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June 6, 2012

Sector Review:

Poor Profits And Overcapacity Dampen The Outlook For Steel In China

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Table Of Contents

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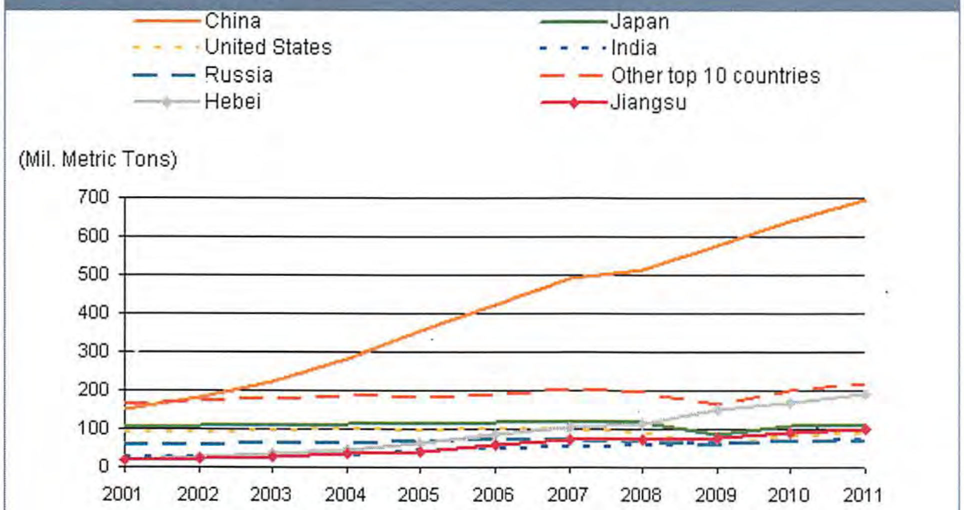
Large Chinese steel companies are losing money for the first time in 10 years, even though steel production is still at a record high. Overcapacity, market fragmentation, and slowing demand will likely keep steel prices soft and could even push them further down. Standard & Poor's Ratings Services expects weak margins and high operating leverage to erode the profitability of China's steel sector over the next couple of years. Many small and medium sized producers, long the central government's targets for closure, may continue to operate provided the cash costs of production are lower than the prevailing prices for finished steel products. In our opinion, a lack of market discipline (i.e, the shutting down of capacity to meet moderated demand), should it occur, could cause pain for the entire industry.

China is the world's largest producer and consumer of steel--miles ahead of the second largest player (see chart 1). Therefore, the performance of China's steel industry will have spillover effects on steel producers and raw material suppliers in other countries. The Chinese steel industry influences the prices of finished steel products and steel raw materials globally, particularly iron ore and coking coal.

Chart 1

Crude Steel Production



Note: Hebei and Jiangsu are provinces in China; data is for steel products. Source: CEIC, Standard & Poor's.

Overview

- Overcapacity, market fragmentation, and recent sluggish demand ail China's steel industry.
- We expect the sector's profitability to weaken in the next one to two years.
- This will have a spillover effect in other regions.
- However, the industry's long-term demand profile should regain its strength.

An increase in exports from China and more competitive pricing of imports into the country could affect global trade volumes of finished steel products. This will most directly affect the companies that supply raw materials to China from Australia and Brazil. Japanese and Korean suppliers will face the most competition for steel imports to China.

A weaker steel industry could lower employment and tax revenues for Chinese local governments. In our opinion, the central government's response may not be fast or targeted enough to help the steel industry over the next few years, and most certainly not in 2012. But we believe shifts in end-use steel demand, industry consolidation, and newer technologies will restore the steel industry to better profitability in three to five years time.

Overcapacity Is Likely To Persist

We believe lack of production discipline weighs on the prices of crude steel and raw materials. This is because we expect that fragmentation and overcapacity in the Chinese steel industry will continue unless the government implements new radical policy measures toward industry consolidation.

China has reported overcapacity in steel production since 2005. The government has implemented several plans and policies during this time that have called for industry consolidation, technological upgrades, and closures of polluting and inefficient plants. Despite progress, overcapacity continues to plague the industry.

While reliable estimates of overcapacity are difficult to obtain, partly because some producers may not report their capacity, we estimate overcapacity in China's steel industry at about 10%-25%. We assess the current capacity utilization at about 85%, which is much higher than the 76% during the 2008 downturn.

The Market Remains Fragmented

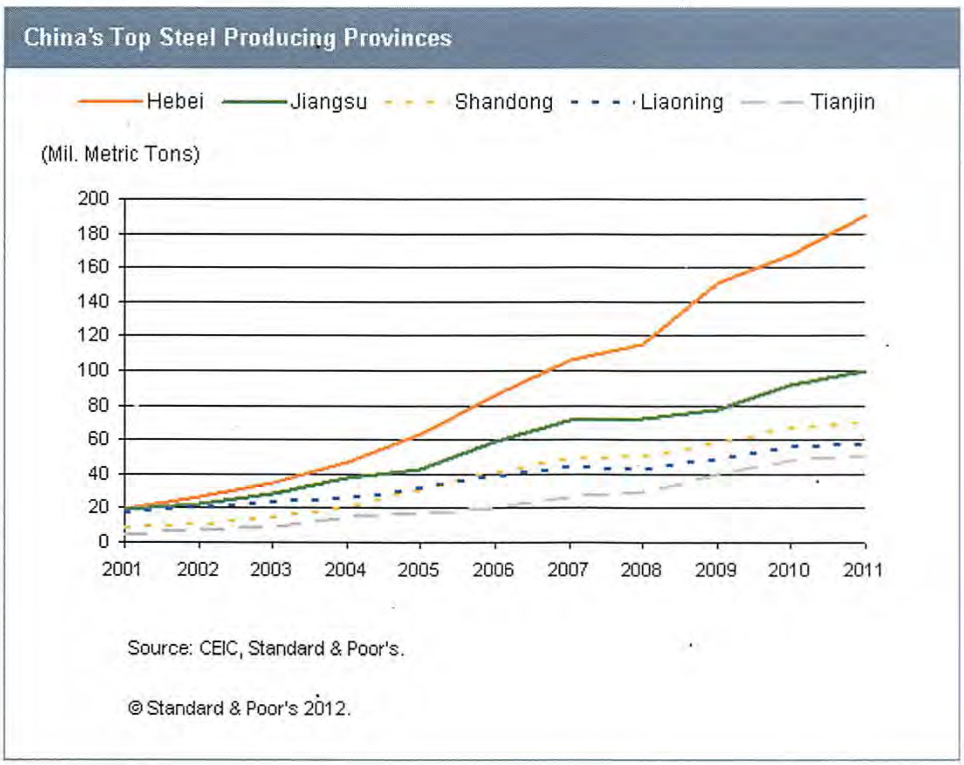
Industry consolidation has not progressed as rapidly as observers have expected. For example, Baosteel Group Corp. (A/Stable/--, cnAA+) acquired several domestic companies in 2007-2009. However, since then, the company has not undertaken any acquisition because of local governments' opposition and because of a lack of economically viable targets. We believe the extent of market fragmentation and the lack of incentives to change are the main obstacles toward greater industry consolidation.

The Chinese steel sector is possibly more fragmented than that in any other country. The largest Chinese producer accounts for roughly 10% of the market. In contrast, the top six steelmakers constitute more than 80% of total supply in Japan's domestic market. Likewise, in Korea, POSCO (A-/Negative/--) dominates with a 40% market share.

In China, a handful of large state-owned or provincially owned producers comprise only a part the market. The Chinese Steel Industry Association classifies about 80 producers as medium and large entities. According to China's Ministry of Industry and Information Technology, about another 500 entities are capable of producing crude steel. This number increases significantly if small rolling mills are included. Over the past five years, production from large and medium companies has decreased to 55% of total supply from 59%. According to China Metallurgical Industry Planning Research Institute, over 70% of the newly installed capacity since 2005 was established without proper approval.

Hebei province stands out as the province with the largest number of small and medium privately owned steelmakers. These producers contributed greatly to the large increase in steel production over the past 10 years (see chart 2).

Chart 2



Several factors have contributed to market fragmentation. Booming construction and infrastructure requirements provided a very attractive business opportunity, and barriers to entry were low. Such low barriers were a boon for the small plants that produced low-end commodity steel products, such as rebars (i.e., reinforcing bars) for property construction, while many of the larger steel producers shifted to higher end specialty products.

In addition, steelmaking has supported local governments in terms of employment and tax revenues. For example, according to the Hebei steel association, the steel industry contributes one-third of the region's total industrial value-added output. In Wu'an county, also in Hebei province, 18 privately owned steel companies contribute 70%

of local GDP, according to China Business Journal. Not surprisingly, local governments are reluctant to support plant closures. Some small steel producing enterprises that the government had targeted for closure expanded instead to avoid shutting down, since the government's policies for closure were based on installed capacity.

While the central government's development plan for the industry is strong, it could take years to take effect. Emphasis on specialty steel production will support growth in new end uses for steel. New technologies that consume less energy and function using cheaper raw materials will enhance the sector's profitability and reduce environmental impact.

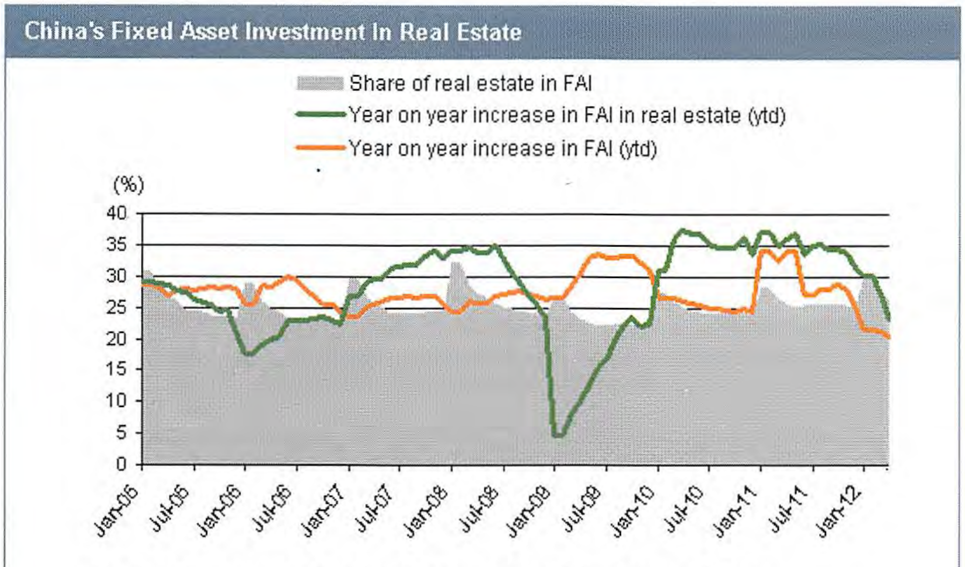
However, the government's short-term strategy is unknown. In May 2012, National Development and Reform Commission approved the construction of two very large steel mills by state-owned steel producers with total capacity addition of 20 million metric tons (mt). The new plants will possess state-of-the-art technology and will be located close to ports for easy import of raw materials. They will also be close to end-use markets, particularly new automotive manufacturing facilities. But until many smaller or older plants are shut down, the new plants would add to the problem of plenty. They will, however, boost employment and economic activity during the multi-year construction period. One of the new plants is Baosteel's 10 mt steel mill in Zhanjiang, Guangdong province. The company is contemplating closing 10 mt of inefficient steelmaking facilities elsewhere in Guangdong, probably as an offsetting compromise. This plant closure could take years to implement.

Demand Should Stay Sluggish

We expect that steel demand in China will remain lackluster in the next one to two years, putting pressure on steel prices. Weakened demand from the real estate sector, somewhat delayed social housing programs, and slower growth in infrastructure development will largely contribute to the decline. In our opinion, higher demand from auto and infrastructure segments in western China will not be sufficient to offset a lower overall demand.

We forecast steel demand to grow 4%-6% in 2012. Demand grew at an average annual rate of 10.7% in 2007-2011, largely in line with the average annual growth in GDP over the same period. Our demand forecast for steel is lower than our base-case GDP scenario of 8%, which makes it more in line with a worst-case scenario of a hard landing in China with GDP expansion at 5%. Lower growth rates of both fixed-asset investments (see chart 3) and end-use demand support our view. In China, 50% of steel demand comes from construction (see chart 4). This differs from steel consumption in other countries. For example: In Japan, steel consumption is heavily skewed toward the automotive industry; and in Korea, the shipbuilding and automotive industries consume the most steel.

Chart 3



FAI--Fixed asset investment. ytd--Year to date. Source: CEIC, Standard & Poor's.

Chart 4

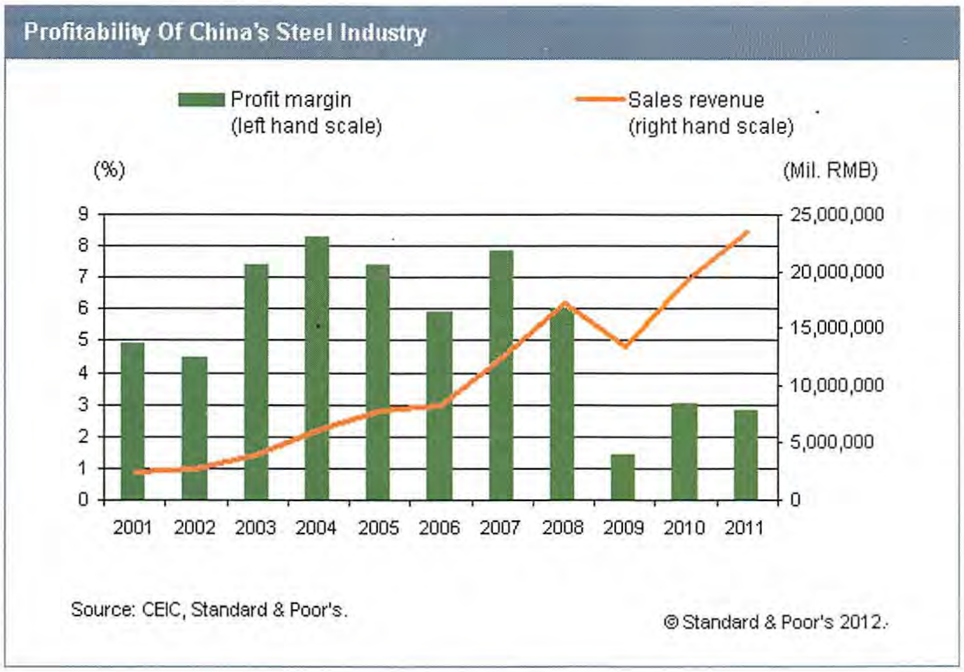
Note: Total steel demand in 2011 was 655 million metric tons. Source: SBB, Bloomberg, Standard & Poor's.

China's 12th five year plan reiterates a sustainable consumer driven growth model and could translate into greater demand for automotive and household appliances. But given the lower percentage of demand from these end uses now, 8% and 2%, respectively, we don't expect higher growth in these segments to fill the gap left by declining construction demand.

Poor Profitability Is On the Horizon

We expect large Chinese steel manufacturers' profitability to be low over the next few years because of weaker margins and high operating leverage. Capital spending for state-owned enterprises (SOEs) that continue to expand and upgrade their technologies will also be high for the next several years at least. Companies reported losses in the first quarter of 2012 while production was at an all time high. We believe China's steel industry is becoming more vulnerable as margins continue to decline (see chart 5).

Chart 5



The risk of accelerated price declines looms if the steel industry doesn't cut production in line with lower demand. Small producers will operate as long as their cash costs of production don't exceed the prices of finished steel products. Some of the more efficient small producers may even outlast the large producers. Some larger producers will lower utilization and bear losses, but may not choose to shut down completely and may continue to operate given their social responsibility (tax revenue and employment) and cheap funding.

Large steel producers can lower utilization to follow demand, but their operating costs will increase because they use blast furnaces. These furnaces are most cost effective at high levels of utilization. In contrast to electric arc furnaces, blast furnaces are difficult to ramp up as well as down. Small players that manufacture commodity rebars will not feel the heat until rebar prices decline further. Rebar prices have declined 12% to about Chinese renminbi (RMB) 4200 per metric ton, from about RMB4800 per metric ton in September 2011. We believe that the smaller players will still remain afloat at the current prices.

Some of the large state-owned steel companies have strong financial profiles partly due to government support. In particular, Baosteel has relatively low leverage and excellent access to capital. The company also has a dominant market position in auto sheets. We believe these strengths will sustain Baosteel during industry downcycles. However, the financial strength of the company combined with its social responsibility as an SOE also allows it to continue to produce at a loss or at low profitability for a sustained period of time.

The overall credit quality of steel companies in China varies. SOE's are the largest companies, but they do not operate with the highest margins or returns on capital (see table 1).

Table 1

China's Largest Steel Companies--Selected Statistics*

	Baoshan Iron & Steel Co. Ltd.	Hebei Iron & Steel Co. Ltd.	Wuhan Iron & Steel Co. Ltd.	Jiangsu Shagang Co. Ltd.	China Oriental Group Co. Ltd
Ownership	State owned	State owned	State owned	Privately owned	Privately owned
Revenue (mil. RMB)	222,415	133, 415	100,824	14,952	38,597
Total assets (mil. RMB)	231,099	141,041	96,101	10,144	22,930
EBITDA margin (%)	9.6	7.0	8.2	9.7	8.0
Return on capital (%)	5.0	3.0	2.6	10.0	10.7
Debt/EBITDA (x)	3.9	7.3	4.8	2.5	2.7
Capacity (mil. metric tons per annum)	48¶	53	20	30	11

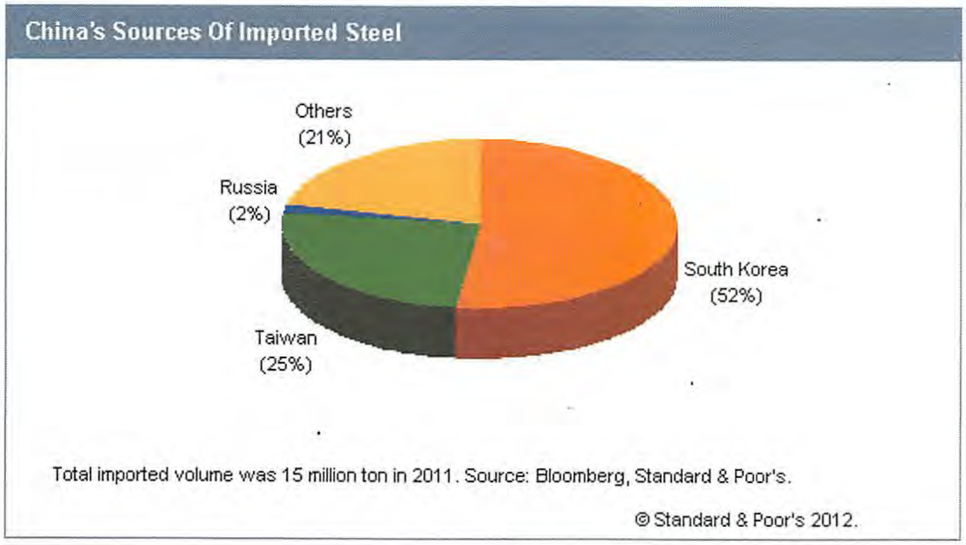
*Data for 2011. ¶Capacity for Baosteel Group. RMB--Chinese renminbi.

Imports of Raw Materials Weigh Heavily On Steel Producers

The Chinese steel industry's heavy reliance on imported raw materials and its weak bargaining position with foreign suppliers are ongoing constraints. Chinese steel companies have limited bargaining power, particularly with the large iron ore producers, even though the country's iron ore imports constitute more than 65% of the world's total trade. But the scales could be tipping in favor of the Chinese--although this will not happen overnight. China's first spot iron ore trading platform went live in May 2012, with participation from all major mining companies. Chinese steelmakers hope that this platform will lead to greater price transparency. Nevertheless, we expect it will be a while before the market can increase its depth and liquidity.

Most imports in recent years have been specialty-grade steel products from Japan, Korea, and Taiwan for use in high-end auto and appliance manufacturing (see chart 6). But even these segments are facing increasing competition from domestic producers who already have, or are planning to, increase capacity.

Chart 6



While, China's steel exports have been increasing in recent months, they haven't reached pre-2008 levels and we don't expect them to return to this peak. And although, Chinese exports to Korea increased by 15% year on year in 2011, Korean exports to Japan went up 36% during the same period. Also, in our view, increased Chinese exports are likely to trigger trade disputes as exports rise. Earlier this year, China's steel sector faced anti-dumping complaints from Mexico, the European Economic and Monetary Union, Brazil, and the U.S. that focused in part on government subsidies. Nevertheless, in Southeast Asia, prospects for Chinese commodity steel products look better.

China's appetite for imported iron ore is unlikely to abate, in our opinion, since its domestic supply is deficient in both quantity and quality. China will continue to rely heavily (60%-70%) on imported iron ore, particularly from Australia and Brazil, purchasing from the three global mining giants: Vale S.A. (A-/Stable/--; brAAA/Stable/--); BHP Billiton Ltd. (A+/Stable/A-1); and Rio Tinto PLC (A-/Stable/A-2). However, as demand slows and prices decline, the windfall cash flows from iron ore production will fade. Greenfield iron ore projects banking on high iron ore prices will be most vulnerable to weakening demand from China's steel industry.

China relies more heavily on imported iron ore than on imported coking coal given its large domestic coal resources (see table 2 and chart 7). Still, given the sheer size of the Chinese steel industry, the 45 mt of coking coal that the country imports constitutes a sizable volume of seaborne trade. Substantially weaker demand from China's steel industry will dent both the iron ore and coking coal markets.

Table 2

Breakup Of China's Coking Coal Sources in 2011*

	(%)
Production	91.9
Imports	8.1
Mongolia	3.6
Australia	1.9

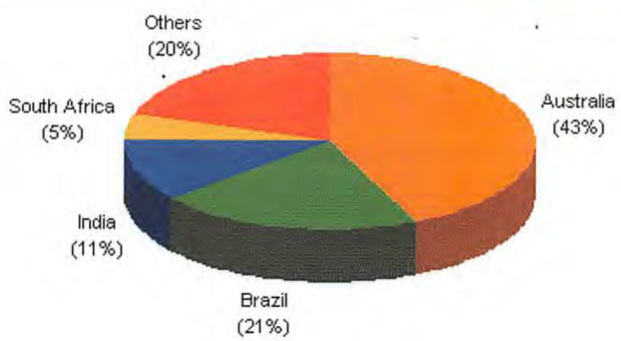
Table 2

Breakup Of China's Coking Coal Sources in 2011* (cont.)	
Others	2.7

*Total consumption of coking coal = 558 million tons. Source: Bloomberg, Standard & Poor's.

Chart 7

China's Sources Of Iron Ore Imports



Total imported volume of iron ore in 2011 was 687 million tons. Source: Bloomberg, Standard & Poor's.

A Test Lies Ahead

The next year will test the mettle of Chinese steel manufacturers as they face weakening demand, poor profitability, and overcapacity. If market forces alone were at work, the demand and supply would likely balance out over a year or two. But with other factors at play, such as the need for local government revenues and job preservation and the presence of unlicensed producers, it is possible that the Chinese steel industry will experience pain and that the sting could extend beyond China's borders.

Related Criteria And Research

- Top 10 Investor Questions On The Asia-Pacific Metals And Mining Sector, June 4, 2012
- Peer Comparison: Difficult Industry Conditions Will Test North Asia's Three Largest Steelmakers, June 3, 2012
- China's Sliding Demand For Commodities Could Sap Strength Of Australian Miners, Feb. 15, 2012
- The Potential Risk of China's Large And Growing Presence In Commodities Markets, June 1, 2011