Laying the foundations for a financially sound industry

Steel Committee meeting
Paris, December 5th, 2013
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• The global steel industry is not financially sustainable

• The outlook remains challenging

• Long term financial health might be elusive without significant restructuring
A large portion of the steel industry has operated with negative cash flows even in benign conditions

Cash flow¹ for sample of 72 steel players, USD billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow</th>
<th>% Players with Negative Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>3.0</td>
<td>33%</td>
</tr>
<tr>
<td>2003</td>
<td>1.9</td>
<td>18%</td>
</tr>
<tr>
<td>2004</td>
<td>0.8</td>
<td>13%</td>
</tr>
<tr>
<td>2005</td>
<td>0.7</td>
<td>22%</td>
</tr>
<tr>
<td>2006</td>
<td>0.9</td>
<td>22%</td>
</tr>
<tr>
<td>2007</td>
<td>1.0</td>
<td>17%</td>
</tr>
<tr>
<td>2008</td>
<td>1.5</td>
<td>34%</td>
</tr>
<tr>
<td>2009</td>
<td>3.1</td>
<td>62%</td>
</tr>
<tr>
<td>2010</td>
<td>2.4</td>
<td>36%</td>
</tr>
<tr>
<td>2011</td>
<td>3.0</td>
<td>41%</td>
</tr>
<tr>
<td>2012</td>
<td>4.2</td>
<td>56%</td>
</tr>
</tbody>
</table>

¹ Total operating cash flow minus capital expenditures minus interest expenses

SOURCE: S&P Capital IQ
The leverage level of the steel industry is increasing

Net debt / EBITDA margin for selected 72 companies

% 2002-2012

Net debt / EBITDA

Times

0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5

2002 03 04 05 06 07 08 09 10 2011 2012

Pre-2003: Price-margin squeeze

2003-2008: Margin improvement and upstream integration

2008-12: Margin deterioration and excessive leverage

SOURCE: S&P Capital IQ
EBITDA margins have deteriorated

Average EBITDA margin in the steel industry¹

Steel industry reached financial sustainability only on the back of an immense credit bubble in the global economy.

Minimum required global average EBITDA margin for long-term sustainability: 17%

Average EBITDA margin (2010-13): 10%

1 Considering sample of 65 companies
2 Consensus forecast

SOURCE: Bloomberg
EBITDA must cover all stakeholder obligations

**Measurement used**

- Net earnings (after stakeholders costs)
- Investment / reinvestment into the business
- Interest payment to debt holder
- Tax to government
- Unfunded liabilities (e.g., pension funds, …)
- Return to shareholders

- CAPEX (during period of low investment, i.e. mostly maintenance CAPEX occurring)
- Average cost of debt
- Effective tax rate
- Unfunded liabilities, gap to be closed in medium term
- Average cost of equity

SOURCE: McKinsey
Meeting current stakeholder obligations requires a 17% global average EBITDA margin

<table>
<thead>
<tr>
<th>Required EBITDA for long term sustainability (global average)(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD / ton, Hot rolled 2012</td>
</tr>
<tr>
<td>2012 EBITDA</td>
</tr>
<tr>
<td>52</td>
</tr>
</tbody>
</table>

54 USD / ton

The global steel industry must generate additional **USD 76 Bn** at current production level to become sustainable.

**Assumptions\(^1\)**
- Capex ~7% of revenues
- 7% cost of debt
- ~250 USD/ton of debt
- Average unfunded liabilities (gap to be closed in medium term)
- 25% effective tax rate
- 9% cost of equity
- ~325 USD/ton of equity

\(^1\) Considering sample of 83 companies

\(^2\) Assumes a price of 634 USD/ton in 2012 for hot rolled

**SOURCE:** McKinsey analysis; Bloomberg; MEPS
For any greenfield capacity expansion, the sustainable EBITDA margin is even higher

Required EBITDA for new greenfield capacity

USD / ton, HRC 2012

- Typical EBITDA
- Sustainable EBITDA for new capacity: 140-200
- Capex cost: 40-50
- Debt cost: 35-50
- Tax cost\(^1\): 15-30
- Equity cost: 50-70

\(\text{~70-150 USD/ton}\)
\(\text{~50-70}\)

\(\text{25-30\%}\)

**SOURCE:** McKinsey analysis

\(\text{\(\text{xx} \) EBITDA margin}\)
Contents

▪ The global steel industry is not financially sustainable

▪ **The outlook remains challenging**

▪ Long term financial health might be elusive without significant restructuring
EBITDA margin range expected to be lower than in the past


EBITDA %

- 2007 "peak": 17
- Recent "slope" erosion: 3
- Mid-term "peak": 14
- Mid-term Cycle bottom: 7
- Cycle range: 7

1 Overcapacity defined as (crude steel capacity) - (crude steel equivalent of finished steel apparent steel demand)

SOURCE: McKinsey Analysis
The global steel industry is not financially sustainable

The outlook remains challenging

Long term financial health might be elusive without significant restructuring
The size of the EBITDA pool in any industry is driven by 3 factors:

1. **Capacity utilization**
   \[ CU = \frac{Demand}{Capacity} \]

2. **Slope of the cost curve**
   \[ \text{Slope} = \frac{C_{90}}{C_{10}} \]

3. **Margin over marginal cost**
   \[ P_{Pr} = \frac{Price}{C_{90}} \]

**Drivers**
- Supply-demand evolution
- Incidents/Revamps
- Ramp-up curves
- Input cost factors (e.g., raw materials)
- Macroeconomic factors affecting the cost curve (e.g., exchange rate)
- Lead time for capacity additions
- Perception of shortage
- Role of traders
- …

**EBITDA pool simulation logic**

**EBITDA pool simulation**

\[ \text{EBITDA} = CU - \frac{(1+1/\text{Slope}) \times (1+CU)}{4 \times P_{Pr}} \]
The average commodity attractiveness is “structurally” underpinned by the slope of its cost curve.
Focus of this presentation

Possible measures (not exhaustive)

1. Capacity utilization (CU)
   - Unilateral closures
   - Legally sanctioned cooperation agreements
     - JVs/alliances
     - Specialization, off-take agreements
   - ...

2. Slope of the cost curve
   - "Fair trade" measures
   - Swing capacity

3. Return over marginal cost
   - Differentiation (product and service)
   - Sustainable cost reporting (all-in sustainable cost – AISC)
Bridging the ~50 USD/ton margin gap to reach a sustainable EBITDA margin would require closing ~300m tons of global capacity.

**EBITDA pool simulation logic**

- **Capacity utilization**
  \[ CU = \frac{\text{Demand}}{\text{Capacity}} \]

- **Slope of the cost curve**
  \[ \text{Slope} = \frac{C_{90}}{C_{10}} \]

- **Return over marginal cost**
  \[ \text{RMC} = \frac{\text{Price}}{C_{90}} \]

**EBITDA margin formula**

\[ \text{EBITDA} \% = CU - \frac{(1+1/\text{Slope}) \times (1+\text{CU})}{4 \times \text{RMC}} \]

**SOURCE:** McKinsey analysis
## Beyond unilateral closures, several restructuring options have been mentioned

<table>
<thead>
<tr>
<th>Description</th>
<th>What is shared</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Players unilaterally and independently reduce excess capacity according to their own timetable</td>
<td>✗ ✗ ✗ ✗</td>
</tr>
<tr>
<td><strong>Unilateral closures and off-take agreement</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Some players close all or majority of production and negotiate agreement to source needed steel from remaining players, potentially at preferential rates</td>
<td>✗ ✓ ✗ ✓</td>
</tr>
<tr>
<td><strong>Unilateral closures and leasing</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Closures same as above. In addition, players negotiate a lease of capacity, potentially at preferential rates</td>
<td>✗ ✓ ✗ ✓</td>
</tr>
<tr>
<td><strong>Combined upstream steel utility</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Upstream capacity is pooled into a subset of entities with joint ownership</td>
<td>✓ ✓ ✗ ✗</td>
</tr>
<tr>
<td><strong>Asset specialization with off-take agreement</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Two or more payers agree to specialize in certain products and either exit noncore areas or swap assets</td>
<td>✗ ✗ ✗ ✗ ✗</td>
</tr>
<tr>
<td><strong>Alliances or “code sharing”</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Players agree to partner in certain areas and reduce/eliminate production where one partner is stronger and relies on the other for future production needs</td>
<td>✗ ✓ ✗ ✓</td>
</tr>
</tbody>
</table>

Source: McKinsey analysis

Likely the basis of ongoing dialogue with OECD and regional authorities

Require upfront anti-trust review