

The image features a dark blue background with a white 'MITTAL' logo in the top right corner. The background also includes a photograph of a modern building with a curved, metallic facade, likely the Pritzker Center for Music at the University of Chicago. The building's surface is composed of large, rectangular panels that reflect light, creating a shimmering effect. The sky is a clear, deep blue.

MITTAL

Steel Industry Outlook  
Federal Reserve Bank of Chicago  
December 2005

Robert J. DiCianni  
Mittal Steel USA

# Outline



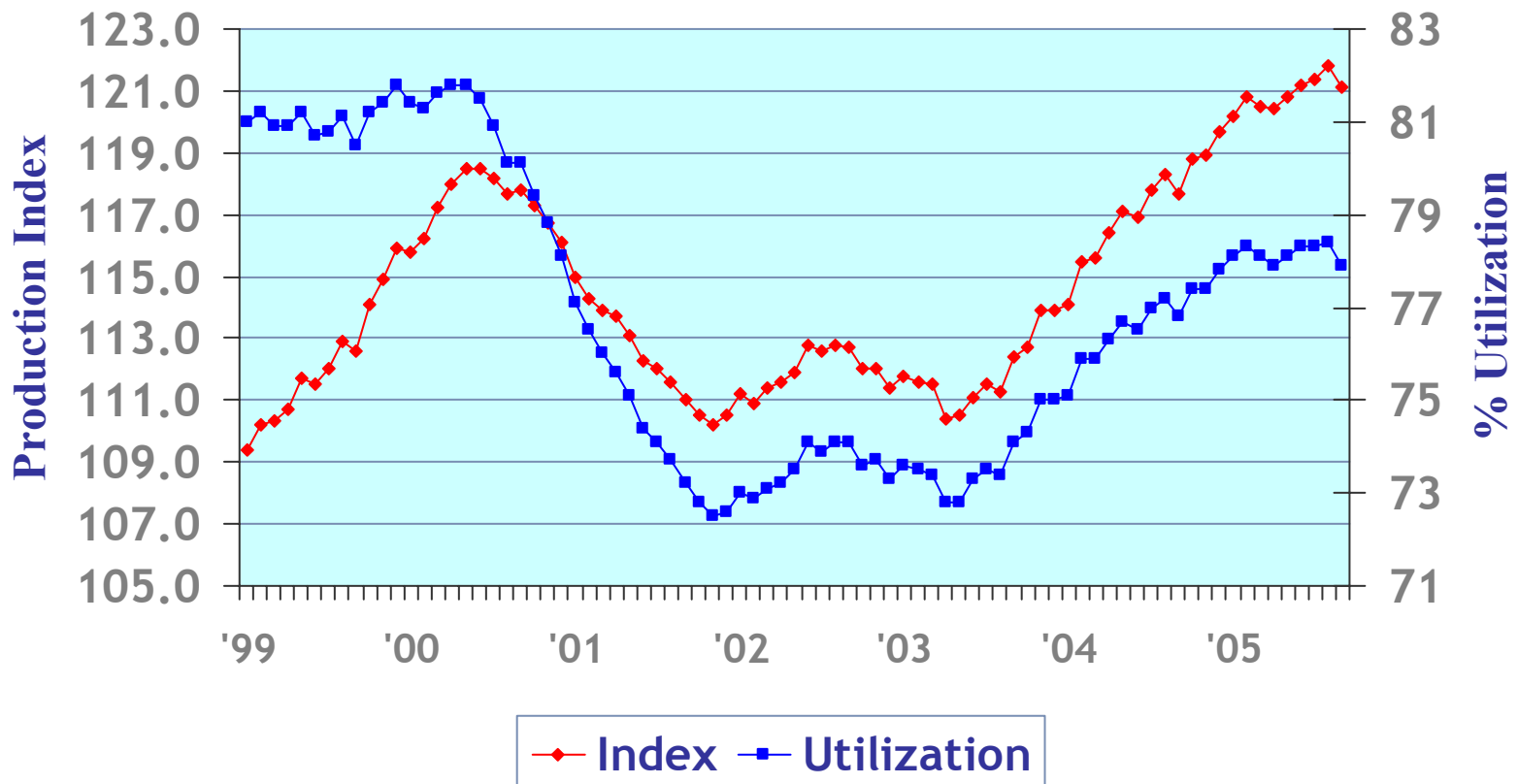
- Overall Outlook
- End Market Outlook
- 2006 Forecast
  - Steel Demand
  - Prices
- Inputs and other factors

# Economic Outlook for 2006



	2004	2005	2006
• GDP	4.2%	3.5%	3.3%
• Industrial Production chge	4.1%	2.7%	3.0%
• Business Inventory Chge \$b	49.9	22.7	31.7
• Auto sales (million units)	16.9	17.0	17.1
• Housing Starts (mil units)	1.95	2.03	1.83
• Consumer Sentiment	95.2	87.4	91.9
• CPI	2.7%	3.5%	2.7%
• Mfg Capacity Utilization	76.7%	78.3%	78.9%

# Industrial Production Manufacturing Only

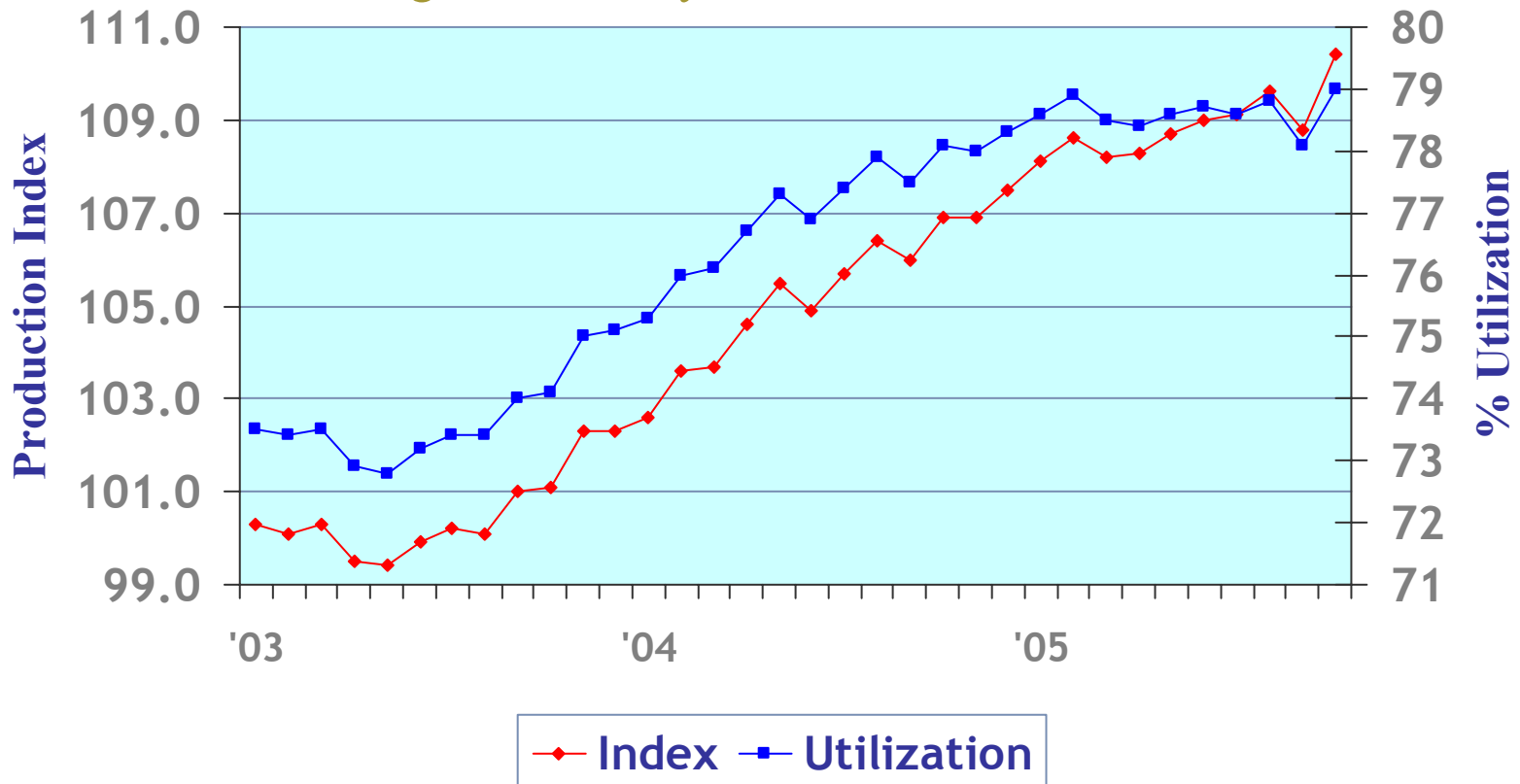


**Manufacturing Production Index and Capacity Utilization**

# Industrial Production Manufacturing Only



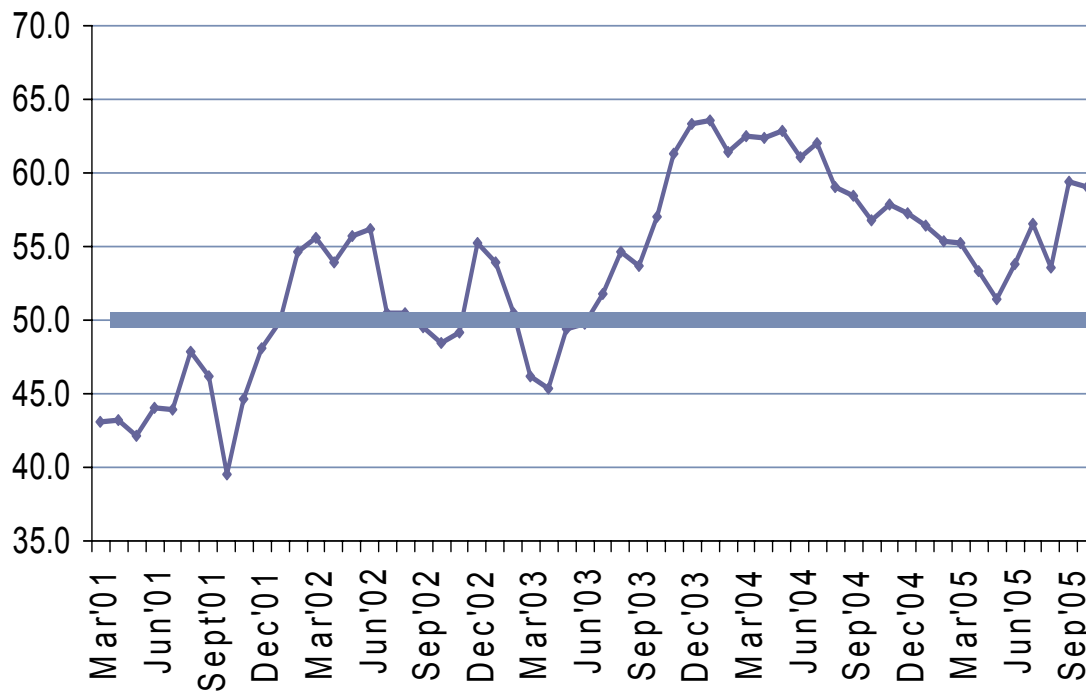
Note that on November 7, 2005 the Federal Reserve changed the base year to 2002



Manufacturing Production Index and Capacity Utilization

# ISM Manufacturing Index

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**This ISM index has continued to show forward growth in the manufacturing sector.**

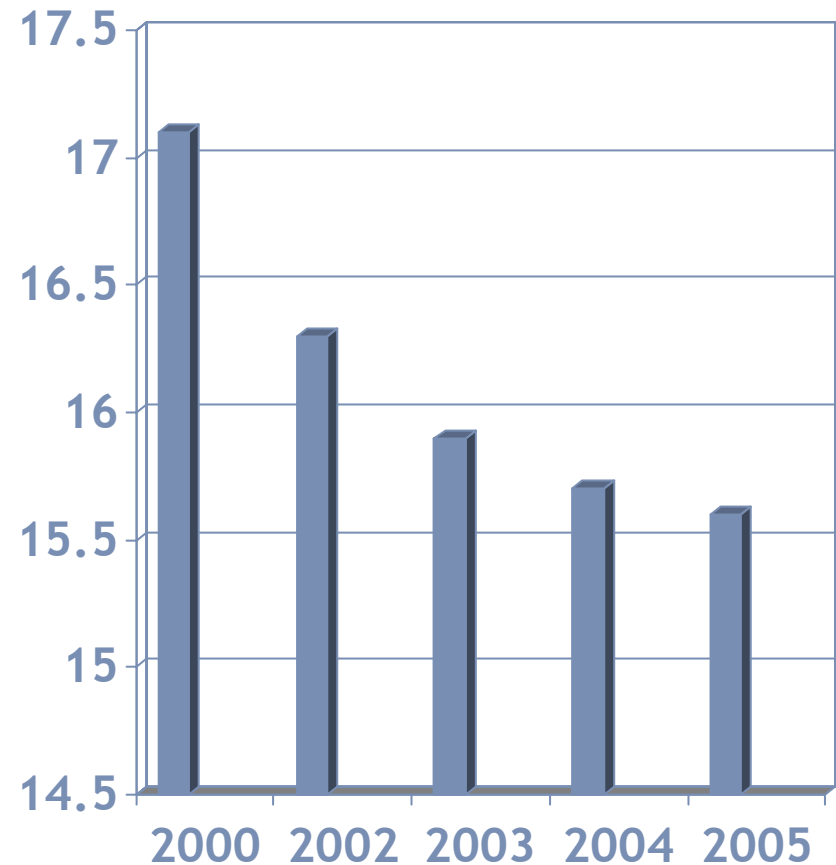
Over 50 indicates expansion in manufacturing.

# Automotive



- Market has underperformed for three straight years
- Imports continue to rise; from 3.2 million in 2002 to 4.2 million in 2005
- About one ton of flat rolled steel per vehicle; 350 pounds of bars and other per vehicle

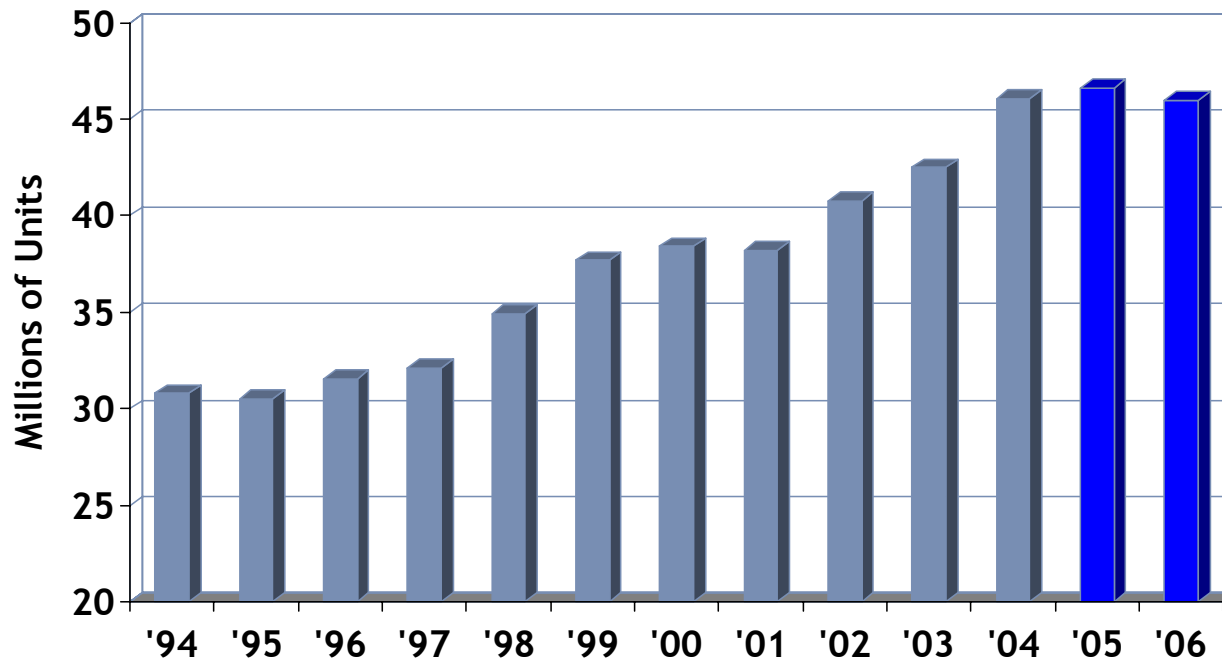
NA production  
(millions of units)



# Major\* Appliance Annual Shipments



## History and Forecast



**Appliance shipments drop from record levels as housing starts fall. 1.9m ton market**

Forecast = 

\* Washers, Dryers, Dish Washers, Refrigerators, Freezers, Free-Standing Ranges, Built-in Ranges



# Electric Machinery



- Electric motors feed everything
- U.S. demand is steady
- Chinese motors are staying in China
- Significant growth in Mexico
- Industry has gone through significant consolidation
  - AOSmith
  - Regal/Beloit
  - Emerson
- Hurricanes spurring demand
- 2005 = 1.6m tons
- 2006 = 1.6m tons

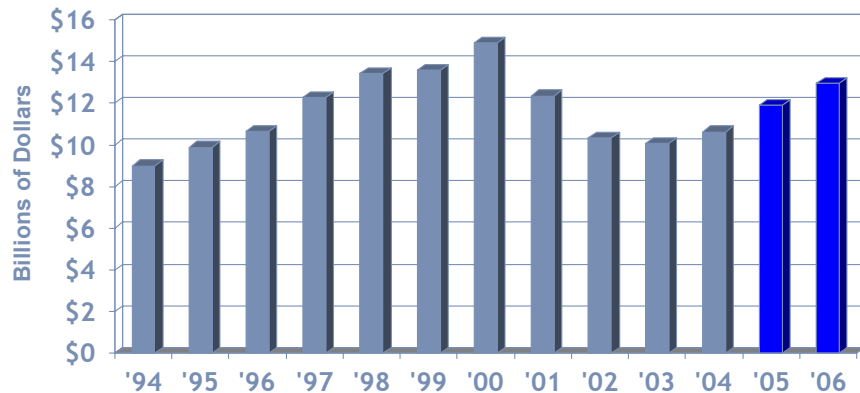
# Commercial and Industrial



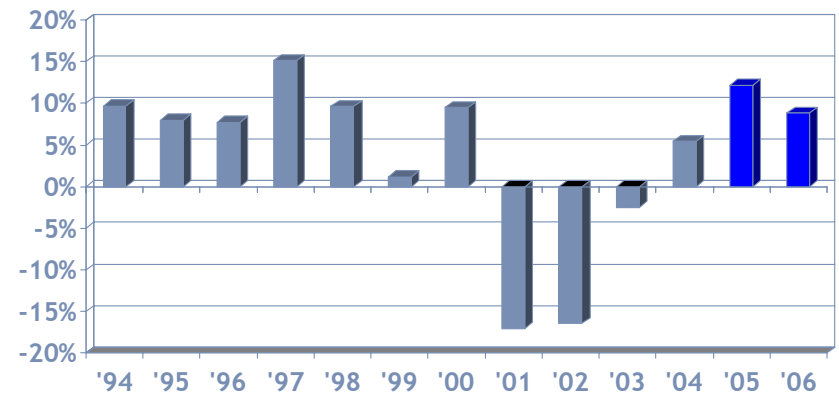
- Fasteners
- Hand Tools
- Containers
- Cans
- Office Furniture
- Material Handling Equipment
- Storage Tanks
  
- 2005 = 7.9m tons
- 2006 = 8.0m tons

# Office Furniture Consumption

Office Furniture Consumption



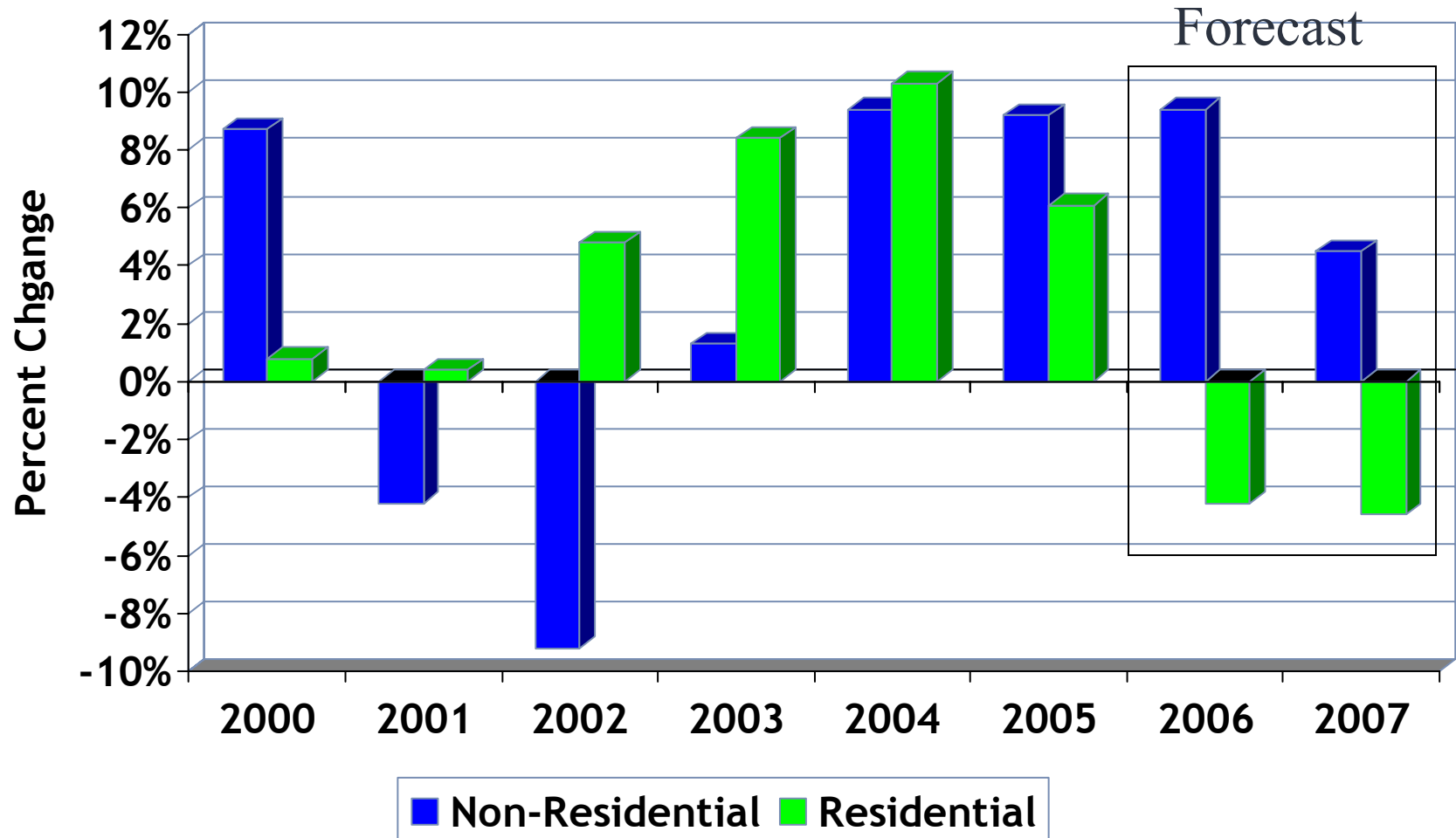
Change in Consumption



The Office Furniture market will continue its recovery as business investment continues to expand.

# Fixed Investment - USA

## Non-Residential and Residential



# U. S. Steel Service Center Total Shipments & Inventories

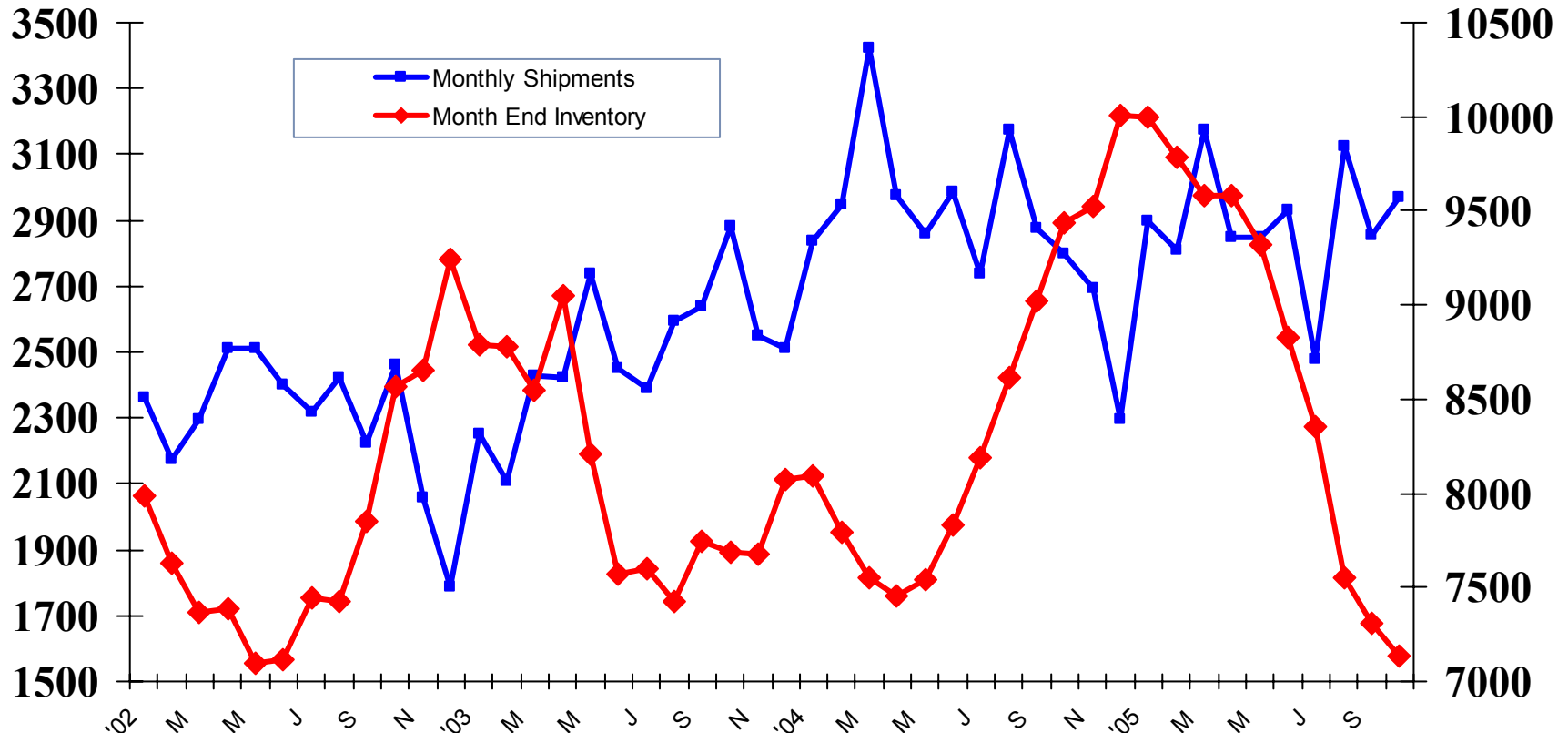


## Carbon Flat Rolled

Based on a representative sample of the U.S. Service Center Industry

Monthly Shipments ,000 Tons

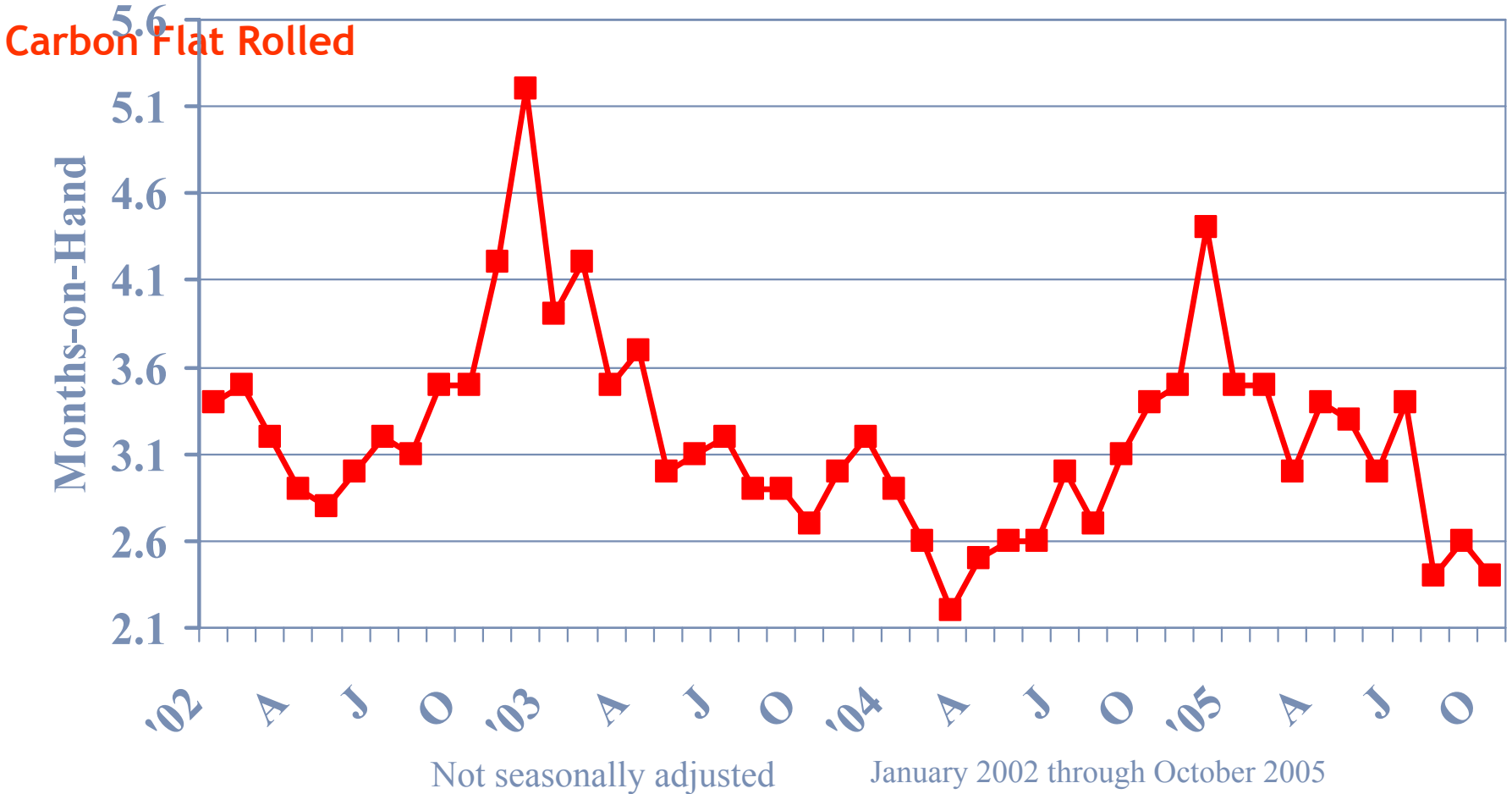
Ending Inventory ,000 Tons



# U. S. Steel Service Center

## Number of Months Shipments on Hand

Based on a representative sample of the U.S. Service Center Industry

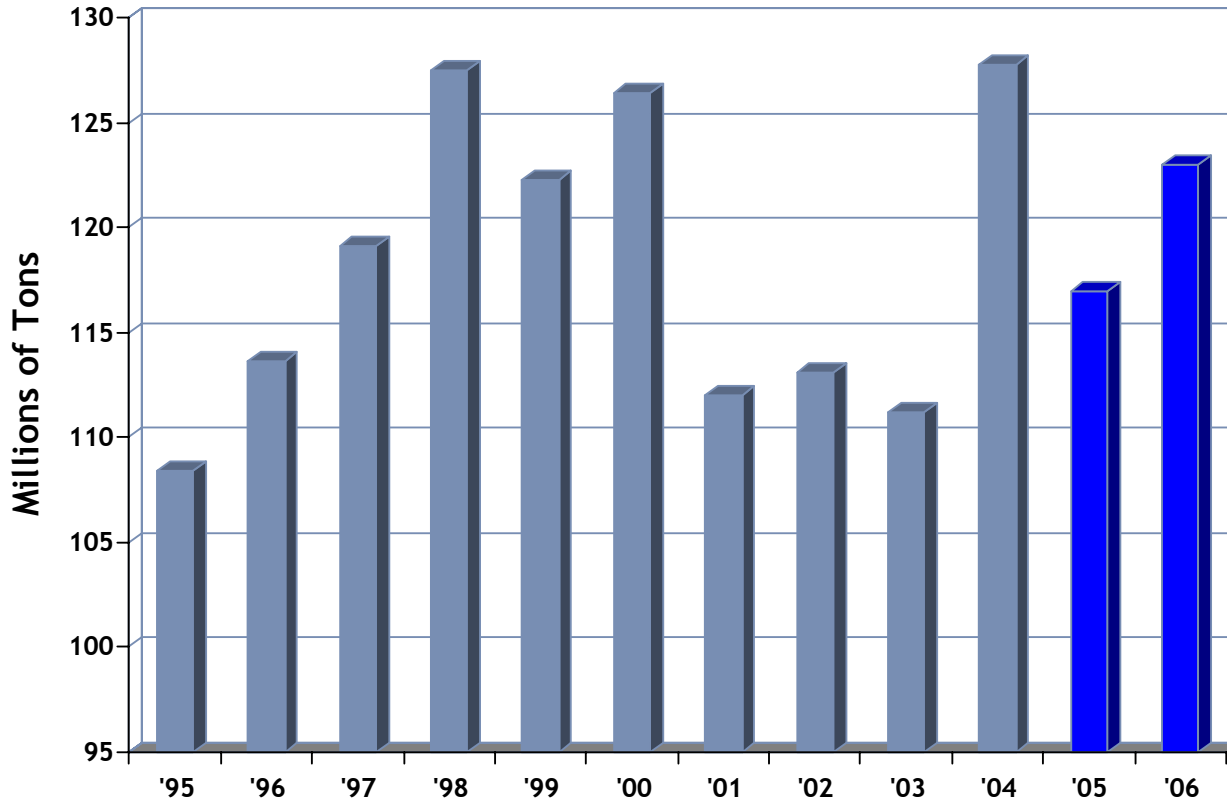


## U.S. Segment Demand Forecast

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<u>Segment</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>% Change</u>
Automotive	10.8	10.9	10.9	0%
Appliance	1.9	1.9	1.8	-5.2%
Construction	8.4	9.4	9.7	+3.1%
C & I	7.6	7.9	8.0	+1.5%
EMM	1.5	1.6	1.6	0%
Distribution	26.4	23.2	25.6	+10.3%
Imports	10.8	6.3	6.4	+1.5%
<b>Totals</b>	<b>67.4</b>	<b>60.2</b>	<b>63.8</b>	<b>+5.9%</b>

# Apparent Steel Consumption - USA

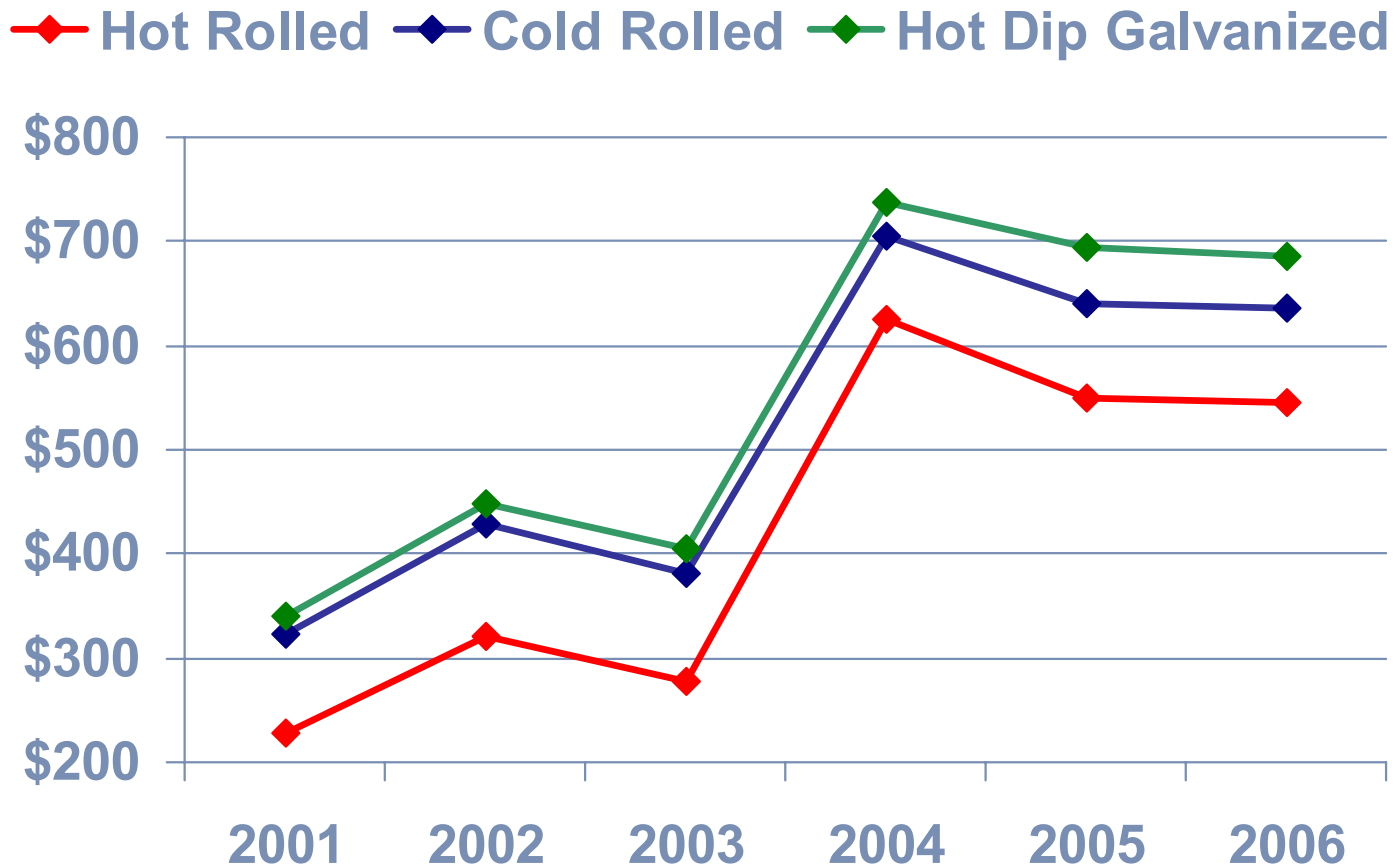


2004 and 2005 were impacted by abnormal swings in inventory. Service center inventories grew by over 4 million tons in 2004. By August 2005, the entire 4 million tons was consumed. This means the Apparent Steel Consumption in 2004 overstates actual consumption by 4 million tons and that the Apparent Steel Consumption in 2005 understates actual consumption by 4 million tons.

Apparent consumption = AISI shipments + finished imports – exports

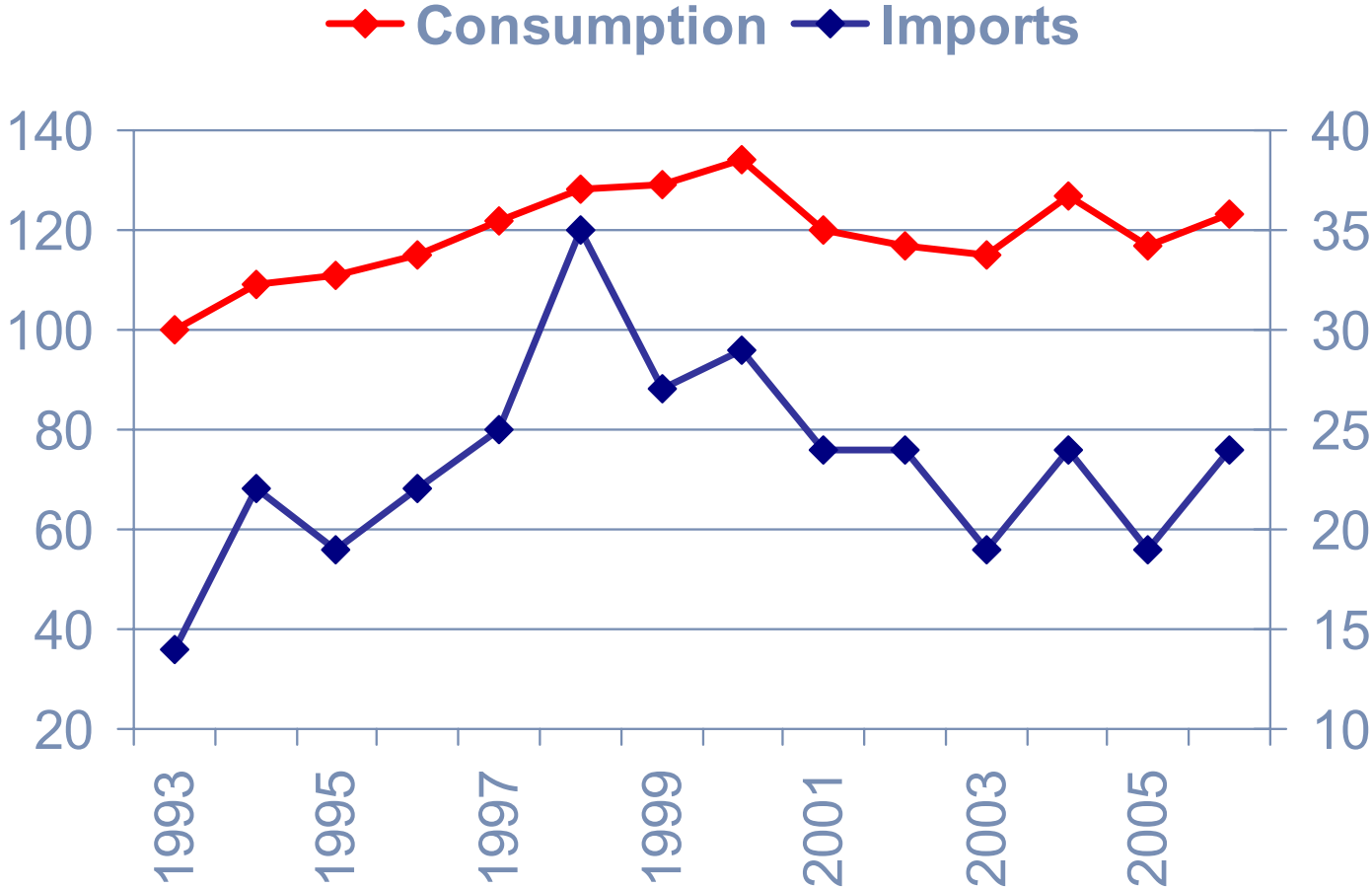


# Steel Prices



Source: Purchasing Magazine

# U.S. Steel Consumption with Imports



Source: Global Insights

# Trends

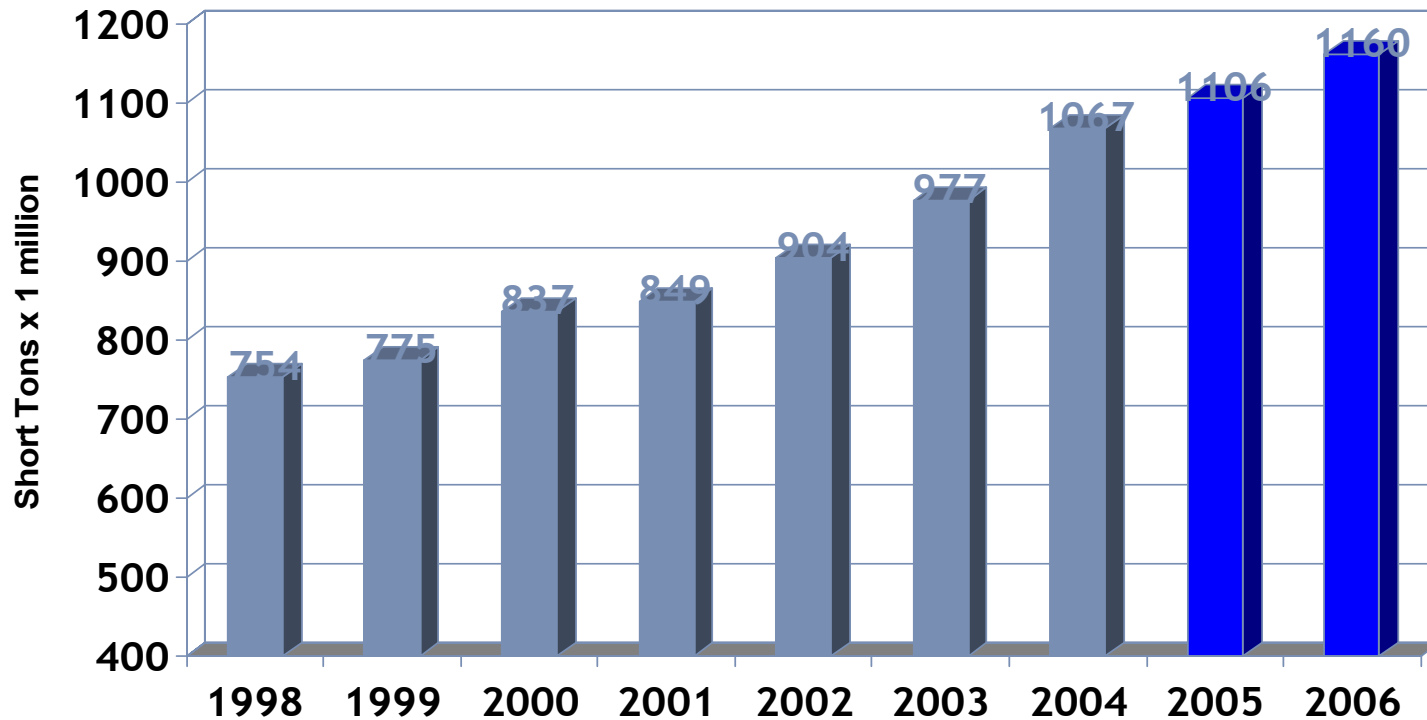


- Global demand is growing
- Lack of investment in infrastructure has put pressure on the global industry
- Production cost increases
- China still leads consumption growth

# Global Apparent Steel Consumption



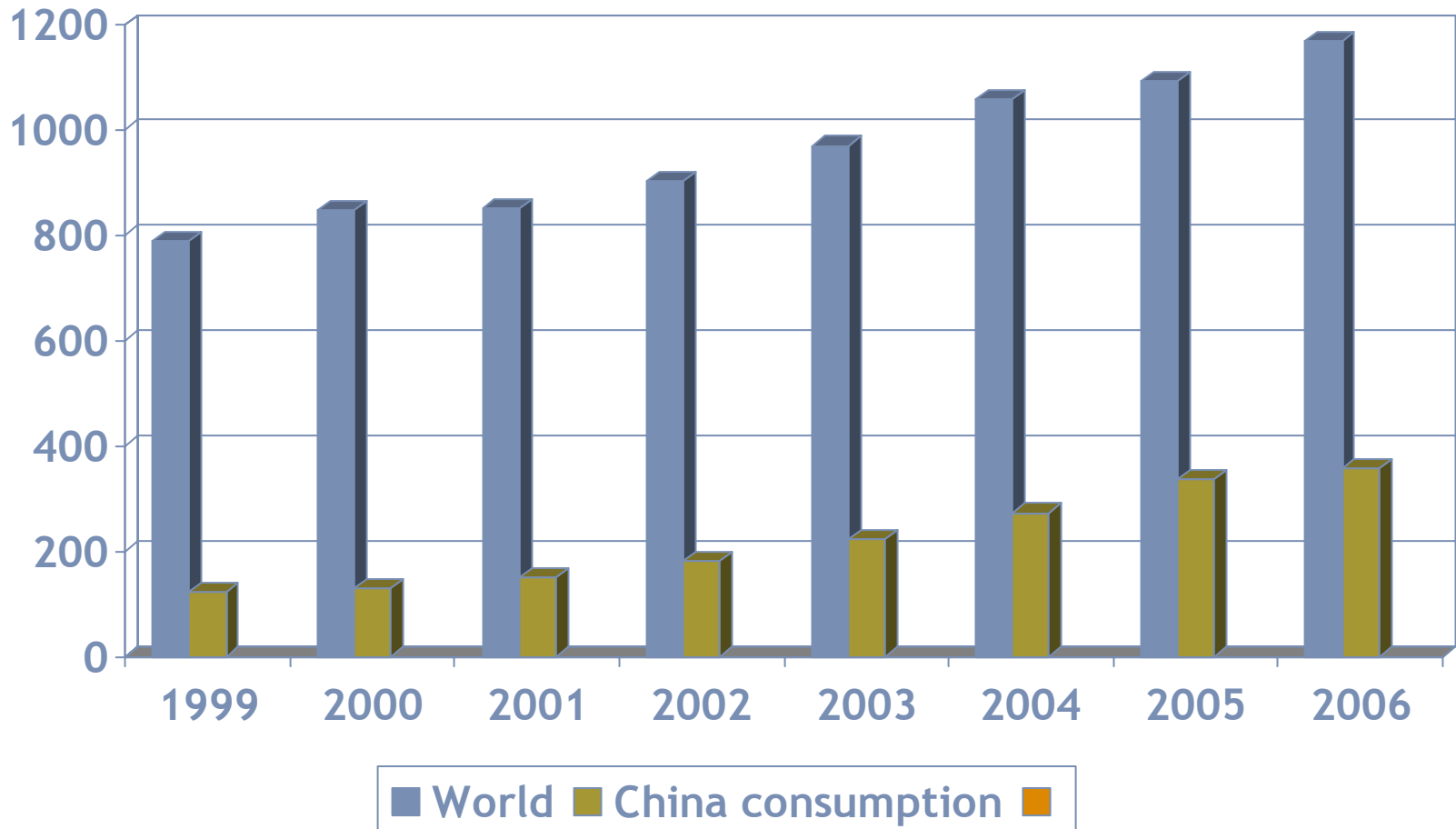
1998 through 2004



Forecast is for an increase of another 100 million tons from 2004 to 2006.

# World and China Consumption

000s of tons



# Trends



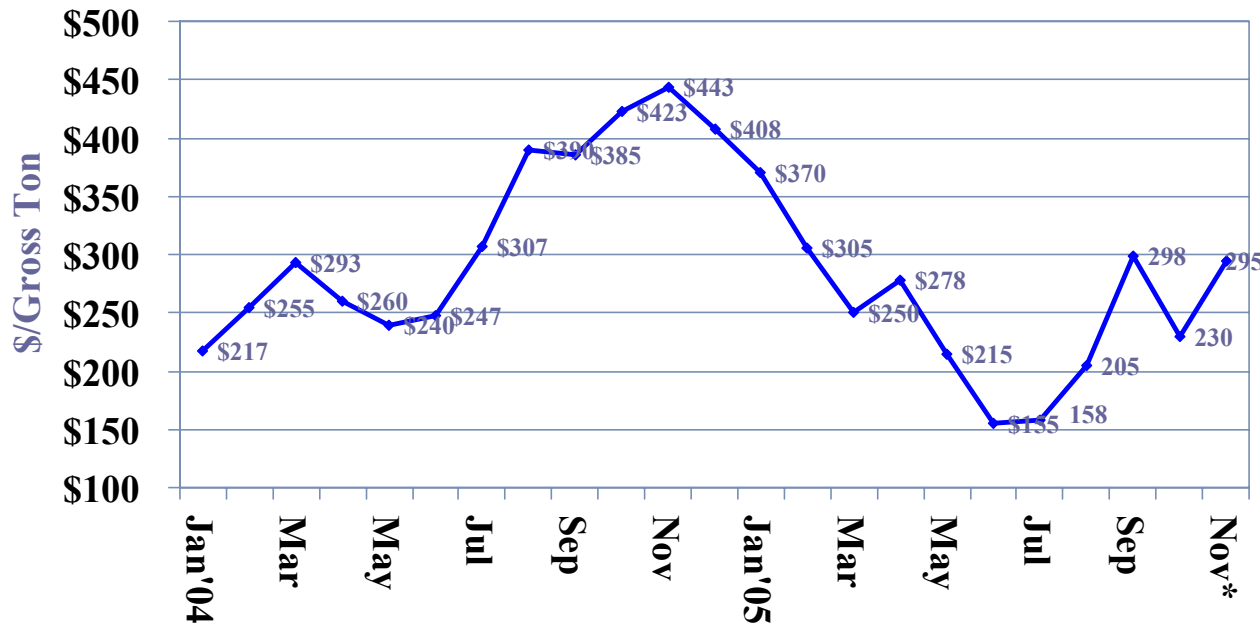
- 2004 saw an explosion in demand for iron ore and coke.
- Mills were caught flat footed by the surge in raw materials prices in 2004 and 2005
- Iron ore and coke prices are up so substantially that sizable increases in capacity to produce these materials are occurring now.
- New capacity should limit increases in costs for iron ore and coke over the next few years.
- Alloys are still very expensive

# Scrap



- Moderate gains in global steel demand produce huge increases in actual metallics requirements (iron, scrap, or scrap substitutes)
- The industry will have a metallics supply problem on a long term basis
- International trade in steel scrap will rise as steelmakers find the supply is not sufficient in their home markets
- 550 million tons of scrap required; 700 to 800 million tons of iron

# Prices - Scrap Steel Auto Bundles Purchasing Magazine



January 2004 through October 2005 plus November projected

Scrap exports had increased significantly but are now beginning to fall. Supply of scrap substitutes are now beginning to flow into the USA again and scrap processing has increased. Some scrap price moderation is expected.



# 2006 Forecast



- The economy will continue to grow only at a slower pace
- Housing starts will drop from record levels
- Auto production steady
- Appliance shipments will decrease slightly from record levels
- Non-residential construction will increase, some of it hurricane driven
- Inventories will increase
- Imports will increase
- Steel consumption will increase and apparent consumption will increase even more vs 2005
- Oil prices remain a risk