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Economy Watch

2015 – a very bad year for the resources industry

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This time last year one could be forgiven for thinking that commodity prices couldn't get any lower but, like a Dostoyevsky novel, that's exactly what happened in 2015. The year started really badly and then managed to get even worse.

Whether you look at the prices of the main commodities such as oil, iron ore, coal and gold, the value of resources industry, or job opportunities in the minerals and petroleum exploration sector, the situation is grim.

Let's look more closely at some key numbers and see how they have changed during the year. The data are taken from http://www.imf.org/external/np/res/commod/External_Data.xls for coal, iron ore and aluminium prices, the Australian Bureau of Statistics for exploration expenditure, the Reserve Bank of Australia for exchange rates and gold prices, the Commonwealth Department of Industry for petroleum production and The Australian newspaper for the ASX.

The oil price continues to fall

Who would have thought that the price of crude oil would have dropped from $US104/bbl in July 2014 to $US60/bbl at the end of December 2014 and continue to fall to $US38/bbl in December 2015? But that's what happened.

On a global scale annual oil production has continued to gradually increase at approximately 0.8% per year, from 3.9 billion tonnes in 2004 to 4.2 billion tonnes in 2014 (BP Review of World Energy June 2015). This is very close to the increase in the global population of 1.0% in 2015. Consequently, the global per-capita production has remained remarkably constant over the last few years.

Figure 1 shows the monthly Australian production of crude oil and gas condensate and the price of West Texas crude from 1990 through to 2015. Notice that oil production has approximately halved from 3600 ML per month in January 2000, to an estimated 1700 ML per month in November 2015. Surprisingly, during most of this period, when the oil price was increasing, the production numbers show a consistent fall. So much for the classical supply and demand model!

The message from these numbers is clear. We must continue to invest in petroleum exploration in Australia, otherwise our import bill for petroleum and its products could become unaffordable. Exploration investment over the last ten years tells a disappointing story. Although expenditure tripled from 2005 to 2012 the results in terms of production have not been realised and now, with the oil price hovering at around $40 per barrel, it is unlikely that the major oil companies will increase spending on exploration. Nevertheless, there is a very good argument for us to hang in there and hunt for new petroleum resources because of the long term benefits for our future prosperity.

Petroleum and minerals exploration investment decline continues

Figure 2 shows how the minerals and petroleum exploration investment has tracked from 2005 through September 2015. There are two issues of note. The first is that the investment in petroleum exploration continued to rise until mid-2014, whereas the minerals investment peaked two years earlier in June 2012. This indicates the different response times in the two industry sectors and is not really surprising.

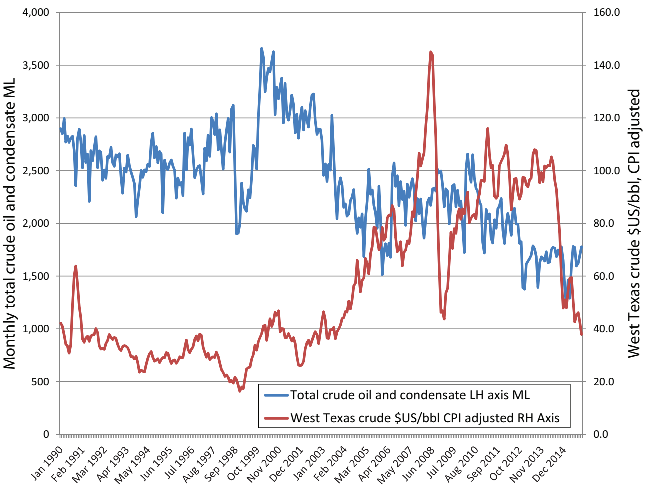

Figure 1. *Australian monthly petroleum production in millions of litres and the price of West Texas crude in $US/bbl. The price is CPI adjusted to 2015 $US.*

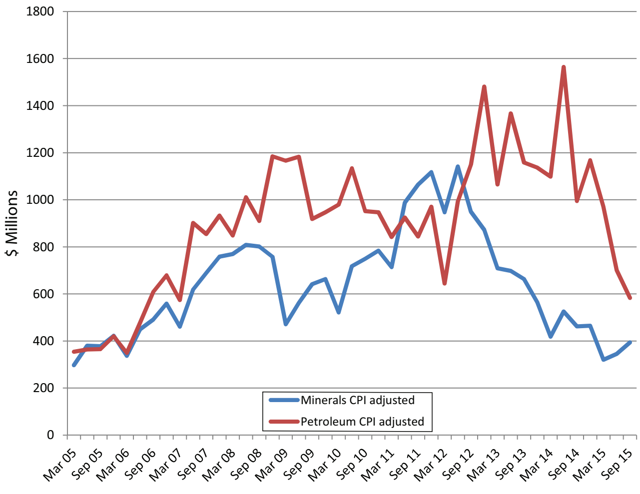

Figure 2. *Quarterly investment in petroleum and minerals exploration in Australia. The data have been normalised to 2015 Australian dollars to allow for CPI changes over the period 2005 through September 2015.*

The second is that if the numbers from both sectors are added for each quarter, there is a maximum of A$2090 million spent in the June 2014 quarter and by the September 2015 quarter the total has dropped to $A980 million. In other words, over a billion dollars per quarter has been removed from Australia's resource exploration budget in 15 months. That's down to the level it was in 2006 and is a disaster for recruiting smart people into resource exploration.

Coal and iron and ore prices also continue to fall

The situation with coal and iron ore is similar to what is happening with oil. The price of all three commodities has been falling steadily since the beginning of 2011 (see Figure 3). Iron ore has decreased from $US187/t in February 2011 to approximately $US40/t in December 2015 and during 2015 the price fell by a massive 40%. As we are all well aware, the effect of this decline has been bad news for all but the more efficient miners; particularly in Western Australia, where the wellbeing of that State is so dependent on the value of its iron ore production.

The coal price peaked at $US142/t in 2011, but has declined steadily ever since and was at $US56 in December 2015. According to the BP review of world energy, global coal production peaked in 2013 at 3.96 billion tonnes of oil equivalent. The rate of increase was approximately 4.4% per year until the production rate plateaued. This is a classic case of over-production pushing the price down, because as the global production increased the price of coal declined. Only the more efficient mines will survive.

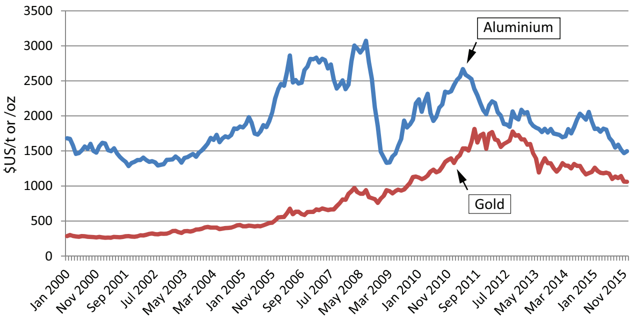

Figure 4. *Prices of aluminium and gold from 2000 through 2015. The data have not been corrected for CPI changes.*

Aluminium and gold

The prices of aluminium and gold (Figure 4), while showing considerable volatility have not declined so rapidly. From 2011, when the price of aluminium reached $US2700/t, it has dropped to $US1500/t, which is where it was in 2003.

Gold has probably fared the best. Its price increased steadily from $US 300/oz in 2002 to $US1800/oz in 2011/12, before the start of the current decline. It has now fallen to $US1060/oz in December 2015, but this is still well above the pre-2009 prices. If you bought gold in 2005, or before, you would have at least doubled your money if you sold it now.

Resource stocks perform badly on ASX

Falling commodity prices played havoc with the value of resource stocks on the ASX and the downward trend evident in 2014 continued throughout 2015. $A65 billion was knocked off the market capital of the resource companies listed in the top 150 companies on the ASX in 2015. This compares to $A61 billion fall in value in 2014. Figure 5 shows the carnage; a fall of $300 billion from 2011. In other words these companies are now worth a third of their value in 2011.

BHP probably took the largest hammering. In 2014 it had been top of the heap for seven years, but it slipped from No. 1 to No. 2 in September and to No. 3 in November. In 2015 it slipped even further and is now listed sixth behind the four big banks and Telstra.

In April 2011 BHP was worth $A160 billion, now it is only worth approximately $50 billion. It must be time to buy any time soon.

Figure 5 shows the data over the last 15 years. Notice that changes in the All Ords Index and the total market capital correlate well until 2006. At that point the value of the resource companies decline and the All Ords Index shows a slight increase within a period of considerable volatility. Allowing for a CPI increase over the 15 year period the annual return from the All Ords is 0.8% per year and from resource companies 1.4% per year. Better than putting your money under the bed, but not very impressive.

Let's hope 2016 is a much better year.

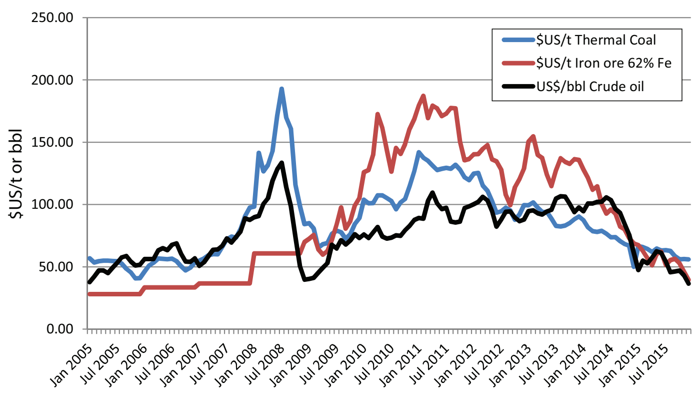

Figure 3. *Prices for thermal coal, iron ore and crude oil from 2005 through 2015. The numbers are all in $US and have not been corrected for the CPI. The peaks in the price of coal and oil in July 2008 have not been used in the analysis.*

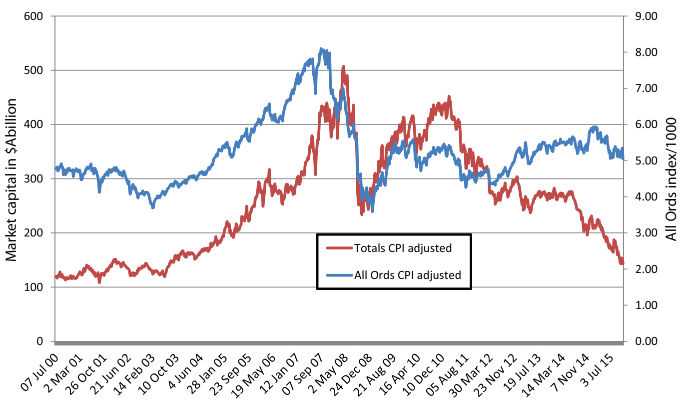

Figure 5. *Plots of the All Ords Index on the ASX (RH axis) and the total market capital of the resource stocks in the top 150 companies on the ASX. The data have been adjusted for CPI changes to 2015 $A.*