Consolidation in the global steel industry, what does it mean for the Middle-East?

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### About SteelConsult International

- **We know the steel industry**
- **We know the market**
- **Extensive databases**
- **Strong network of high level senior consultants**
- **We offer a complete package for analyses and decision making**

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Recent scale growth in the steel industry has mainly been realized through Mergers & Acquisitions. There has been a considerable acceleration of M&A transactions during the last decade.

Number of M&A’s in steel industry

Capacity added through M&A’s* (m tpy)

Source: SteelConsult analysis
Note: * capacity added to acquiring or larger M&A party
Consolidation in global steel: What does it mean for the Middle-East?

The last few years have seen a number of important and unprecedented developments in the M&A environment of the steel industry

- Since late 2004, a number of important and unprecedented M&A developments have shaken up the steel industry:
  - Erdemir, Kryvorizhstal and Dofasco were sold at record prices
  - Arcelor’s bid for Dofasco first hostile takeover attempt in the steel industry since Krupp’s (failed) attempt to acquire Thyssen in 1997.
  - Mittal Steel’s takeover of Arcelor was the second.
  - By taking over Arcelor, Mittal Steel has eliminated the only competitor that could hope to keep up
  - Commercially successful companies from emerging markets increasingly buying quality leaders in mature markets that are performing poorly or are relatively undervalued:
    - Severstal buying Rouge Steel and Lucchini
    - LNM/Mittal Steel buying Inland, ISG, Arcelor and other
    - NLMK buying Dansteel
    - Tata Steel buying Corus
    - Evraz buying Oregon Steel Mills, Palini e Bertoli and Highveld
    - Essar buying Algoma
    - Metinvest buying Spartan UK and Trametal
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Prices for steel assets have gone up to multi-billion US$ levels during the last two years

Source: SteelConsult analysis

Note: *Price based on 100% of shares

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Recent sums translate to prices of US$400-1,100/tonne capacity, and 4-10 times EBITDA. This compares to an average of just US$180/tonne and 3.6 times EBITDA in other transactions since 1997.
Until 27 January 2006, steel companies were expecting to consolidate towards a handful of giants of 100-120m tpy capacity by 2010. Mittal Steel and Arcelor were well underway...

**Crude steel output, 2005**

<table>
<thead>
<tr>
<th>Company</th>
<th>Crude Steel Output (m tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mittal Steel</td>
<td>63</td>
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<tr>
<td>Arcelor</td>
<td>47</td>
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<tr>
<td>Nippon Steel</td>
<td>32</td>
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<tr>
<td>POSCO</td>
<td>31</td>
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<td>JFE</td>
<td>30</td>
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<td>Baosteel</td>
<td>23</td>
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<tr>
<td>US Steel</td>
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</tr>
<tr>
<td>Nucor</td>
<td>18</td>
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<td>Corus Group</td>
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<td>RIVA</td>
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Source: IISI

**Situation on 1 January 2006**
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Instead of a handful of giants, there is now one supergiant with 120-130m tpy capacity. Will the gap ever be bridged? Or will it become even larger?

Crude steel output, 2006

<table>
<thead>
<tr>
<th>Company</th>
<th>Output (m tpy)</th>
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<tbody>
<tr>
<td>ArcelorMittal*</td>
<td>120</td>
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<tr>
<td>Nippon Steel</td>
<td>33</td>
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<tr>
<td>JFE</td>
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<td>POSCO</td>
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<td>US Steel**</td>
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<tr>
<td>Baosteel***</td>
<td>26</td>
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<tr>
<td>Tata Corus</td>
<td>25</td>
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<tr>
<td>Nucor</td>
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<tr>
<td>Tangshan</td>
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<td>RIVA</td>
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<td>Severstal</td>
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Firm expansions in South America, Ukraine, South Africa and Kazakhstan by 2010

Source: IISI
Note: *Incl. Sicartsa  **Incl. Stelco  ***Incl. Bayi
ArcelorMittal is as large as Nippon Steel, JFE, POSCO and USS combined. Or as Baosteel, Tata Corus, Nucor, Tangshan, RIVA and Severstal put together...

Crude steel output, 2006

Source: IISI
Note: *Incl. Sicartsa  **Incl. Stelco  ***Incl. Bayi
ArcelorMittal is still not a particularly large player compared to leaders in other industries, where market leaders account for >20% of the global market...

Global market share industry leader 2006

Source: SteelConsult analysis
Note: *sea-borne ore
As an illustration, 14% global market share would translate to a steel super giant of around 300m tpy in 10 years’ time

Source: ArcelorMittal company reports and presentations, SteelConsult analysis
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In the past, many acquisitions in steel consisted of troubled companies and privatizations...

M&A’s in steel industry, capacity addition to dominant party (mln tpy)

<table>
<thead>
<tr>
<th>Year</th>
<th>Mergers</th>
<th>Privatization</th>
<th>Bankrupt/Chapter 11</th>
<th>Other acquisitions</th>
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<tr>
<td>'97</td>
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Source: SteelConsult analysis
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However, the era of privatizations is over and hostile takeovers will become increasingly common.

M&A’s in steel industry, capacity addition to dominant party (mln tpy)

Source: SteelConsult analysis

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The ME steel sector ownership structure protects much of the industry from unfriendly approaches, but also represents a barrier to the positive sides of consolidation

• The steel mills that are in the M&A driving seat have their own raw materials and/or are commercially more successful than their targets, selling steel at the best margin rather than the best quality

• Technology and quality leadership do not provide protection from hostile takeovers. Serving the demanding auto sector has status, but is not necessarily the most profitable business

• There is also no protection in size

• The only robust barrier to undesired takeovers is a critical share of private or state ownership in the company, which is the case for much of the ME steel industry

• However, the ME steel industry’s ownership structure also represents a barrier to consolidation of the steel industry in the region

• While markets are booming, there is no urgent necessity for scale enlargement

• However, the steel industry in the rest of the world is changing rapidly as a result of the ongoing consolidation. The ME steel industry is growing fast through expansions but organic growth cannot keep up with acquisitive growth
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The average output of the Top-10 steel mills has doubled in 10 years’ time, enabling operational and commercial advantages

Average crude steel output Top-10 steel mills, (m tonnes)

Source: IISI, SteelConsult analysis
The improved financial performance and scale enlargement of the steel industry has led to financially very powerful players, with large war chests and the need to reinvest excess cash.
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Higher spending power is enabling steel mills to grow fast, not only horizontally but also up- and downstream. A new type of competitor is emerging, controlling the chain from mine to distribution...

![Diagram showing the evolution of steel supply chain from 1980 to 2000]

1980
- **STEEL MILL**
- **STOCKIST**
- **END-USER**

1990
- **STEEL MILL**
- **SERVICE CENTER / STOCKIST**
- **END-USER**

2000
- **MINING COMPANY**
- **STEEL MILL**
- **SERVICE CENTER / STOCKIST**
- **END-USER**

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Some signs of consolidation are visible in the CIS, which would lead to new, larger players self-sufficient in raw materials and investing heavily in modernization and expansion.

- In Russia, NLMK recently purchased a 51% stake in Maxi Group.
- In Ukraine, Metinvest announced plans for a multi-billion dollar merge with Smart Holding.
- Also Russia’s Metalloinvest and Ukraine’s Industrial Union of Donbass (ISD) are seriously studying proposals for a merger of the two companies’ operations.
- The 200km radius around Donetsk holds 49BFs and 45m tpy of steel capacity.
- Much of the mills are still using Open Hearth Furnaces and Ingot Casting, but are modernizing and expanding fast.
New capacity from new entrants is also emerging in Turkey and India...Turkey could well be used as a springboard to the ME market, especially if new investments would lead to local oversupply

- In addition to potential new leaders in the CIS, the Turkish steel industry is also seeing rapid developments
- Adding to investments already under progress by Erdemir, ArcelorMittal, NLMK and MMK have recently announced new investment projects in Turkey
- In India, ArcelorMittal and POSCO are preparing investments in large greenfield integrated plants
- Corus has brought cutting edge R&D knowledge and operating practices to Tata, which will lead to considerable synergies in cost and quality in the future
As a result of consolidation, ME mills are facing fast growing, powerful competitors that are spreading activities increasingly closer to the ME region

- The consolidation of the global steel industry will continue, as war chests are filled, earnings remain strong and steel mills seek geographical and scale growth
- Many smaller or poorly performing assets have been absorbed by the large and the strong in recent years, focus to shift to larger deals, likely incl. more hostile moves
- Future consolidation will be increasingly intercontinental, as regional industries have neared the limits of competition authorities in North and South America, Europe and Southern Africa
- Merchant semi markets are getting tighter, as consolidation leads to increased used of excess output for intra-company shipments
- Organic growth through new investments is firm in the ME, but competitors outside the region are growing both via new investments and M&As, leading to the emergence of fast growing, powerful competitors on the doorstep of the Middle-East region
- These players are not just growing through horizontal expansion within the steel industry, but also vertically in mining, processing and distribution, leading to players with scale, low cost raw materials, high quality performance and control over an increasingly large part of the supply chain
It may take some time before circumstances are conducive to consolidation within the ME steel industry, but progress can be made in various other ways

• Benefits of consolidation do not necessarily require full mergers and acquisitions, synergies can also be realized by JVs and alliances with steel mills inside and outside the ME, with the option to expand co-operation in the future

• ME companies have a lot to bring to foreign partners who may wish to establish a presence in the region

• Growth by acquisitions can also be realized outside the ME region, as demonstrated by Al Tuwairqi

• Furthermore, growth can also be realized by vertical expansion for example by investment in processing and distribution
Thank you for your attention!