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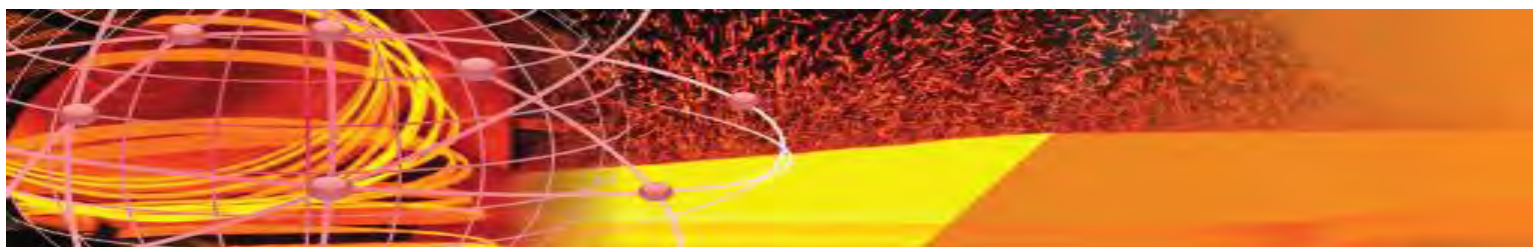
Excess Capacity and Structural Adjustment in the Steel Sector

18 April 2016, Brussels, Belgium

BACKGROUND NOTE NO. 2

CAPACITY DEVELOPMENTS IN THE WORLD STEEL INDUSTRY

This note on **Capacity Developments in the World Steel Industry** overviews recent steel capacity trends and expected future developments. It serves as background information for the discussions under Session 1, *The Current Situation: Global Steel Market, Capacity and Trade Developments*.



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Introduction

Excess steelmaking capacity – a global challenge that continues to grow – is creating significant difficulties for steel producers in advanced, emerging and developing economies alike. Low steel prices, weak profitability, trade disturbances in some jurisdictions, and an escalation of trade actions against steel imports are some of the immediate impacts of excess capacity that are being felt by steel manufacturers around the world. These effects are pronounced due to the weakness of global steel markets and sluggish growth prospects. Alleviating excess capacity would lead to improved and more stable business conditions, and allow the industry to face a number of long-term challenges more effectively.

The steel industry will have to adjust in response to fundamental changes in economic activity brought on by the “next production revolution,” possibly including the emergence of new manufacturing techniques, the development of new and light production materials, and increased automation and digitalisation in many sectors. Keeping global CO₂ emissions at current levels, or lower, will necessitate the development of new, breakthrough steelmaking technologies. If the steel industry is to continue to invest in new processes and products geared towards value creation and innovation, it will require significant reductions in excess capacity and a return to sustained profitability.

Curbing excess inefficient capacity is thus crucial for the long-term sustainability of the steel industry. While the opening and closure of steel plants is usually based on the commercial decisions of the companies involved, government interventions that support the building of new capacity or keep inefficient mills in place are exacerbating the problem. A key priority for governments will be to refrain from measures that artificially support steelmaking capacity and introduce policies that promote efficient industry restructuring and facilitate the closure of uneconomic capacities.

This note examines recent capacity trends and expected future developments in light of existing information on steel plant investments that are either planned or underway in OECD and non-OECD economies. Given the global nature of the excess capacity challenge, the focus here is on broad trends.

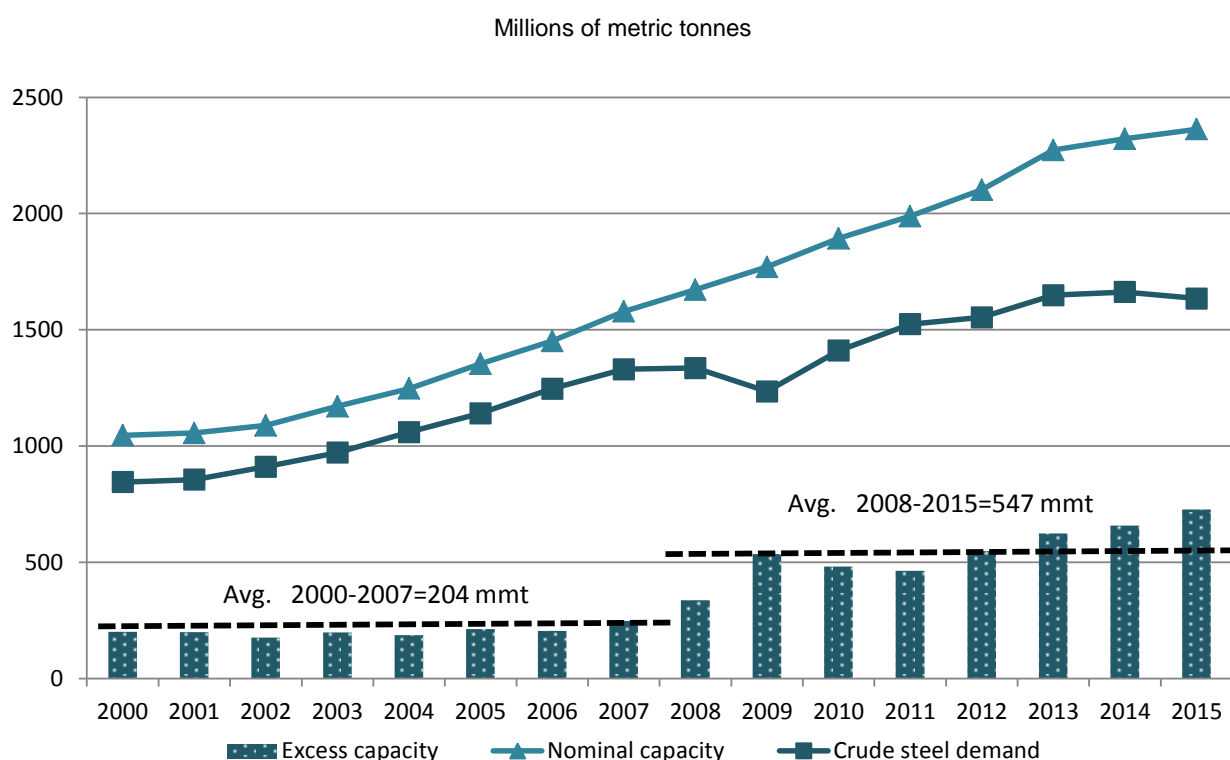
Excess capacity reaches new high levels

The world steel industry’s capacity to produce crude steel has increased rapidly since the early 2000s. Most of the capacity expansion occurred in emerging economies, to support construction and manufacturing activity, and to help build the infrastructure necessary for the economic development of those economies. The world’s nominal crude steelmaking capacity is estimated to have reached 2 362 million metric tonnes (mmt) in 2015, an increase of 126% compared to the level existing in 2000. At the end of 2015, 72% of global capacity was situated in non-OECD economies, with OECD countries accounting for 28%.

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World steel demand contracted sharply in the aftermath of the global economic and financial crisis of 2008, recovering slowly in the subsequent years before dipping again in 2015. However, the capacity for making crude steel has continued to increase at a steady pace. In 2014, global crude steel demand stood at 1 663 mmt, a level that was about 659 mmt below worldwide nominal steelmaking capacity of 2 322 mmt. In 2015, demand is expected to have declined by 1.7% (in finished steel terms) from 2014 levels, according to the World Steel Association (Worldsteel, 2015), while the OECD estimates that steelmaking capacity increased by a further 41 mmt. The capacity-demand gap, therefore, is expected to have widened significantly in 2015, to a level in excess of 700 mmt.¹

Nominal steel capacity exceeded demand by more than 700 mmt in 2015



Note: Steel demand in 2015 is an estimate by the OECD, calculated using the same percentage change from 2014 as forecast by the World Steel Association for finished steel in October 2015.

Source: OECD for capacity and the World Steel Association for demand.

¹. It is important to note that excess capacity cannot be imputed directly from the gap between nominal capacity and demand, because it is not efficient for the steel industry to run at full capacity all the time. For example, during the strong cyclical upturn of the first half of 2008, monthly global capacity utilisation rates did not rise above 91%.

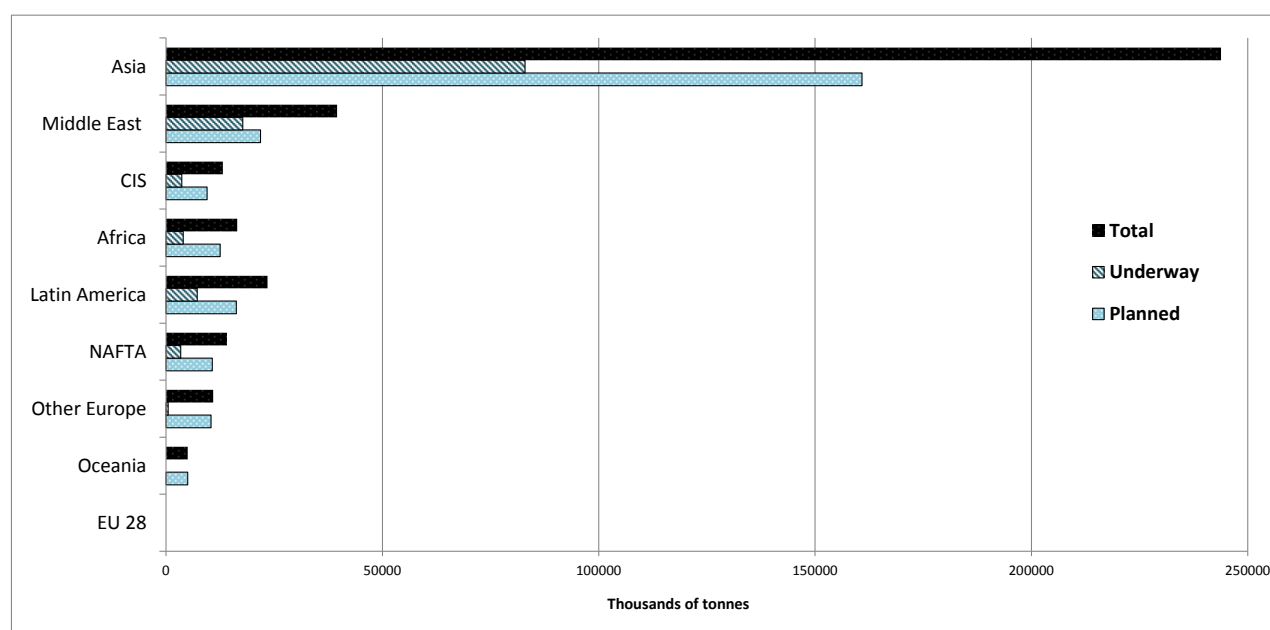
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New investments in the steel industry keep capacity on an upward path

Looking beyond 2015, investment projects continue to increase in a number of economies, which will support further growth in capacity at the global level. The figure below presents the total capacity associated with investment projects that are either currently underway or planned to come on stream over the longer term, according to information monitored by the OECD Secretariat. While many of the investment projects are expected to take place in Asia, some are also planned for the Middle East, the Commonwealth of Independent States (CIS), Africa, Latin America and the North American Free Trade Agreement (NAFTA) region.

Investment projects aimed at boosting steelmaking capacity are planned in many parts of the world

The current stock of projects either underway or planned in the period until 2025



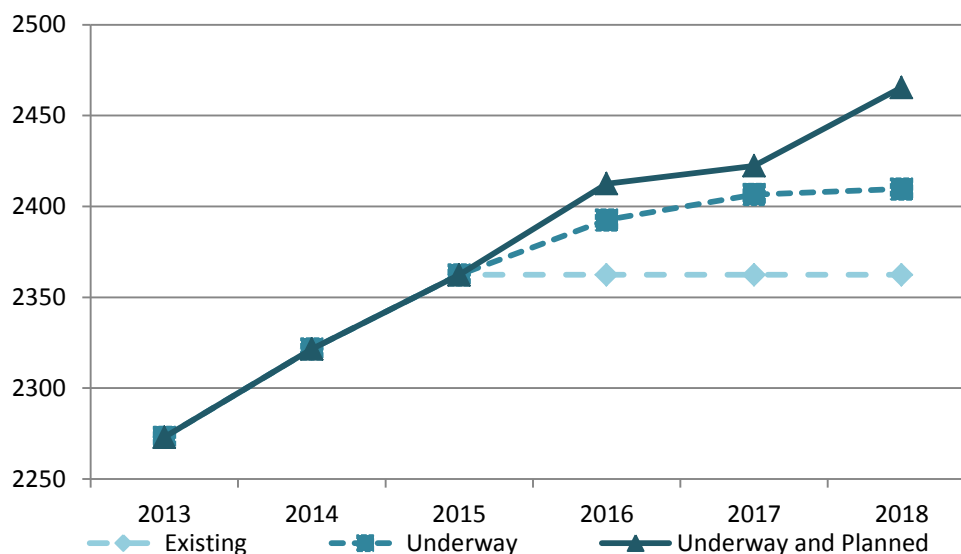
Source: OECD.

What do these investments imply for future capacity developments? The figure below presents scenarios for capacity developments until 2018, based on the investment projects that are underway or planned over the next three years. The baseline capacity projection takes into account only projects that are underway, and not planned. Doing so suggests a cumulative 47.3 mmt increase in global crude steelmaking capacity in 2016-2018 to a level of 2 410 mmt by 2018. Asia is expected to account for almost 63% (or 29.7 mmt) of this increase, followed by the Middle East (with a 10.2 mmt capacity increase), Latin America (4.3 mmt), and the Commonwealth of Independent States (1.6 mmt). To absorb all the new capacities currently underway and planned, however, global steel consumption would have to increase by 103 mmt, equivalent to a 6.3% increase, in 2016-2018. Should steel demand growth continue to stagnate or decline, additional capacity investments will likely continue to aggravate the excess capacity situation.

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Scenarios for world steelmaking capacity growth until 2018

Based on investment projects that are underway and planned, millions of metric tonnes



Source: OECD.

How is excess capacity impacting the industry?

The effects of excess capacity are now very pronounced due to the weakness of global steel markets and sluggish growth prospects, with over-supply and low steel prices creating extremely difficult profitability conditions for many producers around the world. For example, measures of aggregated free cash-flows for the global steel industry have been negative or barely positive in recent years, indicating that the steel industry is in need of external funds to cover any investment or even to maintain operational activities. As a consequence, debt ratios are rising, bringing into question the solvency of many companies. Moreover, markets are sending a clear signal that investment opportunities are scarce, if available at all. Nevertheless, there is a considerable degree of heterogeneity across steel companies; while the majority of companies are experiencing severe difficulties, a few seem to be resilient (OECD, 2016).

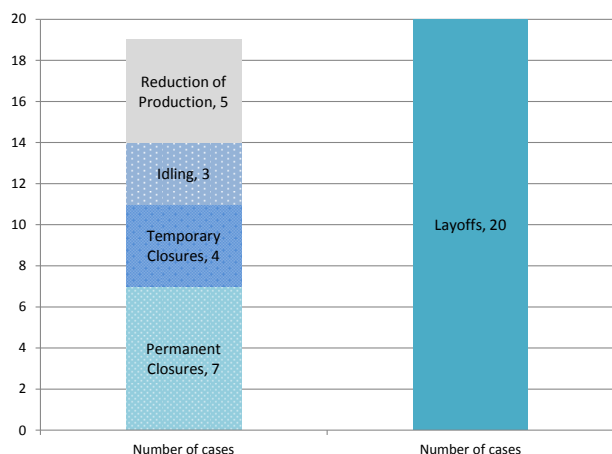
Given the global nature of the industry, excess capacity in some regions can displace production in other regions, and create bankruptcies and localised job losses in parts of the industry. Today, an increasing number of workers and communities are feeling the impacts of the unwinding of excess capacity. Over the past six months, the industry has announced a number of temporary and permanent plant closures, cutbacks in production, and layoffs of steel workers, as shown in the figure below. Many of these announcements have occurred in North America and Europe, but they are affecting many other regions as well.

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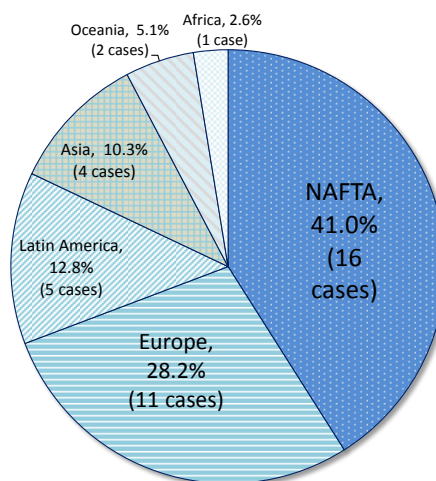
Announcements of closures, production cutbacks and layoffs have increased sharply in recent months

Number of announcements during September 2015 - February 2016

A. Total



B. Regional breakdown



Source: OECD.

Overcapacity is also affecting steel trade flows, putting further pressure on markets and leading to a sharp increase in the filing of trade cases, as described in Background Note No. 3 on Trade and Trade Policy. The number of new trade remedy investigations increased to historically high levels in the beginning of 2016, with allegations of dumped or subsidised steel exports on the rise in a number of economies. A large number of safeguard cases and import duty increases have also been observed recently, which indicate a growing willingness to restrict imports of fairly traded steel from a broader range of trading partners. While these trade actions provide important short-term relief to domestic industries, they also highlight the need for long-lasting solutions to alleviate trade frictions between trading partners.

Concluding remarks and issues for discussion

Excess capacity is a global problem that is affecting producers in all regions. Weak steel demand prospects and further investments are likely to keep excess capacity at elevated levels in the near term under a “business as usual” scenario. While steel companies are the best placed to decide on whether to expand or reduce capacity under given market conditions, a key priority for governments at this time is to avoid measures that artificially support steelmaking capacity. Of particular importance will be to work towards removing subsidies and government support measures – provided at all levels of government and by government-controlled financial institutions – that promote investments in new capacity or which sustain economically unviable companies that would otherwise shut down. Other policy priorities include eliminating trade and investment barriers that slow needed restructuring of the industry, allowing market-based investment decisions in the steel sector, and ensuring that new plants are subject to standards that protect the environment and uphold worker safety.

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Some issues for discussion include the following:

- What are the root causes of the recent surge in global excess capacity? Is the increase in excess capacity temporary or structural?
- What are the main motivations for continued capacity investments in the steel industry? Will market weakness reverse this trend? What can be done to curb capacity additions without endangering economic development goals?
- What are the characteristics of those plants that are closing? Are they the least efficient and most pollutant plants?
- What types of government support are fuelling excess capacity the most, and what types of policy reforms are now needed to facilitate the permanent closures of inefficient plants?
- Reducing excess capacity will have significant social impacts. What policy instruments need to be developed to limit the consequences of such developments for the workforce?

References

OECD (2016), “Evaluating the financial health of the steel industry”, OECD Publishing, Paris, available at: www.oecd.org/sti/ind/Evaluating-Financial-Health-Steel-Industry.pdf.

Worldsteel (2015), “Short Range Outlook 2015-2016”, the World Steel Association, Available at: <https://www.worldsteel.org/media-centre/press-releases/2015/worldsteel-Short-Range-Outlook-2015-2016.html>.