Background

- Excess capacity has become one of the biggest challenges facing the steel industry;
- Excess capacity has an impact on the economic health of the steel industry;
- Past episodes of low demand and excess capacity have been associated with a proliferation of trade actions;
- This begs the question: is the industry in crisis yet?
Background (cont’d)

• In the autumn of 2013, the Steel Unit was asked to examine:
  – The financial health of the industry relative to the previous steel crisis;
  – What would happen if nothing is done to address excess capacity
• The preliminary study DSTI/SU/SC(2013)19 is work in progress. The questions it examines are:
  – Is the financial situation of the industry better or worse than in the late 1990s?
  – What is the impact of excess capacity on profitability?
  – The possible outlook for the industry


• Internal structural problems are usually at the origin of steel crises
• External economic events usually trigger the crises:
  – 1997-2001: Trade disruptions caused by the Asian financial crisis and downturn in Russia
  – 2008-2012: the economic shock following the 2008 financial crisis

Average annual growth during the two 5-year periods

<table>
<thead>
<tr>
<th></th>
<th>Production</th>
<th>Consumption</th>
<th>Capacity</th>
<th>Exports (finished)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-2001</td>
<td>2.6</td>
<td>2.9</td>
<td>1.7</td>
<td>4.9</td>
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<tr>
<td>2008-2012</td>
<td>2.8</td>
<td>2.9</td>
<td>5.0</td>
<td>-1.4</td>
</tr>
</tbody>
</table>

Sources: OECD and the World Steel Association.

Employment decrease in the steel industry is slower than in the 90’s

Employment in the steel industry in selected advanced economies

In thousands

Source: OECD, CIS report
Growth of labour productivity has slowed significantly

Labour productivity in the steel industry in selected economies
In tonnes of crude steel production by employee and by year

Sources: OECD, CIS report

An ageing industry in many OECD economies

Age of blast furnaces by economy

Sources: World Steel Dynamics' Plantfacts database

Key findings:
• The performance is worse than in 1997-2001.
• Worrisome factors:
  – very low operating profitability levels
  – free cash flows are negative
  – debt levels are very high
  – increasing focus on short-term credit
  – very low levels of investments in R&D

EBITDA on sales reached 7.6% in 2012
• 83% of steel firms with Ebitda/sales < 16%

Source: OECD calculations based on data from Factset.
Very low cash flows

- Free cash-flow below zero since 2009.
- External funds needed to cover investment or even operational activities.

Source: OECD calculations based on data from Factset.

Rising debt ratios

- Debt on EBITDA ratio was 5.6 in 2012
- Close to the record level of 1999

Source: OECD calculations based on data from Factset.
Investment opportunities are increasingly low in the steel industry

- Price-to-book below unity (0.95 in 2012).

**Price-to-book ratio**

[Graph showing price-to-book ratio from 1992 to 2012]

*Source: OECD calculations based on data from Factset.*

How does the capacity utilisation rate (CUR) affect steel industry profitability?

**Key points:**
- Industry-wide CUR impacts firm operating profitability (coefficient is approximately 0.3).
- Raw material prices also play a significant role in steelmakers’ profits.
- Inventories held also matter for profits.
- Debt works as a burden on profits.
- Size of firms and concentration in the industry also affect profits.
Table 2. Determinants of profitability at the firm level

<table>
<thead>
<tr>
<th></th>
<th>FE</th>
<th>RE</th>
<th>AB</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.EBITDA_SALES</td>
<td>0.34</td>
<td>(0.05)</td>
<td>(3.24)</td>
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<td>CAP_UTIL</td>
<td>(0.28)</td>
<td>(0.31)</td>
<td>(0.24)</td>
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<tr>
<td>RAW_MAT_BASKET</td>
<td>0.05</td>
<td>(0.20)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>IP_WLD</td>
<td>(0.03)</td>
<td>(0.11)</td>
<td>(0.04)</td>
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<td>LASETTERS</td>
<td>(0.03)</td>
<td>(0.20)</td>
<td>(0.20)</td>
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<tr>
<td>RD_D</td>
<td>-0.36</td>
<td>0.09</td>
<td>-1.49</td>
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<tr>
<td>DEBT_ASSETS</td>
<td>(0.56)</td>
<td>(0.50)</td>
<td>(0.04)</td>
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<tr>
<td>MKTS_R</td>
<td>(1.92)</td>
<td>(2.85)</td>
<td>(2.63)</td>
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<tr>
<td>INVENT_ASSETS</td>
<td>(0.78)</td>
<td>(1.75)</td>
<td>(0.63)</td>
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<td>GROUP</td>
<td>0.22</td>
<td>(0.97)</td>
<td>(0.97)</td>
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<td>SOE ***</td>
<td>0.65</td>
<td>(1.32)</td>
<td>(2.51)</td>
</tr>
<tr>
<td>SOE</td>
<td>2.45</td>
<td>(2.47)</td>
<td>(2.47)</td>
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<tr>
<td>LARGE</td>
<td>(0.94)</td>
<td>(2.65)</td>
<td>(2.65)</td>
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<tr>
<td>_cons</td>
<td>-0.56</td>
<td>-3.12</td>
<td>-7.54</td>
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</tbody>
</table>

Selected results of the panel regressions

- Excess capacity to remain high
- Capacity utilization ratio at 75% or less

Global steelmaking
Excess capacity (mmt)
Global capacity utilization ratio (%)
Operating profitability not expected to significantly increase in the next 5 years

- Capacity utilisation expected to remain low in the future under different scenarios
- Excess capacity will continue to weigh on profitability of the industry
- However, many other factors are important for profitability:
  - Raw material prices
  - Strength of the business cycle
  - Firm-level behaviour