

Brady Bulletin - Issue 6, June 2006

The Chinese aluminium puzzle?

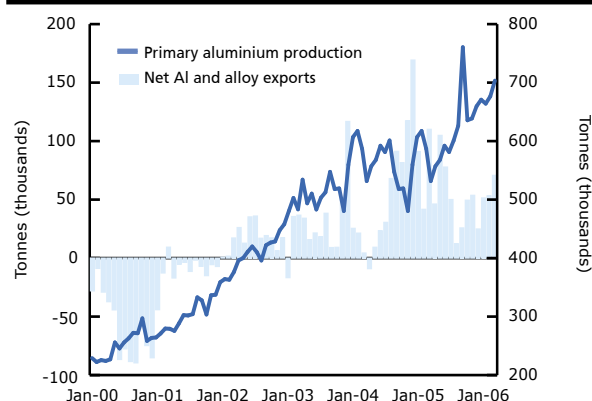
LME inventories have remained high during much of this cycle. However this trend has not stopped aluminium prices on the LME performing strongly for much of this year. A consensus appeared to be emerging among a number of analysts and the producers that the aluminium market would return to deficit in 2006. A number of factors were cited for the improvement in market conditions – among them was a reduction in the level of net exports from China, or a possible return to the country being a net importer of primary aluminium. In turn, this was predicated on a sharp reduction in the rate of aluminium production growth in the country (and continued strong demand).

Over-capacity is still a problem

The Chinese government has introduced a number of measures to curb the growth – none of which appear to have been particularly successful. Efforts to close small-scale smelters on both economic and environmental grounds have been offset by the commissioning of new larger and more efficient plants. In 2005, this led to Chinese aluminium production increasing by 17% to 7.8m tonnes.

Investment in new capacity continues. According to the National Development and Reform Commission there are 11 on-going aluminium projects with a capacity of 1.12m tpy, some of which have not been approved by the relevant authorities. Another problem is that despite the closure of some small-scale smelters, total capacity at the end of 2005 was 10.7m tpy, which represented a capacity utilisation of around 75% last year.

Chinese growth in production and net exports, 2000-2006



Source: China Customs

In addition to the steps taken by the government, 23 of China's top smelters in late 2005 announced a production cut in an attempt to influence the alumina price given China's position as the world's largest importer. However the sharp increase in aluminium prices has encouraged these producers to raise production. At the same time, the spot alumina prices has fallen from over \$600/tonne at the beginning of the 2006 to \$570/tonne in early June further alleviating the cost pressure on Chinese smelters.

Alumina production responds to high prices

Sharply higher domestic output has also contributed to the decline alumina prices. Chalco's production in the first half is over 20% ahead of the corresponding period of last year. Chalco has recently commenced construction of a 1m tpy alumina refinery at Shuijiang. Last year, Chalco produced approximately 9m tonnes of alumina and represented 85% of domestic production. This year output may rise by a further 500,000 tonnes, while Luneng Jinbei has recently commissioned a 1m tpy facility in Xinzhou city in the summer of 2006. Two new producers have recently been established Shandong Chiping (capacity in excess of 1 m tpy) and Kaimen (approx 300,000 tpy).

Primary aluminium output registers double-digit gains

So far in 2006, primary aluminium production in China is running about 20% ahead of last year. Therefore it appears to be increasingly unlikely that output will place a limit on Chinese exports as had been originally expected. A more positive aspect for the "aluminium bulls" is the strength of domestic demand. The production of both aluminium semis and alloys are running over 25% ahead of last year. Activity in the key aluminium consuming industries remains robust with particularly sharp gains in auto production, power generation and refrigeration/air-conditioning sectors.

The trade data on primary aluminium and alloys has yet to show the sharp reduction in net exports from China, which had initially been expected. In the first four months of this year net exports of primary aluminium and alloys were around 180,000 tonnes. During the remainder of the year we see a slight dip in exports but this will be due to strong demand rather than



lower Chinese output. The change in China's net trade position is unlikely to be sufficient in itself to return the market to deficit. For that to happen, demand growth needs to accelerate, and production growth outside of China also needs to slow.

Aluminium production shifts eastwards

In Issue 3 of the Brady Bulletin (August 2005), we noted the rationalisation of production capacity in Europe and the USA caused in part by high energy costs and significantly lower aluminium prices than we are seeing in 2006. The closures are reflected in the production data for 2005 and early 2006. US output fell by 1.4% last year to 2.48m tonnes, while Q1 2006 output was 6.6% lower at 572,800 tonnes. In Europe, (excluding Russia) Q1 production fell by around 5% year-on-year.

The pressure is off the aluminium producers at the moment with prices in the second quarter averaging close to \$2,750/tonne. However, it is unrealistic to believe that these prices will be with us for long as prices are far in excess of what we believe to be long-term average cycle prices, and also the marginal cost of production. We recognise that average prices will be significantly higher than in previous cycles – production costs are rising due to higher energy, labour and raw material prices, the metal-intensive growth in countries such as China and India will help reduce the volatility of demand, while aluminium supply is likely to be more price elastic. The bottom line is that while the industry will inevitably remain highly cyclical, the producers should be able to avoid the periods of massive inventory accumulation, which not only led to low prices but more importantly led to a sustained period of low prices.

Prices at unsustainable levels

Producers and analysts have been forced to reassess their views on long-term average prices. For aluminium, a consensus appears to be emerging in the range of \$1,700-1,850/tonne, compared with a price of \$1,450/tonne that was typically used in the past. As highlighted in the chart, prices in the first half of 2006 were well in excess of the long-term average. This implies that at some stage (2007/08?) there will be a sharp correction back towards, and then below the long-term average price. This will then place renewed pressure on European and US smelters.

The next generation of smelters are already being developed and are heavily concentrated in China reflecting the development by the domestic producers and the Middle East, where some of the major producers have recently announced ambitious plans.

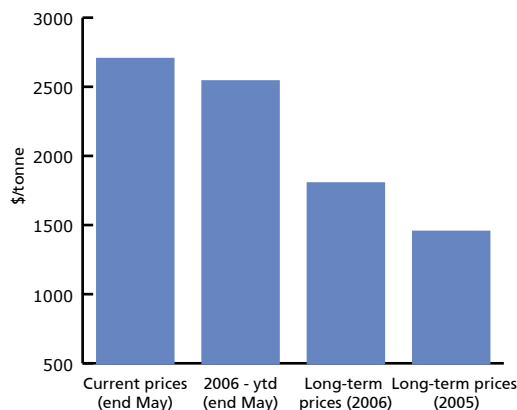
Alcan may take a role in Saudi Arabian 650,000-750,000 tpy Ma'aden project. Construction of the project may begin next year, with commissioning planned for 2010. The company has already taken a 20% stake in 350,000 tpy Sohar project in Oman, which should come onstream in the summer of 2008.

In Iran, the domestic company – Vahid Shirvan Aluminium – has signed a deal with a Chinese consortium for the construction of a 250,000 tpy smelter. Nalco is considering plans to build a 500,000 tpy smelter in the Middle East citing favourable power costs at R0.40 per unit compared to a cost of R1.1 per unit at its Indian operations.

Norsk Hydro has established a 50:50 joint venture with a proposed capacity of 585,000 tpy in Qatar, which could come onstream in 2009. It is also considering a 265,000 tpy smelter in the Murmansk region of Russia. The project is dependent upon the development of the Stockman gas deposit by Gazprom. Rusal is boosting its existing capacity in the country and should produce 3.1m tonnes in 2007 compared to 2.8m tonnes this year. It also plans to add 150,000 tpy to capacity by 2013. Sual plans to invest \$5bn over the next 5 to 7 years to double capacity. This may involve one 1m tpy mega-project, or two 500,000 tpy plants.

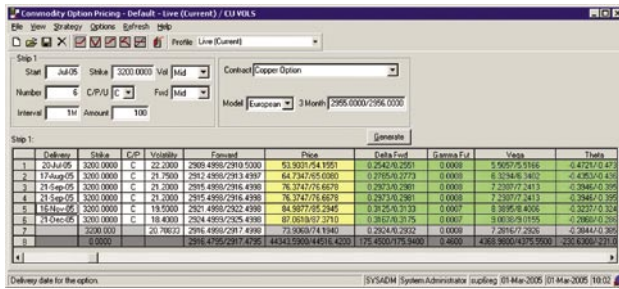
The next issue of the Brady Bulletin (published to coincide with LME Week) will analyse the prospects for the whole of the base metals complex. To ensure you receive this report: contact: b.collins@bradyplc.com. Previous issues are available on www.bradyplc.com.

Long-term vs current aluminium prices



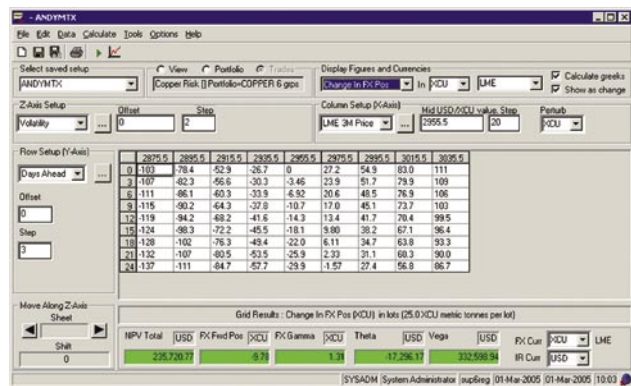
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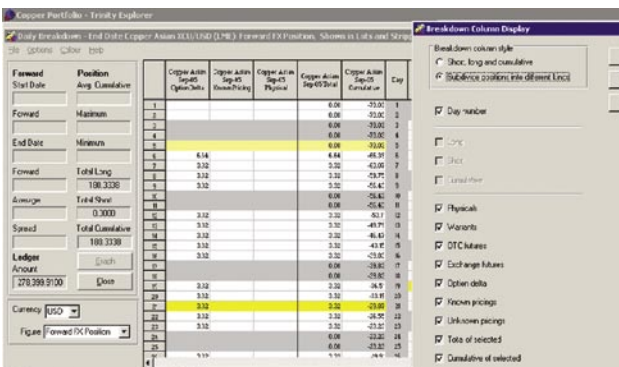


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