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BBVA Research

Fighting an uphill battle

The overcapacity in China's steel industry

Braziliansteel Conference 2018

Le Xia, BBVA Research Chief Economist for Asia

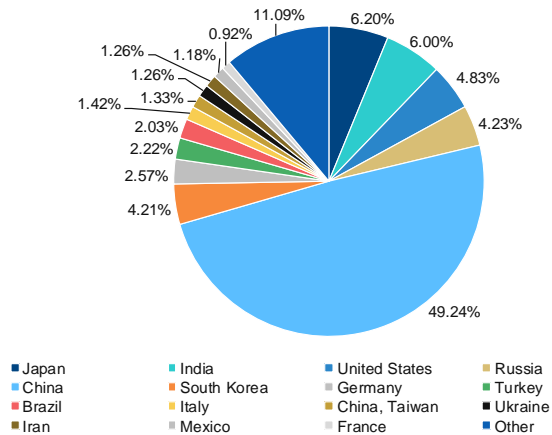
August 2018

Creating Opportunities

Global Market of Crude Steel

Composition of the World's Crude Steel Production

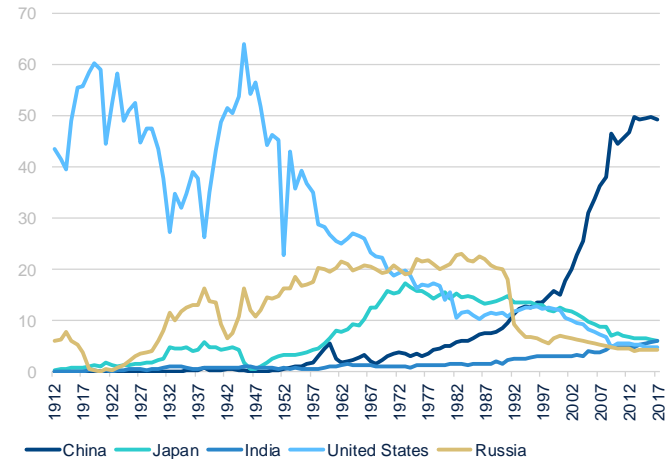
(%, for Top10 producers in 2017)



Source: BBVA Research and Wind, 2017

Rise and fall of major crude steelmakers

(%)



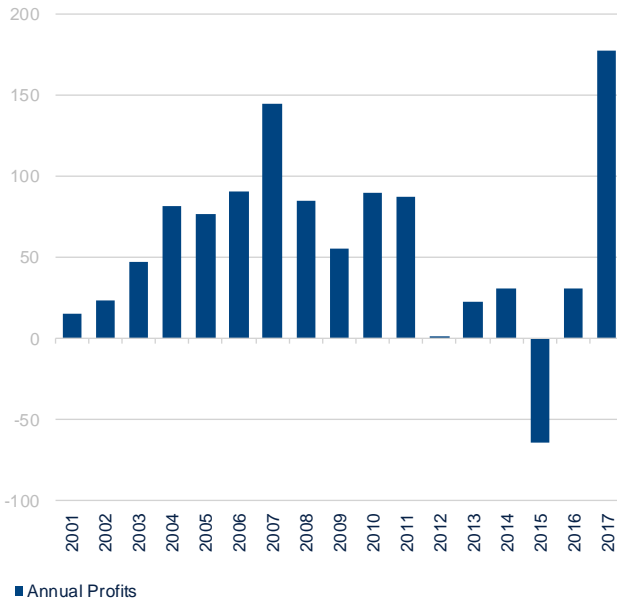
Source: BBVA Research and Wind, 1967-2017

China now produces almost one-half of the world's crude steel, while the country's unused capacity exceeds the annual output of the 2nd-5th largest producers together.

Low Profit and High Leverage

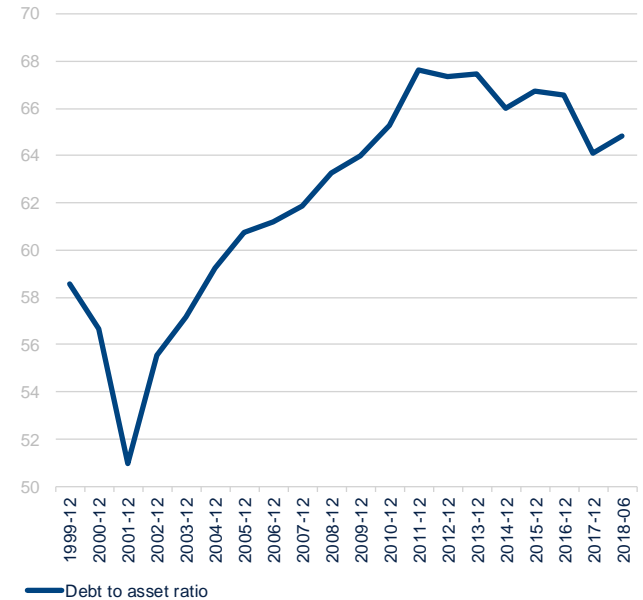
Annual Profits of the Large and Medium-sized Enterprises

(Billion yuan)



Note: Price in April 1994= 100
Source: BBVA Research and Wind

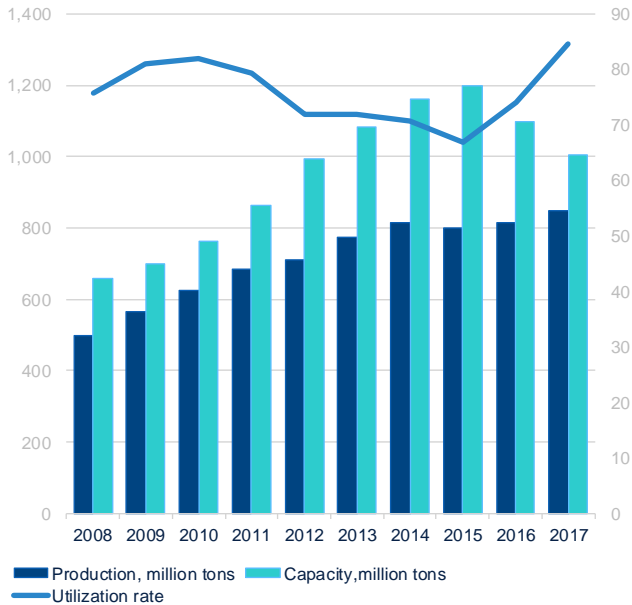
The leverage of China's Iron & Steel Industry remains high (%)



Source: BBVA Research and Wind

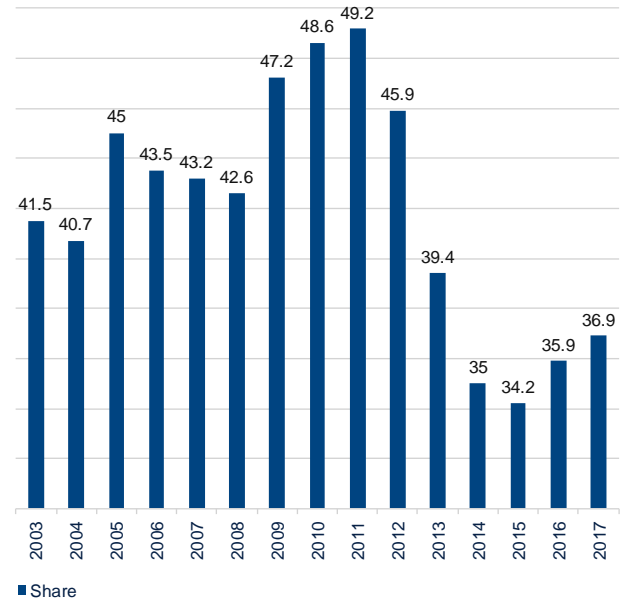
Low Utilization and Low Market Concentration

Crude Steel Utilization Rate (%)



Source: BBVA Research and Wind, 2008-2015

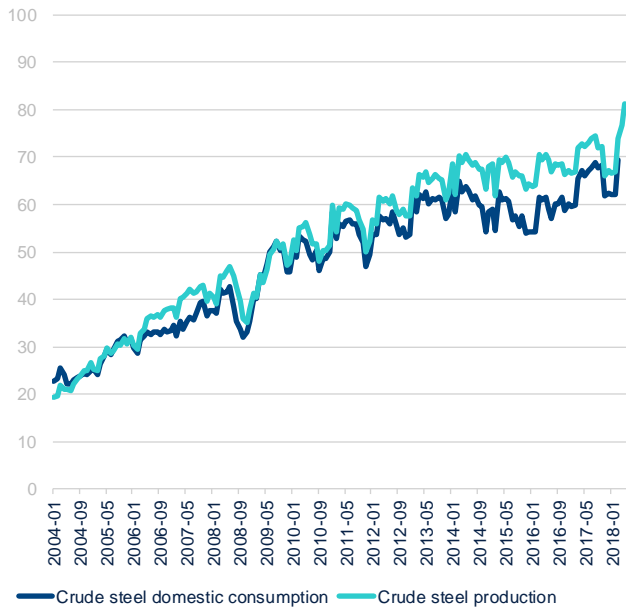
Market share of the top10 Steelmakers in China (%)



Source: BBVA Research and Wind, 2003-2017

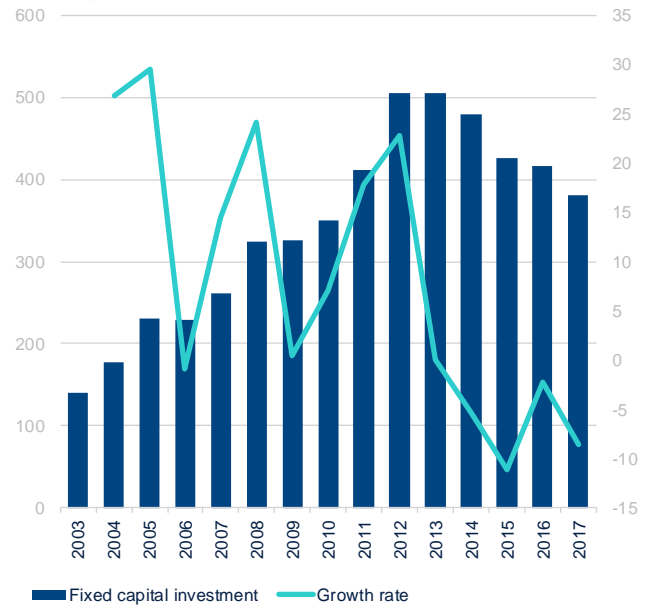
Crude Steel Production

Crude Steel Domestic Consumption (Million tons)



Source: BBVA Research and Wind, 2004-2017

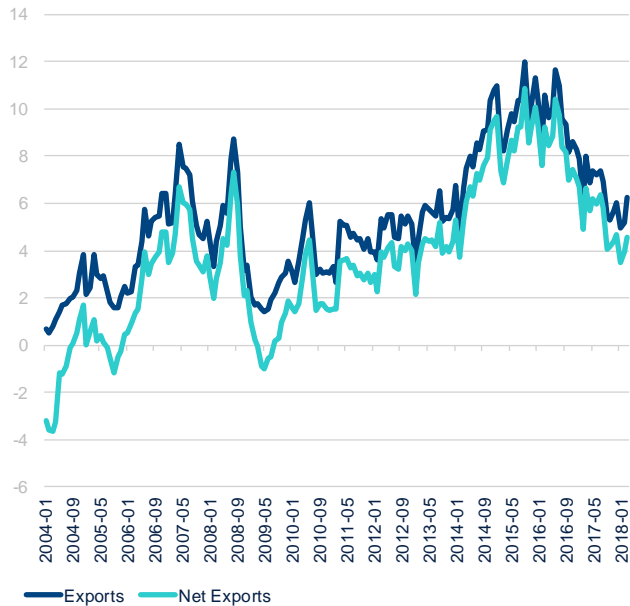
Fixed Asset Investment in Iron & Steel Industry (Billion yuan)



Source: BBVA Research and Wind, 2003-2017

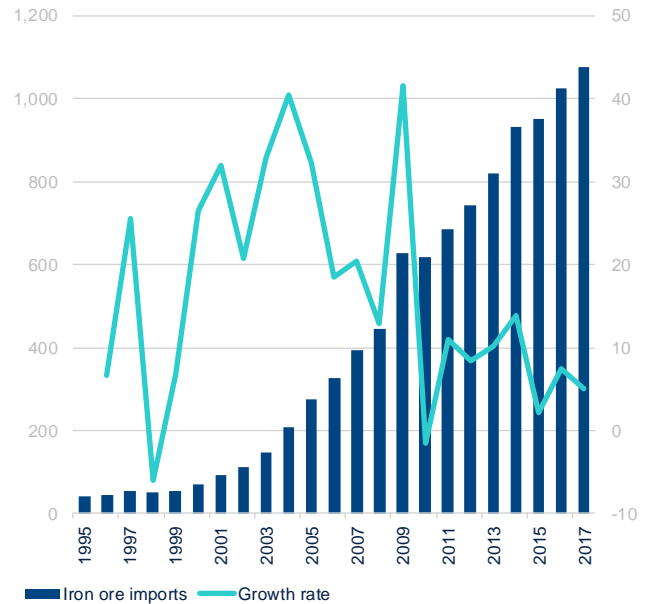
Crude Steel Exports

Crude Steel Exports (Million tons)



Source: BBVA Research and Wind, 2004-2018

Iron Ore Imports (Million tons)



Source: BBVA Research and Wind, 2002-2018

Origins of China's Overcapacity



External shocks

- Stimulus package in response to the 2008-2009 Global Financial Crisis



Low technical barrier

- The slow implementation of IP laws made technology spread fast and wide



Over-investment



Relative lower demand

Over-Investment and Relatively Lower Demand

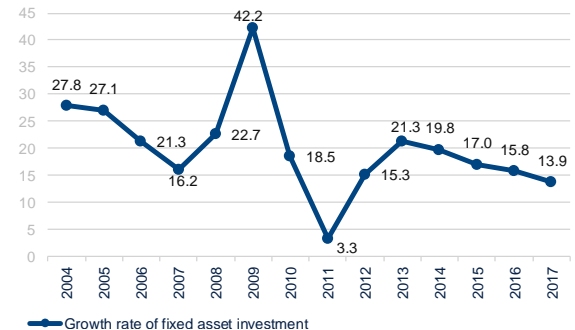
Outdated Development Model

- GDP-oriented developing model has made Iron & Steel industry become local governments' favorite
- SOEs dominate the Iron & Steel industry, which received more policy support. Private enterprises produced around 60% of output in 2016 while 8 out of the top 10 largest producers are still stated-owned
- Underpricing of labor and natural resources such as energy, water, and electricity
Gasoline, water, and industrial electricity tariffs in China are about one-third to one-half of the world averages

Demand from Terminal Markets

- High speed of 'Urbanization' drives up down-stream's demand for iron and steel
- Investment in the downstream industries started to slow down. Mismatched demand and supply (e.g., -4% v.s. +0.9% in 2014, and -5.4% vs. -2.3% in 2015)

Growth Rate of the Fixed Asset Investment in Infrastructure Sector (%)



Source: BBVA Research and Wind

How to solve the overcapacity in China?

Unsuccessful Previous Efforts (1)

Stage 1: Dec 2003 - Mar 2009

■ Blueprint for the Adjustment and Revitalization of the Steel Industry

- Goals:
 1. Curb the downward tendency and make sure that the top 5 enterprises account for at least 45% of the national production (state-owned: HBIS Group, BaoSteel, WuSteel, and An-BenSteel, private-owned: Shagang Group)
 2. By 2011, reduce iron and steel output to around 500 million tons and wash out a production capacity of 72 million tons for iron and of 25 million tons for steel
- Result: disrupted by the 2009 stimulus package

How to solve the overcapacity in China?

Unsuccessful Previous Efforts (2)

Stage 2: Aug 2011 - May 2015

■ **Guiding Opinions of the State Council on Resolving Serious Production Overcapacity Conflicts (Oct. 2013)**

- Low iron and steel utilization rate of only 72% in 2012 with new projects being under or proposed construction
- Goals:
 - Focusing on certain provinces such as Hebei, Liaoning, and so on, reorganizing and relocating enterprises, compressing the aggregate capacity up to 80 million tons

Overcapacity within China Iron and Steel Industry: Solutions

The Supply-side Reform

Stage 3: 2016/02 - Present

■ Plan for adjustment and upgrading of iron and steel industry (Nov. 14, 2016)

- Debt Asset ratio of the pillar iron and steel industries exceeded 75% during 12FYP, utilization rate of crude iron decreased to 70%, and the concentration rate of the top 10 producers dropped to 34%
- Goals
 1. Eliminating capacity of 100-150 million tons, increase utilization rate to 80% and increase industrial concentration by 25%
 2. Strictly prohibited the building of new capacity-added projects, and future strengthened the environmental restrictions and the supervision of capacity elimination

The Elimination of Crude Steel Production Capacities

Targets

Accomplishment

2016 > 45 mt in 2016
100-150 mt in five years (2016-2020)

> 65 mt

2017 > 50 mt in 2017

> 50 mt

2018 > 30 mt in 2018
150 mt ahead of schedule

Completion of 30 mt (till July 25)
approaching completion of 150 mt

Environmental Restrictions

- 2017 Prevention and Control of Atmospheric Pollution in Beijing and the Surrounding Areas
- 2017-2018 Work Plan for the Prevention and Control of Atmospheric Pollution in “2+26” Cities



1. Production Standards

- Off-peak production & a winter production cut to 30%-50% of the enterprise's capacity (main focus: Tangshan, Handan, Shi Jiazhuang, and Anyang)
- Halt or limit production to a level depending on the Air Pollution Index
- Restrictions on industries' working days (276 days in 2016 but 330 days in 2017)



2. Environmental Cost

- Stringent standards on the atmospheric pollutant emission, industrial effluent, VOC level, and etc. & close, dismantle or compel maintenance of the plants unqualified

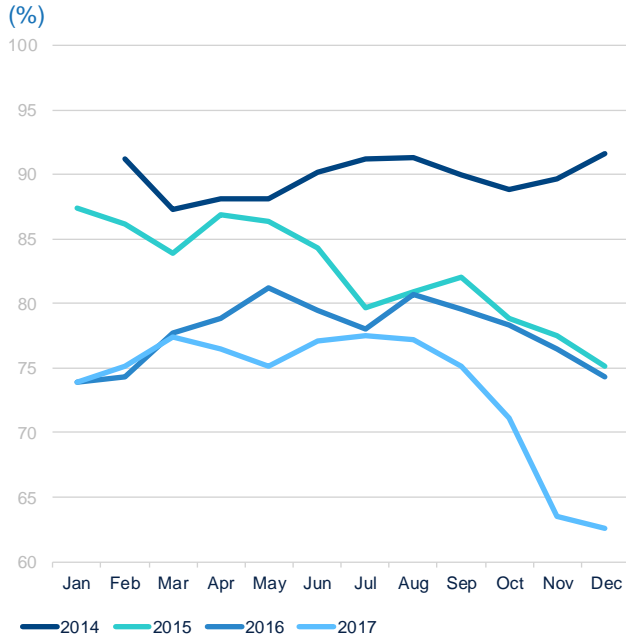


3. Governments' Inspection

- A coverage of all the 31 provinces in China
- Under supervision of the General Office of the State Council instead of the Environmental protection bureau

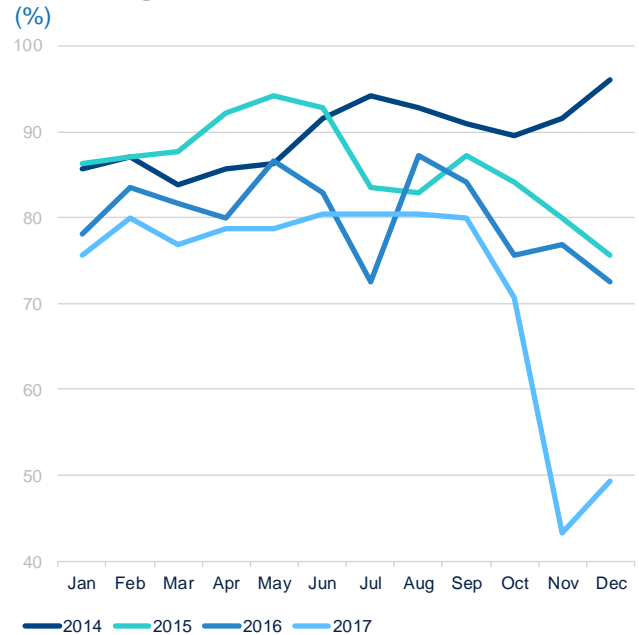
More Seasonal Patterns Appear

Changes in Enterprises' Operating Rate Whole Country (%)



Source: BBVA Research and Wind, 2014-2017

Changes in Enterprises' Operating Rate Tangshan (%)

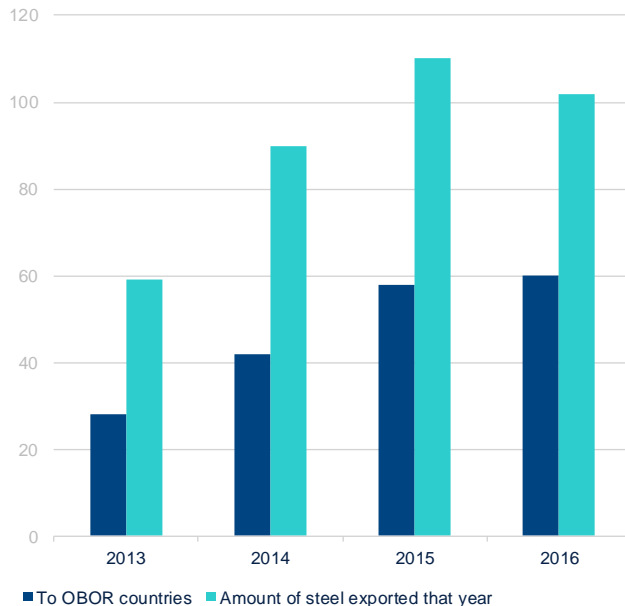


Source: BBVA Research and Wind, 2014-2017

Seeking ways to export the excess capacity: Revive global demand

Steel Exports to OBOR Countries

(Million tons)



Source: BBVA Research and ZGW.com, 2013-2016

Asian infrastructure investment bank

- A way to absorb the excess capacity or too small to make any dent?
 - This multilateral development bank aims to cushion the building of infrastructure in the Asia-Pacific region with its nowadays' 86 member states

One belt, one road

- The establishment of steel trade cooperation with 64 countries
 - With a decreasing iron and steel demand from the global market, in 2016, China exported 63 million tons of iron and steel to the "OBOR" countries (a 3% increase y.y.)

Will these new efforts succeed?

01

Concerns in governments' not properly enforcing the policies, which includes

- Local governments may provide support for iron and steel enterprises (underreported capacity)
- Policymakers may have been focusing on production instead of capacity
- In essence they are not market-based solutions

03

The potential decrease in GDP brought by a reduced industrial production in the short-run

- Output growth of industries are highly correlated with that of crude steel production.
- 1% decrease in steel production would drag down the industrial adding value by 0.31% and the GDP by 0.12%

02

Placement of the labor force under economic transition

- Relative easy to eliminate capacity while hard to export excess labor

04

Escalating trade tensions with the U.S.

- Although China is not among the top10 countries exporting steel products to the U.S., enterprises in China may be affected indirectly from other countries and the price of iron ore is expected to increase

Other Possibilities

- Enhance enterprises' asset restructuring process, which includes but is not limited to allowing for enterprises' going bankruptcy, M&A, Going Privatization, and etc.
- Restrict capacity from 'input' side (e.g., reasonable resources' price, reducing subsidies or preferential policies like the low capital lending rates)
- Prevent SOEs' empire-building behavior by redistribute firms' profits to other social wellbeing programs
- Encourage enterprises' R&D expenditure and emphasize the protection of intellectual properties
- Use the current trade war as an opportunity to reshuffle China's iron & steel industry

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