Steel Industry Outlook
Federal Reserve Bank of Chicago
December 2005

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Outline

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

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

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

Over 50 indicates expansion in manufacturing.

Source: Institute for Supply management
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
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

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

BIFMA History and Forecast as of November 2005
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

Not seasonally adjusted January 2002 through October 2005
U. S. Steel Service Center

Number of Months Shipments on Hand

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

Not seasonally adjusted January 2002 through October 2005

Carbon Flat Rolled
## U.S. Segment Demand Forecast

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

Consumption

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

1999 2000 2001 2002 2003 2004 2005 2006

World  China consumption
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
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