



Gold

## Will the Resources Sector be Stronger for Longer?

In this edition of the Alchemist we provide a brief outlook on the current resources boom; exploring what has caused its magnitude and how long it may be sustainable. In this discussion we also look at the current consensus analyst forecasts and the expectations of the industry majors.



Lead

## The Current Boom – How it Compares

The current resources boom has been dubbed a 'commodity super cycle' and it has proven to be both stronger and longer than many analysts first predicted. The prime contributing factors to the boom have been:

1. Stronger economic growth globally, but particularly from China. In 2006 world GDP growth was 5½% - the highest rate in over 30 years. This level of growth is associated with resource intensive development.
2. Low commodity prices in the 1980s and 1990s that depressed global investment in resource exploration and production capacity. These low prices were partially the result of investment resources being diverted to the dot-com boom.
3. Growth of China has been more influential than predicted. Importantly, it is not its growth rate alone that is the key – China has been growing at around 10% pa for the last 25 years. A key driver has been China's increasing need for imports to sustain the country's growth. For example, Chinese demand for imports soared by 330% from early 2002 to December 2005. Producers have simply been unprepared for this aggressive growth in Chinese import demand.



Copper



Platinum



Nickel



Iron



Aluminium



Zinc

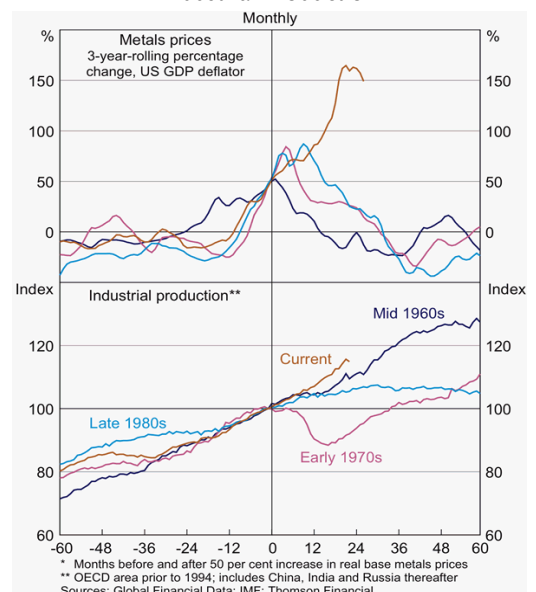


Silver

Figure 1 portrays the magnitude of the current resources boom compared to price cycles of the past. It shows the correlation between growing demand (industrial production) and metals prices in recent decades. It demonstrates that during the 1960s, '70s and '80s metals price cycles, although demand for commodities continued to rise, metals prices inevitably fell as supply increased to take advantage of the booming markets.

In contrast, the current resources boom has seen a rapid and prolonged growth in prices due to escalating demand that has been met by relatively modest supply response to date. This has resulted in metal prices rising 150% in the last five years.

**Figure 1: Metals Price Booms & Industrial Production\***



Source: RBA Bulletin – April 2007

L14, 19-31 Pitt Street Sydney NSW 2000

T. (02) 9250 0000 F. (02) 9250 0001

L15, QV1 Building, 250 St Georges Terrace, Perth WA 6000

T. (08) 9480 2500 F. (08) 9480 2511

E. thealchemist@rfc.com.au

## How Long can the Boom Last?

There are two factors that can sustain a prolonged resources boom:

1. Supply of resources remains low
2. Demand for resources remains strong

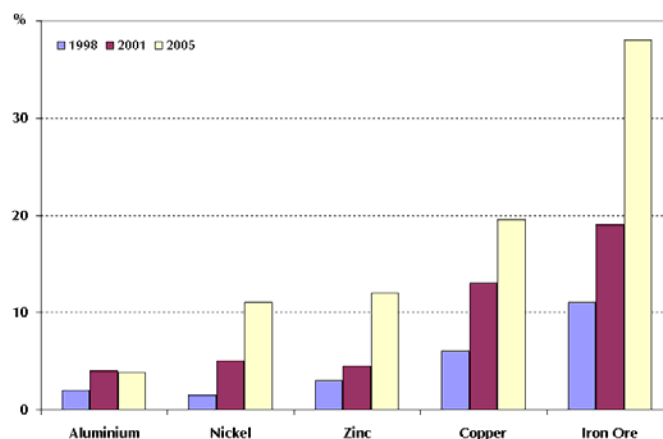
It appears possible that both of these conditions may be met for at least the next few years.

Whilst miners around the world are working extremely hard to expand supply to take advantage of booming resource prices, it doesn't appear as though there will be any significant supply increase in the near future relative to the current demand profile. There are a number of reasons for this:

1. You can't just switch production on. There is a lag time of at least 5-10 years from exploration to production and with the lull in investment in the resources industry that occurred during the 80's and 90's production ramp up will take time.
2. Most mine sites are already operating near full capacity to bring production increases on line as soon as possible. The Australian Bureau of Agricultural and Resource Economics have said that while the expectation is for at least 50 advanced projects in Australia to be completed by the end of 2008, it is most likely that "some of these projects will not meet announced scheduled completion dates or forecast budgets, reflecting strong industry wide competition for skilled labour and equipment". This reflects how there is little room to expedite production any further.
3. To show any marked increase in supply, the mines to come into production need to be big! Small producers entering production will gradually cause some easing in prices, but the magnitude of current demand levels means that the supply needed to meet it and cause a notable easing in resource prices needs to be equally as significant. This will take time and exploration success.

The demand side of the equation poses a similar story on the outlook of resource prices. Demand for resources is showing no signs of slowing, particularly with the ongoing rapid growth of the BRIC nations (Brazil, Russia, India and China). In 2006 real GDP rose 9.2% for India and 10.7% for China, which then experienced a second-quarter GDP growth for this year of 11.9%. The 2007 International Business Report forecasts that BRIC countries are expected to contribute 44% to global GDP by 2050 (a rise from the current level of less than 30%). The key driver for this economic growth is the rapid industrialisation and urbanisation driven by expanding populations. BRIC countries now account for over 40% of the world's population and this continues to grow. With this economic growth, the BRIC countries' demand for resources is also expanding. China alone now accounts for more than 46% of global iron ore consumption and over 20% of copper, alumina, aluminium, zinc and steel. The key link from this to the current resources boom has been that China's level of demand is increasingly sourced through international trade rather than from internal resources. This is shown in Figure 2 above which demonstrates the growth in Chinese imports since 1998. Similarly, China's demand for Australian mineral exports has risen from 5% in 1996/97 to 20% in 2006/07. It appears that China is no longer capable of supporting domestic demand with its own production. As such, its need for additional resources is stimulating market demand and pushing prices up.

**Figure 2:** Chinese Commodity Imports  
Share of total global imports



Source: ABARE; International Trade Centre

The forecast is that this commodity intensive rate of urbanisation from the BRIC nations will not slow for many years. As such, it seems that the ingredients to sustain the current boom, particularly from the demand side, are present.

### What Forecasters are Predicting

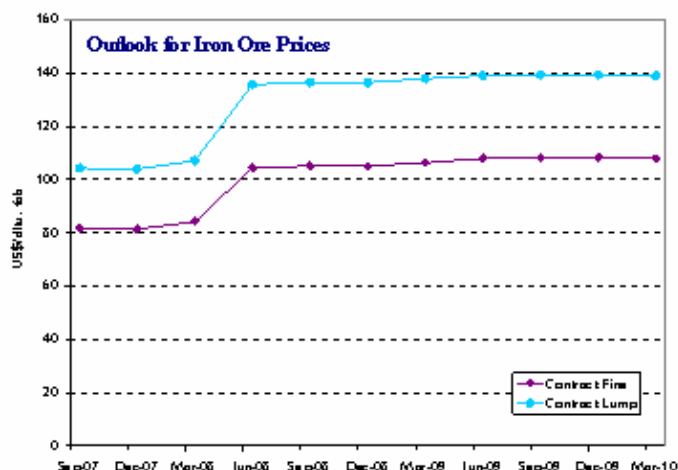
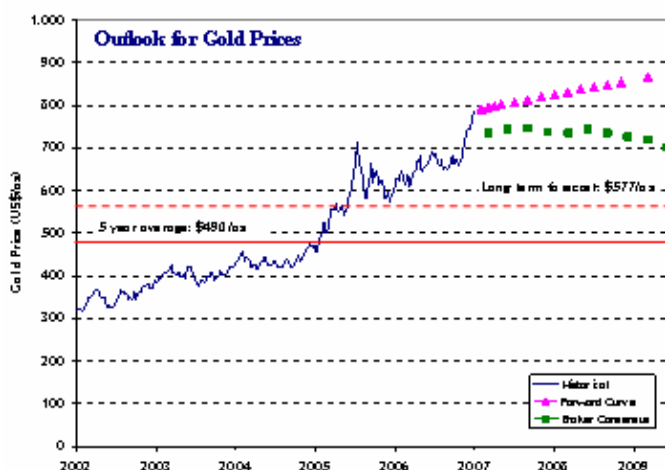
According to the broker consensus forecasts in Table 1, the prices of all commodities except iron ore are expected to fall by March 2010, and all of the commodities are forecast to fall in their long term sustainable prices. However, bear in mind that these long term forecasts are still well above the commodity prices of five years ago. The five year averages have been hiked up by the significant prices evident since 2005. This is best demonstrated in the price outlook graphs below.

Commodity	Units	Current Price	5 yr average historical	Consensus Forecast			
				March 2010	% Change to March 10	Long Term av consensus	% Change to LT
Copper	US\$/t	6,721	4,301	5,278	-21.5%	3,620	-46.1%
Zinc	US\$/t	2,391	1,908	2,100	-12.2%	1,687	-29.4%
Lead	US\$/t	3,007	1,198	1,641	-45.4%	1,058	-64.8%
Nickel	US\$/t	28,585	19,425	21,405	-25.1%	16,788	-41.3%
Iron Ore (lumps)	Usc/dltu	104	66	139	33.6%	76	-26.5%
Iron Ore (fines)	Usc/dltu	82	52	108	31.7%	61	-25.9%
Gold	US\$/oz	825	493	701	-15.0%	577	-30.0%
Oil (WTI)	US\$/bbl	98	52	64	-34.2%	68	-30.3%
Silver	US\$/oz	15	9	12	-21.3%	9	-37.1%
Uranium	US\$/lb	93	40	88	-5.8%	43	-53.9%
Aluminium	US\$/t	2,458	2,029	2,259	-8.1%	2,186	-11.1%
Tin	US\$/t	16,560	8,532	9,558	-42.3%	8,503	-48.7%

Table 1: Consensus Outlook for Resource Prices

Source: Energy & Metals Consensus Forecasts (October 2007), IRESS and Bloomberg

Shown below are a number of price outlook graphs which are a reflection of broker and forward market views as at November 1 2007 when the last consensus forecasts were collected. Whilst the plot for iron ore shows only the future forecasted curves, charts for gold, copper, zinc, lead and nickel plot the price movements of each commodity from 1 November 2002 to 1 November 2007, the broker consensus of coming movements in the next two years, and the current short term forward curves. The graphs largely show that while brokers are forecasting a fall, the metals markets are not as pessimistic. While the forward curves typically do show a downward trend in the future (except for gold) the downturns are not as significant as what the analysts forecast, and tend to remain well above the five year historical averages.





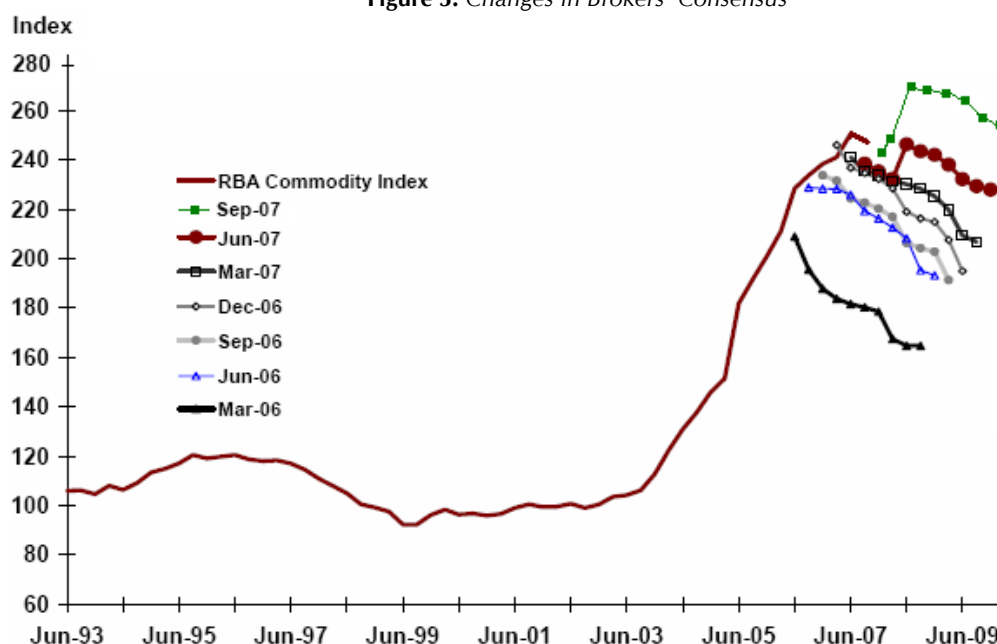
Source of data for these graphs is Minerals Monitor June & October 2007 and Bloomberg

## Brokers' Track Record

The forecasts above may not necessarily be cause for alarm as analysts' recent track record has not been great. As Figure 3 below shows, analysts have been continually upgrading their commodity price forecasts and the 'inevitable' downturn that they have been anticipating since March 2006 is yet to come. This is despite the last quarter downturn which has since reverted, with the RBA Non-Rural Commodity Price index increasing almost 3% from September to October, rising back up to near 250. This was driven by a 5% rise in the Base Metals index component, which reflected the increased prices for gold, lead and nickel in the past month.

Economists explain that the reasons these forecasts have been off the mark in the past is because the BRIC countries' growth (particularly China's) is accelerating faster than anticipated, the increase in commodity supplies is slower than expected and because production costs are rising. It is interesting to note in Figure 3, that while the forecast for each of the past quarters has been for a downturn, the severity of that downturn is diminishing slightly with each period. Of particular interest, is September forecasts actually predict an initial rise, followed by a fall for the first time in over a year. This initial rise is due to an expected increase in the next 12 months for coking coal prices of 26%, steaming coal of 26% and in iron ore (lump) prices of 30%. Together these bulk commodities contribute a 48% weighting to the RBA Non-Rural Commodity Price index.

Figure 3: Changes in Brokers' Consensus



Source: Minerals Monitor June 2007 and October 2007 Reports

## What the Industry Majors are Predicting

While analysts may be predicting a near term inevitable fall in the current resources boom, the majors seem to be subscribing to the 'stronger for longer' notion. In July Rio made a cash bid offer for Alcan worth AUD\$44 billion. In doing this, they announced that they were "capturing the growth opportunities driven by China and India" and that they were "more optimistic on prices than current forward markets". Other similar recent cash offers have included BHP for WMC, Norilsk Nickel for LionOre, Xstrata for MIM, Peabody for Excel Coal and, most recently, Xstrata for Jubilee. These cash offers, which are typically priced much higher than the stocks are valued, are a reflection of the higher value that the acquirers perceive in these companies, contributed to by the expected return from the company's assets once they go into production and the belief in a continued resources boom. This theory may have been tempered by BHP indicating it may be prepared to make a scrip offer (not cash) for Rio Tinto. However, the scrip option in this case could be due to the mere size of the offer – we're talking \$153 billion.

## Conclusion

The future of resource prices is never certain. Analysts continue to predict an imminent downturn as they are conservative in their outlooks, whilst major market players are largely proclaiming their confidence in a sustainable boom period. The general consensus, however, seems to be that over the very long term resource prices will weaken from current highs as production catches up with demand; as economic theory predicts, no boom is sustainable forever. Supply is going to increase in the future as miners seek to benefit from high commodity prices. This will be boosted by technology advances making development of previously uneconomical mines more feasible, changing risk profiles of particular countries presenting the opportunity to develop mines in relatively untouched regions and the increase in joint venture partnerships involving Chinese parties, allowing China access to commodity supply without entering into international trade.

However, it is also likely that prices will remain above their historical averages in the long term, despite analysts' forecasts. Strong world economic growth, particularly from the BRIC countries has the potential to support a sustained resources boom. The associated increase in populations coupled with the need for urbanisation and industrialisation means the need and demand for resources should remain strong. When you combine this with the fact that resources are finite, in the long term we should continue to see an increasing demand for resources that are reducing in availability. In addition, higher long term production costs including wages, fuel and equipment costs could mean that resource prices may maintain a long term upward trend, even if they do ease off current highs.

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