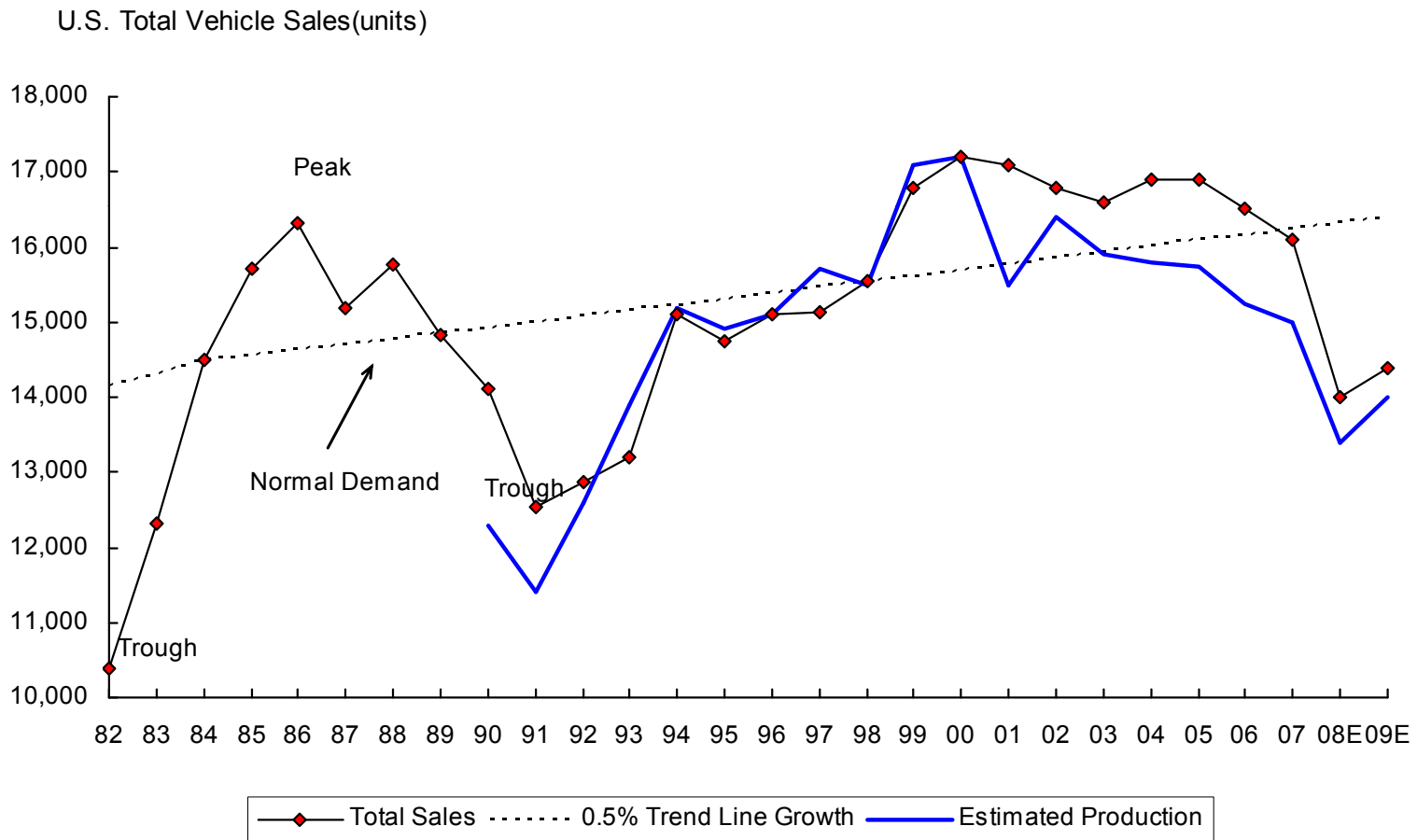
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# Automotive

*IT WILL BE UGLY FOR A WHILE*

# Automotive:

## Where Are We In The Sales Cycle? Will Demand Soften?



## Auto Industry Faces Some Difficult Years

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NAFTA PRODUCTION (millions)		COMPANY	2007	Q1:08	Q2:08	Q3:08E	Q4:08E	2008E
2004	15.8	GM	-8%	-17%	-28%			
2005	15.75	FORD	-7	-6	-15			
2006	15.25	CHRYSLER	0	-16	-19			
2007	15.0	DETROIT 3	-6	-13	-13			-11
2008E	13.4	NEW DOMESTIC	+6	-1	-1			-3
2009E	13.0 to 14.0	TOTAL		-14%	-14%	-12%	-11%	-11%

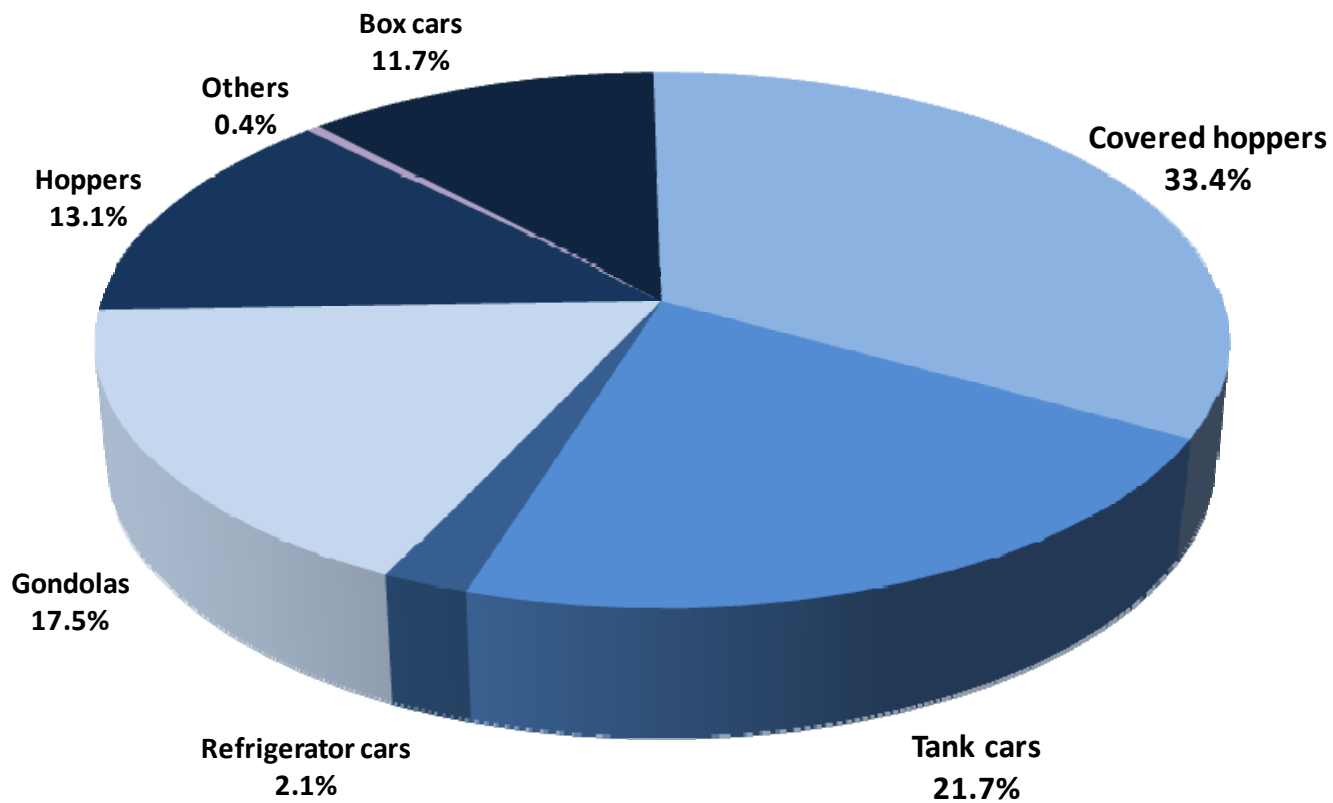
International Build Q1:08 up 6%; Q2:08 up 3%; FY2008 up 4% to 5%

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# Rail Cars

*SOFT DEMAND AS ETHANOL BOOM PASSES*

# Railcar Fleet by Car Type—North America



Source: AAR

# Railcar Manufacturers Overview

	% of US Fleet	Production Capabilities					
		ARI	Trinity Industries	FreightCar America	Greenbrier Companies	Union Tank Car	National Steel Car
Covered Hopper	29.6%	●	●	○	○		●
Tank Cars	19.1%	●	●		○	●	
Gondola Cars	15.6%	○	●	●			
Flat & Intermodal Cars	11.8%	○	●	○	●		●
Open Hopper Cars (Coal)	11.2%		●	●			
Box Cars	10.4%		●	○	●		
<i>Source: Company Reports</i>				● Primary Product			○ Capability



# Rail Car Demand Begins to Wane

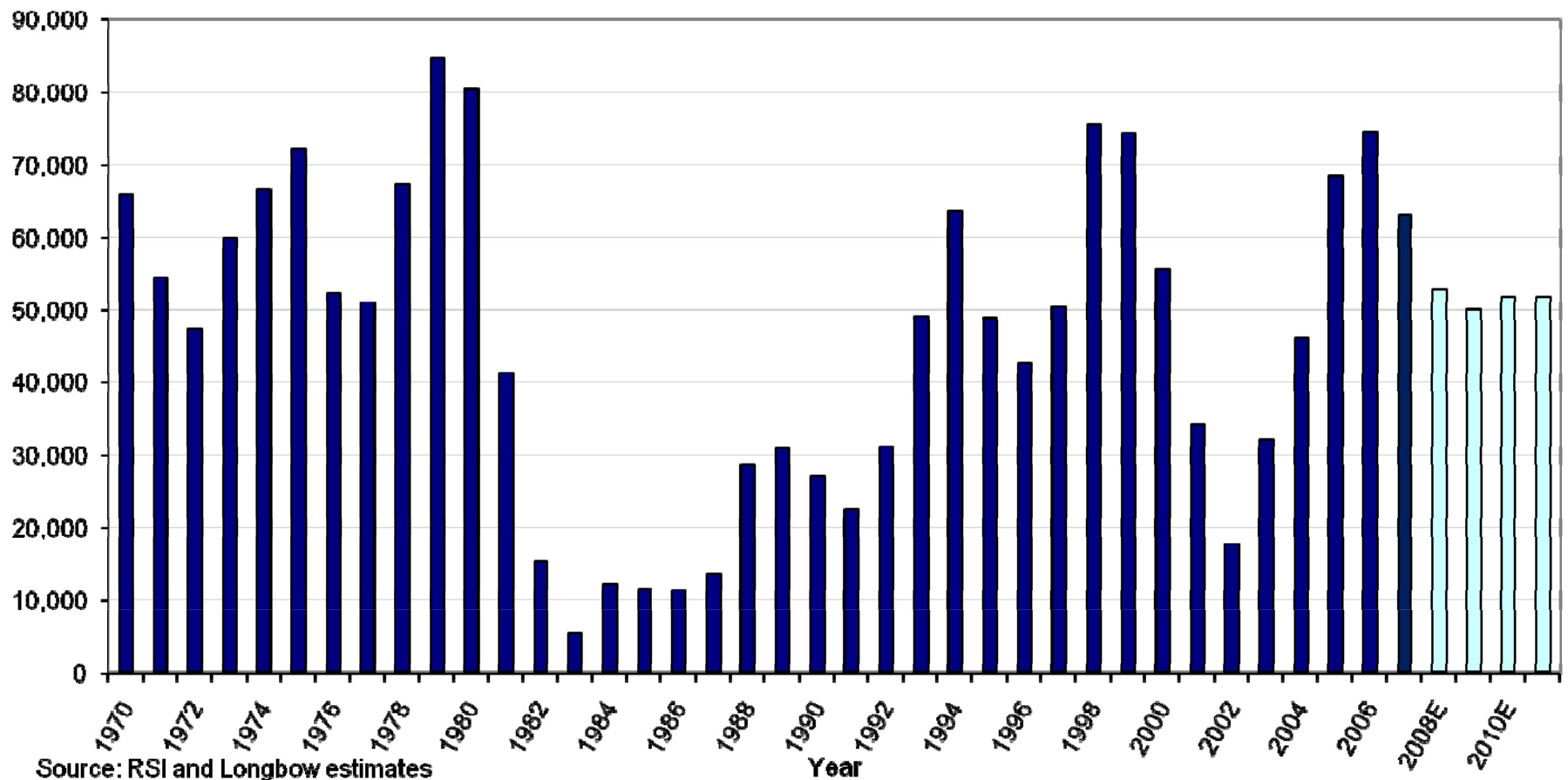
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- **Factors Influencing Demand:**
  - **Size of Fleet (stable now at near 1.3 million)**
  - **Age of Fleet (average now 18.5 years)**
  - **Utilization (trips per year)– rising**
  - **Replacement Pressures**
  - **Commodity Loadings (rising 1.3% per year)**
  - **Intermodal Growth**
  
- **Deliveries Have Surged As Economic Growth Accelerated**
  - **2003 - 32,180**
  - **2004 - 46,871**
  - **2005 - 68,612**
  - **2006 - 74,943**
  - **2007E - 63,145**
  - **2008E - 50,000-55,000**
  - **2009E - 50,000 +/-**

Source: Longbow Research

# Railcar Industry Overview

## Annual Railcar Deliveries & Forecast



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# On-Highway Vehicles:

*A MUTED PRE-BUY AT BEST*

# 1997-1999 Truck Market Positives Were Clearly Not Sustainable

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- **Strong domestic economic and industrial production/capacity utilization growth was not sustainable**
  - 1% change is 14,000 trucks
- **Union Pacific/UPS strike followed by Conrail/CSX integration problems**
  - 1% change in freight from rail to truck represents about 15,000 trucks
- **NAFTA benefits of increased Mexico and Canadian trade have waned**
  - Asian crisis and rising imports are near term offset
- **Fleet replacement cycle shortened from 4-5 years to 3-4 years due to:**
  - Increased utilization
  - Increased cash flow
  - Driver enticements
  - Prices were flat to down
  - Guaranteed residual prices
- ***Guaranteed residual prices ballooned USED truck inventories and extended fleet replacement cycle***

# Heavy-Truck Market In 2002 Had Negative Bias, But Pre-buy Saved The Year

---

## Positives

- Relatively stable energy prices
- Relatively stable fuel prices
- Low interest rates
- Pre-buy of class 8 trucks to beat emissions penalty

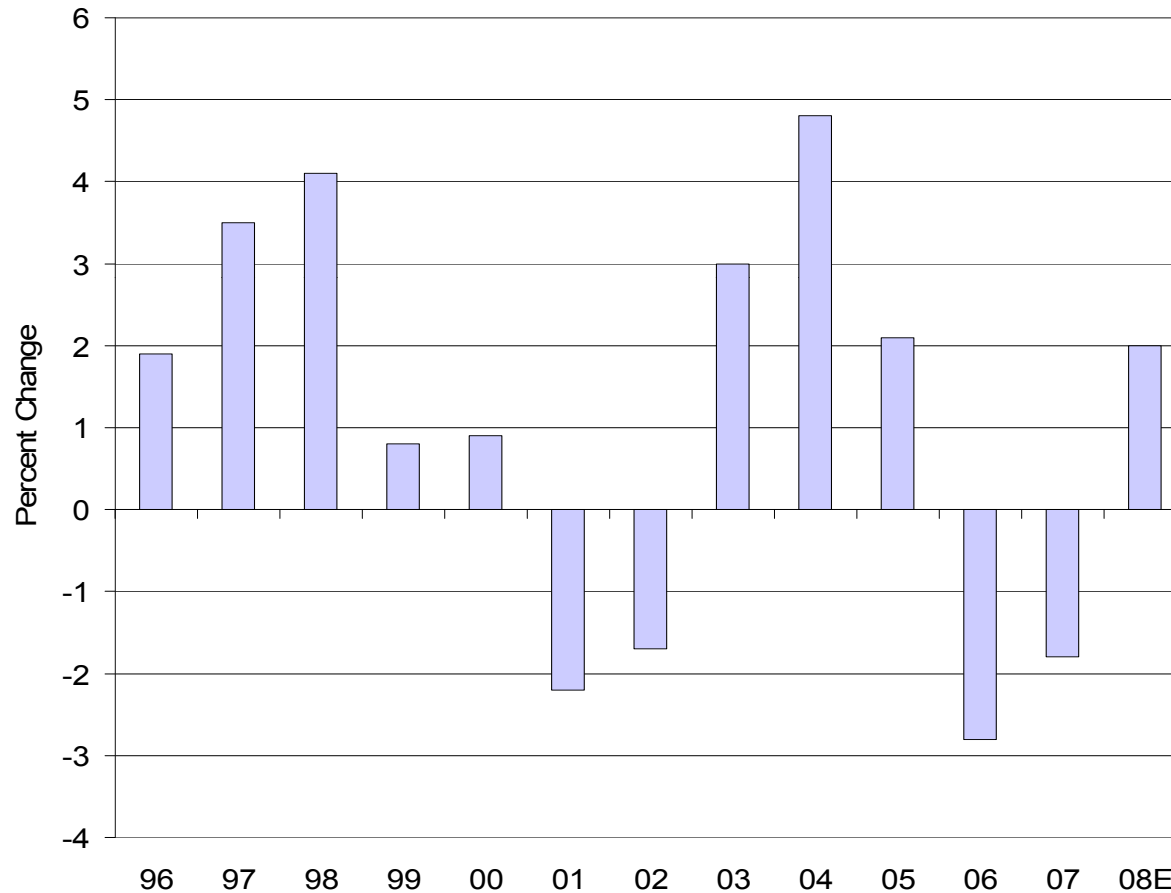
## Negatives

- Lower freight tonnage
- Higher insurance costs
- Credit crunch!
- Declining used truck values are now stabilizing
- Record 4,200 truck company bankruptcies in 2001
- October emissions requirements raise truck prices
- Driver crunch

# U.S. Long Haul Truck Freight Tonmiles

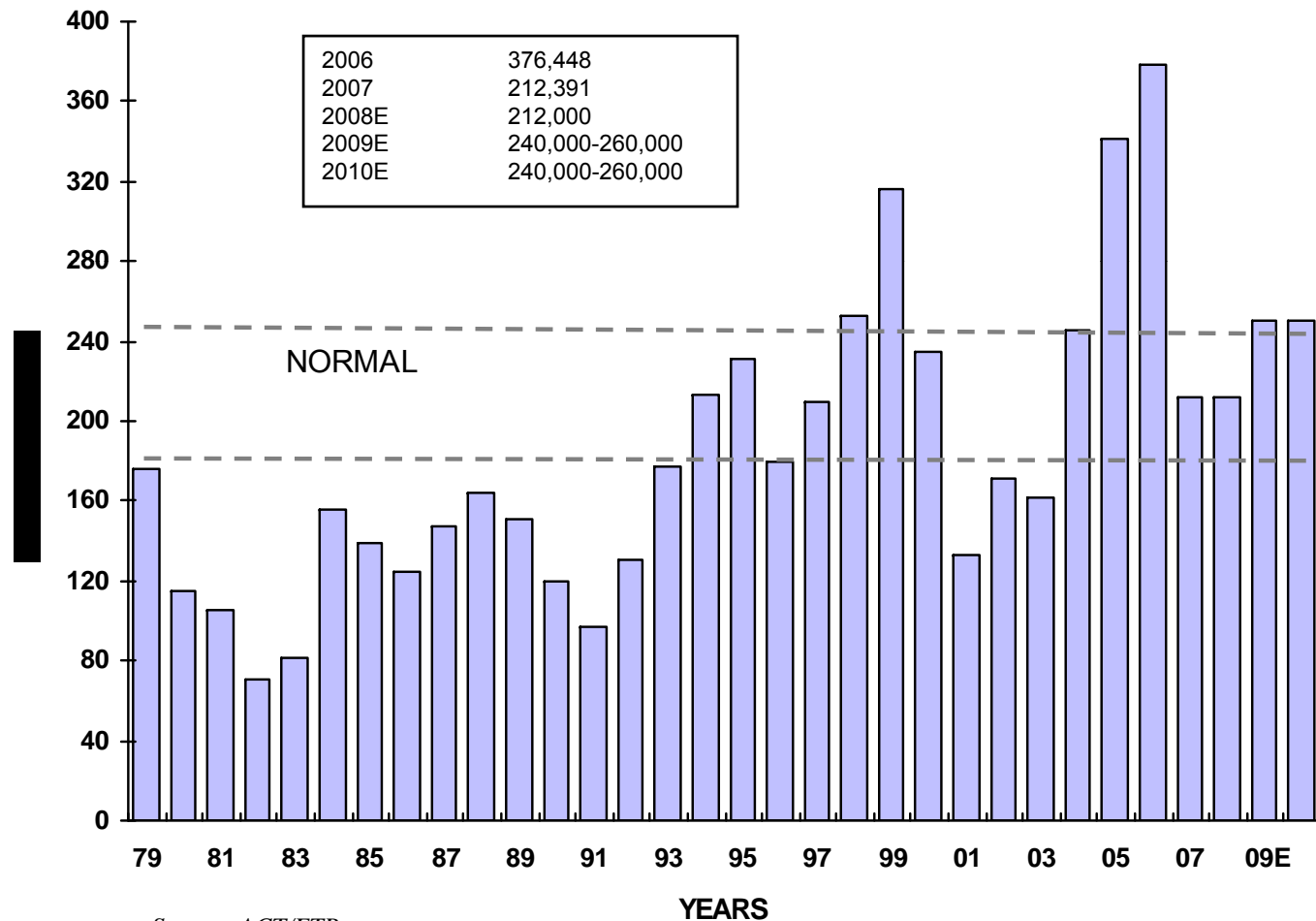
## Growth Turns Positive

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Source: ACT; FTR Associates

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



Source: ACT/FTR

## The Cyclical Truck Boom Of 2006-2010

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- Driven by normal cyclical economic recovery, assuming sustained 3% domestic GDP growth
- Exacerbated by fear of 2007 emissions, causing rational truck owners to dramatically reduce fleet age as much as possible by 1/1/07.
- Freight decline in 2006 of 2.8% and near 2% in 2007 suggests that the trucking industry overbought by as much as 85,000 trucks in 2006.
- Heavy truck demand fell about 44% in 2007 to about 212,000 units; medium truck demand fell about 22.4% to 205,900 units
- Domestic market was weaker than expected though overall activity is somewhat masked by shipments to Mexico and Export.
  - Current environment is characterized by weak freight and weak pricing
  - U-Shaped recovery for trucks at best
- The engines that fleets hate in 2007 will hopefully be loved in 2008 and 2009; 2007 engines are 2002 engines with added filtration. 2010 emissions standards are very stringent and difficult, causing material engine and truck re-designs.



# MUTED PRE-BUY: TOO MANY TRUCKS CHASING TOO LITTLE FREIGHT

---

- High diesel fuel costs and a weak domestic economy continue to be a major problem for the truck sector
  - Profits are getting squeezed to the point that businesses are going under and fleets are being downsized.
  - Any increase in demand or base pricing follows markets where competition is shrinking due to existing from business;
  - Buying used trucking fleets as firms exit the market is a viable alternative to new purchases near-term
- Our Truck Surveys suggest
  - Smaller trucking confirms could care less about pre-buy and emissions and are trying to survive 2008;
  - Larger fleets are definitely paying attention to the 2010 mandate but have not made any definitive decisions yet with respect to pre-buy or the use of Urea; initial testing of Urea trucks very positive but the concern of availability of Urea still paramount.
- Current data supports an outlook for 2008 of about 210,000 to 215,000 units, down modestly from our most recent forecast of 212,000 to 220,000 units and compares to a revised 212,391 NAFTA production reported for 2007.
  - Q1:08 production of about 49,700 units rose to about 57,300 units in Q2:08;
  - The weaker order trends now suggest that Q3:08 NAFTA production will fall below Q1 to about 47,600 units with a Q4:08 production rebound still anticipated to about 55,000 to 60,000units.

## Medium (class 5-7) Truck Production Will Also Show Muted Recovery

---

- The medium duty market is typically consumer driven and the meltdown in this sector continues.
- Orders for classes 5 to 7 remain weak in June at 11,991, the lowest since early 1995 suggesting that 2008 production will decline at least 12%-15% from 208,200 in 2007 to 175,000 to 180,000 again somewhat lower than our prior estimate of a 10%-12% plus decline;
- Second half 2008 production in these classes looks to decline about 10%-13% (Vs. prior estimate of down 5% to 10%) from the first half of this year.

2009E	200,000-225,000
2008E	175,000-180,000
2007A	205,872
2006A	265,422
2005A	244,831

# NEW 2010 TECHNOLOGY MAY RESULT IN MUTED PRE-BUY

---

- CLEAN CLASS 8 ENGINES HAVE TWO DIFFERENT TECHNOLOGICAL PATHS
- CUMMINS (CMI)—ISX Engines won't need SCR (UREA) to meet standards
  - 2010 engines look like 2007 engines with two additional larger displacements
  - Retiring ISM On-Highway engines
  - CMI will use credits to meet emission standards
- CMI Tier 4 INTERIM for Off-Road also won't use SCR
  - High pressure common rail fuel system, cooled EGR, CMI VG turbochargers, and advanced electronic controls.
  - CMI particulate filters, newly designed air intake system and crank case filter;
  - Removes 90% of PM; 45% of NOx with up to 5% better fuel economy;
  - Did not rule out SCR use in Tier 4 FINAL
- CAT out of truck market in 2010; Volvo, Detroit Diesel (Freightliner/Mercedes) will use SCR
- All using SCR for Medium trucks (class 5-7) as SCR technology is a better match for the medium truck duty cycles.

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# Commercial Aerospace

*STILL A GROWING EQUIPMENT MARKET*

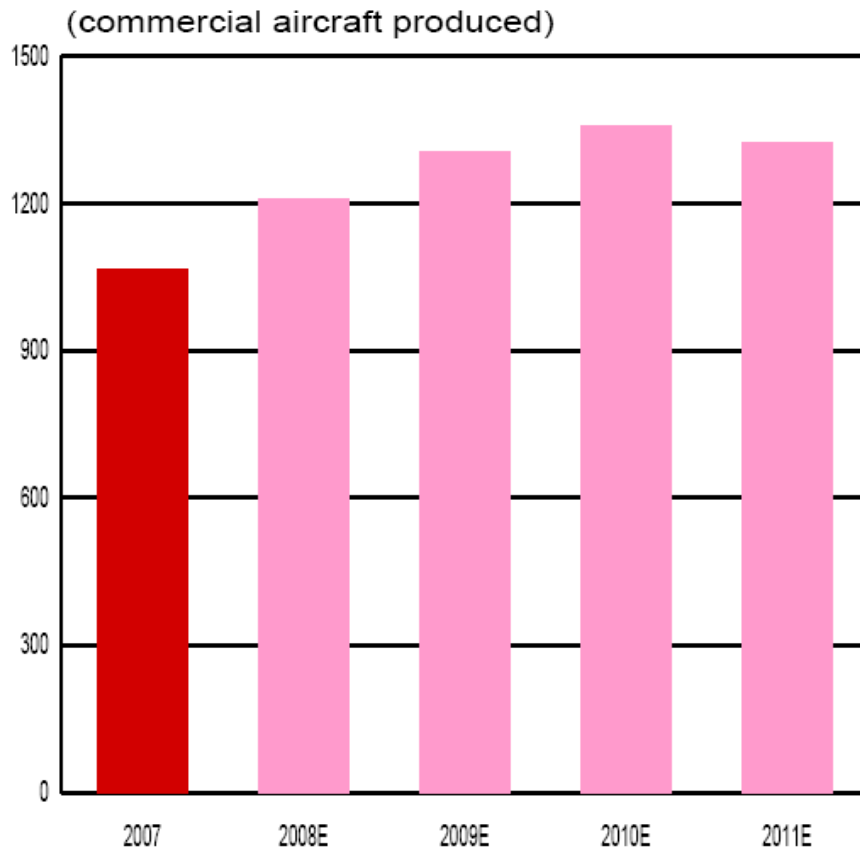
# AEROSPACE OUTLOOK STILL REASONABLE

---

- Air Transport and Regional
  - OE deliveries up 10%
  - 7000+ OE Aircraft Backlog; continued International Demand
  - F2008 4% flight hour growth; 1H 6% VS. 2H08 2%
- Business and General Aviation
  - Multi-Year OE backlog; strong order trends continue
  - Deliveries up 9%
  - Medium-long range aircraft remain solid
- Defense and Space
  - DOD Budget up 4%
  - Continued stable growth for now—election?

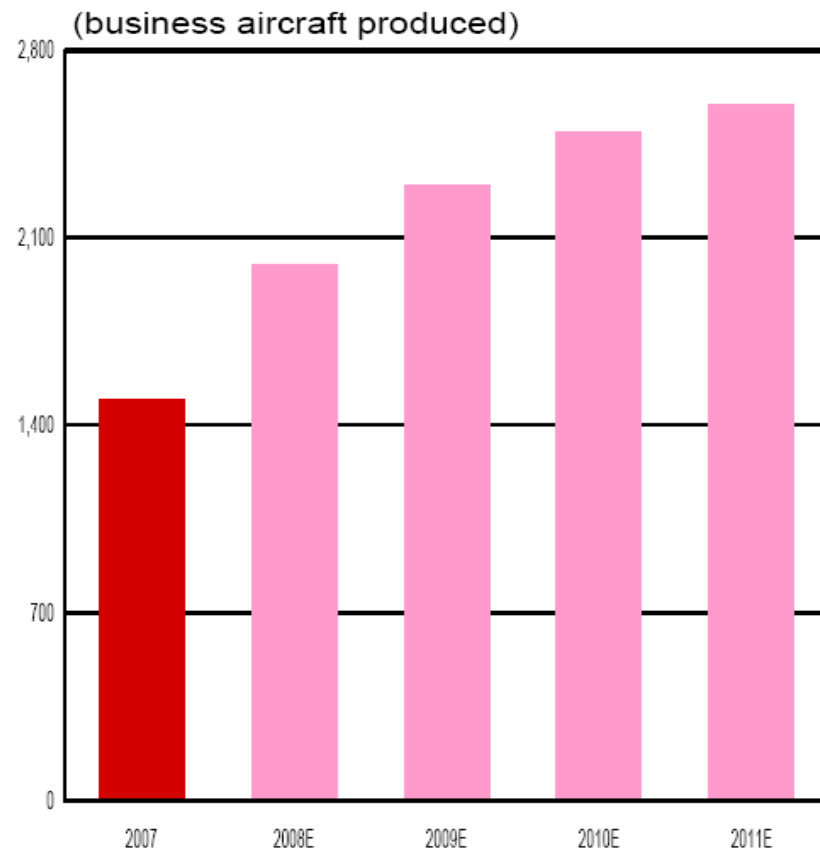
# AIRCRAFT DELIVERIES

## Commercial and business jets



Includes Airbus, Boeing, Bombardier CRJ, Embraer  
Source: The Airline Monitor, Jan/Feb 2008

*United Technologies*



Includes business jets and turboprops  
Source: P&WC estimates

---

# Construction Equipment

*STILL LOOKING FOR A BOTTOM*

# NA CONSTRUCTION ACTIVITY FACES UNCERTAIN OUTLOOK

---

**2002:** A good year for all except non-residential

- Housing was very strong at 1.71 million starts up from 1.6 million benefiting from higher incomes, lower mortgage rates and household asset diversification.
- Non-residential activity remained very weak reflecting high office vacancies, consolidating retail sector, and weak industrial plant construction exacerbated by 09/11.

**2003:** Total construction remained strong

- Both residential (1.85 million starts) and public construction were healthy
- Non-residential continued to decline

**2004:** Modest growth as non-residential spending finally turns up 3%-4% (mostly price). Residential stays surprisingly strong at 1.95 million starts, as expected H2 fade never materializes.

**2005:** Residential was expected to decline, but sector remained resilient as housing starts actually rose to 2.07 million. Nonresidential continued to recover rising 6.4%.

**2006/07:** Housing starts declined 12% to 1.82 million in 2006 and fell another 26% in 2007 to 1.34 million. Non-Residential construction grew about 16% in 2007, up from 12.3% in 2006, nearly offsetting the housing decline.

**2008/09:** Housing likely to fall another 30% to about 0.95 million starts or less in 2008, but hopefully begin to stabilize by the end of the year with minimal gains likely in 2009. Non-Residential construction looks somewhat slower in 2008, perhaps a 2% to 7%. 2009 is a problem with an outlook of flat to down 5% and possibly worse if the credit crunch doesn't subside



## Shifting Construction Market Mix

---

Total (Trillion 1\$ SAAR)	<u>2006</u> \$1.20	<u>2007</u> \$1.17
<u>% of Total</u>		
Private Residential	54%	46%
Private Non-Res	25%	30%
Public	21%	25%
	<u>12/06</u>	<u>12/07</u>
Total	\$1.17	\$1.14
Private Residential	50%	41%
Private Non-Res	27%	33%
Public	23%	26%

# NON-RESIDENTIAL CONSTRUCTION ISN'T DEAD YET

---

<b>(PERCENT CHANGE)</b>	<b>2007A</b>	<b>2008YTD</b>
TOTAL CONSTRUCTION	(-2.6%)	(-5.1%)
RESIDENTIAL	(-19.4%)	(-27.0%)
NON-RESIDENTIAL	+16.4%	+14.5%
PUBLIC	+12.4%	+ 7.4%

*Eaton*

# MOST NON-RESIDENTIAL MARKETS WILL HOLD-UP IN 2008

CATEGORY	% NON-RES	2007A	2008 YTD	2008E
EDUCATIONAL	15%	13%	11%	5% TO 10%
COMMERCIAL	14	16	5	1% TO 4%
HIGHWAY/STREET	12	6	3	0% TO 5%
OFFICE	10	20	18	5% TO 10%
POWER/ENERGY	8	34	38	15% TO 20%
HEALTHCARE	7	12	8	5% TO 10%
MANUFACTURING	7	20	33	5% TO 10%
LODGING	5	58	41	15% TO 20%
TRANSPORTATION	5	16	16	5% TO 10%
COMMUNICATION	4	22	6	5% TO 10%
SEWAGE/WASTE	4	6	6	3% TO 7%
AMUSEMENT/REC	3	14	15	5% TO 10%
WATER SUPPLY	2	4	(-3)	FLAT
<b>TOTAL</b>		<b>16%</b>		<b>2% TO 7%</b>

# CONSTRUCTION EQUIPMENT DEMAND SOFTENS IN NA AND EUROPE

---

<i>(Percent Change)</i>	<u>2006A</u>	<u>2007A</u>	<u>2008E</u>	<u>2009E</u>
<b>North America</b>				
Light Equipment	-13%	-15%	-20% to -25%	0% to -5%
Heavy Equipment	3%	-13%	-15% to -20%	-5% to -10%
<b>Worldwide</b>				
Light Equipment	5%	12%	-5% to -10%	0% to 5%
Western Europe	2%	13%	-15% to -20%	-5% to -10%
Latin America	30%	45%	20% to 25%	10% to 15%
Rest of World	25%	35%	10% to 15%	5% to 10%
Heavy Equipment	14%	16%	5% to 10%	0% to 5%
Western Europe	13%	22%	-5% to -10%	-5% to -10%
Latin America	24%	35%	25% to 30%	10% to 15%
Rest of World	23%	31%	20% to 25%	10% to 15%

Sources: CNH; Deere; Caterpillar; Longbow Estimates

# 2008-09 CONSTRUCTION MACHINERY OUTLOOK HAS BECOME MORE CLOUDED

---

- NA retail sales in 2008 are likely to decline 15% to 25% or more
- Blame sluggish construction environment from fallout from sub-prime crisis, weak housing and expected continuing soft demand from the rental industry
- Material handling machinery (cranes, AWP's, telehandlers, etc) likely to continue to soften in 2008 into 2009 as recent boom fades
- NA construction machinery production likely down 5% to 10% in 2008 (was flat to down 5%); flat to modestly down in 2009
  - Most of needed inventory reduction took place in 2007
  - Highway bill needs to be re-written in 2009; trust fund is underfunded
  - Material handling production will likely follow retail sales
- European sales have begun to falter as their economy weakens; sales will likely decline through 2009
- Latin America and Rest of World should remain solid

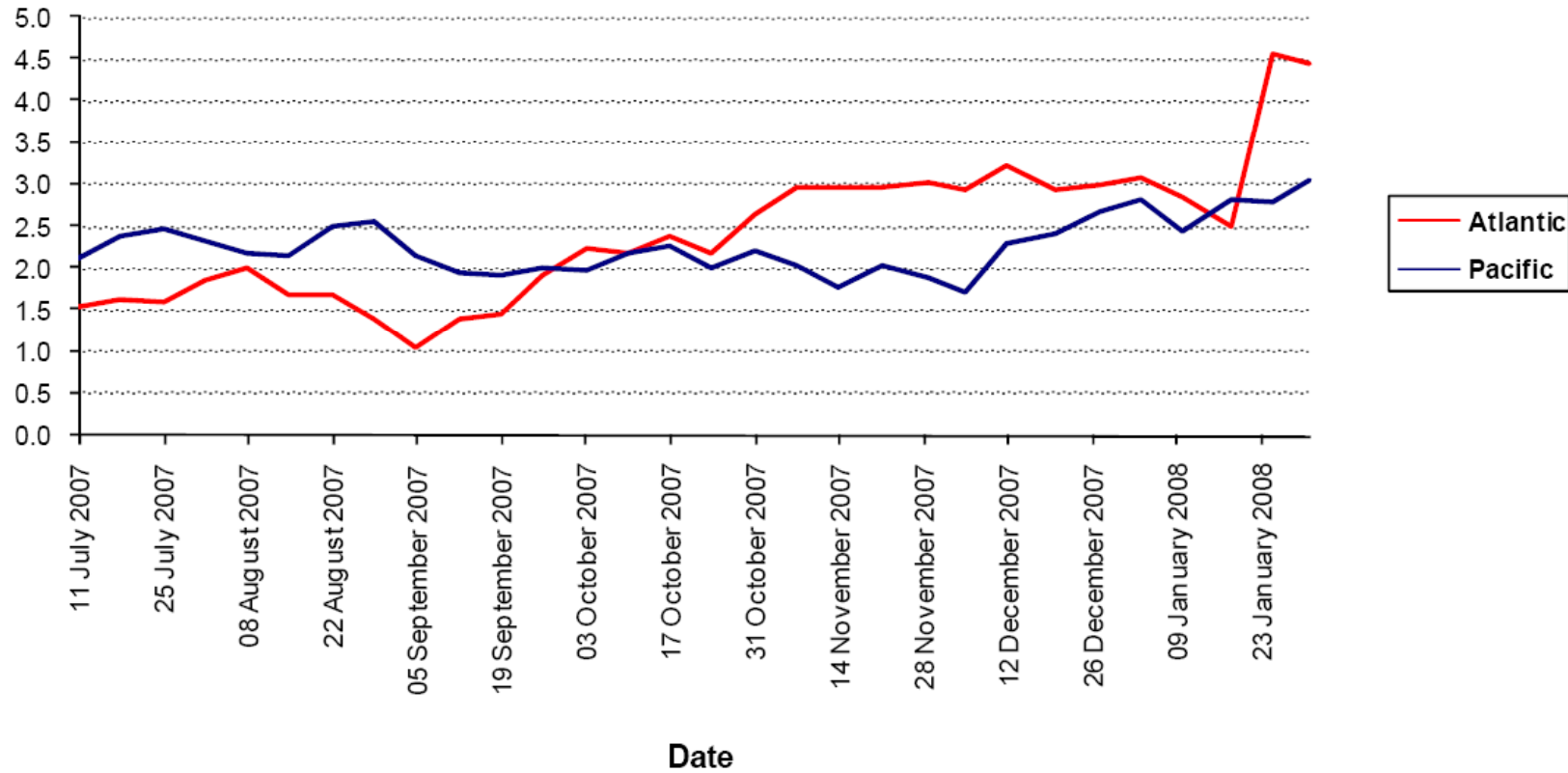
# Global Mining Equipment Demand is Growing

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- Growth in demand for commodities is a function of economic activity, population increases, and worldwide improvements in standards of living.
- High economic growth in China, India, and developing nations play the largest roles in growing demand for coal. Oil and other commodities.
- Increasing production and replacement each play a part in mining equipment orders.
- International markets and Oil Sands projects are growing considerably faster than US mining markets.
- Infrastructure issues such as port congestion can impact the time of mining equipment orders.

# Port Congestion may Limit New Mining Equipment Demand

Port Congestion Index



## Mining Shovel Demand has been Strong

---

	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007E</b>	<b>2008E</b>
<b>JOYG</b>	12	16	17	22	26
<b>BUCY</b>	8	8	10	16	24
<b>Shovel Capacity</b>	<b>20</b>	<b>24</b>	<b>27</b>	<b>38</b>	<b>50</b>
<b>Commodity Growth</b>					
<b>Copper</b>	7.1%	2.3%	-0.2%	5.1%	7.6%
<b>Iron Ore</b>	15.5%	14.3%	10.2%	4.0%	7.0%
<b>Coal</b>	7.8%	6.4%	7.6%	4.6%	4.5%
<b>Oil Sands</b>	15.2%	-0.4%	14.4%	13.1%	16.2%

*Source: BP, ICSG, ABARE, Company Reports, Longbow estimates*



# Mining Shovel Demand Should Remain Solid through 2012

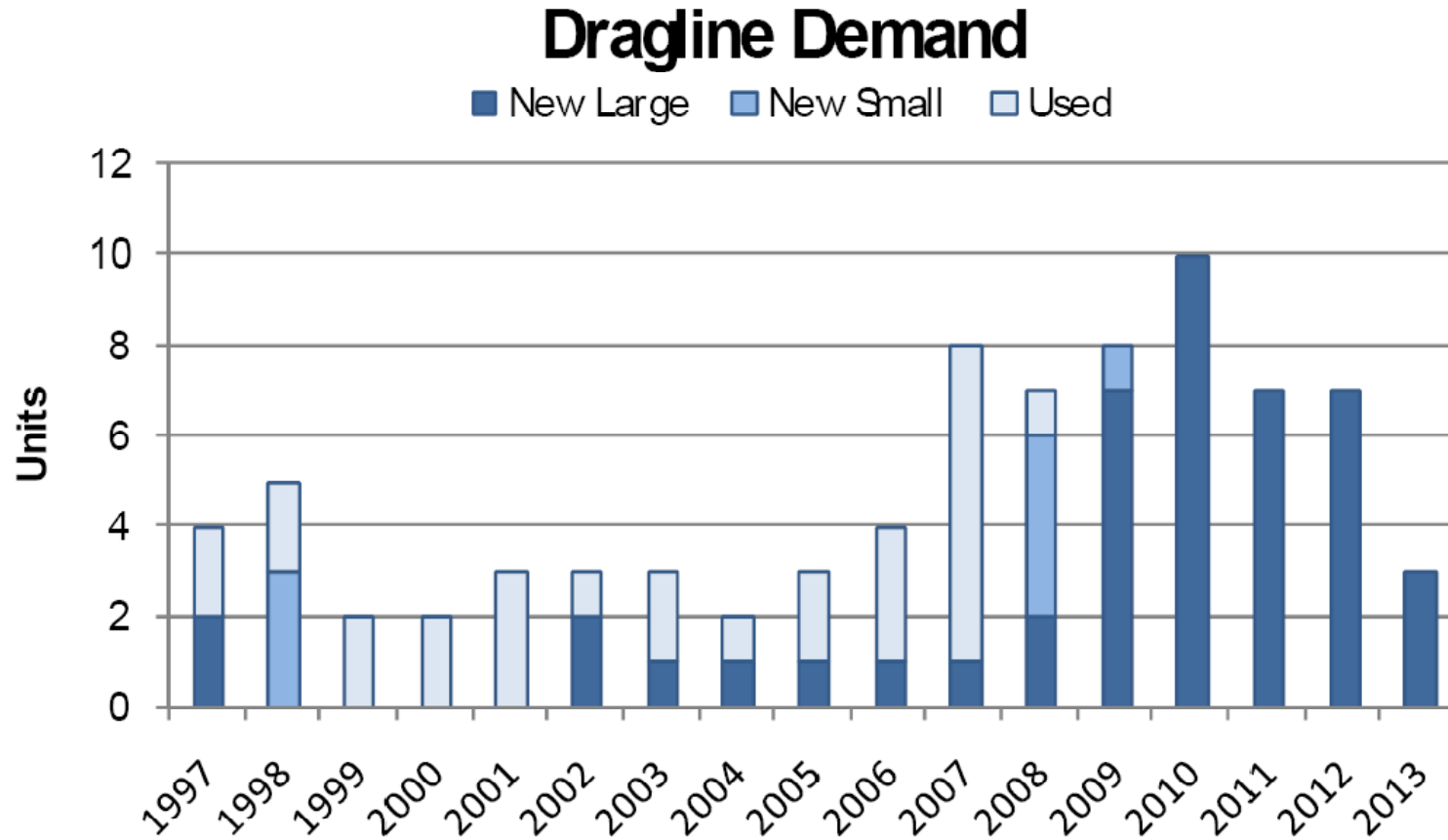
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## Estimated Annual Shovel Demand through 2012

Coal	15-20
Iron Ore	8-10
Copper	6-8
Oil Sands	8-10
Other	3-5
<b>Total</b>	<b>40-53</b>

*Source: Longbow estimates*

# Dragline Demand Should Improve



Source: Bucyrus

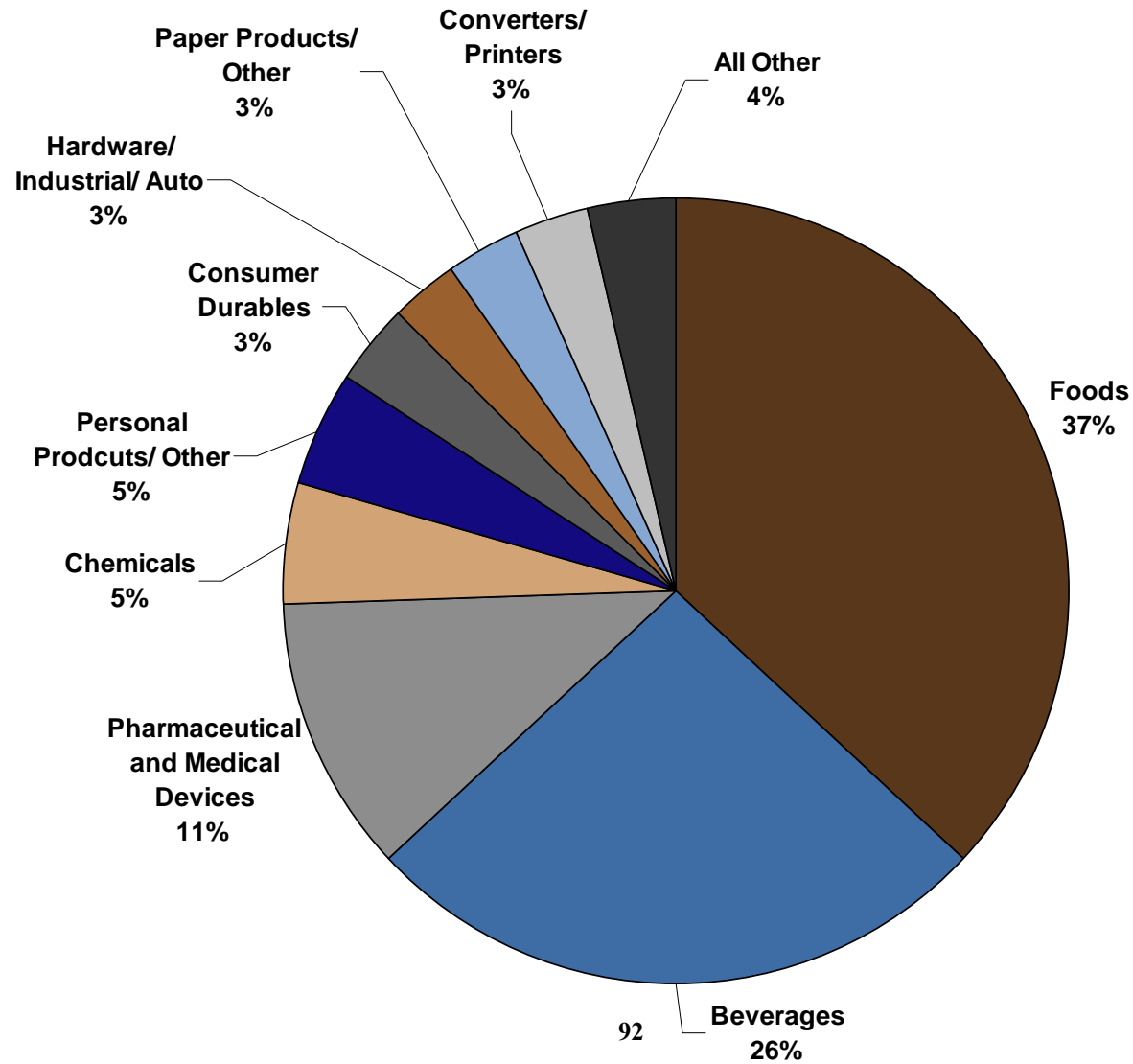
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# **PACKAGE MACHINERY**

***U.S. PACKAGING MACHINERY SALES TRACK  
ECONOMIC ACTIVITY***

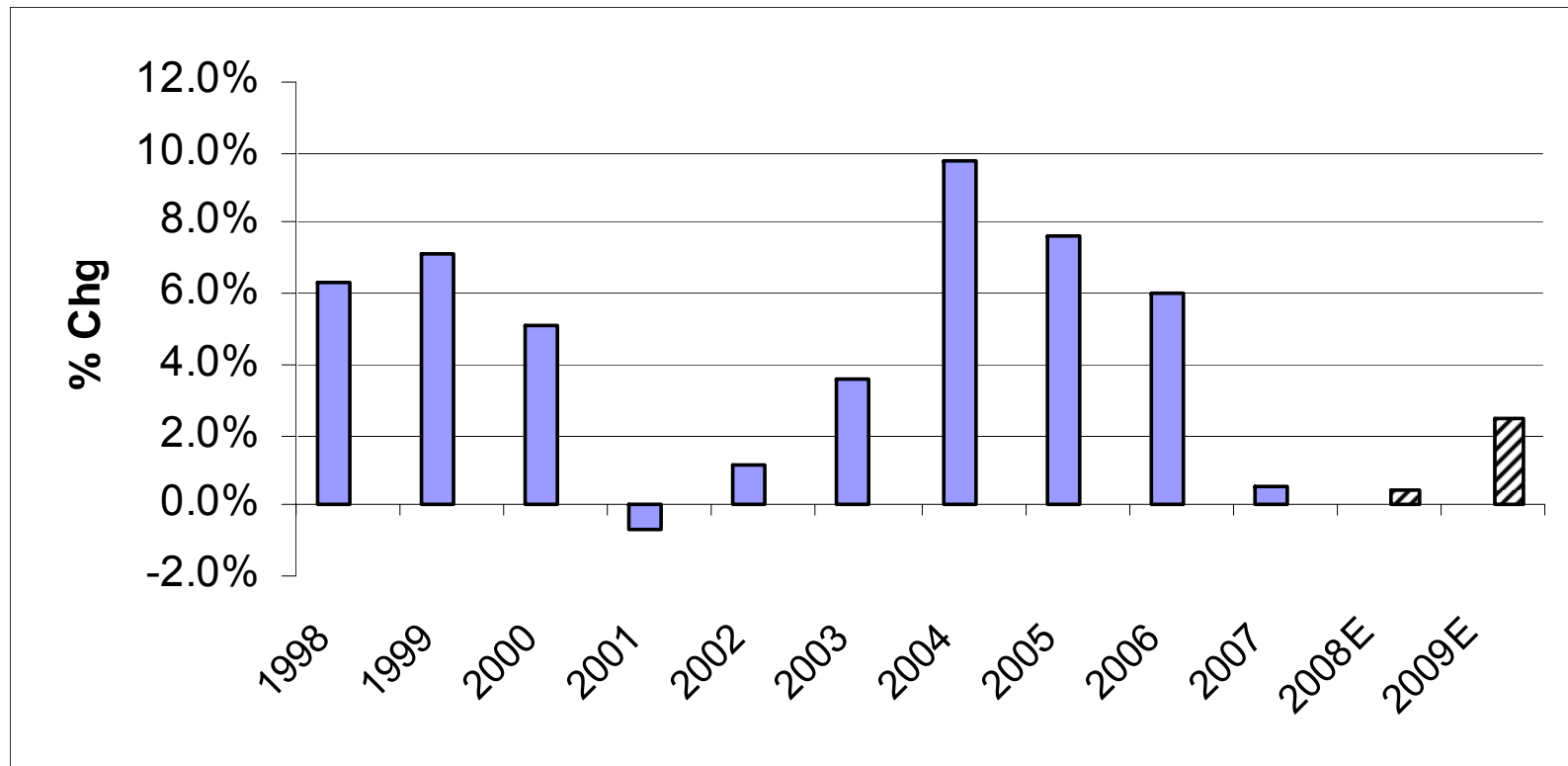
# TOTAL PACKAGE MACHINERY SHIPMENTS BY MARKET SEGMENT

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# Annual Growth of US Packaging Machinery Shipments

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Source: Packaging Machinery Manufacturers Institute

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# Machine Tool Industry

*Back To Basics: Macroeconomics Will Drive  
Spending on Machine Tools*

# Macroeconomic Factors Will Drive Machine Tool Spending

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- Growth in industrial production
- Rising operating rates
- Need for increased/sustained productivity gains
- Improving financial performance of customers
- Repair balance sheet of customers

## Key Issues:

- Will automotive spending increase for retooling to sell small cars?
- U.S. market continues to be dominated by foreign products with a market share of about 75%.
- Will currency matter?

# MACHINE TOOL CONSUMPTION FOLLOWS ECONOMIC ACTIVITY

U.S. MACHINE TOOL CONSUMPTION									
DOLLARS IN MILLIONS	2001	2002	2003	2004	2005	2006	2007E	2008E	2009E
METAL CUTTING	\$2,445	\$1,927	\$1,790	\$2,658	\$2,871	\$3,762	\$4,021	\$4,343	\$4,116
% CHANGE	-31.4%	-21.2%	-7.1%	48.5%	8.0%	31.0%	6.9%	8.0%	-5.2%
METAL FORMING	\$223	\$237	\$190	\$185	\$196	\$182	\$241	\$252	\$250
% CHANGE	-51.2%	6.0%	-20.0%	-2.2%	5.7%	-6.9%	31.9%	4.8%	-0.8%
TOTAL	\$2,669	\$2,164	\$1,980	\$2,843	\$3,067	\$3,944	\$4,262	\$4,595	\$4,366
% CHANGE	-33.7%	-18.9%	-8.5%	43.6%	7.9%	28.6%	8.0%	7.8%	-5.0%

SOURCE: AMT, Longbow



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## **Fluid Power**

*Inventory Levels and Construction  
Markets Are Key*

# Fluid Power Industry

	<i>Market Change</i>									
	2000E	2001E	2002E	2003E	2004E	2005E	2006E	2007E	2008E	2009E
<b>Mobile</b>										
Farm machinery	-2%	8%	-5%	-2%	18%	0%	-3%	8%	8%	8%
Lawn & garden	9	-20	-3	5	15	7	-7%	-8%	-10%	5%
Construction	-1.5	-20	-10	5	24	9	-3%	-15%	-10%	-5%
Mining	-5	-10	-20	-10	35	14	12%	-15%	-10%	-5%
Mobile/aftermarket	3	-20	3	3	20	7	5%	-20%	0%	20%
Other	15	-25	5	-10	16	6	10%	3%	3%	5%
<i>Total--Mobile</i>										
<b>Industrial</b>										
Machine tools	3.3	-23.3	-36.4	4.7	30	17	24	6%	5%	-5%
Paper machinery	3	-10	-5	0	10	0	7	7%	3%	3%
Food	5	-10	5	3	5	5	7	7%	3%	3%
Chemical	3	-10	7	3	7	8	10	12%	12%	12%
Plastics	8	-30	-13	-10	7	-10	5	-5%	3%	3%
Packaging	5.1	-0.7	1.1	3.6	10	8	4	0%	0%	3%
Industrial aftermarket	7	-15	8	3	10	4	3	7%	5%	5%
Other	15	-19.5	8	-15	9	2	2	6%	4%	4%
<i>Total--Industrial</i>										
<b>Total</b>										
<b>Total Change in Fluid Power Market</b>	6.3%	-19.8%	-4.7%	-3.1%	21.5%	7.2%	4.2%	-3.0%	-0.5%	3%

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# **INDUSTRIAL MARKETS 2008-2009 AND BEYOND:**

**How Much Pain Before Any Gain?**

*Speech to NFPA Economic Outlook Conference*

*Eli S. Lustgarten*

*Senior Vice President, Longbow Securities*

*August 19-20, 2008*