Rio Tinto

OUTLOOK FOR METALS AND MINERALS

Half Year Results 2011
04 August 2011

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Highlights

Commodity prices during the first half of 2011 averaged considerably higher than in 2010. This was due to a combination of factors including: ongoing strong demand from China, low interest rates that have facilitated commodity investments, a weaker US currency and increasing commodity supply constraints.

- Spot iron ore prices had a more stable period than usual with an average price of $177/t - a little higher than market expectations driven by strong Chinese demand.
- Coking coal prices remained at elevated levels through the first half owing to the impact of earlier floods on Australian production.
- Thermal coal prices averaged above $120/t with volatility affected by both supply and demand disruptions.
- At around $2500/t aluminium prices are consistent with estimates of the marginal cost of production in China.
- Copper prices have been volatile, dropping from a peak of $10,145/t in February to $8500 in May, but climbing steadily since.

Consensus forecasts of growth around the world have moderated in recent months although global GDP is still forecast to grow at a rate of around 3.5 per cent in 2011. We expect Chinese GDP to grow by 9.5 per cent.

At the same time markets have tightened this year for key raw materials and equipment for the mining industry with higher input prices including wages, tighter labour supply and increased lead times for mining equipment that have particularly affected smaller producers.

These global macroeconomic conditions, coupled with constrained commodity supply, suggest elevated average prices in the remainder of this year and into 2012.

At the same time it is important to acknowledge two key macro risks to this outlook. First there is the pace of credit tightening in developing countries – especially China – as these countries address inflationary threats. Second, there is the potential for financial crises arising from sovereign debt problems in Europe and the United States to destabilise global economic activity and commodity markets.

Looking further forward with robust growth in developing countries and constraints to the expansion of commodity supply we expect that real long-run prices and margins for almost all minerals and metals will average significantly higher than in the decade preceding the most recent six year boom. At the same time, however, price volatility is also expected to be elevated - a pattern we have dubbed the ‘saw tooth economy’.

Introduction

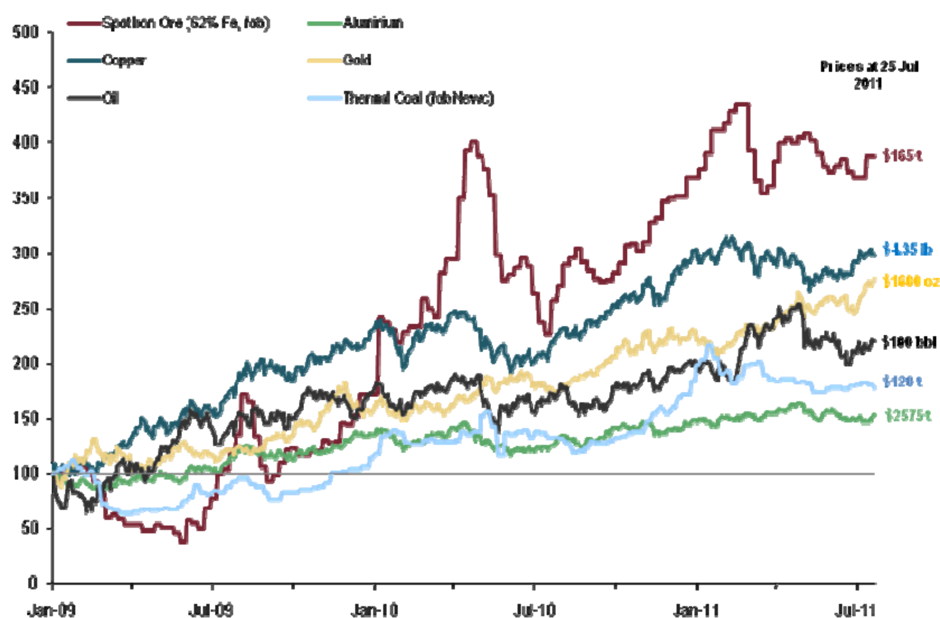
Commodity prices during the first half of 2011 averaged considerably higher than in 2010 although there were some declines in the second quarter of the year brought about by concerns over financial and macroeconomic risks. Not withstanding these declines, the broad strength this year can be attributed mainly to four interrelated factors:

- Strong physical demand from China and many other developing countries where economic activity remains strong despite the implementation of growth constraining policies to address inflationary threats;

- Low interest rates and quantitative easing by OECD economies that continue to facilitate and indeed encourage direct and indirect investment demand for commodities;

- A weakening US currency that has inflated marginal commodity production costs and prices when measured in US dollar terms; and

- Downward revisions to production expectations for a range of commodities as supply growth has proved to be more difficult in input constrained and weather affected markets.



Looking forward, we have not changed the broad outlook that we presented in our paper in February. On balance we expect global macroeconomic conditions and constrained commodity supply conditions to support elevated average prices through the remainder of this year and into 2012. If anything, the supply side constraints are more apparent now than compared with February. However, there are broader macro risks to this outlook and in this context there are two key tension points.

First, governments in developing countries are expected to continue to tighten credit availability to address inflationary threats. We expect that inflation will moderate progressively; but, if inflation proves sticky and escalates then a rapid tightening of credit growth could put the brakes on commodity demand for a period.

Second, it is clear that the world is still not free from the threat of financial crises with the potential to destabilise commodity markets. At present the most evident dangers flow from fears of contagion into broader financial markets from the ongoing sovereign debt crises in Europe and, at the time of writing, concerns about the ability of the US to service its government liabilities.

Given this range of risks, it seems likely that news or rumours affecting expectations about monetary, credit and fiscal settings as well as the broader health of the financial sector will induce ongoing volatility in commodity markets albeit around an elevated price trend.

Looking further to the future, our expectation remains that two key themes will 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 the persistent substantial economic imbalances in both developed and developing countries will need to be resolved. That process will take time and change is unlikely to occur smoothly. 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 commodity supply side, project financing will rely increasingly on funds from the developing world and the willingness of governments in resource rich countries to allow such investments. At the same time, volatility could reduce the availability of finance placing some constraints on commodity supply expansion. Indeed, our recent work on metals and minerals supply point to a range of broader ongoing constraints to production growth over the medium-term.

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 including growth, currencies and costs. We also discuss some specific issues affecting aluminium, copper, iron ore, coal, diamonds, uranium and titanium dioxide feedstock markets.

Macroeconomic overview

Consensus forecasts around the world have moderated in recent months although global growth is still forecast to be around 3.5 per cent in 2011. In OECD economies the main issues have been increasing fears of contagion from the debt problems in Europe, weaker leading indicators in the United States and the effects of the Japanese Tsunami disaster. China and India are continuing to grow strongly but with higher than desirable levels of inflation, governments have been reducing credit growth to slow economic activity to a more sustainable pace.

Consensus Forecasts of World Economic Activity and Consumer Price Inflation

	Real GDP Growth			Consumer Prices		
	2010	**2011**	**2012**	**2010**	**2011**	**2012**
China	10.3	9.2	8.8	3.3	4.5	3.9
India	8.5	7.9	8.3	10.4	7.7	7.0
Russia*	4.0	4.4	4.1	6.8	8.8	6.8
Indonesia	6.1	6.3	6.4	5.1	5.9	6.0
Australia	2.7	1.9	3.4	2.8	3.3	2.9
Brazil	7.4	4.1	4.2	5.9	6.2	5.1
South Korea	6.2	4.3	4.5	3.0	4.1	3.1
Taiwan	10.9	4.9	5.1	1.0	2.0	2.2
Saudi Arabia	3.7	6.3	4.5	5.4	5.6	5.7
Germany	3.6	3.4	1.9	1.1	2.3	2.0
France	1.4	2.0	1.7	1.5	2.1	1.8
UK	1.3	1.5	2.2	3.3	4.4	2.6
US	2.9	2.5	3.0	1.6	3.1	2.1
Canada	3.2	2.8	2.5	1.8	3.0	2.1
Japan	4.0	-0.7	3.1	-0.7	0.3	0.2

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

<u>China</u>

China's GDP growth of 9.5% in Q2, though slower than the 9.7% recorded in Q1, confirmed that the economy remains strong despite a year and a half of progressive credit tightening. Our expectation is that GDP growth in 2011 will be about 9.5% - slightly ahead of consensus - moderating on an annual basis from 2010 levels.

Annual inflation remains stubbornly high, but these rates may be at or near a peak. Forty per cent of the increase in June inflation was due to higher pork prices resulting from an outbreak of disease in the pig population even as fresh vegetable and other food prices began to fall. Importantly, non-food inflation corrected downward in June and prices on a sequential basis have stopped accelerating.

Fears of a hard landing are diminishing, as money and credit growth have already fallen back to government target levels and appear to be levelling off. Other leading indicators are stabilizing after late spring corrections. Automobile sales growth has begun to pick up again after a sharp downturn following the expiration of stimulus-related subsidies.

Housing sales in second and third tier cities have picked up strongly, generating some cautionary statements from officials about the possibility of extending purchase restrictions on residential properties to these markets. Social Housing Program activity accelerated in June; construction of some 57% of the 10 million unit 2011 target had begun by the end of the month, offsetting an expected slowdown in commercial residential construction growth. We expect that the majority of this year's social housing construction target will have been started by November this year and that momentum from the program will sustain through 2012.

As we move into the second half of 2011, policy makers face a tough challenge in terms of curbing inflationary expectations while maintaining growth momentum, especially given weakening prospects in Europe and the United States. Indeed, export growth has continued to slow and is showing signs of further moderation. Given weakening prospects in Europe and the United States, we may expect to see a slight shift of economic priorities in China

towards protecting growth. There may also be some change in economic priorities resulting from the leadership transition in 2012 and the execution of the latest five year plan.

On balance, we expect that tightening is most likely near its apex and should become marginally less restrictive over the remainder of the year. Nonetheless, substantial loosening is unlikely to be in the cards, given the lingering hangover from the stimulus program in the form of local government debt, cost push inflation, and other issues.

Current challenges include local government debt, where the mismatch between the fiscal revenues of the central government and expenditures by local governments charged with funding infrastructure and housing programs has left some localities severely indebted. At a national level, however, central government debt as a share of GDP has been shrinking and overall indebtedness remains very low, meaning that the central government will be able to continue to support local governments through fiscal transfers. Longer term, however, the imbalance in the fiscal revenue system will need to be addressed to relieve local government dependence on land sales as a primary source of revenue.

From a medium-term perspective, China's growth is expected to slow but still remain robust, driven by ongoing urbanization as well as large-scale infrastructure construction in interior regions and industry relocation to inner provinces. Labour costs continue to rise, however, and imply structurally higher inflation over the next 5-6 years. In this context, managing inflation expectations will continue to be challenging given resistance to interest rate liberalisation and faster currency appreciation.

United States

Despite significant monetary expansion as a result of further quantitative easing that began last year (QE2) and a reduction in the unemployment rate, US GDP growth slowed to 0.4 per cent in Q1 of this year. This compared to GDP growth of 0.8 per cent in Q4 of 2010.

The economy also appears to have continued to stagnate in the second quarter although a substantial portion of this appears due to temporary supply side issues due to the disaster in Japan affecting the availability of parts for the automotive sector.

While QE2 hasn't had the short-term impact upon employment and economic growth that its advocates hoped for, it has achieved some of its goals. Asset and stock prices have increased and this should lead to higher investment and eventually higher employment. QE2 has also increased inflation and reduced fears of a Japan style deflation. Indeed, the annualised inflation rate has increased from around 1 per cent late last year to 3.6 per cent in June, which is above the Fed's inflation target. This in conjunction with persistent high unemployment has led to some concerns about the emergence of a mild form of 'stagflation'.

At the time of writing there were concerns about the progress of negotiations on raising the US government's debt ceiling. The recent deal struck between House Democrats and Republicans to address the burgeoning budget deficit appears to have postponed the worst of these concerns for the time being. However, some commentators continue to point to a risk that US sovereign debt ratings could be downgraded from current AAA levels. The implications for the global economy and commodity markets of such an outcome remain unclear. But, if the situation results in a significant contraction in credit availability there would be serious negative consequences for global economic activity.

Japan

The Japanese economy shrank a further 0.9 per cent in Q1 2011 after also shrinking in Q4 2010. This has occurred as a result of stalling demand due to the end of fiscal stimulus in

2010, the expiration of temporary export subsidies and finally the negative impact of the tsunami disaster in March. The decline in economic growth is likely to have continued and been significant in quarter two as the full impacts of the tsunami disaster on production flow through the economy. To aid growth the government enacted a ¥4 trillion yen extra budget to finance initial reconstruction efforts in early June.

Despite the setback caused by the disaster, analysts are predicting a modest recovery as industrial production and manufacturing seem to be rebounding. Industrial production rose by 1 per cent in April after a record decline in March and business groups are indicating that industrial production increased to even higher levels in May and June.

Europe

GDP growth in the European Union accelerated in Q1 of this year, with GDP increasing by 0.8 per cent. This compared to GDP growth of only 0.2 per cent in Q4 of 2010. Most forecasters are predicting an ongoing recovery, with Germany set to record strong annual growth of 3.4 per cent for 2011. However since the end of March, the Eurozone debt problems have worsened considerably, with Greece now requiring a second bail out and rising fears that a debt crisis will spread across the continent.

In less than four months the yield on 10 year Greek bonds increased from 6.5 per cent at the end of Q1 to 18.3 per cent on July 18 before falling back somewhat. Even though the Greek economy is only a very small share of the overall European economy, there are significant fears about contagion of its problems into the broader European banking sector and any knock on effect to larger heavily indebted countries such as Spain or Italy.

Illustrating the broader problem, Moody's credit rating agency recently downgraded Portuguese bonds to junk status and in a space of four months the yield on 10 year Portuguese bonds has increased from 4.3 per cent at the end of Q1 to 12.9 per cent on July 18. Yields on Irish bonds have also recently experienced a similar jump. In the past month Spanish 10 year bond yields have increased from 5.4 to 6.1 per cent and Italian bond yields have increased from 4.9 to 5.9 per cent.

India

The Indian economy recorded 8.5% growth in GDP for the financial year 1st April 2010 to 31st March 2011 compared with 8% growth achieved in the previous year. This performance was led by the services sector, but was also supported by very strong growth in agriculture. However, activity now seems to have hit a soft spot, with GDP growth numbers for Jan-Mar 2011 coming in at 7.8%, against 9.8% a year ago. The key factor that has adversely affected economic expansion is the sharp deterioration in investment.

Investment expenditure has been dampened largely due to the high interest rates resulting from the sustained monetary tightening carried out by the Reserve Bank of India to address inflationary pressures. Despite this, inflation remains high, coming in at 9.4% for the month of June 2011. Expectations on inflation for the rest of the year remain biased on the upper end and therefore the RBI is unlikely to pause in its rate hike programme, even given the recent 50 basis point rise. Therefore, the negative overhang on investment sentiment will continue.

The ongoing push towards manufacturing has the potential to bring about a structural shift in the resource use path for the country, and ratchet it upwards. Given that the resolution of domestic supply bottlenecks may lag the growth of incremental demand, there could be significant impacts on the global commodities market over the medium-term. The sharp rise

in the imports of thermal coal into the country is an example of how commodity supply and demand discontinuities could play out in this market.

Currencies

The US dollar has continued to experience moderate depreciations against most major currencies this year. This is occurring because it seems less likely that the Federal Reserve will increase interest rates anytime soon and it's starting to look likely that the government budget deficit reductions this year will be greater than initially thought. However, in the last month the US dollar has recovered some ground as investors have moved back to the dollar to await the outcome of the latest European debt problems.

Buoyed by strong commodity prices and concerns about the relative economic health of the United States, the Australian and Canadian dollars have remained relatively strong over 2011. Movements in both currencies have been similar so far this year. At the beginning of the year both currencies were roughly at parity with the US dollar and both progressively appreciated over the period to May driven by continued perceived weakness in the US. In May and June the US dollar recovered ground but since then both currencies have strengthened again - to around 1.09 USD per AUD and 1.06 USD per CAD - as investors have become more nervous about the US debt ceiling issues.

The RMB is a controlled currency but continuing inflationary pressures will require further real appreciations of the RMB against the US dollar and we expect the Chinese government to continue to appreciate the nominal value of the RMB in the face of current inflationary threats. That said, any deterioration in the global economic situation would probably cause the government to pause this process.

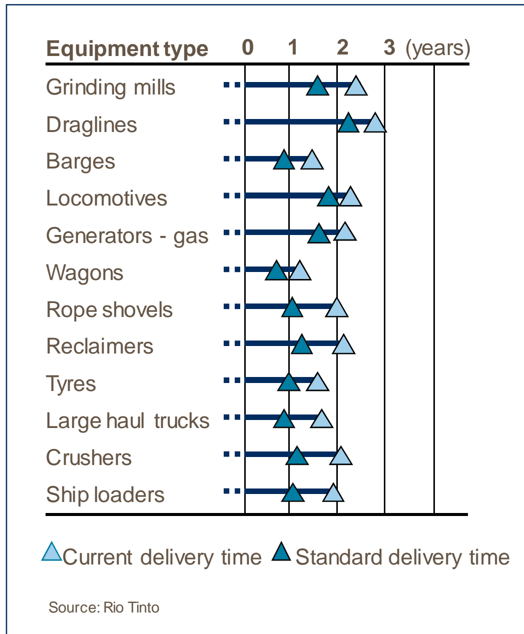
Commodity markets

Costs

Markets for key raw materials and equipments to the mining and minerals industry have continued to tighten as output and investment at most mining companies has increased. Raw material prices have continued their upward trend and some products with structural supply side issues have continued to experience elevated prices during the first half of the year. The increase in crude oil prices resulting from the Middle East and North African (MENA) unrest has also lead to increases in energy costs.

A multitude of supply constraints are impacting the ability of the mining industry to bring new capacity to market. Gone are the near-surface, high-grade deposits located in relatively stable geopolitical areas. Ore bodies are increasingly complex, lower grade and/ or in challenging geopolitical and isolated locations. Permitting and approval requirements are increasing, slowing the speed with which projects can reach the production stage. Resource nationalism continues, increasing political risk and having a negative effect on new investment thus slowing the supply response further.

Lead times for heavy machinery and equipment have been growing and items such as rope shovels, large haul trucks, crushers and ship loaders are all experiencing delivery times longer than standard. We anticipate short-term equipment cost escalation driven by high commodity prices and capacity imbalances. Whilst Chinese mining equipment shipments are increasing, we do not expect them to fully offset the cost escalation due to concerns over reliability and delivery performance from some new suppliers.



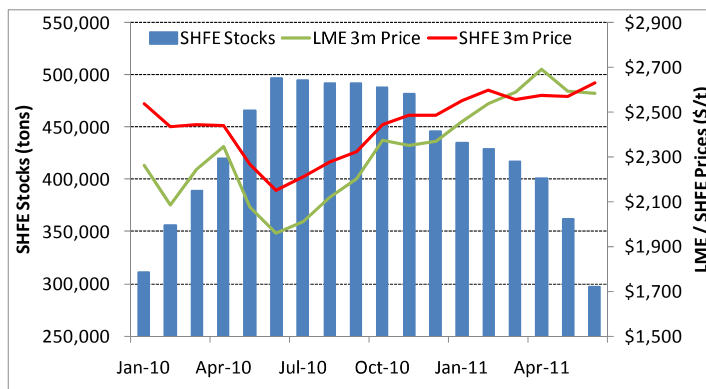
Source: Rio Tinto

We expect to see continued growth in real mining wages over the medium-term as many countries face an undersupply of mining labour. Availability of appropriately skilled engineers, project managers and contractors is going to be critical to the achievement of short-term production forecasts across iron ore and copper where projects are becoming more complex. We anticipate that the greatest construction labour constraints will be felt across Australia, Brazil, Chile and Russia due to significant investment growth across the mining, oil and gas and infrastructure sectors. Relief will come as labour supply moves from other sectors to fill construction labour demand and it remains to be seen how improvements in productivity can also help alleviate these effects.

Aluminium

During the first four months of the year aluminium spot prices rose strongly from $2,460/t to touch a peak of $2,786/t driven by fears of smelter outages in the Middle East as the MENA crisis spread across the region, the USD weakened significantly as compared to the EUR and on fears of renewed smelter outages in China as a result of continued power shortages. However since then aluminium has pared back some of its gains and is now back to the $2,600/t levels as a result of continued worries over debt contagion in the Eurozone and uncertainty over the resolution of the US debt ceiling.

The physical market has been tight in China as a result of continued strength in demand, newly installed capacity taking time to ramp-up and a large surge in the export of aluminium semis products. The automotive sector in China though has not seen the impressive growth rates seen during 2010 when the domestic sales of automobiles increased by more than 32% y/y. This has been driven by the withdrawal of automobile subsidies, credit tightening and higher interest rates and as a result the sales of automobiles in 1H'11 are up by less than 4% year on year.



Source: Thomson Reuters Datastream

Production outside China has continued a steady ascent this year driven by restarts in North America and ramp up of new capacity in the Middle East, however supply is still slightly below the peak of 2008. The NDRC has raised power tariffs in China in June to reduce a disconnection between rising domestic coal prices and stagnant power tariffs which had not been raised for over 18 months. This should have an impact on the smelting costs for some Chinese producers. The forward curve on the LME was in a backwardation briefly in the month of May, which resulted in the breaking of some stock financing deals, however in general the deals continue to stay profitable. Market premiums across North America,

Europe and Asia Pacific remain high, influenced by the financing deals and warehouse loading rates.

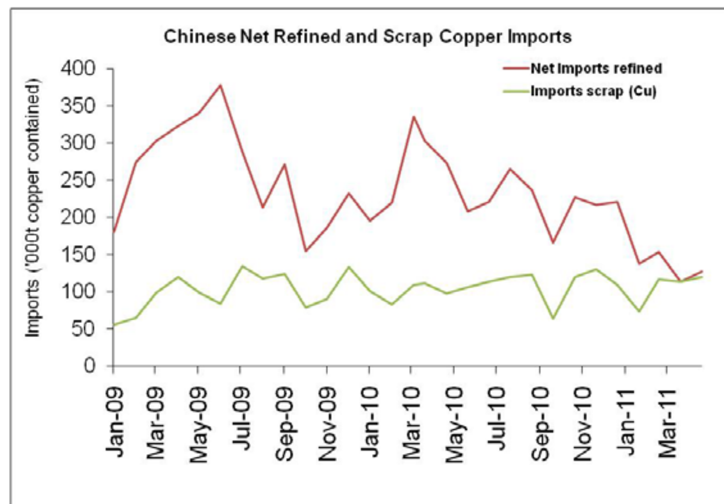
For the second half of the year China is expected to continue to drive the demand growth for aluminium with growth rates in US and Europe expected to remain weak. The demand from Japan on the other hand is likely to bounce back as automobile production is expected to return to close to pre tsunami levels by early Q4. The building and construction sector still faces headwinds as the Japanese government struggles to put in place the financing required to ramp up the public reconstruction work, which is not expected until early 2012. High levels of inventories continue to overhang the aluminium market and with expectations of a rise in interest rates pushed back into late 2012, we can expect most of these stocks to remain tied up. With weakening demand growth expected in H2, no deficits are expected to appear in the market this year and the market will continue to feel the weight of the stock overhang.

Copper

The LME copper spot price peaked in mid-February at $10,145/t. Macroeconomic concerns with respect to oil prices, the end of QE2, monetary policy tightening and sovereign debt risks pulled copper prices to a trading range about $1,000 lower for the rest of the half, with the average price being $9,396/t. The price bottomed at just above $8,500/t in mid-May and then climbed relatively steadily, reflecting increasingly positive Chinese production growth.

During the first 3 months of 2011, world refined production increased by only 1.5 per cent, 30% of which was due to an increase in secondary supply. Due to current market tightness, relatively small disruptions due to weather and labour relations are reverberating in the spot price. Labour issues continue to be challenging, particularly in Chile, where strikes occurred at the Collahuasi mine earlier this year and at the time of writing are ongoing at Escondida. The effect of these strikes is to lower production further.

The International Copper Study Group estimates world apparent usage of copper grew by 6.6 per cent in the first three months of the year; growth was down from 9.7 per cent for the same time frame in 2010. Although we do not yet have official figures on copper consumption for the full half-year, we are aware that seasonal production in China picked up strongly in the second quarter from a relatively low 3% increase in Q1. SHFE stocks peaked at the end of March at 161kt, and were drawn down to 73kt by the end of June. Chinese imports in the first half were down year on year but by most accounts copper consumption growth was strong, and was fed in many cases by warehouse and supply chain stock depletions. We note a similar seasonal exchange stock draw-down pattern with respect to 2010 consumption.



Source: Thomson Reuters Datastream

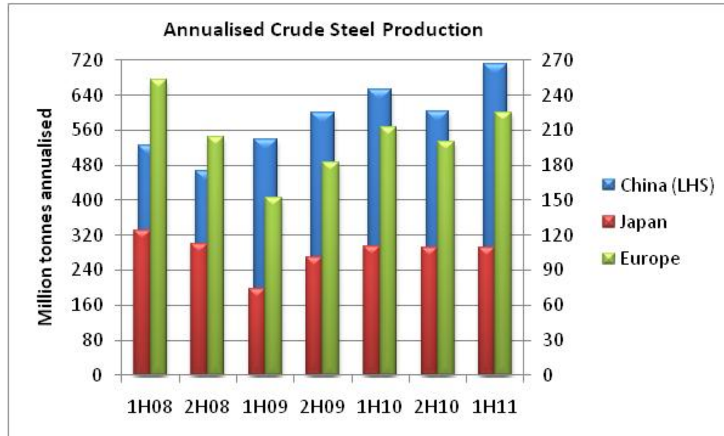
LME:SHFE arbitrage has been closed for most of the first half of the year, distorting Chinese imports downwards. Bonded warehouse stocks accumulated in Chinese ports in the first half, with traders anticipating future delivery to the mainland. Most of these stocks have been depleted, with bonded warehouses now carrying more typical levels of working inventory. The refined copper deficit is still expected to increase through 2011 and into 2012, as demand continues to grow against limited supply expansions. ETFs have not yet made significant inroads to the copper market, though other forms of non-retail investment continue to influence short-term copper price movements.

Iron ore

Spot iron ore prices were relatively stable in the first half of 2011 despite being in a normally volatile price range. After a brief peak just over $US190/t in mid-Feb (all prices US$/t CFR China), prices fell to the mid $160s before stabilising in the $170s for most of Q2. This was in contrast to the previous half where prices traded across a $60 range.

The average price in the first half of 2011 of $176.90 was a little higher than market expectations. The strong prices were driven by robust demand in China and supported by growth in Europe which more than offset weaker flows into Japan after the devastating tsunami in March. And while global seaborne exports continue to grow, export performance in the first half was weaker than anticipated translating to supply growth that merely kept pace with demand growth at prevailing prices.

China's crude steel production soared to 353Mt in the first half, up 9.2% on what was a very strong first half of 2010. China's production growth in the first half looks particularly impressive if compared to the energy-policy-driven weak result in the second half of 2010. The strong growth owed predominantly to strong residential construction activity despite countervailing policy steps taken to dampen investment and contain inflation. Europe's production continued to recover, boosted by improved manufacturing performance on the back of a weak Euro, with Germany and Turkey key contributors to growth across the last 6 and 12 months. In contrast, Japan's industrial infrastructure was severely damaged in March resulting in an 8% fall in Q2 production compared to rates achieved prior to the tsunami, which detracted from what would otherwise have been positive growth.



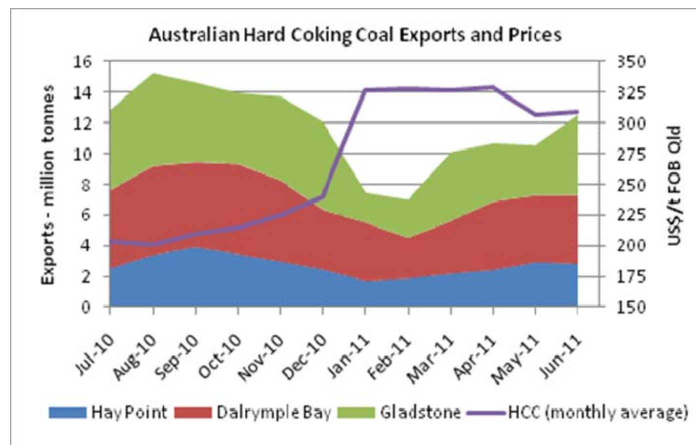
Source: World Steel Association

The weaker than anticipated seaborne supply result in the first half resulted from a weather affected Pilbara region – despite significant additions to capacity over the past year exports from the major producers were just 3.3% higher than a year earlier, with production up just 1.5%. Brazil's exports were also on the lower end of expectations, up just 5.4% on a year prior, compared to capacity-demonstrating stronger growth of 12% recorded in the previous half. India's exports were much weaker than a year prior, but this was expected as illegal mining continues to be targeted in numerous states.

Looking ahead supplies should stabilise given a dryer second half of the year in Australia and Brazil while demand will depend mainly on building construction rates in China.

Coking coal

Supply was significantly affected by flooding in Queensland late in 2010 and throughout the first half of 2011 – Queensland in recent years accounting for almost 60% of global seaborne supply. Prior to the floods in late December, unseasonal wet weather saw the hard coking coal price rise from ~$210/t in mid-October to ~$240/t in early December. When more rain fell on an already saturated landscape, the impact on mine production and rail infrastructure was considerable. As a result spot prices for hard coking coal (HCC) rose considerably during this period and remained at high levels throughout the first half as the effects of the flooding proved to be longer lasting than the market anticipated.



Source: McCloskey Coal and Energy Publishing

Looking forward prices are expected to slide gently in the second half of the year and into 2012 as Queensland supply recovers and grows. The US supply that entered the seaborne

market in the first half is expected to remain as the product has now been accepted by the market and margins remain healthy.

Thermal Coal

Seaborne thermal coal prices in the three major hubs of Newcastle, Richards Bay and ARA (Amsterdam, Rotterdam, Antwerp) experienced modest volatility during Q1-2011 characterised by disruptions on both supply and demand sides. This volatility was much less in Q2-2011 as all three hubs traded largely sideways. The average quarterly FOB prices for Newcastle were USD$128/t and USD120/t for Q1-2011 and Q2-2011 respectively, compared to publically announced JPU annual benchmark contracts of USD$129.85/t and USD$127.50 starting in Q1-2011 and Q2-2011 respectively.

On the supply side, the impacts of the Queensland floods experienced during Q1-2011, whilst mainly impacting metallurgical coal, did affect thermal coal exports from Queensland with estimated losses of 8.8MT. Supply impacts in New South Wales experienced during February and March have been largely recovered with May 2011 year to date (YTD) thermal coal exports matching the previous year. The planned maintenance to Transnet's rail system feeding Richards Bay Coal Terminal (RBCT) meant June 2011 YTD exports are broadly in-line as the same period last year. Colombian YTD thermal coal exports are broadly similar to 2010 with seasonal rain impacting export growth ambitions significantly. Finally, Indonesian supply data to April 2011 shows strong export performance to the international market although somewhat less than the previous year.

On the demand side there have been two material disruptions experienced during H1-2011. The first disruption was the earthquake and tsunami that devastated much of north east Japan in March 2011. Initial estimates indicated approximately 7.0GW of coal fired power plants impacted, however in the subsequent months there has been recovery of approximately 2.0GW. Thermal coal imports during April and May 2011 were down on the same period in 2010, however data from the Federation of Electric Power Companies indicates heavy purchasing of thermal coal in June. The short-run repercussion of the Fukishima Nuclear Reactor incident and the subsequent policy responses, both within Japan and abroad, will provide further support for thermal electricity production going forward. The second disruption was China's significant re-entry into the thermal coal market with imports beginning in May 2011 (May 11 net imports = 7.1MT versus April 11 net imports = 3.7MT). The significant increase in thermal coal imports was catalysed by a number of factors including poor hydroelectricity performance in early 2011, increasing domestic coal prices, increasing domestic demand and a narrowing of the spread between domestic and seaborne prices.

Going forward demand for thermal coal is expect to remain strong with Asian and Indian demand to account for a reasonable proportion of the growth. Supply for the major exporting hubs of Australia, Indonesia and South Africa should grow modestly.

Diamonds, Titanium Dioxide and Uranium

The diamond market saw a swift recovery in H1 2011. Strong demand for larger stones from China coupled with smaller stone demand from India as well as financial crisis driven supply curtailments have driven a strong price recovery for both rough and polished prices. Both markets remain buoyant, however average rough diamond price growth has outpaced polished price growth where rough prices have almost tripled from their April 2009 low.

Looking forward to the medium-term, relatively strong global economic growth is expected to support robust demand with forecasts for luxury goods growth ranging from 10-15 per cent.

Our research suggests that the threat to demand from synthetic diamonds is low. The US remains the largest consumer of diamonds accounting for over 40% of demand, however with double digit growth from both the Far East and India, combined these markets could soon rival the US.

The end of 2010 saw a substantial rise in the price of feedstock material for titanium dioxide and since then demand growth has continued to outpace supply and propel prices to record levels.

Post Fukushima, the short-term uranium market conditions remain weak. Significant volumes of overhanging inventory including Department of Energy disposals, deferred Japanese volumes and reductions in Japanese inventories have provided downside price risk. On the demand side, the negative impact of Fukushima on nuclear build programmes around the world has seen an accelerated phase-out of nuclear power in Germany, no extension in Switzerland, the abandonment of the Italian programme and a number of Japanese reactors remain suspended.

However the market is expected to tighten progressively over the medium-term due to project delays. Looking further ahead, the long-term demand outlook remains positive, primarily driven by Chinese growth. At present, there is no evidence to suggest that the Chinese nuclear power programme is at risk with a planned 82GW of installed capacity to be reached by 2020.

Conclusion

With global growth of around 3.5 per cent, Chinese GDP expected to grow above nine per cent and constrained commodity supply growth we expect positive implications for metals and minerals markets during 2011 and into 2012.

However there are important risks to this outlook related to the pace of credit tightening in developing countries – especially China – and the potential for financial crises arising from sovereign debt problems in OECD countries.

Looking further to the future, our view remains that there will be 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, significant constraints to capacity expansion remain evident, and if anything, have become more problematic.

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’.