



## Auscap Long Short Australian Equities Fund Newsletter – November 2014

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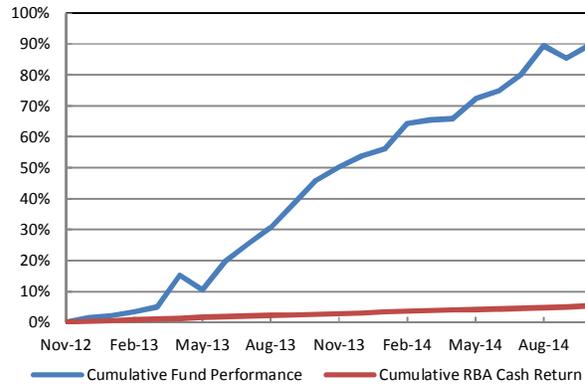
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**Welcome**

Welcome to the Auscap newsletter, an opportunity for us to report the performance of the Auscap Long Short Australian Equities Fund (Fund+) to current and prospective investors. In each publication we will also discuss a subject that we have found interesting in our research and analysis of the market. We hope that you enjoy reading these snippets and encourage any feedback. In this edition we look at game theory to explain why the major iron ore producers continue to increase supply despite a significant decline in price.

**Fund Performance**

The Fund returned 2.25% net of fees during October 2014. This compares with the benchmark return of 0.21%. Average gross capital employed by the Fund was 169.5% long and 36.3% short. Average net exposure over the month was +133.2%. At the end of the month the Fund had 36 long positions and 10 short positions. The Fund's biggest stock exposures at month end were spread across the financials, consumer discretionary, healthcare and materials sectors.



**Fund Returns**

Period	Auscap	Benchmark
October 2014	2.25%	0.21%
Financial Year to date	8.47%	0.84%
Calendar Year to date	23.17%	2.09%
Since inception	89.61%	5.20%

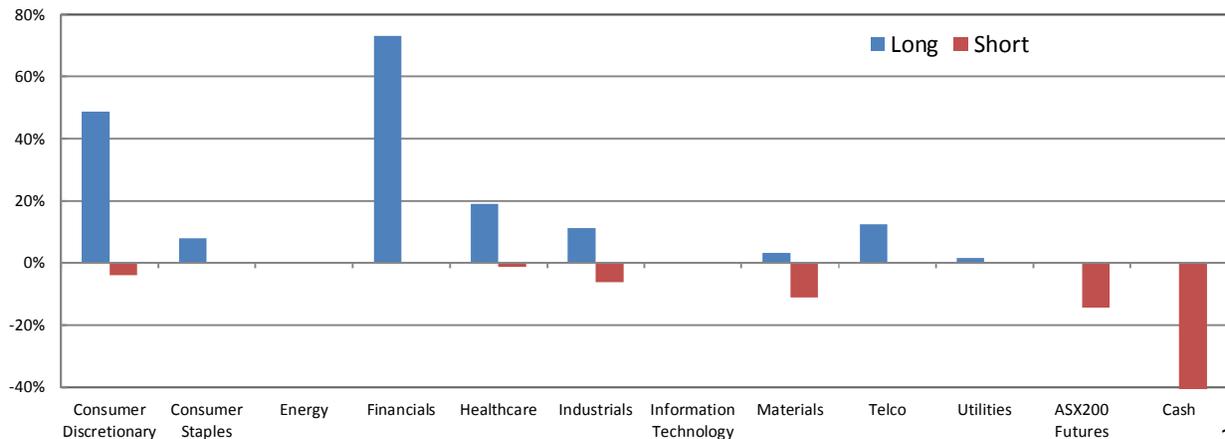
**Fund Exposure**

October 2014 Average	% NAV	Positions
Gross Long	169.5%	35
Gross Short	36.3%	10
Gross Total	205.8%	45
Net / Beta Adjusted Net	133.2%	96.7%

**Fund Monthly Returns**

Year	Jul %	Aug %	Sep %	Oct %	Nov %	Dec %	Jan %	Feb %	Mar %	Apr %	May %	Jun %	YTD
FY13						1.35	0.74	1.23	1.46	9.83	(4.05)	8.32	19.72
FY14	4.70	4.28	5.84	5.46	2.86	2.57	1.32	5.32	0.70	0.29	3.82	1.48	46.01
FY15	2.95	5.24	(2.09)	2.25									8.47

**Sector Exposure - 31 October 2014**



## Why The Big Iron Ore Producers Face The Ultimate Prisoners’ Dilemma

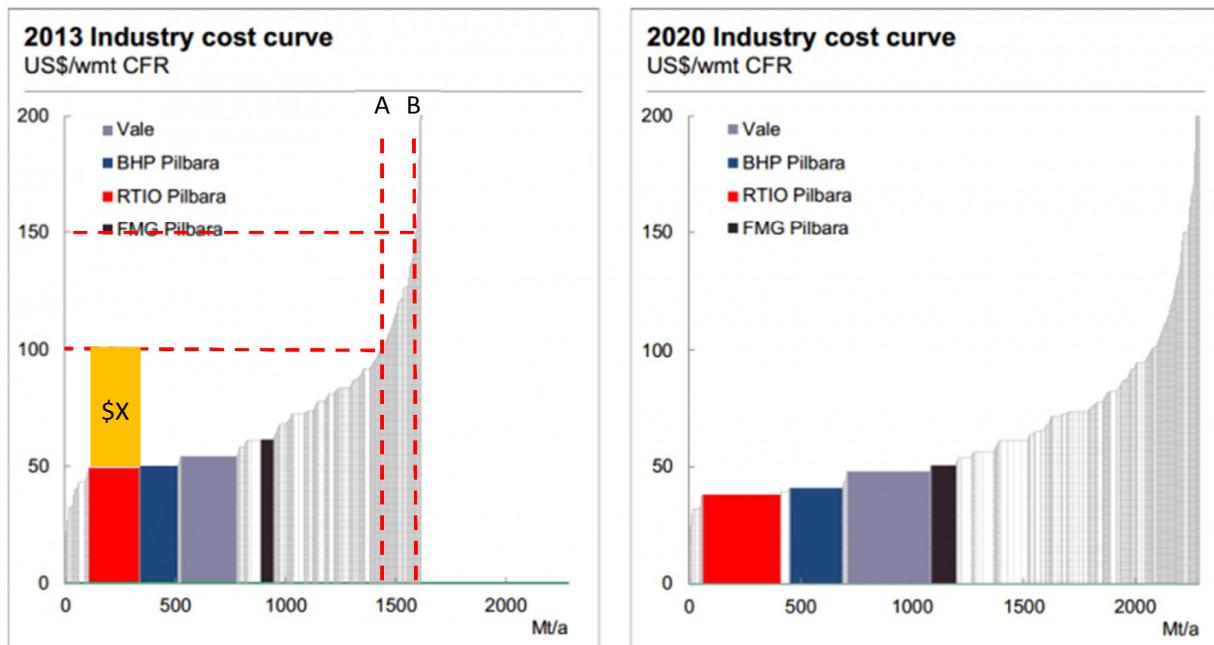
In early October, the Western Australian Premier Colin Barnett complained that BHP Billiton (BHP) and Rio Tinto (RIO) were increasing their production and supply of iron ore in a weak market. Less than six months earlier the Premier had praised RIO for creating jobs by expanding their Western Australian operations. So what had changed? The Premier’s main grievance appeared to be that the latest increase in the supply of iron ore had led to an accelerated decline in iron ore prices which meant a decline in the revenues paid to the state government through mining royalties.

*“The pushing of increasing amounts of iron ore into the market at a time of weak demand and falling prices is a flawed policy... And in my sense that’s not probably good for the overall industry, buyers and sellers, and it’s having a direct impact on WA because our iron ore revenues or royalties are falling”.*

Colin Barnett, Premier of Western Australia, 10 October 2014

The question the government might ask is whether this outcome was avoidable? Why have the big producers been in a rush to push as much new supply into the market as possible? We look at game theory for the answer and suggest that despite the likelihood of materially lower iron ore prices, and the potential for lower profits, the big producers will almost inevitably continue to increase production.

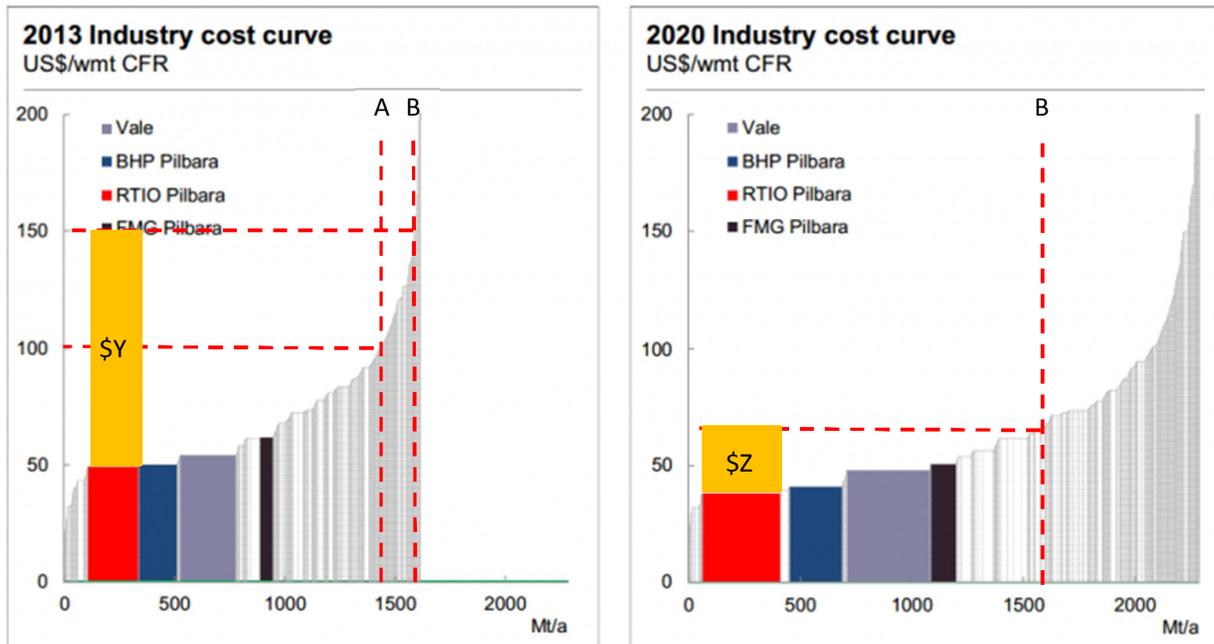
The price of iron ore is determined by global demand and supply. For a given level of demand, price will move to the marginal cost of production to get enough supply into the market to satisfy that demand. The demand for steel, and the two main ingredients in its production, iron ore and coal, has risen dramatically over the last decade due to increased Chinese production and consumption. The major iron ore producers were unable to respond quickly to this increase in demand and the price of iron ore skyrocketed to encourage new production from smaller, more marginal and more expensive producers. From 2004 to its peak in February 2011 the price of iron ore rose from \$16.39 per tonne to \$191.70 per tonne. This reference price refers to a dry metric tonne of iron ore that has reached the destination port (CFR) and grades 62% Fe (iron) content.



Note: Includes shipping and sustaining capital expenditure and is adjusted for inflation and FX  
 Source: Rio Tinto - September 2014; Auscap overlay

The cause of this sharp increase in price is illustrated above using an overlay on RIO’s recently published iron ore industry cost curve. If we assume a constant industry cost curve at 2013 production levels, an increase in demand from A to B would lead to a modest increase in volume supplied, but a very large increase in the price, which would rise from circa \$100 to \$150. In this example, RIO’s profits would increase from \$X (above left diagram) to \$Y (below left diagram). This is similar to what happened between 2004 and 2011, during which time sharp increases in demand and a steep marginal cost curve led to very significant price increases.

This boom in both demand and price was great for the Australian government, the Western Australian government and the mining companies because the revenue received by all of them rose dramatically. The high prices encouraged the major suppliers (RIO, BHP, Vale and FMG) to significantly increase production, as they are in the process of doing.



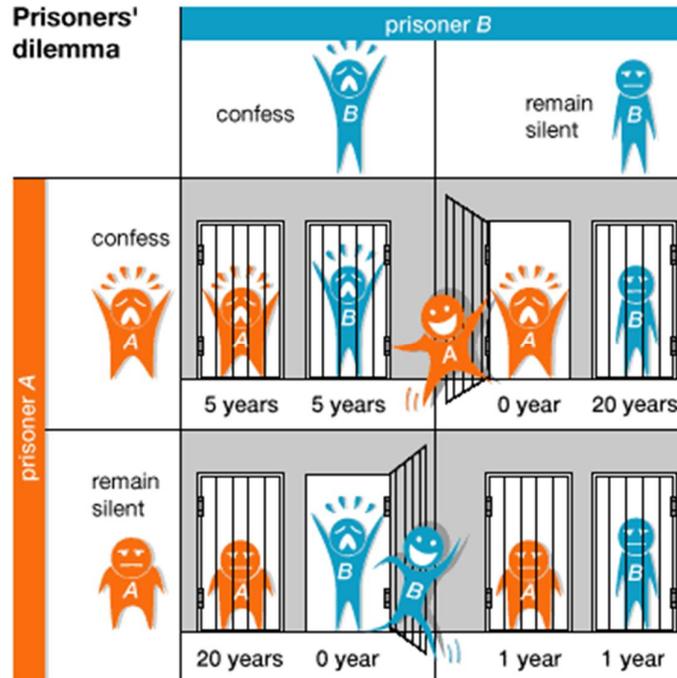
Let us assume, for illustration purposes, that this increase in production results in the cost curve widening to the 2020 levels projected by RIO (as shown in the graphs above), but that demand remains constant at point B. The steep nature of the cost curve means that as supply growth catches up with and overtakes demand growth, price will be significantly impacted, as will profits. This will affect both the big producers and the smaller producers. In the example above, RIO’s Pilbara operations are making more profits producing less ore (\$Y in the left diagram) than when producing more ore (\$Z in the right diagram). This is because the price effect (lower prices) more than outweighs the volume effect (higher volumes). This leads to a decline in overall revenues and profitability for the iron ore producers and, as Premier Barnett was concerned about, lower Western Australian government royalties. This begs the question, why are the large producers not refraining from producing more iron ore, which would keep prices and profits elevated?

**The Prisoners’ Dilemma**

Game theory, which is the study of strategic decision making by rational decision makers, may hold the answer. The prisoners dilemma is an economic game theory that analyses why, in the absence of collusion, two parties might make decisions that ultimately leave them both worse off than if they had colluded. It may help to explain why the major producers are continuing to increase production, even though it could well lead to a worse result for all.

In the prisoners dilemma two people have been caught by authorities and are suspected of committing a number of crimes. However, the authorities do not have enough evidence to convict either of them on all crimes so the prisoners are separated (i.e. prevented from colluding) and given the following options:

- If neither confess they will each receive 1 year in prison;
- If one of them confesses they will receive a pardon, while the other will receive 20 years in prison; and
- If they both confess they will each receive 5 years in prison.



Source: Encyclopaedia Britannica, Inc.

Because neither player knows how the other will act they have to consider the opportunity set from only their own perspective. With that in mind, they each decide to confess to try to reduce their sentence and not risk spending 20 years behind bars. However, because they both do so they each end up with a longer sentence than they would have received if neither had admitted their guilt.

**How does this relate to iron ore?**

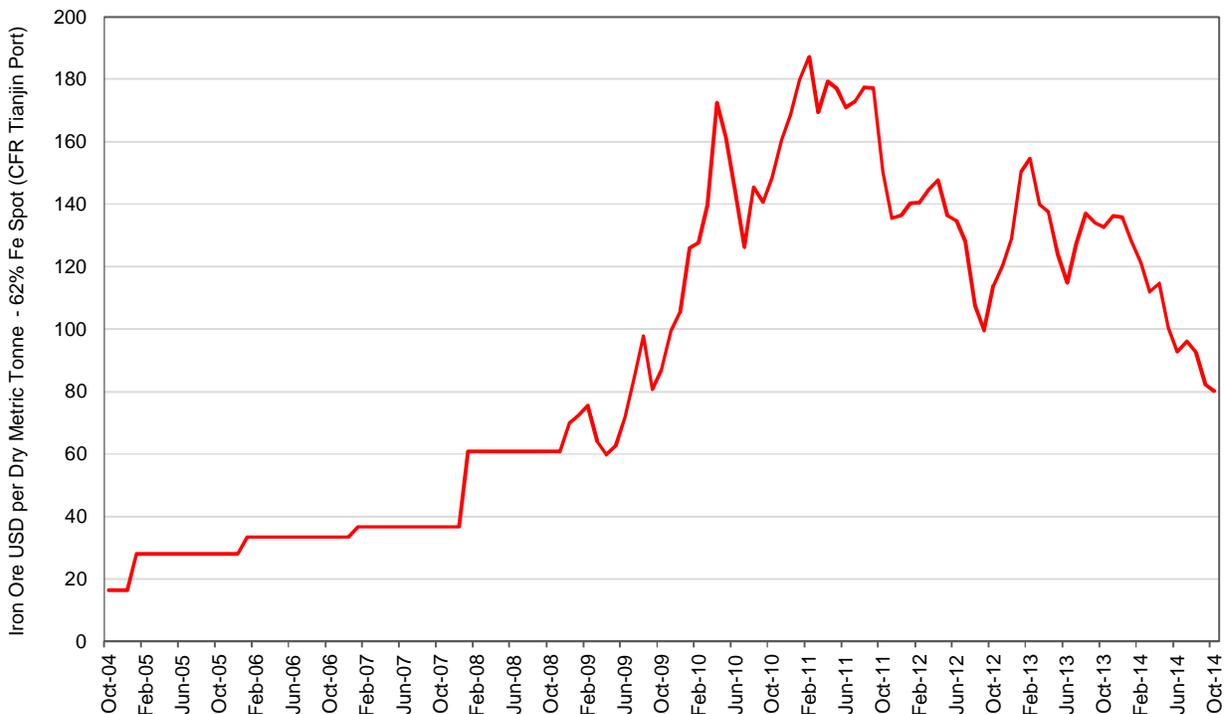
The major iron ore producers are, collectively, largely responsible for any major increase in the supply of iron ore into the seaborne market. Given how high iron ore prices have been in recent years compared to the cost of production for the major producers, it would be in their collective interest to limit production and maximise profits. This is what the economic cartel, OPEC (Organisation of the Petroleum Exporting Countries), has been doing since it was formed in September 1960 and began using its influence to significantly raise oil prices from 1973. However, competition legislation prohibits the iron ore producers from colluding on supply.

Unable to collude, the major iron ore producers are faced with the ultimate prisoners dilemma. If each were to refuse to increase supply, prices would stay high and each company would maximise their profitability. However, no individual company has influence over the decision making of any other company and for each company it is highly profitable to increase their own supply at current prices.

Further, if one company dramatically increases their supply and the others do not, higher volumes will not be offset by falling prices and that company's shareholders will reap significant benefits. Conversely, if the company does not increase supply and its competitors do, it will suffer from falling prices, a reduction in market share and lower profitability. Such decision making would invariably be questioned by investors. Analysing the situation from their own perspectives, as the boards of each company have undoubtedly done in approving the vast expansion projects undertaken over the last five years, leads to only one conclusion - increase supply as quickly as possible. Unfortunately the result has been that all four major producers, BHP, RIO, FMG and Vale, have chosen to increase supply dramatically and as this supply hits the market the price has fallen thereby outweighing the benefits of an increase in volume.

We suggest that because the marginal cost curve for iron ore has been very steep, and the cost of production for the major suppliers is low, the price effect was eventually bound to outweigh the volume effect. This has been aided by the fact that very few marginal tonnes appear to have dropped out of the market despite the decline in price. China's domestic iron ore supply appears to have been stickier than expected, with some suggesting this is due to government support, and very few mines in countries exporting iron ore to China have closed. Ironically, each marginal producer is racing to increase supply, because increasing supply and scale is the easiest way to reduce the average cost per tonne!

**Monthly Iron Ore Price**



To some extent it is ironic that there are suggestions of collusion between RIO and BHP, because it implies that collusion would necessarily have led to the same significantly increased volumes of production, which might not have been the case. The two companies tried twice to effectively and legally collude to maximise profits. The first attempt was the failed merger proposed by BHP in November 2007, formalised through a hostile offer in February 2008. The second was the failed attempt in June 2009 to combine their Pilbara iron ore operations and save billions through production and development synergies. Regulators were successful in blocking both attempts to maximise shareholder value. Whether a successful merger of operations would have resulted in lower or higher levels of supply will never be known.

To return to Premier Barnett and his comments in October, he suggested that *Western Australia in a sense is a partner in the iron ore industry. The companies don't own the iron ore. They simply have a right to mine and sell ore that belongs to the people of Western Australia.* While this might be correct, given the fiduciary duties of directors to maximise shareholder value through rational decision-making, and the obligation on the major iron ore producers not to collude on supply or pricing, it seems very unlikely that the boards of BHP, RIO and FMG could ever have come to a different conclusion. They must maximise production because they do not, by themselves, control price. Realistically the only party that potentially has the power and inclination to prevent the less desirable outcome, the prisoners dilemma outcome, from occurring in the iron ore sector is in fact the Western Australian government. The government is the authority in this situation and could possibly look at ways of limiting supply. We would suggest that all the other parties are acting exactly as game theory suggests they would!

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