Rio Tinto

OUTLOOK FOR METALS AND MINERALS

Full Year Results 2010
10 February 2011

Vivek Tulpulé
Chief Economist

The following note summarises the views of Rio Tinto's Chief Economist, Vivek Tulpulé, on the economic outlook for 2011.

- Commodity prices during 2010 were on average considerably higher than in 2009. After some declines in the first half of 2010 due to concerns about financial and macroeconomic risks, most prices followed strong upward trends in the second half which have continued into 2011. This was primarily driven by strong demand from China and other developing countries, low interest rates and quantitative easing in OECD economies, and continued supply constraints and disruptions.

- In 2010 we identified a pattern of economic volatility we dubbed the 'saw-tooth' economy. Although current macroeconomic trends indicate increasing commodity consumption, we now see higher risks of such volatility in the near term due to persistent economic imbalances.

- Economic conditions around the world remain heavily influenced by the monetary and fiscal stimulus put in place by governments following the global financial crisis. Whilst this remains an important source of strength for commodity markets in the near term, the stimulus will eventually be removed and the different speeds at which this occurs in different parts of the world has the potential to generate significant price volatility.

- Looking toward the remainder of 2011 and into 2012, we expect global macroeconomic conditions and commodity supply conditions to support higher average prices.
  - Global GDP growth is predicted to be more than 4 per cent with growth biased towards developing countries
  - Chinese GDP growth expected to be above 9 per cent
  - Interest rates in OECD economies are expected to remain low, which will support direct investment in commodities
  - The two-speed pattern of global growth suggests a weak US dollar and a higher real Chinese exchange rate which would tend to support commodity prices
  - We have downgraded our view on commodity supply through 2011 due to infrastructure and input constraints

- At the same time we expect these conditions to lead to elevated risks resulting from:
  - Reduction or removal of government stimulus programmes and the timing of such actions
  - Uncertainty about the strength of private sector demand to replace it
  - Inflationary pressure in developing economies, particularly China, where we expect CPI to stay relatively high for H1 2011
  - The continued threat of financial crisis

- From a longer term perspective, we maintain our view that the next 15-20 years will see a doubling of demand for iron ore, copper and aluminium, driven primarily by increasing prosperity in developing countries, including China and India, with associated industrialisation and urbanisation.

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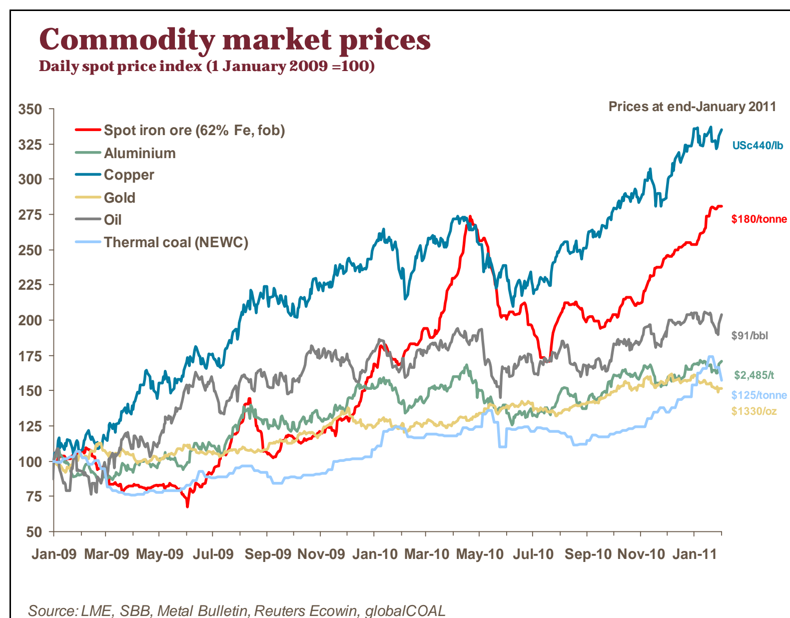
Commodity prices during 2010 averaged considerably higher than in 2009. Most prices saw declines during the first half of the year brought about by concerns relating to financial and macroeconomic risks; but during the second half and into 2011 most prices followed strong upward trends. This strength can be attributed to at least four interrelated factors:

- Strong demand from China and many other developing countries where growth fuelled by economic stimulus policies exceeded most expectations;
- Low interest rates, quantitative easing and sovereign debt concerns in OECD economies that facilitated and indeed encouraged direct and indirect investment demand for commodities;
- Downward revisions to supply expectations for a range of commodities as expansions proved to be more difficult in input constrained markets; and
- Recent weather conditions that disrupted supply for some commodities – especially Australian coal.



Source: LME, SBB, Metal Bulletin, Reuters Ecowin, globalCOAL

Looking toward the remainder of this year and into 2012 we expect global macroeconomic conditions and commodity supply conditions to support elevated average prices while simultaneously generating elevated risk. A key factor in this conclusion is that economic conditions around the world remain heavily influenced by the monetary and fiscal stimulus put in place by governments following the GFC. Of course, this is an important source of strength for commodity markets. But the stimulus will be removed eventually and the speed with which this occurs has the potential to generate both volatility and substantial swings in commodity prices.

Six interrelated factors contribute to the expectation of elevated average price outcomes:

- First, global growth is expected to exceed four per cent this year with Chinese GDP expected to grow by more than nine per cent. Such outcomes would have positive implications for metals and minerals demand.
- But adding to this, it is expected that growth in 2011 will be biased in favour of developing countries where a continuation of relatively loose fiscal, monetary and credit policies is expected to support activity. This implies that global economic activity will be more focussed on commodity intensive activity than would be the case normally.
- With continued labour market weakness and high unemployment in most OECD economies and concerns about risks associated with sovereign debt, policy interest rates are expected to remain low. This will support direct investment in commodities and more generally funds flow into markets levered to developing country growth.
- The two-speed pattern of global growth would also tend to support the case for continued weakness in the US dollar and a higher real Chinese exchange rate. In turn, both outcomes would support US dollar denominated commodity prices.
- Fifth, we have downgraded our view on commodity supply through 2011 due to infrastructure and input constraints.
- Finally, in such conditions we should expect inflation in production costs and continued strength in commodity currencies. To some degree these outcomes would feed into commodity price inflation but also compress the margins of most producers.

There are important risks to this outlook that increase over time. This is mainly because the macroeconomic environment described above suggests increasing broad inflationary pressure that would eventually compel governments to reduce or even remove economic stimulus thereby reducing support for commodity prices. There is considerable uncertainty about the speed or timing of such policy change and uncertainty about the strength of private sector demand absent the stimulus.

In recent times market commentary has focussed on risks associated with a sharp tightening of credit availability in China and other developing countries to deal with inflationary threats or to rein in property speculation. However an alternative and quite plausible scenario is that governments may delay the normalisation of fiscal, monetary and credit policies owing to concerns about the underlying strength of private sector activity and export markets and the ongoing threat of global financial sector crises. While such an outcome would add near term strength to commodity markets - especially for those in which supply conditions are already tight - the scope for sharper downturns in later periods would also increase.

A second aspect of the risk relates to the differential speeds with which stimulus is likely to be removed in different parts of the world and the effect of this on global funds flow. In particular, it seems reasonable to expect that most OECD economies would retain their stimulus for a longer period than most developing economies given high rates of unemployment and political difficulties associated with tightening policies given the pressures owing to electoral cycles. However, beyond 2011 as OECD countries progressively begin to normalise their monetary policy and increase interest rates, global investment funds would flow back toward developed economies and away from investments levered to developing country growth including commodities. The negative effect of such a

shift on commodity prices may be offset to an extent by improving OECD demand, but the net effect is highly uncertain.

The two speed global economy also generates political risks. For example, concerns about politically motivated global trade restrictions have become more evident. Additionally budgetary pressures can create incentives for governments to increase taxes on their best performing sectors; those will typically be levered to growth in developing countries. Another political risk emerges from the effects of food price inflation on the purchasing power of poor urban dwellers in developing countries. This group of people is also most likely to be affected by the reduced competitiveness of developing countries' export sectors as their real exchange rates appreciate relative to the slower growing OECD economies. Recent events in Tunis and Egypt highlight the influence of such forces on political stability.

Finally in the context of risks, it remains important to recognise that the world is still not free from the threat of financial crisis. The ongoing sovereign debt crisis in Europe and its sweeping contagion into financial markets around the world illustrate the potential for persistent economic imbalances and hidden risks to cause ongoing disruption to global economic activity and commodity markets.

Given the range of risks described, it seems likely that news or rumours affecting expectations about monetary, credit and fiscal settings – especially in China and the United States – as well as broader financial conditions will induce ongoing volatility in commodity markets albeit around an elevated trend.

Looking further to the future, our view remains that two key themes are expected to dominate the global economic environment. First, increasing prosperity in developing countries including China and India, with associated industrialisation and urbanisation will continue to drive underlying growth in demand for commodities.

Second, it is clear that substantial economic imbalances persist in both developed and developing countries. These will need to be resolved and that process will take time. In particular, developed countries will be under increased pressure to reduce public and private debt, while China is expected to begin a move toward reduced dependence on exports and investment to fuel economic growth.

The two themes suggest a high average demand growth setting for our markets but also one that will be characterized by elevated volatility and scope for discontinuities. On the supply side, project financing will rely increasingly on funds from the developing world but at the same time, volatility could reduce the availability of finance placing some constraints on commodity supply expansion. Additionally the resources sector will face competition for funds from other projects associated with the processes of urbanisation and industrial development.

On this basis we expect that real long run prices and margins for almost all minerals and metals will average significantly higher going forward than in the decade preceding the most recent six year boom but price volatility is also expected to be elevated - a pattern we have dubbed as the 'saw tooth economy'.

The remainder of this paper addresses key near term drivers of the broad outlook. We also discuss some specific issues affecting aluminium, copper, iron ore and coal markets.

Macroeconomic overview

Global GDP growth is expected to increase by more than four per cent in 2011 with slow growth in OECD economies expected to offset by relatively fast growth in developing countries. The pace of activity is still very much dependent on continuing government stimulus policies and uncertainties remain about the speed with which these will be removed.

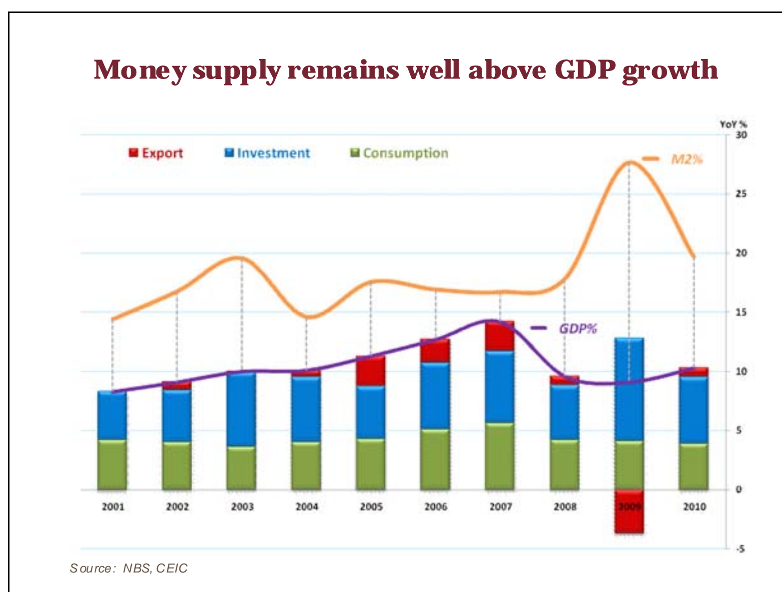
World Economic Activity and Consumer Price Inflation

	Real GDP Growth			Consumer Prices		
	2010	**2011**	**2012**	**2010**	**2011**	**2012**
China	10.3	9.2	8.9	3.3	4.3	3.6
India	8.7	8.3	8.4	9.7	6.9	6.6
Russia*	4.0	4.3	3.7	6.9	8.6	6.6
Indonesia	6.0	6.2	6.4	5.1	6.5	5.9
Australia	2.7	3.1	3.5	2.9	3.0	3.0
Brazil	7.6	4.5	4.8	5.9	5.1	4.7
South Korea	6.0	4.2	4.5	2.9	3.4	3.0
Taiwan	9.8	4.2	5.0	1.0	1.7	2.0
Saudi Arabia	3.7	4.3	4.8	5.8	6.2	5.2
Germany	3.6	2.5	1.8	1.1	1.7	1.7
France	1.6	1.6	1.7	1.5	1.6	1.7
UK	1.7	2.1	2.1	3.3	3.3	2.0
US	2.9	3.2	3.3	1.6	1.7	1.8
Canada	2.9	2.5	2.7	1.8	2.2	2.1
Japan	4.3	1.2	2.0	-0.8	-0.3	0.0

*Source: Consensus forecasts (January 2011), *Global Insight (January 2011)*

China

China's GDP grew faster than expected by 10.3 per cent in 2010. Despite of a number of tightening macro measures and curtailments in energy intensive industries, GDP growth actually accelerated slightly in the fourth quarter. Money supply growth was still strong, with M2 rising by 19.7 per cent and Rmb bank lending reaching Rmb7.95trn, exceeding the government's target.



As we move into 2011, managing inflation expectations and preventing asset bubbles while trying to maintain the growth momentum are the key priorities for the government. The surge in inflation over the last few months is mainly the result of loose monetary policy in the past two years. Inflation is expected to stay relatively high at least for the first half of this year driven by negative weather shocks, commodity prices and wage inflation. As a result, the central bank is expected to adjust policies frequently to manage liquidity and control credit. The Chinese government could also let its currency appreciate at a faster pace this year to ease external pressure as well as to combat inflation.

A key area to watch is the housing sector. The two rounds of housing tightening measures in the past year have not been very effective, with new home prices going still up quickly in many cities. Top Chinese leaders have pledged that property tightening will continue. While the tightening may well negatively impact housing starts in the following months, the residential real estate investment should remain solid with the central government pushing harder to increase social housing construction. We also remain vigilant over developments in the Chinese commercial property sector.

From a medium term perspective the next five year plan will have great significance in setting the direction of economic development. In contrast to the planned economy era, the current five year plans are public policy-oriented guidelines with only a few mandatory targets. They serve the purpose of setting goals for the country's development for the next few years and mapping out key strategies and policies to achieve the goals. In this context, promoting comprehensive economic development, rather than a pure focus on economic growth, has been set as a top priority in the 12th five year plan. The overarching theme of the plan is to transform China's growth model so that its economic and social developments become more balanced, more inclusive and therefore more sustainable.

The full 12th five year plan period (2011-2015) with specific economic and social targets will be discussed and approved by the National People's Congress this March. However, the principles and broad outlines were approved by the 5th Plenary Session of the 17th Chinese Communist Party Congress held in October 2010. Implementation plans by each region and industry will be published even later, around the middle of 2011, at the earliest.

United States

The pace of recovery was slower than expected in the second half of 2010 with unemployment continuing to remain at high levels. The unemployment rate was last reported in December 2010 at 9.4 per cent. In view of the weaker than expected recovery, the United States is continuing to pursue expansionary fiscal policies, unlike Europe which is now pursuing contractionary fiscal policies. In December Congress agreed to an $858 billion tax package. In November the Federal Reserve also announced an additional quantitative easing program worth $600 billion which will result in the Fed purchasing bonds until the middle of this year.

Economic growth should continue to recover in 2011 in light of the expansionary policies. In October the IMF projected that the US economy would grow by around 2.4 per cent in 2011. However this projection was made before the stimulatory tax package or additional quantitative easing programs were announced and as a result, the consensus forecast has shifted up to around 3 per cent growth this year. However, with fast-rising federal and municipal debt in combination with a large external trade deficit, there will be significant pressure for fiscal consolidation measures in the near future that would tend to dampen growth.

Some inflationary pressure could emerge in the medium term if demand starts to recover and the Fed doesn't reverse its monetary position to a sufficient degree. The Fed may be slow to respond to such pressure given current concerns of deflation, high unemployment and the trade deficit. Additionally political motivations associated with the US electoral cycle may delay the removal of stimulus at an economically optimal rate.

Japan

Growth in the Japanese economy stalled towards the end of 2010 as earlier fiscal stimulus packages were reduced and temporary export subsidies expired. Unemployment remains above pre GFC levels, deflation persists, the export sector is suffering from the high value of the Yen and public debt is becoming a large problem.

The government responded by announcing two fiscal packages in late 2010 that will support activity in 2011. In October the Bank of Japan also reduced its target interest rate from 0.1% to 0-0.1% and committed to maintain this policy until the medium to long term inflation outlook becomes positive. The Bank of Japan also intervened in currency markets in late 2010 to curb the appreciation of the yen and has indicated that it will continue to intervene in currency markets to try to improve export competitiveness. At the end of 2010 the Cabinet Office predicted that the economy would grow around 1.5% in 2011. This is considerably lower than the expected growth for 2010 overall, but higher than the expected growth in the last quarter of 2010.

Europe

GDP growth picked up in most European economies in 2010, however there were marked differences in performance. Germany grew at around 3.5% in 2010 while economies such as Spain, Portugal, Ireland, and Greece are either still in recession or have only just recovered from recession. Unemployment rates also remain rather high in many of these economies.

Sovereign-bond spreads (the extra interest compared with bonds issued by Germany, the safest credit) have risen sharply in some economies in the second half of 2010, especially Greece, Portugal, Ireland and Spain. This reflects that confidence in the recovery is still weak.

Most economies have however promised or are already in the process of implementing fiscal consolidation measures in order to reduce sovereign debt. Labour market reforms have also been announced in order to improve trade competitiveness. However whether these consolidation measures and labour reforms prove to be significant enough to mitigate fears concerning a future financial collapse in the region remains to be seen.

In any case, the consolidation measures will slow the recovery in Europe. In October the IMF projected that the European Union will grow at around 1.7 per cent on average in 2011, with annual growth increasing to 2.2 per cent by 2015.

India

Growth momentum has returned firmly to the Indian economy, with GDP growing at 8.9 per cent in the first half of the current financial year. The expansion has been broad based, with private consumption – which makes up for almost 70 per cent of India's GDP – starting to exhibit robust growth once again, growing at 8.6 per cent, after the sluggish 4.7 per cent in the 2010 financial year. Growth is expected to exceed 8 per cent in 2011.

The major downside risks to growth in the immediate future are inflation and a widening current account deficit. Driven in part by food inflation, headline inflation has been persistently high and is expected to remain at elevated levels over the rest of the financial year. As in China, managing inflation without curbing growth will be one of the key challenges for the Indian government in the months ahead.

Over the medium to long term, the Indian economy is expected to remain on a high growth trajectory, driven by strong underlying socio-economic fundamentals. A predominantly young population will push the savings rate higher, and with reforms that enhance procedural efficiency and better financial intermediation, a stronger investment rate is expected which will in turn boost GDP growth.

As the importance of agriculture has declined, India has become an increasingly service sector dominated economy. Historically, it has also has been less resource-intensive than China. However, we expect that the industrial sector will exhibit increasingly strong growth, backed by robust infrastructure investment, growing urbanisation, and strong domestic demand. Hence, although on a comparatively lower trajectory, resource-intensity is set to rise in the coming decade. At the same time, constraints to Indian commodity supply growth may increase commodity import demand at a fast pace over the next few years.

Currencies

After weakening substantially over 2009, the US dollar held its ground against other currencies for most of 2010 and in some cases appreciated against other currencies. However towards the end of 2010 the US currency weakened further as the market first anticipated and then reacted to the Federal Reserve's second quantitative easing programme. This put further upward pressure on commodity currencies during the second half of the year, in addition to the already large appreciation that had occurred in 2009.

Currency movements will continue to be influenced by ever-changing speculation about the relative strength of different economies and future interest rate movements. Large interest rate differentials prevail between many economies and if the recovery continues it may be expected that some of these differentials will decline and this would contribute to a reversal in the exchange rate movements that have occurred over the past year or two.

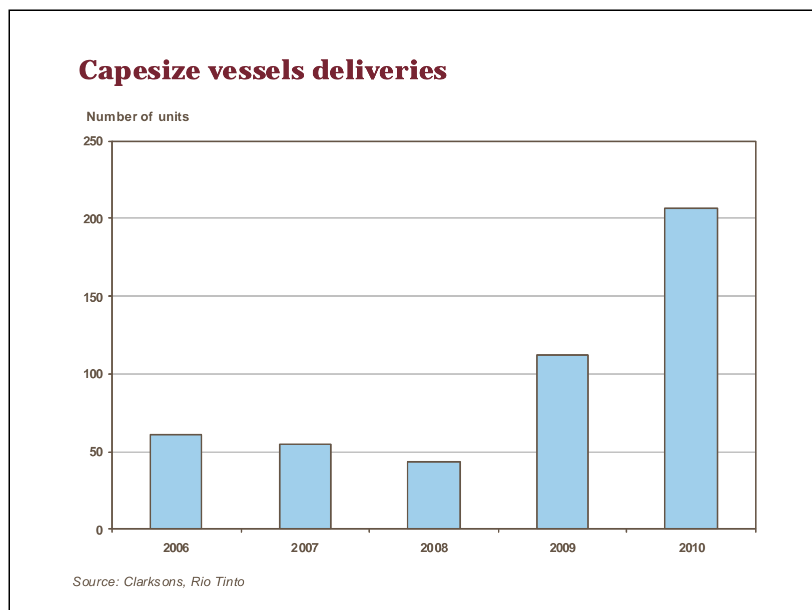
Although the appreciation in the Chinese RMB remained modest in 2010, we continue to expect further increases over the medium term with the urgent need to control money supply and inflation putting pressure on the Chinese government to let its currency appreciate.

Commodity markets

Costs

With output and investment levels at most mining companies recovering from the cuts implemented during the financial crisis, markets for key raw materials and equipments to the mining and minerals industry have gradually been tightening up again. Raw material prices have been on an upward trend since the start of 2010 and some products with structural supply side issues have already experienced significant price increases during the second half of the year. Meanwhile, lead times for heavy machinery and equipment have been growing as once again demand growth outstrips supply. The recent rally in crude oil prices is also leading to further increases in energy and diesel costs.

The cost inflation faced by the mining industry is not yet as widespread as before the financial crisis as overcapacity in some sectors is contributing to some cost stability. In the dry bulk shipping market the increase in vessels delivery during 2010 has kept downward pressure on freight rates despite the recovery in trade volumes. In total 957 new vessels were delivered during 2010 raising the capacity of the global dry bulk fleet by 16.5 per cent, taking into account ship conversions and scrapped vessels. In the capesize segment alone 207 new bulkers were delivered in 2010, as much as in the previous three years combined, raising capacity by 22 per cent. As a result, by the end of last year shipment costs from Western Australia to China were at similar levels to that seen during the first quarter of 2009 at the trough of the recession. Despite cancellations, the delivery rate of new vessels in 2011 is expected to at least match 2010 levels, further adding to an already well supplied market. Any weakening of freight rates would improve FOB returns for bulk traded commodities all other things being equal. However, lower freight rates can also improve the competitiveness of more distant suppliers into the pacific market which in turn can place pressure on delivered CFR prices.



In general though the industry will need to keep a close eye on cost inflation and equipment availability and develop strategies to mitigate the delivery risk of reinvigorated capex expansion plans in coming years. Costs, skills and equipment availability are again expected to lead to project delays in the not too distant future.

Labour cost pressures will be more acute in parts of the world that are highly leveraged to the growth in emerging countries and where labour markets have been less exposed to the shocks from the global financial crisis. The mining sector should expect to see above average labour cost inflation especially in locations such as Australia, and it remains to be seen to what extent this trend can be offset by productivity improvements.

Aluminium

The aluminium market recorded some large price swings during the first half of 2010, with costs providing some support below $2,000/t on the downside and strong resistance felt at around $2,500/t, capping price rallies. Prices have been on a gentler upward path since the middle of last year with better demand in OECD countries boosting market sentiment. Demand was particularly seen to benefit from a rebound in activity in the automotive sector as well as primary-for-secondary substitution.

Despite this stronger demand, the market continues to be characterised by a large stock overhang, with limited movements in visible inventories during the year. However, industry estimates suggest that around 75 to 80 per cent of the stock remained tied up in financing deals, and the tightening conditions in the physical market through the year were therefore evidenced by a continued rise in most regional market premiums.

Pressures on Chinese energy efficiency targets from an expiring five year plan and the consequential curtailment of over 2.5 million tonnes of Chinese smelting capacity during the second half of the year led to Chinese production levels falling from a record peak in June to a fifteen month low in November 2010. The supply cuts were exacerbated by cold weather conditions in China towards the end of 2010, leading to power shortages within some of the key aluminium producing regions, and delaying smelter restarts. The supply curtailments have had no noticeable impact on China's aluminium imports but encouraged some destocking within China with the State Reserves Bureau selling back into the market some of the stocks it had accumulated during the financial crisis.

Supply restarts within China are likely to be gradual and are unlikely to gather pace until the latter half of the first quarter of 2011. Elsewhere, western world restarts have progressively increased over the course of 2010 with the commissioning of projects in the Middle East and India making strong contributions to supply growth despite ramp up issues.

The dynamics related to the unwinding of aluminium stock financing deals is a source of uncertainty for the aluminium market going forward, particularly given rising interest rate expectations associated with the macroeconomic outlook. With interest rates being a material driver of financing deal profitability, any rise in interest rates is likely to impact metal flow and consequently premiums and price. This will be interlinked with the continued strength in demand as well as potential development related to continue speculation on physically backed aluminium exchange traded funds.

Copper

The first few months of 2010 saw volatility in copper prices that was likely a reflection of investor uncertainties regarding the sustainability of the recovery in the world economy. The price bottomed at just above $6,000/t ($2.72/lb) in mid-June and then climbed relatively steadily to close the year at $9,650/t ($4.38/lb). The announcement of a second round of quantitative easing by the US was a key positive driver for commodity prices in general and copper in particular.

During the first 10 months of 2010, world refined production increased by 4.6 per cent, with 70 per cent of the growth attributed to increased secondary production. Primary refined production increased by only 1.8 per cent while secondary production increased by 20.8 per cent. Many of the world's largest mines continued to experience challenges with declining grades, delays to expansions programmes and disruptions from accidents and strikes.

The ICSG estimates world apparent usage of copper grew by 7.5 per cent in the first 10 months of the year. Usage in the EU, Japan and the US increased by 11 per cent, 24 per cent, and 7 per cent respectively, driven by European and US equipment manufacturing activity, and strong automotive production. Although these growth rates are strong, usage in all three markets remains well below pre-crisis levels. In line with this supply and demand imbalance, LME stocks peaked in March at 550kt, then underwent a steady draw-down to reach a low of 350kt in December.

While supply and demand in the second half of 2010 appeared to support the upward price movement, copper is now trading significantly above the marginal cost of production, with

near term price movements highly geared to the relative strength of the US dollar, global macroeconomic indicators and the expectation of continued supply deficits.

The 2010 refined copper deficit is expected to increase through 2011 and into 2012, as demand continues to grow against limited supply expansions. Talks about substitution are likely to intensify again given the industry's continued inability to respond to stronger demand and widening price differentials with other materials, especially aluminium. However, the prospects of rapid and significant material switches are expected to be limited in the near term given the substitution that has already taken place.

A new development for the copper market was the introduction of exchange-traded funds (ETFs) late in 2010. ETF Securities launched a physically-backed ETF in December, and similar products are planned by JPMorgan and Blackrock. These investment vehicles could have a significant impact on copper prices in the coming year by adding to investment demand.

Iron ore

Spot iron ore prices were very volatile in the second half of 2010. From an April 2010 peak of $186/t, the Platt's index plummeted to hit its low for 2010 of $116/t in mid July. The falls were precipitated by tightening measures in China amid asset price bubble concerns, and a lull in global demand after restocking in steel and raw materials supply chains earlier in the year.
But as steeply as the market had declined it then rebounded. A number of factors drove the rebound and then subsequent increases in prices that played out over the remainder of 2010 and into 2011.

Firstly, the price had overshot slightly on the downside. There is considerable price support at around $120/t as a large tranche of Chinese domestic iron ore supply becomes unprofitable at this level.

Secondly, iron ore exports from the Indian state of Karnataka were banned from July in an effort to crack down on illegal mining. This ban translated to a significantly different profile for Indian exports in the second half of 2010, tightening the supply-demand balance and lending considerable price support. While a recent court decision has overturned the ban the implications for supply from this region remain uncertain.

A factor which caused some uncertainty in the market from late Q3 2010 was the announcement in China of energy reduction targets which dampened the outlook for energy intensive industries including iron and steel. Mandated shutdowns materially impacted steel production in the second half of 2010. However, the energy reduction target also manifested itself in reduced iron ore concentrates output in China. This muted somewhat the impact of reduced steel output on iron ore prices. Concerns about ongoing supply disruptions in India accentuated the stock build in Q4 ahead of winter and Chinese holidays in Q1 which translated to rising prices.

Looking ahead the Indian supply concerns remain with increased uncertainty as the state of Orissa is considering similar bans to those in Karnataka. This coupled with a stronger demand outlook in China and the developed world results in strong price expectations for 2011.

Coal

Newcastle thermal coal prices finished 2010 up US$35/t y-o-y at US$115/t. Within the year however, H1 and H2 were distinctly different in terms of volatility characterised by sharp rallies, subsequent corrections and periods of range bound trading.

China's continued presence as a net importer initially supported H1 prices at US$100/t before falling to US$90/t in April. This correction was caused by stagnant European demand coupled with Richards Bay FOB prices sitting higher than delivered prices to Europe. This left South African suppliers with little option than to send product to the Far East at a reduced margin. Supporting this, 2010 saw the emergence of Chinese consumption of South African coal accounting for 11 per cent of RBCT thermal coal exports.

Also contributing to the US$10/t correction was a depressed seaborne freight market with BCI rates at US$1,922/t mid-year, the lowest since January 2009. This incentivised non traditional sources, such as Colombia and South Africa, to divert volumes to the Asian market causing a degree of oversupply. This was the first time that Colombian suppliers entered the Pacific market.

The second half of 2010 saw a continuation of a US$25/t decline in price over a six month period starting in May, before reaching a floor of US$85/t during August. This decline was initiated by a combination of factors including China's energy efficiency restrictions on key industries and stagnant Asian demand, in particular Japan.

The market dynamics changed dramatically from August with unseasonal and prolonged weather-related supply constraints within Indonesia. The tightness in Indonesian supply was felt through international coal markets leading to speculative increases throughout the remainder of 2010. Europe experienced a severe cold snap in December leading to a dramatic increase in thermal coal demand that also dragged international prices up. December also saw Queensland production impacted by severe floods affecting the Goonyella system leading to Dalrymple Bay/Hay Point. Although largely a metallurgical coal system, thermal coal losses were not insignificant at about 452kt. The resultant supply impact led to panic buying in Asia and coal prices reached US$130/t by year end, the highest since September 2008.

Variations in supply from weather related disruptions are expected to drive price patterns into 2011. It is estimated that 4.6 Mt of thermal coal exports could be lost from the Queensland floods during the first quarter, representing about 3 per cent of the seaborne market. The risk of further rain-related supply shocks could continue into the second quarter according to meteorologists until after the Indonesian wet season.

Coking coal supply, has also been significantly affected by recent flooding in Queensland, which accounts for almost 60% of global seaborne supply. Our analysis suggests ~12Mt of metallurgical coal has been removed from supply, equivalent to ~20% shortage across Q1. This has seen spot coking coal prices increase substantially.

Recent weather events in Queensland have impacted affected coking coal markets significantly as the State accounts for almost 60% of global seaborne supply. About 12Mt of metallurgical coal has been removed from supply.

Prior to the floods in late December, unseasonal wet weather saw the hard coking coal price (FOB Qld) rise from ~$210/t in mid-October to ~$240/t in early December. The prediction of more rain to come by the Bureau of Meteorology proved accurate and with the landscape already saturated, the impact on mine production and rail infrastructure was considerable. Spot coking coal prices increased from about $240/t the week before the floods and peaked

at over $380/t four weeks later - the rise happening gradually as the extent of the disruption became apparent as waters receded. Since then index prices have fallen to around $340/t.

Looking forward metallurgical coal markets remain tight. On the supply side Queensland production will remain weak as operations recover slowly from flood effects. The ability of other major exporters - the US, Canada and Russia - to increase supply to meet demand at current prices appears limited.

Conclusion

The IMF predicts global growth of more than four per cent this year with Chinese GDP expected to grow at around nine per cent. At the same time, supply growth is expected to remain constrained. Such outcomes would have positive implications for metals and minerals markets.

But there are important risks to this outlook that increase over time. These arise mainly because the macroeconomic environment suggests increasing broad inflationary pressures that would eventually compel governments to reduce or even remove the stimulus thereby reducing support for commodity prices. There is considerable uncertainty about the speed or timing of such policy change and uncertainty about the strength of private sector demand absent the stimulus. This creates scope for volatility and substantial swings in commodity prices in the near and medium term.

Looking further to the future, our view remains that there will be high average demand growth setting for our markets but also one that will be characterized by elevated volatility and scope for discontinuities. On the supply side, project financing will rely increasingly on funds from the developing world but at the same time, volatility could reduce the availability of finance placing some constraints on commodity supply expansion.

On this basis we expect that real long run prices and margins for almost all minerals and metals will average significantly higher going forward than in the decade preceding the most recent six year boom but price volatility is also expected to be elevated - a pattern we have dubbed as the ‘saw tooth economy’.