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ArcelorMittal S.A. –
Heading towards the next excess supply crisis

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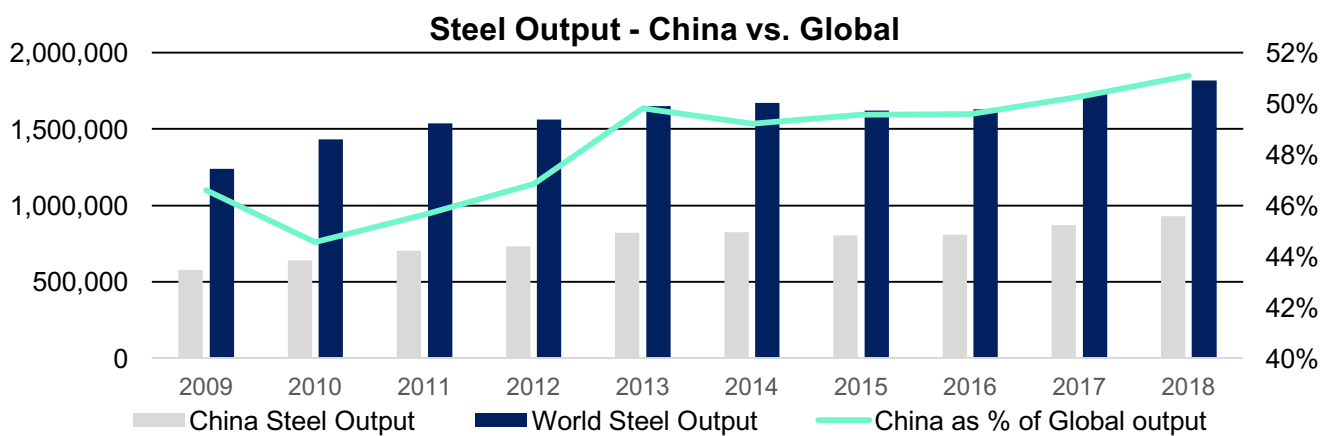
Abstract

This paper “Heading towards the next excess supply crisis” investigates the relationship between excess steel supply in China and global steel prices. The analysis aims at understanding the impact of increasing excess supply on ArcelorMittal’s realized price per segment. It implies that subsidies and loose regulatory frameworks in China cause steel output to increase, contradicting sluggish domestic demand from the automotive sector. This pressurizes global steel prices as China floods international markets with cheap materials. The effect is even more severe in developing countries as these are predominantly targeted by Chinese steel exports.

Keywords: Chinese steel market, excess steel supply, Global steel prices

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The Chinese steel market accounts for 51% of global steel output and is therefore the largest and most pivotal steel market in the world.¹ Due to this dominance, market dynamics in China have a substantial influence on global market conditions, while shocks in Europe or the U.S. barely materialize beyond domestic borders.



Source: World Steel Association, Steel statistical yearbook 2019

Chinese government creates framework conditions for building up capacity

The most relevant historic market disturbance stemming from China is the issue of excess steel supply. Resulting from the economy's developing nature, the Chinese steel sector has been growing significantly over the last decades. If this expansion on produced steel is accompanied by an equally growing domestic demand, global market conditions will not be put under pressure. The problem occurs once the respective Chinese demand is sluggish while steel output is growing. In this scenario, Chinese steelmakers will increase exports at low prices to dump the excess material. This floods international markets with steel and iron ore, having a serious deflationary effect on global realized steel prices and profit margins. There are several dynamics, both market- and government based, which are catalyzing the negative effect on global market conditions.

Firstly, the regulatory framework for expanding steel production capacity in China was historically rather loose. As the steel market plays a significant role in the Chinese economy, the government is subsidizing the industry substantially in order to maintain economic growth and keep unemployment low.² These subsidies for the steel industry are that significant, such that industry insiders argue that the

¹ World Steel Association. (2019). Steel Statistical Yearbook (Concise Version).

² The Economist. (2016). *Why the world has too much steel*. [Online] Available at: <https://www.economist.com/the-economist-explains/2016/05/05/why-the-world-has-too-much-steel> [Accessed 30 Dec. 2019].

Chinese government is supporting the domestic steel sector illegally, which triggered the so-called illegal production capacity affair back in 2015.³ Secondly, the environmental restrictions of building new blast furnaces in China are significantly lower than in developed markets like Europe or the U.S., reducing both, up-front investment but also operating costs of these plants. Moreover, many of the environmental protection departments in China are owned and controlled by local government agencies, which may purposely neglect the investigation or punishment of potentially illegal plants in order to boost domestic economic growth.⁴ Summing up, the Chinese government creates a framework, making it particularly easy for Chinese steelmakers to expand crude capacity. On the market side, the Chinese steel sector is, compared to market structures in developed countries, much more fragmented. Therefore, many different players have to fight for the small amount of domestic demand in order to cover the high fixed costs in this cyclical business. This eventually competes market prices down. In this scenario, increased market consolidation would actually improve market efficiency by endowing some players with enough bargaining power to stabilize steel prices. Hence, the Chinese government announced its goal to consolidate the steel sector further such that the top 10 players assume 60% of the market share by 2020.⁵ The merger between Baoshan Iron & Steel and Wuhan Iron & Steel is a first step towards this goal, however Chinese market concentration is still far away from developed regions. Lastly, China's cheap access to the key input factor iron ore enables them to set steel prices lower compared to iron ore importers.

2015 illuminated the threat of excess steel supply

The severity of the issue of excess supply could be observed in 2015. Between 2000 and 2014 the global steel output doubled from 800m tonnes in 2000 to 1.6 billion tonnes in 2014, a development predominantly stemming from Chinese expansion projects.⁶ As the Chinese construction boom cooled

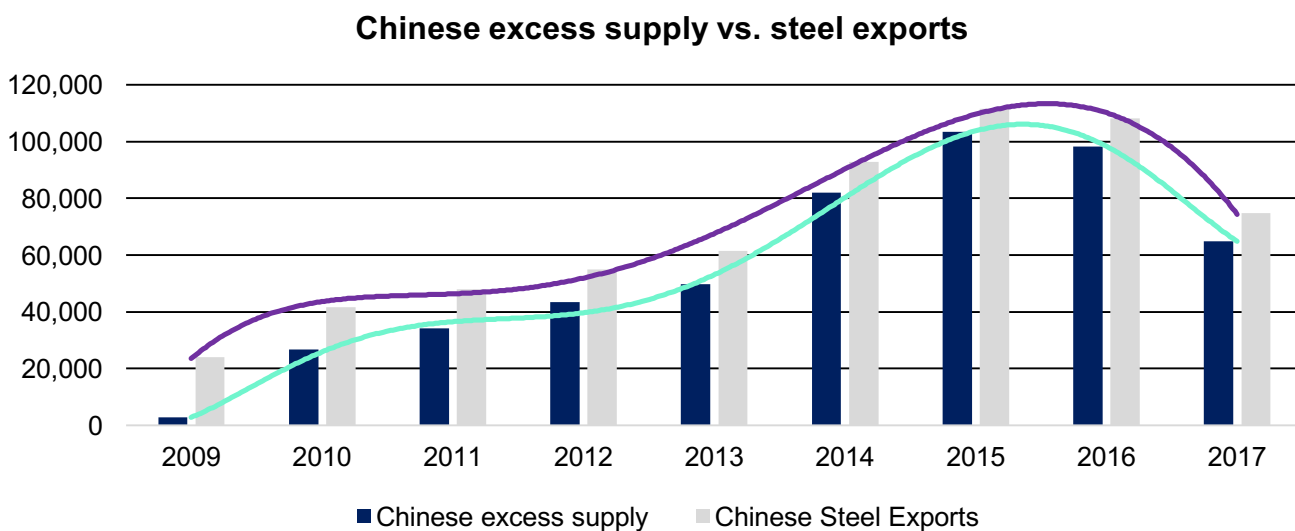
³ Ft.com. (2017). *Steel industry grapples with curse of oversupply* | Financial Times. [Online] Available at: <https://www.ft.com/content/992ad270-b4d3-11e7-aa26-bb002965bce8> [Accessed 30 Dec. 2019].

⁴ Xiong, J. (2017). Discussion about Resolving Excess Capacity in Steel Industry. *Journal of Service Science and Management*, 10(02), pp. 156-165

⁵ Reuters.com. (2018). *China's steel industry fragmentation worsening*. [Online] Available at: <https://www.reuters.com/article/us-china-steel/chinas-steel-industry-fragmentation-worsening-official-idUSKBN1WU1MC> [Accessed 30 Dec. 2019].

⁶ The Economist. (2016). *Why the world has too much steel*. [Online] Available at: <https://www.economist.com/the-economist-explains/2016/05/05/why-the-world-has-too-much-steel> [Accessed 30 Dec. 2019].

down in 2015 and the Chinese GDP growth declined for the first time in years, the above mentioned dynamics came into effect, letting Chinese steel exports rise, while global steel prices declined.



Source: World Steel Association, *Steel statistical yearbook 2019*

Having a look at MT’s financials of 2015, one can see how significant such market imperfection can be for steelmakers around the globe. Group Sales declined by 19.8%, EBITDA by 27.8%, both of which caused by a drop in the average realized price of 18.5% within one year. Upon this crisis for the steel market the U.S. and Europe launched the investigation on safeguard measures on China’s iron and steel products. Eventually, the 232 investigation from the U.S. led to the import tariff on Chinese steel products in the context of the Trade Wars. Moreover, China had to sign the Supply-side structural reform (SSSR) in 2015, committing to excess supply cuts of 100 – 150 mt. until 2020 latest.⁷ As global steel prices are determined by demand and supply, the issue of excess supply accommodates a certain cyclicity. After 2015, the World Steel Association and other regulatory bodies committed efforts to cut excess supply. If implemented successfully, steel prices will increase. Weak regulatory barriers and a fragmented market will subsequently incentivize Chinese steel players to enter the market or invest in further expansion projects to capitalize these higher margins. Finally, this again leads to excess supply and declining global steel prices.⁸

⁷ Sarma, N. (2019). *What will happen to Chinese steel after Trump tariff? I ORF*. [Online] Available at: <https://www.orfonline.org/expert-speak/what-will-happen-to-chinese-steel-after-trump-tariff-54842/> [Accessed 30 Dec. 2019].

⁸ Ft.com. (2019). Chinese group sparks oversupply fears in steel market | Financial Times. [Online] Available at: <https://www.ft.com/content/15a4a44c-6735-11e9-9adc-98bf1d35a056> [Accessed 30 Dec. 2019].

Current market conditions pressurize steel prices again

We think that this cyclicality will initiate the next crisis of global steel prices, starting in 2019, fully materializing in 2020 and beyond. This assumption becomes evident on both, the demand- and supply side. On the demand side, the Chinese economy is facing severe disruptions from a weak automotive sector, with automotive sales going down by 6.9% in August 2019 after 14 consecutive months of decline. Moreover, as the Chinese economy becomes more developed over time, steel demand increasingly shifts away from the construction sector (Long products), towards the automotive sector (Flat products).⁹ On the supply side, China's steel output grew 6.6% in 2018 and is expected to further grow by 13% in 2019.¹⁰ This is because the Chinese government recently announced its "Iron ore and steel capacity replacement campaign" including the construction of new blast furnaces and converters contributing to an increase in capacity of 93 million mt/year.¹¹ In addition to that, the government recently announced to cut down its effort to reduce excess supply by dissolving the Global forum on Steel Excess Supply, an initiative launched by the G20 countries to globally reduce steel output.¹² The interlude between increasing crude capacity and a sluggish domestic demand in the upcoming years is our main forecasting driver for short-term steel prices, letting us believe that the average realized steel price on Group level is bound to decline by 12.1% on Group level until 2022, sitting at the record low since the crisis in 2015.

Developing markets as key export destination

Moreover, we think MT's segments are affected by deflationary global prices to a different extent. In the light of the Trade Wars with the U.S., China's exports of steel shift away from North America towards developing markets, where steel demand is still highly driven by the construction sector and

⁹ Reuters.com. (2019). *Weak demand offsets fall in iron ore prices for steelmakers*. [Online] Available at: <https://www.reuters.com/article/us-steel-ironore-margins-graphic/weak-demand-offsets-fall-in-iron-ore-prices-for-steelmakers-idUSKBN1WQ25C> [Accessed 30 Dec. 2019].

¹⁰ Sarma, N. (2019). *What will happen to Chinese steel after Trump tariff? I ORF*. [Online] Available at: <https://www.orfonline.org/expert-speak/what-will-happen-to-chinese-steel-after-trump-tariff-54842/> [Accessed 30 Dec. 2019].

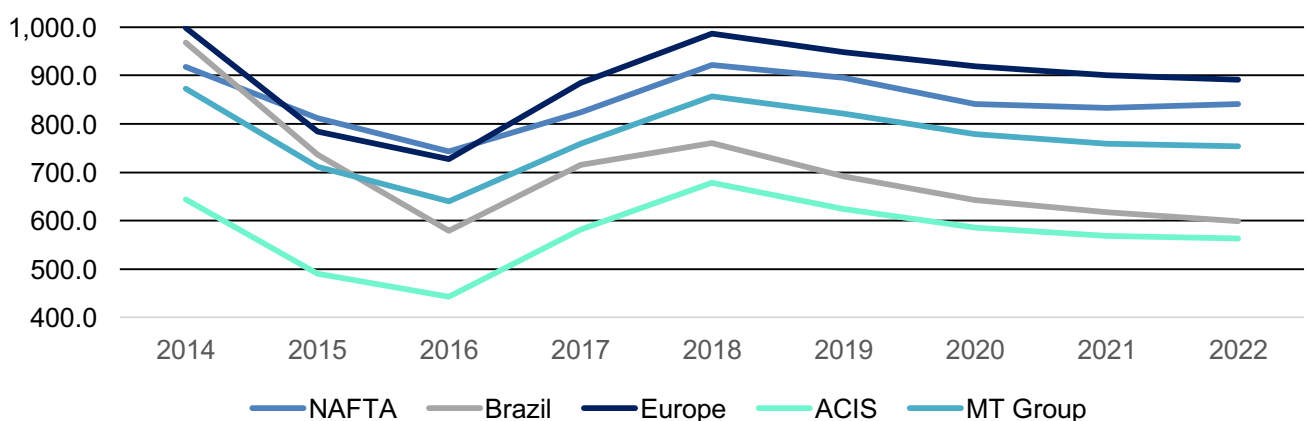
¹¹ Hellenicshippingnews.com. (2019). *China to commission 93 million mt/year of new steel capacity in 2020* | Hellenic Shipping News Worldwide. [Online] Available at: <https://www.hellenicshippingnews.com/china-to-commission-93-million-mt-year-of-new-steel-capacity-in-2020/> [Accessed 30 Dec. 2019].

¹² South China Morning Post. (2019). *Global steel forum scrapped as China says it had done more than its share*. [Online] Available at: <https://www.scmp.com/economy/china-economy/article/3034753/global-steel-forum-scrapped-china-says-it-has-done-more-its> [Accessed 30 Dec. 2019].

hence is more robust to current disruptions. As of 2018, all of the top ten destinations for Chinese steel exports were developing countries, nine of them in Asia. We therefore assume that the Brazil and ACIS segment are affected the most by deflationary global prices, as China will flood these markets with excess material.¹³ Hence, realized steel prices in Brazil are assumed to go down by 21.2% until 2022, while the ACIS price is bound to decline by 17.0% until 2022. The developed segments Europe and NAFTA will also be affected but less severely. In the U.S. the Section 232 tariff lead to the reinforcement of shut down furnaces or even the construction of new plants, worsening the excess supply conditions from China domestically (prices to go down by 8.8% until 2022). European markets are the largest importer of steel. Hence prices will be negatively affected, declining with 9.7% until 2022.

Looking forward, we do not see the issue of global excess supply to resolve within our short-term forecast period for several reasons. Firstly, we do not see global trade frictions to loosen up anytime soon. The U.S. is entering election year in 2020, making an ultimate resolution of the Trade Wars unlikely in the upcoming years. Moreover, the inflationary Chinese exports will even increase global trade tensions, as Governments will try to protect domestic steel markets. Secondly, the third largest global steel market India recently announced its goal to double crude capacity by 2030, which will severely exacerbate the issue of excess supply.¹⁴ These aspects in the light of sluggish global steel demand lead us to believe that global steel prices will not be exonerated within our short-term forecast period.

Historical & Forecasted steel prices per segment



Source: Annual reports (2014-2018), Valuation Model

¹³ Sarma, N. (2019). *What will happen to Chinese steel after Trump tariff?* I ORF. [Online] Available at: <https://www.orfonline.org/expert-speak/what-will-happen-to-chinese-steel-after-trump-tariff-54842/> [Accessed 30 Dec. 2019].

¹⁴ Ft.com. (2017). *Steel industry grapples with curse of oversupply* I Financial Times. [Online] Available at: <https://www.ft.com/content/992ad270-b4d3-11e7-aa26-bb002965bce8> [Accessed 30 Dec. 2019].