

Developments in iron ore

Supply contraction and Chinese demand drives prices higher

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A review of iron ore market dynamics

- The world is paying significantly more for iron ore today than it was last year, largely because of a number of supply constraints, including the tragic Vale Brumadinho disaster in January 2019.
- China continues to drive demand for some 1.1 billion tonnes or around 80% of total iron ore production per annum.
- Supply constraints in the iron ore market are likely to support iron ore pricing in the near-term and on a sustainable longer-term basis, with the iron ore price expected to continue to grind higher in 2019. Supply losses are expected to last for 2-3 years, supporting the commodity price over the medium term.
- As a result, Australian diversified mining and metals companies have entered a positive earnings upgrade phase.
- A higher iron ore price gives the Australian government more options on the fiscal side to support growth, reinforcing the benefits of accommodative monetary policy settings.

Iron ore overview

It is easy to underestimate the importance of iron ore to the Australian economy until it is pointed out that each US\$10 change in the price of iron ore corresponds to approximately A\$6.3 billion in nominal GDP and A\$1.1 billion in Australia's tax revenue¹.

Demand for iron ore from a growing China helped Australia ride through the Global Financial Crisis. From market lows in 2016 of around \$40, iron ore has tracked up on the back of strong global demand, Chinese demand for infrastructure and property, and a resilient growing US economy under President Trump. Since the start of 2016, iron ore has ranged between \$60 and \$100 a tonne, and is currently trading above the top end of this range.

The recent Brumadinho disaster in Brazil comes 3-years after BHP's Samarco disaster and coincides with a number of other weather related mining issues bringing contractionary pressures to the supply-side of the iron ore complex.

Ausbil has been monitoring the impact of shortages, particularly in seaborne bulk ore supply, since Brumadinho. In March, when iron ore was trading in the low US\$80/t range, Ausbil forecast that supply constraints and market disruptions would see the iron ore price exceed US\$100/t, which it did, so far reaching US\$108/t as of late May 2019.

Moreover, by Ausbil's estimates, supply constraints are likely to play out far longer than Vale² and most analysts are projecting. Consensus estimates are only now catching on to the potential impact on the iron ore market, and how sustained disruptions could become.

So where is the iron ore market headed, and how does this impact investors, and the Australian economy?

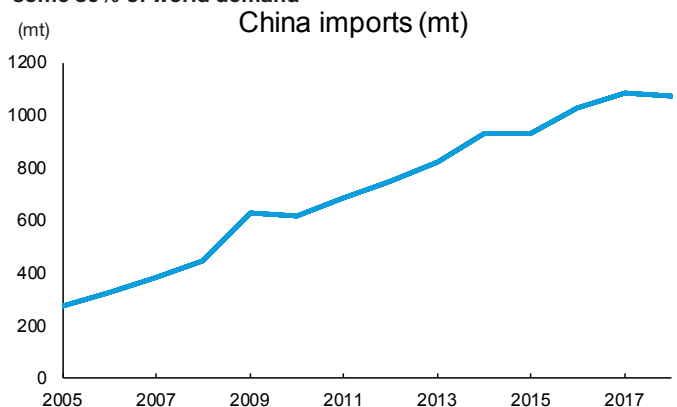
1. Australian Government Budget Papers, 2019/20.
 2. Brazil's largest Iron Ore company.

Brief overview of the iron ore market

Iron ore is primarily used to produce steel. The total seaborne iron ore market is approximately 1.4 billion tonnes annually, with the largest exporters of iron ore being Australia (around 760mt in 2018) and Brazil (around 370mt in 2018). The largest importer of iron ore is China, importing around 1.1 billion tonnes in 2018.

Chinese imported iron ore is converted into steel which supports Chinese construction activity, and the manufacturing of goods consumed both domestically and exported to the rest of the world. Historically, Chinese imports of iron ore grew at a CAGR of around 12.7% from 2005 to 2016 (as illustrated in Figure 1), but have been relatively stable since 2016 as Chinese growth and therefore demand for steel has moderated.

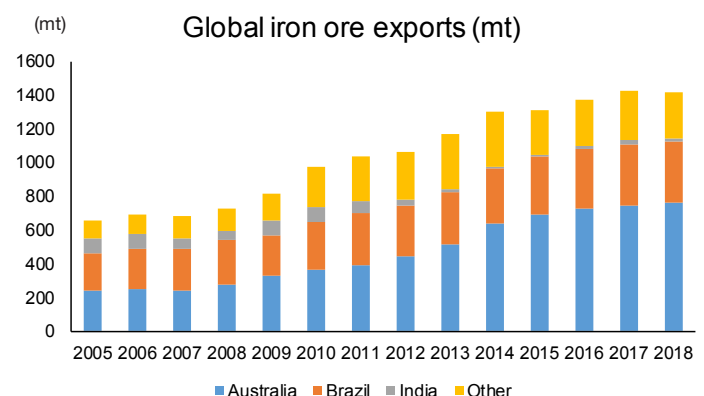
Figure 1: Chinese imports of iron ore remain strong, accounting for some 80% of world demand



Source: Bloomberg

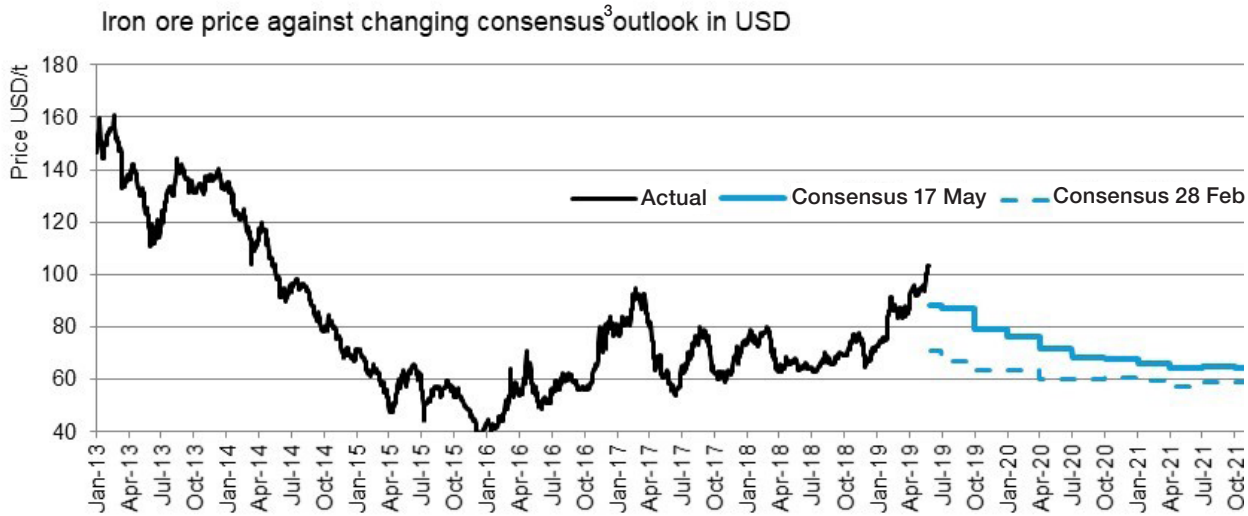
Growth in supply (exports) of iron ore to support China's demand has largely been met by supply growth from Australia, including supply growth from BHP Billiton, Rio Tinto and Fortescue Metals. Figure 2 illustrates Australia's dominance in global iron ore exports of which some 80% are destined for China.

Figure 2: Australia dominates the supply of iron ore globally



Source: Bloomberg

Figure 3: The iron ore price



Source: Bloomberg, broker forecasts

Iron ore pricing has fallen over the past few years as supply growth initially outpaced demand growth for seaborne iron ore. More recently, supply rationalisation has occurred, with higher cost supply displaced from the market, and the majors more closely matching supply with demand. The price of iron ore has stabilised for several years as a result (Figure 3). However, this all changed during early 2019 following an environmental incident in Brazil.

The Vale Brumadinho disaster impact underestimated

On 26 January 2019, the Brumadinho tailings dam tragically failed in Brazil. The tailings dam held waste material from one of Vale's iron ore processing operations. The devastating event resulted in significant loss of life and is one of the worst tailings dam failures and mining incidents in history. The Brumadinho failure follows another significant tailings dam failure in November 2015, when a tailings dam supporting the Samarco iron ore mine failed, also claiming the lives of local inhabitants. Samarco was owned by BHP Billiton and Vale.

Unfortunately, history is littered with environmental disasters from tailings dam failures, however to see two significant failures in the same commodity, in the same country, in assets owned by the same company is a significant concern.

Brazilian authorities tightened regulations in Brazil following the Samarco incident in 2015, however following the latest disaster, regulators appear to be taking a much more proactive approach to ensure safety and limit the risk of any future disaster. This response to the latest disaster has seen a renewed focus on tailings dam safety and stability and has resulted in several Brazilian operations being closed or suspended. These closures have occurred under the directive of authorities and the mining companies themselves. Brumadinho has catalysed significant focus on the construction, management and safety of such structures that will hopefully work towards achieving acceptable social outcomes and safe structures in the future.

As a result of the mine shutdown, Vale has reduced their Brazilian iron ore production by a run rate of 93mt per annum. This is a significant supply disruption by any measure.

While the investment community is aware of the Brazilian disaster, we believe the broader market, particularly iron ore consumers in China, have underestimated the longer term implications of the disruption. Ausbil's fundamental view is that a supply from regions outside of Brazil will take months to respond, and that Brazil will likely continue to see supply disruptions for several years as the Government and Vale sort through not just the

production impact, but the social, regulatory and environmental impact of this failure on the mine and its immediate community.

The iron ore market going forward

The Brazilian supply shock has created a tight market. The curtailment of Brazilian production by Vale has removed 93mt (annually) from the Seaborne iron ore market, representing around 6.6% of the global seaborne iron ore market. In addition, the recent Cyclone Veronica resulted in 20mt of lost supply for the year from BHP Billiton, Rio Tinto and Fortescue Metals. Limited new supply is available globally to fill the supply gap in the short to medium term, which should see ongoing tightness in Iron ore for some time.

Following a period of sustained low iron ore pricing, few new projects have been commissioned in iron ore, and most mid-tier producers have been consolidated. The major iron ore producers continue to focus on the 'value over volume' mantra. Following the Brazilian mine closures, limited new production is available to fill the demand gap.

Chinese demand has been robust in recent years. Strong demand from the property sector continues to surprise the market to the upside despite various restrictive policies. We expect demand to remain robust with ongoing benefits from the construction activity in infrastructure spending, although the property market strength has the potential to moderate in 2H19.

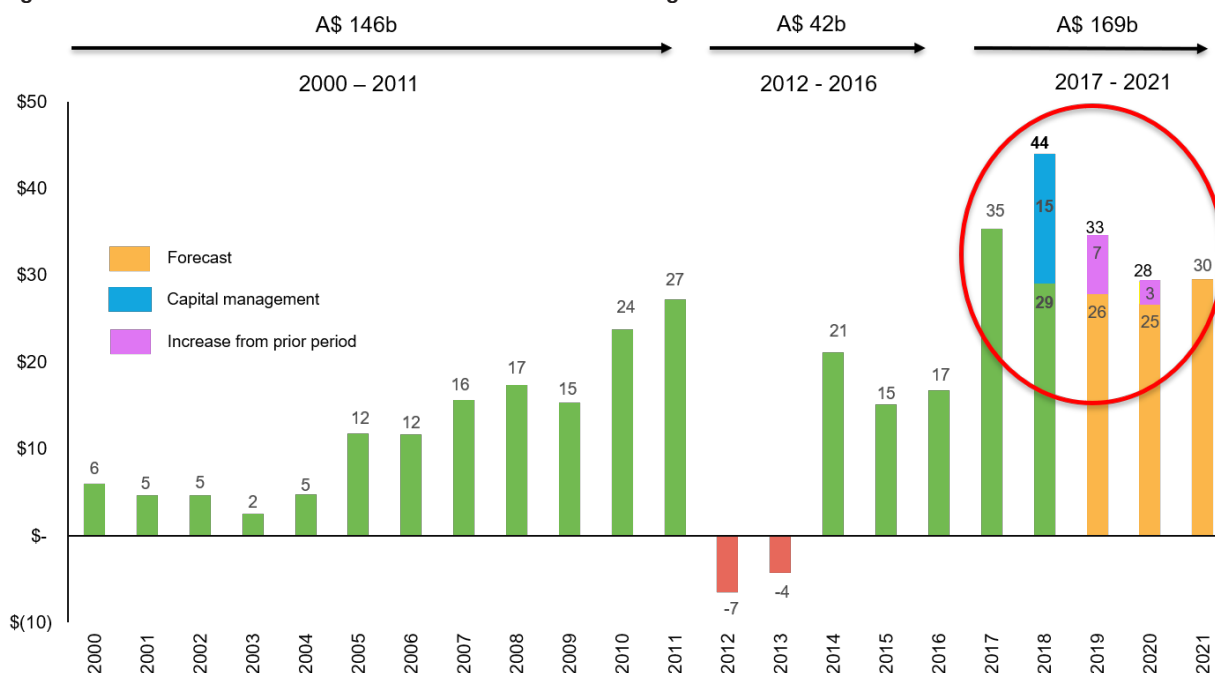
In recent years, the Chinese government has singled out the steel and coal industries for material capacity reductions. The capacity targets appear to have been comfortably exceeded. These closures are important from the perspective that they increase industry utilisation rates, enhance overall steel mill profitability and simplistically enable higher prices to be paid for raw materials (including iron ore).

Following the Brazilian mine closures, low grade discounts on iron ore have reduced, driving an increase in realised pricing for low grade iron ore producers. This is likely to continue until supply responds to the current tight market conditions and steel mill profitability improves.

The strength in iron ore prices has continued to surprise most market commentators. Commodity price upgrades have commenced, and are likely to be a key driver of the major diversified mining companies and pure play iron ore producers' earnings upgrades over the medium term. Demand continues to be strong, supply growth has moderated, and the Vale Brazilian curtailments have created a supply shock which is unlikely to be filled in the short to medium term. These factors are likely to provide ongoing price and earnings support.

3. A consensus estimate is a figure based on the combined estimates of the analysts.

Figure 4: The free cash flow boom in Australian metals and mining



Source: Ausbil Bloomberg

In a broader context, the resources boom from 2000 to around 2011 saw the iron ore price rise to over \$160/t, well above current levels of just over \$100/t. The resources boom reached beyond the Global Financial Crisis of 2008/2009 effectively shielding the Australian economy from much of the turmoil experienced globally. Australia did not have a recession. As can be seen in Figure 4, the resources boom of 2000-2011, and subsequent periods have seen the Australia's metals and mining companies generate significant value for shareholders.

During the boom period itself (2000-2011), Australian resources companies generated A\$146 billion in free cash flow for investors. This period in resources was not just about mining but included significant capex investment in explorations, mines, infrastructure, transport and resource capacity. Though the boom has passed, the capacity remains.

2012 and 2013 saw negative free cash flow as the world economy shuddered on the global sovereign crisis (mainly in Portugal, Italy, Iceland and Greece) but as this settled, demand returned. The five year period after the resource boom ended saw Australian metals and mining companies generate some \$42 billion in free cash flow.

Demand ramped up again in 2017 and 2018, so much so that 2018 generated more free cash flow (A\$44 billion) than for the previous five years between 2012 and 2016.

With iron ore demand still strong, accommodative policy settings globally and established resource capacity in Australian mining, the consensus outlook for 2019-2021 adds to the 2017 and 2018 record years to generate a total expected free cash flow for the five year period of A\$169 billion, some \$23 billion more than the free cash flow generated across the entire 11-year resources boom.

What does the iron ore price mean for the Australian economy?

Australia is the world's largest producer of iron ore. This makes iron ore crucial to Australia's overall terms of trade, and the flow through to employment, growth and government tax receipts.

In 2019/2020, each US\$10 change in the price of iron ore is expected to impact nominal GDP by A\$6.3 billion and tax revenue by A\$1.1 billion⁴. In 2020/2021, the magnitude of price sensitivity more than doubles, with each US\$10 change in the iron ore price impacting nominal GDP by A\$13.6 billion and tax revenue by A\$3.7 billion. With iron ore prices rising by over US\$40 per tonne since June 2018, these impacts on nominal GDP and tax receipts have quadrupled, which has been seen in the Commonwealth budget position. As a result, the Budget has improved much faster than forecast and is expected to return to surplus. This means that the improving fiscal balance provides the Government with the opportunity to release fiscal stimulus where and when required.

In terms of capacity to further stimulate the economy, Australia has been doubly advantaged in the lower AUD / USD price which benefits sales of Australian commodities which are denominated in USD, and the rising iron ore price.

The additional revenue already accruing to consolidated revenue gives the Australian government more fiscal stimulus options such as spending programs, infrastructure building and through lower taxes. Additional tax revenue also gives the government more policy options around housing affordability, including support for first home buyers.

Iron ore pricing outlook – consensus upgrades likely

To date, 93mt (annually) of iron ore production has been curtailed in Brazil, representing around 6.6% of the global seaborne iron ore market. In addition, the recent Cyclone Veronica resulted in 20mt of lost supply for the year from BHP Billiton, Rio Tinto and Fortescue Metals. Given disruptions are only now starting to see a slowing in iron ore arrivals into China, following the initial disaster in late January

4. Australian Government Budget Papers, 2019.

2019 (and given shipping times), we believe iron ore pricing is likely to continue to strengthen in the coming months.

The iron ore price has already met and exceeded Ausbil's initial target price of \$100/t set in February 2019. Ausbil's view is that the full recovery of supply from Vale will take a minimum of 3 years to return to the marketplace, setting a floor under the current price and potentially pushing prices towards higher levels in the second half of 2019.

Price strength is likely to translate into earnings upgrades for both the Australian diversified and pure-play iron ore mining companies. At the economic level, the additional revenue that strong iron ore prices generates in tax receipts brings more diverse fiscal stimulus levers into play that will help underpin the Australian economy alongside the monetary policies already in place. For investors, we expect tightness in the market to translate into earnings upgrades across the iron ore complex.

For further information please contact:



James Stewart, Equities Analyst, Resources.

James has 18 years of investment experience, including 12 years of resources and commodities experience to the Ausbil team. James' experience spans global resources. Most recently James was the mining specialist with Regal Funds Management, a leading Australian long/short fund. Prior to this James was responsible for regional resources coverage for UBS in Singapore, and CLSA. James holds both mining and finance qualifications and is a CFA.



Luke Smith, Equities Analyst, Resources.

Luke has over 20 years of experience in the resources sector, both at a corporate level and as an equity analyst in financial services. Most recently, Luke was a highly rated Director, Senior Energy Analyst at Commonwealth Bank Institutional Equities. He also worked as a Commercial Mining Analyst with IndiEnergy, an Oil and Gas Analyst with ABN Amro and a Corporate Finance Analyst with Woodside Petroleum.



Jim Chronis, Chief Economist, Associate Director – Debt and Diversifieds.

Jim has over 20 years of investment experience managing multi-billion dollar active fixed interest portfolios for the likes of BT Investment Management, Rothschild Australia Asset Management and Commonwealth Bank Financial Services Asset Management. As a highly experienced fixed interest macro strategist and economist, Jim has demonstrated a consistent skill in adding value to portfolios and translating macroeconomic themes into investment strategies.

About Ausbil Investment Management

Ausbil Investment Management (Ausbil) is a leading Australian based investment manager. Established in April 1997, Ausbil's core business is the management of Australian and global equities for major superannuation funds, institutional investors, master trust and retail clients. Ausbil manage over \$11.7 billion* in active Australian and global equity investments. Ausbil is owned by its employees and New York Life Investments (NYLIM), a wholly-owned subsidiary of New York Life Insurance Company. NYLIM has more than US\$561* billion in assets under management. NYLIM has a number of boutique affiliates including MacKay Shields, Candriam Investors Group, Private Advisors and GoldPoint Partners.

*as at 30 April 2019.

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