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2014: A transitional year for the iron ore and steel market

By James Eginton Research Analyst (FOR SOPHISTICATED INVESTORS ONLY)

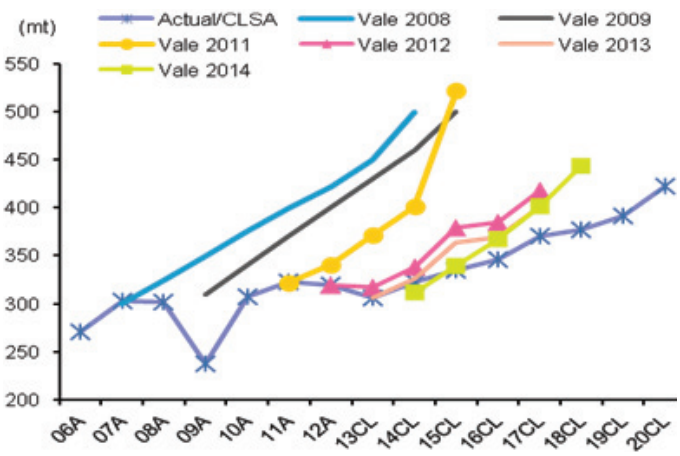
The relationship between the supply of iron ore and steel consumption in China has been the dominant theme in the bulk commodity space for the past five years, as China's population has begun the process of urbanisation. Significant investment has been made in infrastructure and housing, which has driven the considerable growth in demand for steel and, as a result, for iron ore. James Eginton, Research Analyst at Tyndall AM, provides an outlook for both of these markets and explains why 2014 is set to be a year of transition as these supply and demand dynamics change.

The iron ore market

Whilst steelmaking capacity in China has kept pace with the surge in demand, it has been the supply of iron ore that has lagged and has, as a result, led to a quadrupling of the iron price over the past 10 years.

Key to the supply issue of iron ore has been the inability of the Brazilian producers to add incremental new supply to offset mine maturity, as well as the environmental and political challenges that have faced the world's largest iron ore miner, Vale. Chart 1 highlights the inability of Vale to deliver net new tonnes.

Chart 1: Vale supply guidance has consistently disappointed



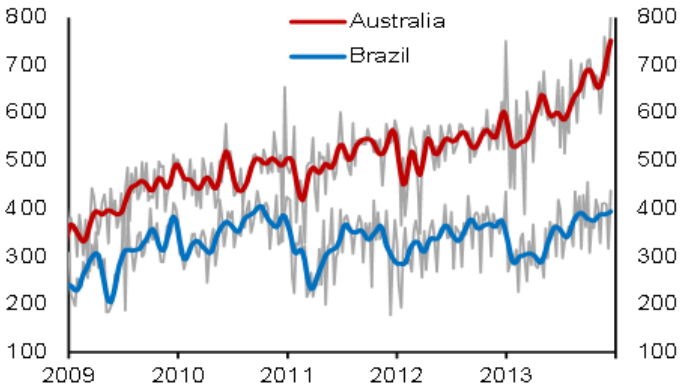
Source: Vale, CSLA

Vale is now at risk of losing its title as the world's biggest exporter of iron ore to Rio Tinto if it continues to fail to deliver new tonnage. This could happen within two years.

The seaborne response to the Chinese demand for new iron ore has been led by Australia. It has been dominated by production increases from the incumbent majors, BHP Billiton and Rio Tinto, but has also been supported by the successful growth of Fortescue Metals which is now the fourth-largest iron ore producer globally. Chart 2 highlights the seaborne response from Australia versus Brazil, which has continued to find it difficult to add additional net tonnage to meet the ever-increasing demand from China.

Chart 2: Australia is leading the supply response

Iron ore exports (millions of tonnes per year)



Source: Credit Suisse

The importance of the supply response is the main driver in reducing the key input cost into steel making – iron ore. The slow response of the supply of iron ore versus the more timely increase in steelmaking capacity has caused sharp spikes in the iron ore price and has led to low profitability of steel mills.

Supplementing iron ore over the past five years has been the high-cost, low-quality domestic iron ore from within China. Ore grades in China are as low as 15% (versus the global benchmark of 62%) and require significant beneficiation (refinement) in order to be useful in the steel making process. As a result, a large proportion of Chinese iron ore sits high on the iron ore cost curve. Chart 3 highlights where the Chinese ore currently is assumed to sit at around USD 130 per tonne CIF (costs of production, insurance and freight).

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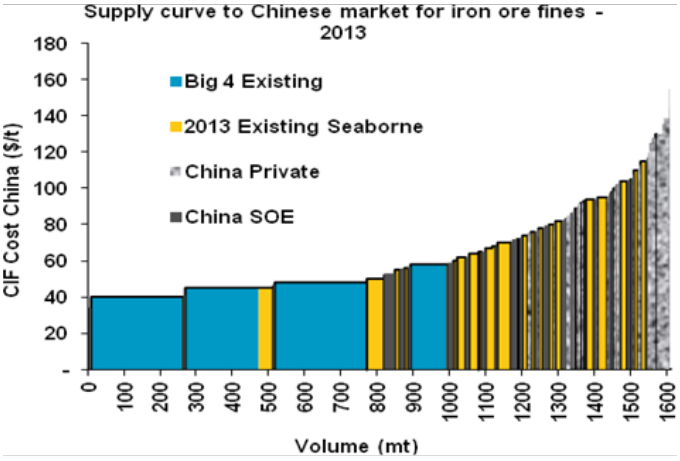
Chart 3: Market support for iron ore sits at around USD 130 per tonne



Source: SMM, Company reports, Industry sources, Macquarie Research, September 2013

In order for the iron ore price to fall, this low-quality tonnage needs to be removed from the market and replaced by lower-cost Australian and Brazilian iron ore.

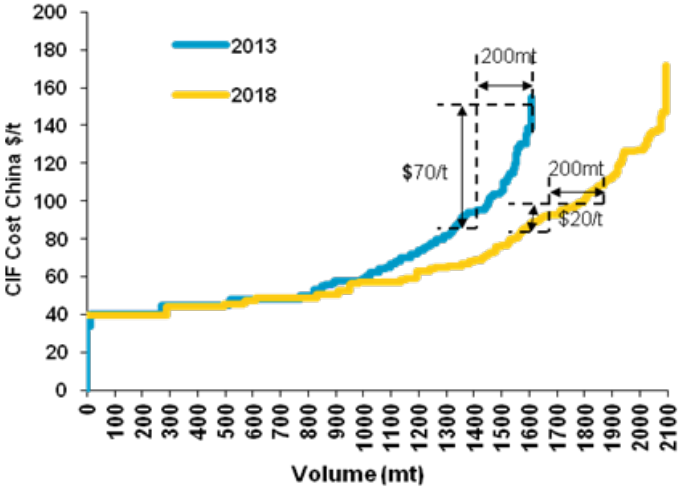
2014 marks an important year in the supply-demand balance for iron ore, as it's likely to be the first year since 2004 that the iron ore market will move towards a small surplus. The size of the surplus or deficit depends on assumptions surrounding Chinese steel consumption, but it is clear that 2014 will see significant additional iron ore produced at a lower cost than Chinese domestic ore. Iron ore supply additions will total close to 200 million tonnes with Rio Tinto, BHP Billiton, Fortescue and Vale contributing approximately 120 million tonnes of this new supply.

The expectation is that the iron ore price will fall from its current price level of around USD 130 per tonne towards USD 110-120 per tonne, with significant declines likely after the second quarter of 2014 and following the cyclone season in Western Australia and Brazil, which has the potential to cause significant disruption to seaborne supply.

Currently, 270 million tonnes per year (on a 62% iron content equivalent) is sourced from Chinese domestic suppliers. Morgan Stanley forecasts that within four years, 70 million tonnes per year will be removed and supplemented by seaborne supply (source: Global Metals Playbook: 1Q14, research paper, 22 January 2014). This is despite Chinese steel consumption growing by 2-2.5% per year in the same period (which should necessitate more iron ore consumption). Thus, the seaborne market, in particular Australia, will be important in displacing this domestic Chinese tonnage.

Looking to the medium term, the iron ore price is also likely to exhibit significantly lower price volatility than it has displayed in recent years. Chart 4 highlights the reason for the lower volatility and it surrounds the flattening of the iron ore cost curve.

Chart 4: A period of lower volatility could occur in the medium term



Source: SMM, Company reports, Industry sources, Macquarie Research, September 2013

Chart 4 highlights that in order to displace 200 million tonnes of iron ore demand in 2013, the iron ore price will need to fall by USD 70 per tonne due to the steepness of the cost curve. However, looking to 2018 and assuming forecasted supply comes to the market, the same 200 million tonne move in supply will only result in a USD 20 per tonne movement in the iron ore price. This will make the iron ore market far more stable in terms of pricing and should assist steel maker margins in the long run.

Nearer term, however, the steepness in the cost curve has the potential to create a volatile iron ore market. The current cyclone season in Western Australia and wet season in Brazil has already seen Port Headland and Cape Lambert closed for two days and Vale declare force majeure due to heavy rains in the south east of Brazil which lasted for approximately a week after Christmas.

The impact was seen in the iron ore prices which ran up to USD 139 per tonne and subsequently moderated back below USD 130 per tonne in mid-January on the resumption of normal supply. The cyclone season in Western Australia and wet season in Brazil will normally run through the first quarter and into the early part of the second quarter.

After this period, new iron ore supply and the potential for Indian iron ore stockpiles in Goa to hit the market threaten to force prices lower through the second and third quarters. The impact will depend on the strength of Chinese steel consumption and inventory levels.

Restocking of iron ore inventory by Chinese steel mills is unlikely to provide a catalyst to promote further buying in the spot market as levels appear to have returned to normal for this time of year, steel mill profitability is low and credit remains tight for steel mills and steel traders. Chart 5 highlights that despite restocking taking place over the second half of 2013, iron ore prices have been relatively stable.

This also adds support to the view that the iron ore supply is finally catching up to Chinese demand.

Chart 5: Restocking not necessarily supportive of prices

Source: Credit Suisse

India remains a potential catalyst for pricing volatility in iron ore in the immediate term. Whilst we do not expect the key exporting region of Goa to begin mining within the next 12 months, the issue is what happens to the 11.5 million tonnes of iron ore inventory that is sitting at the port, which the courts have recently approved for sale but had been previously been banned by the government. If this floods the seaborne market in the second and third quarters, it will materially affect the price of iron ore and is a key downside risk.

At this stage, it is expected that the majority of the tonnage will remain within India and be sold to Indian mills as they face concerns about iron ore supply going forward, particularly from the key producing region of Odisha. India has the potential to be a net importer of iron ore and steel in the next two years.

The steel market

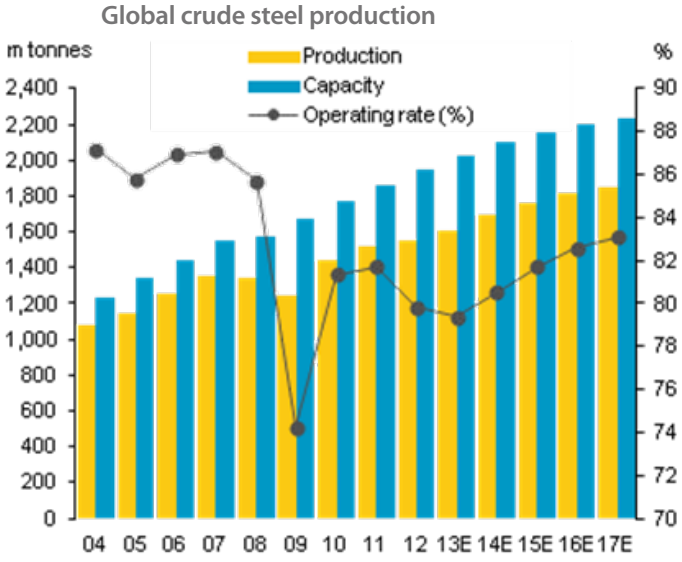
The steel side of the story is a case of historically high input costs coupled with overcapacity, leading to margin compression and an industry that is seeing record steel production and consumption, but has been unprofitable for a number of years. China has been the key to global consumption growth but has also been the cause of significant capacity additions.

Market expectations on steel consumption growth for 2014 are around 3-4% in 2014, with Chinese steel consumption totalling approximately 800 million tonnes. By 2017, market expectations are for close to 1 billion tonnes of steel being consumed in China alone. To put this into context, 2013 world steel consumption was 1.6 billion (including 775 million tonnes from China).

Steel consumption is likely to shift during 2014 (and into the medium term) from infrastructure investment towards consumer products as Chinese consumers increase their spending on air conditioners, fridges and dishwashers. Infrastructure spending growth is beginning to moderate with significant investment in rail, roads and electricity having previously been made. This may also mean the shift in steel consumption from long products such as rebar used to support the steel structure in buildings and infrastructure projects to flat products including hot rolled coil used in products such as refrigerators. These two products are produced at different mills and at different quality specifications (with flat products being the higher specified product).

Despite the significant growth in steel consumption, profitability in the sector has been very weak. The key for steel spreads and steel mill profitability to improve in the near term appears to be input cost relief rather than steel price improvement. This is due to the low steel mill utilisation levels which are currently hovering just below 80%. It is assumed that mills need to operate utilisation rates above 85% in order to get pricing power. This is unlikely over the next 12 months. Chart 6 highlights how capacity additions have exceeded production over the past five years leading to weak utilisation levels.

Chart 6: Capacity additions have resulted in weak utilisation levels



Source: CRU, AME, Deutsche Bank

As mentioned previously, there is some hope that iron ore prices will moderate over the next 12 months on the significant new, low-cost supply that is entering the seaborne market. This may lead to margin improvement for steel. Margin improvement is unlikely to be driven by significant price improvement for steel. In the near term, steel prices are unlikely to see significant upside as mill inventories have been high for this time of year, leading to lower levels of restocking

and credit conditions in China for mills and traders remaining tight (see Chart 7). Growth in steel consumption above market expectations would be required for material steel price moves.

Chart 7: Unusually high steel mill inventories will limit price upside

Source: Credit Suisse

Looking to the medium term, one potential catalyst for a recovery in utilisation levels (and a subsequent recovery in steel-making margins) is Chinese environmental reforms which could have the effect of curbing capacity.

China has recently announced the closure of obsolete capacity with the plan to phase out 60 million tonnes per year of capacity in the Hebei region alone. A large reason for this push is due to the poor air quality in Beijing which has forced the government to act on air quality, particularly around heavily populated regions. The closure of the obsolete capacity could be the key difference. Past pushes by the government on environmental reforms have not been successful in improving air quality nor has it reduced new capacity.

The key issue in reducing capacity and pushing for environmental reform is that it runs counter to local government objectives on employment, with the steel industry being a large employer in many regions. For example, in the key steelmaking region of Hebei, 15% of workers are in the steel industry and it represents close to 30% of the region's business income (which is taxable). This makes it a challenge and often puts the local government at odds with the central government. How the central government in Beijing is able to deal with this issue will have a significant bearing on whether net capacity closures are made or whether capacity closures in the region are merely replaced by new mills. It is too early to say which is likely to happen, but has the ability to be a significant upside to steel margins in coming years.

Conclusion

Overall, 2014 marks a transitional year for the steel and iron ore industry. It marks the first time since 2004 (excluding the global financial crisis) that the iron ore market will transition from being in a deficit position (where demand has exceeded iron ore supply) to a mild surplus. This is due to new supply, largely from Australia. At the same time, the Chinese central government has been pushing environmental reforms which could have the effect of improving steel mill utilisation through capacity closures. This is at a time when steel consumption continues to grow (albeit at a slower rate than recent history). As a result, the outlook for steel makers has begun to brighten with the potential for margin expansion and improved financial performance. India continues to remain unclear as to their position in the seaborne market for both iron ore supply and steel consumption. Political uncertainty makes it look increasingly unlikely that India will re-enter the export market with the supply of iron ore, whilst on the steel consumption side, growth in consumption is expected to be supported by internally produced steel. China too remains uncertain as to growth and the desire of the government to push environmental reform.

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