Steel Market Outlook
Agenda

• Economic indicators

• Key steel consuming markets and forecasted demand

• Steel consumptions trends

• Global steel markets and raw materials

• Comments on trade
U.S. Gross Domestic Product (GDP) From 2016

Real GDP Growth vs. Prior Years 2000-2015, Forecast 2016-2017
Source: U.S. Department of Commerce; IHS November 2016
- The economy is improving in 2017 and 2018 after a weak 2016.
- Primary drivers of growth will be improvement in consumer spending and business spending as business confidence has improved significantly in 2017.
- Improving markets in the EU and Asia will also help USA growth.
Industrial Production Index (IP) from 2016

Percent Change in Index vs. Prior Years 2000-2015, Forecast 2016-2017

Source: U.S. Federal Reserve Board; base year for index 2012: November IHS forecasts.
Industrial Production Index (IP)
Sources: U.S. Federal Reserve Board; Oxford Economics Oct 2017 forecast

Business spending is increasing, supported by:
- Improvements in business confidence
- Improvements in US exports
- Increased spending for labor productivity as the labor market tightens
Steel Consuming Markets
• Auto sales are soft because all pent up demand from the recession has been used up, both on the retail side and the fleet side of the market, interest rates are increasing, a large number of good used vehicles are coming off lease, the OEMs are less aggressive with incentives than expected, and there is a lack of new launches compared to previous years.

• The major drivers for sales now are replacement and an expanding economy. Fortunately the fleet is very old with the average vehicle on the street just over 11.5 years old. Therefore a lot of replacement is needed.

• Low gasoline prices continue to increase demand for trucks to an extent that is surprising analysts. Truck market share finished 2016 at 62% and through June 2017 it has increased even more to 63%. Recovery in the housing market is also contributing to the strong market for trucks.
Residential construction spending increased 5% in 2016, slower than in each of the previous four years. FMI expects growth to proceed at a similar pace in 2017 and 2018.

Nonresidential building construction spending increased 6% in 2016, also slower than in recent years, and is projected by FMI to post similar-sized gains during the forecast horizon.

Nonbuilding construction is seen averaging 5% growth in 2017 and 2018.
USA Energy Market Steel Demand
(millions of tons)

Preston optimistic case for 2017 was 8.2m tons

Source: Preston Pipe and Tube Report, November 2017
U.S. Service Center Data: Carbon Flat Roll
Shipments, Inventory, and Months-on-Hand

Service Center Monthly Shipments and Inventory

Inventory

Service Center Monthly Shipments and Inventory

Shipment Inventory

Months on Hand

U.S. Service Center Data:

Shipments, Inventory, and Months-on-Hand
Steel markets direction in 2017 & 2018

<table>
<thead>
<tr>
<th>Industry</th>
<th>2017 &amp; 2018 Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td></td>
</tr>
<tr>
<td>Residential Construction</td>
<td>Up</td>
</tr>
<tr>
<td>Non-residential Construction</td>
<td>Up</td>
</tr>
<tr>
<td>Machinery</td>
<td></td>
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<tr>
<td>Appliance</td>
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<tr>
<td>Infrastructure</td>
<td></td>
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<tr>
<td>Energy</td>
<td></td>
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<tr>
<td>Steel Inventories</td>
<td></td>
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</tbody>
</table>

- Auto growth is in Mexico in 2018. USA market is flat.
- Non-res construction will add about 500k in 2018.
- After being negative in 2015 and 2016 energy activity will see positive demand in 2017 & 2018.
- Steel inventories started 2017 at low levels, are rebuilding this year, and will continue to rebuild in 2018.

Source: AMUSA analysis
# USA apparent steel consumption

<table>
<thead>
<tr>
<th>Year</th>
<th>Short tons (in millions)</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>106</td>
<td>1%</td>
</tr>
<tr>
<td>2014</td>
<td>118</td>
<td>12%*</td>
</tr>
<tr>
<td>2015</td>
<td>106</td>
<td>-11%</td>
</tr>
<tr>
<td>2016</td>
<td>101</td>
<td>-5%</td>
</tr>
<tr>
<td>2017</td>
<td>106</td>
<td>5%</td>
</tr>
<tr>
<td>2018</td>
<td>109</td>
<td>3%</td>
</tr>
</tbody>
</table>

*About 3 million tons of the 2014 increase was an inventory overbuild due to a late year surge in imports.*
Steel consumption trends
Weekly US raw steel production
Capacity utilization

Source: American Iron & Steel Institute

As of 11/11/17
74.6%
Average Daily Shipment Rate: Y/Y % Change

-30%  -25%  -20%  -15%  -10%  -5%  0%  5%  10%  15%  20%


Plate Flat Roll Pipe & Tube

Shipments | Flat Roll | Plate | Pipe & Tube
---|---|---|---
Jan-Sep 2016 | 19,530 | 2,494 | 1,781
Jan-Sep 2017 | 19,896 | 2,632 | 1,687
Diff: Tons | 366 | 137 | -94
Diff: % | 2% | 6% | -5%
U.S. Flat Roll Imports and Import % of ASC (Carbon Only)

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017 YTD (Sept)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Import % of ASC</td>
<td>14%</td>
<td>21%</td>
<td>21%</td>
<td>18%</td>
<td>18%</td>
</tr>
</tbody>
</table>
Steel Production and Apparent Demand
Source: AISI, U.S. Department of Commerce

**Domestic Shipments**

- 2014: 24.9, 22.0, 22.0, 21.5, 22.6, 22.8, 23.0, 22.2, 20.7, 22.6, 22.8, 23.0

**Finished Imports**

- 2014: 8.4, 8.2, 8.2, 8.2, 7.3, 6.3, 6.4, 7.0, 6.5, 6.9, 8.1, 7.9
- 2015: 8.7, 7.1, 7.3, 7.7, 6.4, 6.4, 6.5, 6.9, 7.9, 8.1, 7.9

**Exports**

- 2014: 3.2, 2.9, 2.7, 2.6, 2.5, 2.2, 2.3, 2.6, 2.8, 2.6, 2.9
- 2015: 3.1, 2.6, 2.5, 2.2, 2.3, 2.6, 2.8, 2.6, 2.9

**Apparent Consumption (ASU)**


- 2016: 30.1, 28.4, 27.1, 26.5, 23.5, 25.0, 26.1, 25.7, 24.5, 27.6
USA Apparent Steel Consumption
million of short tons

Drop in ASC in select recessions
1953 – 22%
1957 – 22%
1973 – 23%
1981 – 27%
2009 – 41%

Source: AISI, AM Marketing
The U.S. manufacturing trade deficit is projected at $868 billion in 2017 (based on 7 months of data annualized), a increase of $2 billion from 2016.

The U.S. indirect steel trade deficit posted another sizable increase in 2016, climbing to 23.9 million net tons from 21.4 million net tons in 2015.

In 2016, China accounted for well over one-third (35.6%) of the total U.S. indirect steel trade deficit.
Global Steel Demand

WSA - Global Apparent Steel Consumption

- ASC: million metric tons
- % Change Y/Y

2006: 1,139
2007: 1,218
2008: 1,226
2009: 1,151
2010: 1,412
2011: 1,439
2012: 1,528
2013: 1,540
2014: 1,500
2015: 1,516
2016f: 1,622
2017f: 1,648
2018f: 1,648

% Change Y/Y:
- 9.2%
- 0.7%
- -6.1%
- 13.7%
- 7.9%
- 1.9%
- 6.2%
- -2.6%
- 0.7%
- 7.0%
- 1.1%
- 16.0%
- 1.6%


WSA - Global ASC Growth Forecast by Region

- NAFTA: 4.9% (2017f), 1.2% (2018f)
- EU28: 2.5% (2017f), 1.4% (2018f)
- CIS: 3.6% (2017f), 3.8% (2018f)
- C&S America*: 2.5% (2017f), 4.7% (2018f)
- China: 12.4% (2017f), 0.0% (2018f)
- Global: 7.0% (2017f), 1.6% (2018f)

* Central and South America
Steelmaking Raw Material Input Costs
2014-2016 Averages and 2017 YTD

All charts in $ per metric ton except for Scrap

#1 Busheling Midwest Scrap ($/GT)  Iron Ore 62% Delivered to China  Premium Hard Coking Coal FOB DBCT*

Source: MBR
Summary

• In 2017 and 2018 steel markets will expand after 2 years of contracting

• Energy is a major contributor of the improvement

• Consumer confidence and business confidence are surging since the election

• Markets are anticipating the administration’s policies will continue support a strong revival of industrial markets

• 2016 decisions on trade will continue to limit the impact of imports....but

• Raw materials will remain volatile for the next several years

• Unlike the last few years the risk is more to the upside than the down side
Trade

- 232
- TPP
- NAFTA