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Commodity Markets Strategy Group[1]

5 May 2011

Metals Market Comment

Tin – Chinese destocking masking underlying deficit

Testing times for our bullish view of tin

In our Metals Market Comment of 26 April, we examined whether our bearish view of nickel was undermined by the decline in LME stocks of recent months. For tin, the problem is precisely the opposite. Is our long-standing bullish stance towards tin undermined by the steady rise in LME stocks? LME tin holdings have now increased by nearly 5kt, or 29%, since the start of 2011 and by almost 9kt (73%) since their low point of October 2010. And yet we have previously forecast another large underlying deficit in the tin market this year.

We can take some comfort from the fact that until very recently the market had for the most part brushed off the rise in LME tin stocks. Although the tin price has now fallen by over 10% from its April high, this has had more to do with a general sell-off in metals. But has the market been right to dismiss the stocks increase, or has the fundamental outlook changed for the worse?

Rising LME stocks reflect Chinese destocking

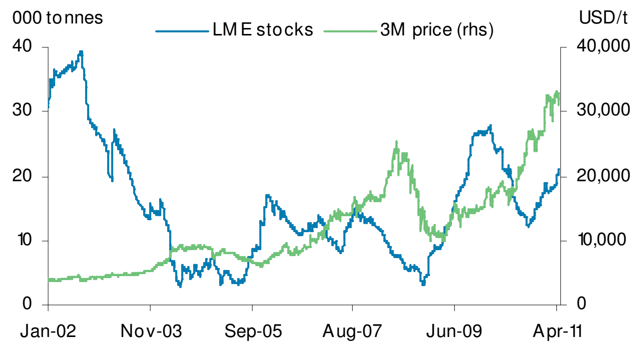
We continue to believe that the rise in LME tin stocks since October 2010 can be largely explained by developments in China. We have previously noted that Chinese imports of refined tin fell sharply in Q4'10 and that it appears that at the same time the country exported substantial tonnages of 'tin products' (which are not subject to the 10% export duty). Imports remained low in Q1'11 (Chart 2). And ITRI has recently collated import data from third countries which suggest that Chinese exports of tin surged in Q4'10 to at least 5kt (mostly to Singapore), compared with a quarterly average of little more than 1kt earlier last year. China was a significant net exporter of tin in late 2010 and it is likely to have remained so in Q1'11.

All this coincided with the Chinese domestic tin price failing to keep up with the soaring LME price, making exports attractive. But it was only possible because China had previously stockpiled tin. Quantifying this and subsequent destocking is very difficult. We judge that Chinese stockpiling of tin in 2009 and through most of 2010 amounted to over 15kt and that much material remains. But some Chinese smelters have reportedly largely exhausted their inventories, while other destocking cannot continue indefinitely.

Tin still in underlying supply deficit

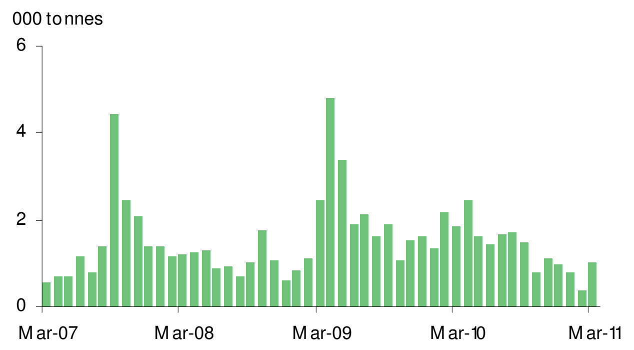
Our view is that, for fully six months now, Chinese destocking has been masking the underlying tin market

Chart 1: LME tin stocks and price



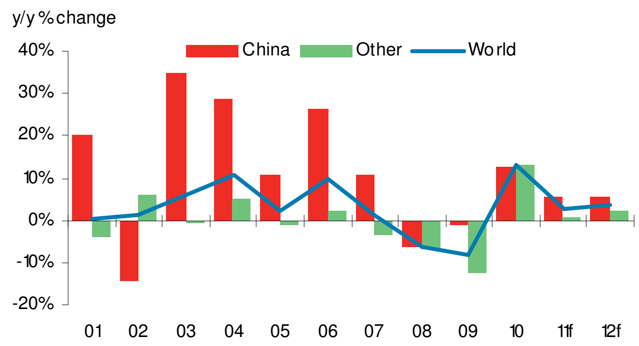
Source: LME, Bloomberg, BNP Paribas

Chart 2: Chinese imports of refined tin and alloy



Source: Chinese General Administration of Customs, BNP Paribas

Chart 3: World refined tin demand, y/y change



Source: CRU, ITRI, BNP Paribas forecasts

balance. How long this will continue is uncertain but we remain convinced that tin is in structural deficit. Although our figures are less extreme than before, the balance table on page 3 shows an underlying global deficit of 10kt or more for each of 2010, 2011 and 2012.

Since our last detailed analysis of the tin market in mid-February, we have shaved our estimate of the rebound in world demand last year from 14% to 13% (Chart 3), and we have cut our forecast of demand this year, due

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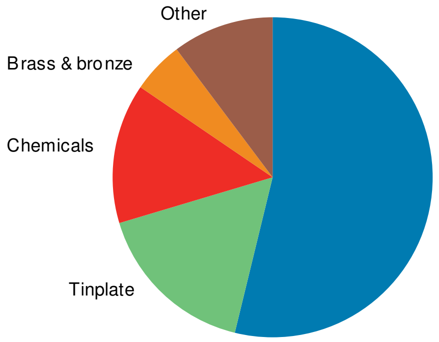
chiefly to the earthquake in Japan. Japan accounted for a hefty 9% of global demand in 2010, yet tin will not be a notable beneficiary of reconstruction in H2'11 and 2012. Moreover, underlying trends are not as strong they were in 2003-06 and substitution pressures are intensifying. Uses at risk of substitution include organotin chemicals for PVC stabilisers (~30kt/y), wine bottle tops (~5kt/y) and parts of the ~60kt/y tinplate market. We forecast that world tin demand will grow by only 6-7% between 2010 and 2012.

As previously stated, however, tin is primarily a supply-side story. Although we have marginally raised our forecasts of world mine production in 2011-12, this chiefly just reflects a higher estimate for 2010. Growth last year is still put at less than 3% and we expect a further rise of only 6-7% over 2011-12 (Chart 5).

Whilst the high tin price is boosting the number of new mine projects, few of them will make a contribution in 2011-12. And meanwhile most of the growth in output will come from expansion or redevelopment of existing mines, notably in Australia, Bolivia and Brazil. Elsewhere, the picture is more of stagnation, and downside risks are mounting. There are signs of revival in the small-scale Indonesian mining industry, but PT Timah is struggling and the regulatory environment remains challenging. The outlook for the DR Congo, which produced as much as 14kt of tin in 2008, is highly uncertain due to the conflict minerals issue. More recently, presidential elections are shining a spotlight on Peru. Through Minsur, Peru, though in decline, still mines over 10% of the world's tin. Among base metals, only zinc comes close to such dependence (Chart 6), although Peru accounts for over 15% of global silver production.

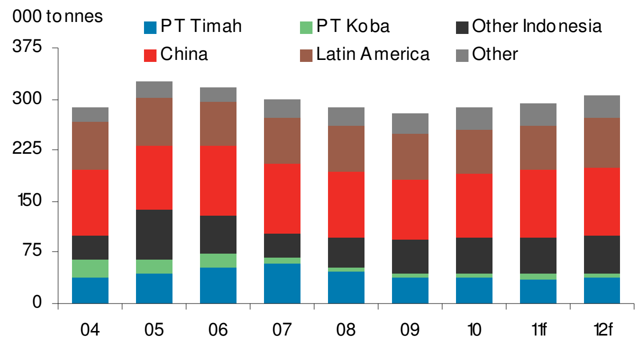
In short, even now, with the tin price having tripled since late 2008, we expect world mine production to increase by no more than 10% between 2009 and 2012. Tin is simply not on the radar screen of most mining companies, particularly, perhaps, the majors with ample money to spend. Mine output may again in 2011-12 be supplemented by expansion in supply from scrap, but we doubt this will make a material difference to the overall rate of growth of refined production.

Chart 4: World tin demand in 2010 by end use



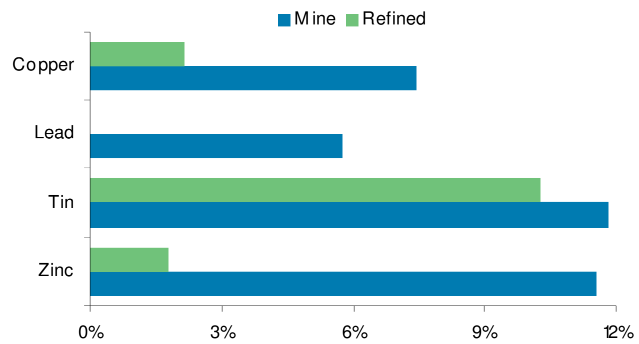
Source: CRU/ITRI, BNP Paribas

Chart 5: World tin mine production



Source: CRU, ITRI, BNP Paribas forecasts

Chart 6: Peru's share of world production, 2010



Source: ICSG, ILZSG, INSG, CRU/ITRI, Brook Hunt, BNP Paribas

The tin bull market is not over

As we see it, the tin market is currently caught, not unlike copper, between, on the one hand, a large and persistent underlying deficit and, on the other, the release by China of inventory that was mostly built up in 2009 (when prices were far lower than today). The destocking could continue for a while. But although it is impossible to know precisely how much Chinese inventory remains, we do not believe that it is sufficient to cover the underlying tin supply deficit over the balance of 2011 and through 2012. We therefore expect that at some point LME tin stocks will turn back down, and probably quite sharply.

As with copper, Chinese action has postponed the pinch point at which tin inventory available to the market reaches critically low levels. In copper's case, it is now possible that the pinch point will be put off long enough for new supply to catch up with demand. But for tin the situation is more challenging, first because the underlying deficit may continue into 2013, and secondly because much LME inventory may become undesirable due to conflict minerals issues.

We conclude that the tin bull market is not over. We have adjusted our price profile to take into account persistent Chinese destocking and the current steep sector-wide correction. But we believe that the price will recover to a new high and perhaps challenge USD 35,000/t at some point in the next 12 months. And although tin's premium over nickel has retreated sharply from a recent USD 7,000/t, we reiterate our medium-term target of USD 10,000/t.

Stephen Briggs

BNP Paribas world tin supply/demand balance – last updated 5 May 2011

000 tonnes tin	2007	2008	2009	2010	2011f	2012f
Mine production	300	288	279	286	292	305
Refined production	354	337	336	351	360	375
US DNSC stockpile sales	8	4	0	0	0	0
Refined consumption	373	348	321	362	372	385
- % change	1.4%	-6.5%	-8.0%	12.9%	2.8%	3.5%
Implied balance	**-11**	**-7**	**15**	**-11**	**-12**	**-10**
Year-end reported stocks	35	32	46	34		
- Change	-1	-3	14	-12		
- Weeks' consumption	4.9	4.8	7.5	4.9		
Implied change in unreported stocks	-11	-5	2	1		
LME cash price – USD/tonne	14,526	18,487	13,581	20,438	32,250	34,500
LME cash price – USD/lb	6.59	8.39	6.16	9.27	14.63	15.65

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