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Deteriorating outlook starting to pile on the pressure

Strategists

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There is often a pick-up in physical demand around September, as metal consumers return to the market after the slower summer period. The deep sell-off in early August has actually brought many consumers back earlier and with greater appetite than usual to take advantage of the lower prices, which in some cases are 20-30% below the late-July levels.

LME cancelled warrants in nickel and tin, for example, are at multi-year highs, stocks are falling and premiums are firm or rising. The Chinese have been active, with good spells of arbitrage-related buying seen in copper, nickel and tin especially, while the fundamentals of the Chinese lead market look to have improved.

However, we must make the distinction between the current fundamentals and the longer term outlook. On the whole, the stronger demand indicators we are seeing right now reflects buying that is opportunistic and seasonal in its nature. In the case of copper at least, Chinese consumers are still operating hand-to-month, with neither the will nor the financial capability to engage in more strategic restocking.

Overall, and aside from seasonal, price related buying, there is little doubt in our mind that the edge has been taken off physical demand for the base metals during Q3. Our expectations for Q4 are also now starting to look ambitious given the flow of disappointing data. Against this backdrop prices are facing mounting pressure.

We have been careful not to get complacent about the headwinds that the global economy has faced, and many of the bearish factors weighing on the market outlook now are already factored into our models. Many of our price forecasts are still in line with year-to-date averages with aluminium, NASAAC and lead, for example, only off by 0.3-0.8%.

However, the August sell-off, the lacklustre rebounds so far, the deteriorating outlook and fragile sentiment all mean that we have put many forecasts on negative watch, pending the Fed's next move on QE or other stimulus measures, and signs of any change in direction by Chinese policymakers.

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LME Cash Price Analysis and Forecasts

	Actual Prices								Forecasts	
$/tonne	Aug 11	Ytd Ave.	Ytd Range	2007	2008	2009	2010	2011	2012
Aluminium	2,392	2,521	2,309 - 2,772	2,639	2,576	1,665	2,170	2,530	2,570
Copper	9,034	9,370	8,537 - 10,148	7,126	6,969	5,150	7,539	9,525	10,000
Lead	2,398	2,567	2,272 - 2,939	2,595	2,090	1,661	2,182	2,585	2,600
Nickel	22,085	24,788	20,625 - 29,030	37,181	21,074	14,272	21,809	25,300	23,000
Tin	24,460	28,325	23,100 - 33,255	14,536	18,539	13,402	20,447	29,625	30,400
Zinc	2,210	2,313	2,096 - 2,546	3,250	1,873	1,612	2,159	2,390	2,500
Aluminium Alloy	2,290	2,345	2,212 - 2,480	2,192	2,375	1,462	2,077	2,380	2,490
NASAAC	2,404	2,471	2,321 - 2,627	2,183	2,384	1,447	2,097	2,450	2,520

Economic trends

US confidence under pressure

While the political crisis over the US debt ceiling was resolved at the beginning of August, the agreement was temporary and rather half hearted. Combined with a no-better-than modest pick-up in US GDP growth during Q2 (to 1.3% from 0.4% in Q1), fears of a double-dip recession intensified last month. GDP growth was driven primarily by positive contributions from exports, non-residential fixed investment, private inventory investment and federal government spending. On the last of those factors, however, having fallen by 9.4% y-o-y during Q1, real federal government expenditure and gross investment increased by 2.2% in Q2, with a particularly strong turnaround in defence spending. Given the recent cuts agreed to federal government spending as part of the deal to raise the debt ceiling, this positive impact is unlikely to last.

Concern about the fate of the US economy in the coming few quarters helped to fuel the global share sell off in August. This in itself could well have significant repercussions for consumer confidence and spending, particularly in the US, where the feel-good effect from a rising stock market tends to boost retail sales, especially at the luxury end of the market.

Hope on the labour market recovery

On the labour market front, the US economy added no addition jobs in August, making a significant recovery feel even further off and putting greater emphasis on President Obama's speech on the job market on September 8th. He presented a $447bn stimulus plan, which was above the $300bn speculated by the media. We expect most parts of the plan will be able to pass through Congress. If all of it were to pass, it is thought that it would boost GDP by between one and three percentage points in 2012. However, perhaps due to the debt-ceiling debacle, and footage of stony faced Republicans, the market appeared to be uninspired by Obama's fiscal plan and remained downbeat in the immediate aftermath.

Euro uncertainty weighs on growth…

Adding to the general gloom in advanced economies is the ongoing uncertainty over the Eurozone sovereign debt crisis, which may well have contributed to the slowdown in the region's growth during Q2. With the Eurozone's crisis threatening to spread from small, peripheral economies like Greece, Ireland and Portugal to Italy and Spain, the absence of a common fiscal policy is becoming increasingly enervating. The single currency appears increasingly unsustainable in its current form.

The rate of (q-o-q) expansion in both the Eurozone 17 and the European Union 27 decelerated from 0.8% in Q1 to 0.2% in Q2. In y-o-y terms, growth slowed from 2.5% to 1.7%. This decrease was largely driven by declines in the output of consumer durables, which fell 2.5% m-o-m in seasonally adjusted terms in the Eurozone during June. The output of intermediate goods and capital goods fell by 0.6% and 1.5%, respectively, during the same month.

…and even German GDP growth stalls…

Having outperformed most other large developed economies in recent years, German GDP growth decelerated much more rapidly than anticipated in Q2, from a seasonally adjusted 1.3% q-o-q to just 0.1%. Business confidence appears increasingly shaky as the Eurozone financial crisis intensifies: The Ifo Business Climate Index dipped from 114.5 to 112.9 between June and July (its lowest reading in nine months), with expectations now at their lowest for more than a year.

Global slowdown weighing on Japan

Japan's core machinery orders tumbled in July at twice the pace economists' had expected and the current account surplus also surprised on the downside. Taken together, it is clear that companies are delaying investment due to worries about a strong yen, slackening global growth and slow progress in reconstruction from the March earthquake

Inflation still a concern in emerging markets

Higher food prices continue to spur consumer price inflation in China and India. The Reserve Bank of India increased interest rates again during August. However, given that the main source of inflationary pressure is global commodity prices, rather than domestic demand, the impact of such measures is likely to be limited. On the other hand, this year's monsoon has been a normal one, which should boost crop yields and ease pressure on food prices.

In China, CPI came down from 6.5% in July to 6.2% in August. For Beijing's policymakers, this is a small step in the right direction, but with industrial production coming in at a still very decent 13.5% (albeit down from 15% in June and 14% in July) there is little reason to expect any relaxation in monetary policy. However, while inflationary pressure remains strong, there is not yet any real sign that this is becoming a self-sustaining trend, and it is expected to continuing forming a plateau during Q3 as food prices begin to stabilise. That said, a further round of quantitative easing in the US could upset this by ratcheting up global inflationary pressure.

Aluminium — Slowdown fears keeping the market wary

The hunger for commodities as the global economy stagnates has waned, taking prices for most base metals back down to lows not seen since late 2010. Aluminium – one of the industrial metals most closely linked to economic growth—have certainly borne their fair share of the impact of weakening sentiment, pushing cash prices back down to just above $2,300/tonne. Nevertheless even at these levels only a very small amount of smelting capacity will have seen their marginal cost of production being breached.

Although prices have staged a small recovery since the low point in mid-August, in part spurred by late Q3-early Q4 seasonal buying interest, the bad news continues to flow. A disappointing round of PMIs in August, weak manufacturing data for the US, and poor US employment numbers are all conspiring to exert further downward pressure on pricing.

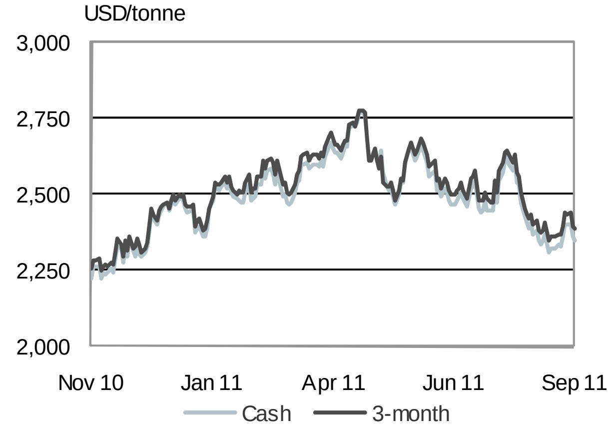
While aluminium demand is certainly off the high levels witnessed earlier this year, there are still some strong spots for consumption, which should pick up again into Q4. Nevertheless, construction demand is still leaving a gaping hole in overall aluminium orders, which will become more exposed as other niche sectors show lower rates of year-on-year demand growth. We expect aluminium to be in for a bumpy ride over the coming month, although expect prices to be range-bound rather than test fresh lows.

Financing deals still ripe for the picking

The world of aluminium has attempted to reconcile the millions of tonnes of inventory held both on and off exchange, with continued strong production rates for some time now. Nevertheless, the difference between fundamentals and pricing continues to drift ever wider, with recent developments unlikely to reverse this trend. With the world's key economies yet again in turmoil, there is no sign of money becoming more expensive – interest rates are still scraping along the floor. Add to this the fact that the cash to 3-month contango is currently sitting in the $35-40/tonne range – against a year to date average of just $24/tonne.

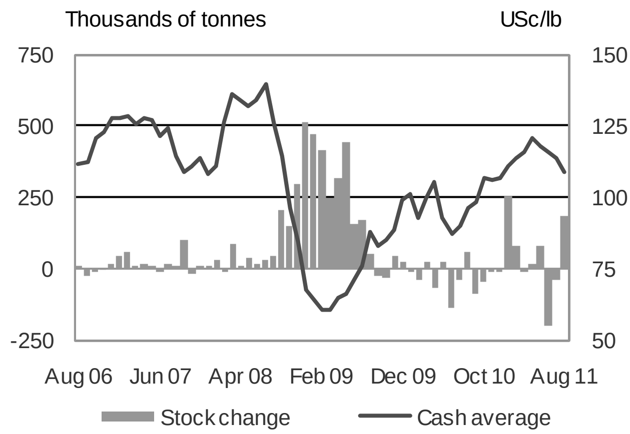
Although on-warrant LME aluminium stocks remain off the all-time highs of 4.7m tonnes seen in May of this year, further large deliveries have been seen. Warehousing companies are also actively fishing for new stocks, and with the physical demand for aluminium in a period of uncertainty, we believe that stock levels may well continue to grow further. This will put further downward pressure on pricing looking into 2012-2013, albeit perhaps having limited impact on either physical premiums or the sporadic bouts of tightness in the nearby spreads that continue to be a feature of the market.

LME cash and 3-month aluminium price



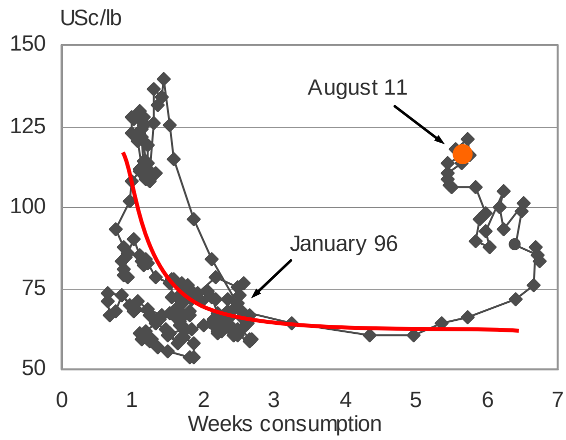
Sources: LME; Standard Bank Research

Monthly change to LME aluminium stocks vs. cash price



Sources: LME; Standard Bank Research

Month-end LME aluminium stocks vs. cash price



Sources: LME; Standard Bank Research

…keeping premiums close to record highs

In our view, the edge has been taken off physical demand for aluminium over Q3, and expectations for Q4 are widely being adjusted down. Counter-intuitively however, we continue to see physical premiums in most regions remain close to – if not at – record highs. In the EU, duty paid in-warehouse premiums continue to sit in the $190-210/tonne range, where they have remained since early May. Although the levels of $230-240/tonne which were being voiced as a potential 2011 level around this time last year were never attained, current highs certainly seem to reflect a much tighter theoretical market than is in reality being experienced. Likewise for EU duty unpaid material – currently $120-140/tonne – and US Midwest material – currently 8.3-8.7¢/lb, although it should be noted that the latter has slipped back from close to 10¢/lb in early May.

Will this delay 2012 purchasing?

Although the trigger for these soaring premiums was strengthening demand in 2010 and into H1 2011, which was leading to some real physical tightness and consumers scrabbling about to lock in 2011 tonnages, it was the added issue of warehouse queues and financing deals that exacerbated the situation. While the current market is no where near as tight, as witnessed by the widening contango, premiums have not yet retreated to more "normal" levels.

Given the ongoing situation with LME warehouse queues, premiums may remain elevated for some time, complicating issues for consumers as we approach the annual mating season. Rather than just the supply side however, also confusing matters this time round is the demand side of the equation with mounting concerns over the economic situation in the US and in Europe as we head into 2012.

Annual Global Supply/Demand Balance for Aluminium, 2002-2012

Thousands of tonnes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Production											
Africa	1,372	1,428	1,711	1,752	1,864	1,815	1,715	1,681	1,824	1,935	2,052
North America	5,415	5,495	5,109	5,375	5,332	5,545	5,783	4,850	4,690	4,966	5,345
Latin America	2,229	2,275	2,356	2,391	2,493	2,557	2,660	2,508	2,494	2,368	2,548
Asia (ex. China)	2,113	2,317	2,585	2,944	3,296	3,504	3,700	4,321	5,089	5,929	6,379
Western Europe	4,260	4,425	4,667	4,741	4,541	4,664	4,840	3,964	4,089	4,103	4,369
Australasia	2,170	2,198	2,246	2,252	2,274	2,314	2,296	2,211	2,277	2,228	2,273
China	4,420	5,465	6,589	7,743	9,349	12,607	13,076	13,550	16,404	17,821	18,240
CIS and Eastern Europe	4,141	4,345	4,569	4,643	4,735	5,001	5,269	4,745	4,798	5,028	5,309
Total	**26,120**	**27,948**	**29,832**	**31,841**	**33,884**	**38,007**	**39,339**	**37,830**	**41,665**	**44,378**	**46,515**
Year-on-year % change	6.9%	7.0%	6.7%	6.7%	6.4%	12.2%	3.5%	(3.8%)	10.1%	6.5%	4.8%
Consumption											
North America	6,595	6,829	7,500	7,567	7,653	7,526	6,913	5,043	5,547	5,769	5,890
Asia (ex. China)	5,473	6,001	6,646	6,780	6,960	7,100	7,140	6,675	7,200	7,495	7,735
Western Europe	6,038	6,192	6,603	6,717	7,055	7,244	7,256	5,900	6,786	7,023	7,164
China	4,189	5,148	6,086	7,091	8,480	11,497	12,934	14,100	16,814	18,681	20,549
Others	3,243	3,408	3,637	3,855	4,098	4,187	4,288	4,163	4,330	4,602	4,790
Total	**25,538**	**27,577**	**30,473**	**32,009**	**34,246**	**37,554**	**38,531**	**35,882**	**40,677**	**43,570**	**46,127**
Year-on-year % change	6.1%	8.0%	10.5%	5.0%	7.0%	9.7%	2.6%	(6.9%)	13.4%	7.1%	5.9%
Implied surplus (deficit)	581	371	(641)	(168)	(362)	453	**807**	**1,949**	**988**	**808**	**387**
Stocks analysis											
IAI	1,660	1,629	1,788	1,797	1,621	1,553	1,676	1,205			
LME	1,241	1,423	693	644	698	929	1,338	4,624			
COMEX	340	213	61	160	122	40	35	0			
SHFE	11	27	60	46	19	89	207	293			
Total	**4,455**	**4,826**	**4,185**	**4,016**	**3,654**	**4,107**	**4,914**	**6,863**	**7,851**	**8,660**	**9,047**
Stocks as weeks of consumption	9.1	9.1	7.2	6.5	5.6	5.7	6.6	9.9	10.0	10.3	10.2
LME cash prices											
Historical & base case ($/tonne)	**$1,350**	**$1,431**	**$1,716**	**$1,898**	**$2,567**	**$2,639**	**$2,576**	**$1,665**	**$2,170**	**$2,530**	**$2,570**
(cents/lb)	61.2c	64.9c	77.8c	86.1c	116.4c	119.7c	116.8c	75.5c	98.4c	114.8c	116.6c

Sources: IAI; WBMS; LME; COMEX; SHFE; Standard CIB Research

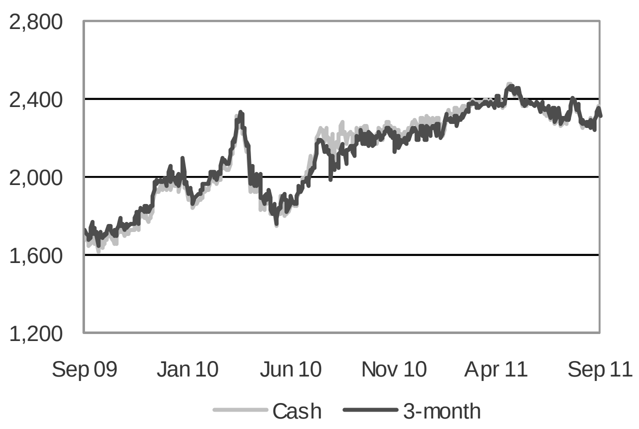
Aluminium alloy

The premium which primary aluminium demands over its sister alloy contract has narrowed sharply in the past couple of months. The differential peaked at over $280/tonne in early August, but ended the month at $40-50/tonne, with a brief drop as low as $21/tonne in mid-August. While the primary contract is being buffeted by the winds of the global financial markets, the alloy contract, which tends to remain one step removed from this front line, has been focusing more on the current supply/demand situation.

Consumers are already starting to return to the physical market after a slow summer period, which is spilling over into the exchange traded contract. In fact, many have come back early to take advantage of lower pricing – LME alloy dipped to $2,245/tonne in late August – ahead of an expected upturn in pricing in the physically traded market in early September when the masses return. There certainly seems to be a little more optimism in the secondary sector than in primary that Q4 will bring with it upbeat orders.

Is this optimism justified? There was certainly a tightening in European secondary markets in August, but LME stocks have continued to grow, suggesting that the tightening was nowhere near acute. But the focus of much of the optimism remains on the German auto market, which has so far escaped unscathed from the current economic storm that is brewing. August auto production in the country was up 20% y-o-y to 399,000 units – a record level. Both domestic and export markets are driving this demand; domestic new auto registrations increased by 18% y-o-y, while exports increased by 17%. While growth rates in the remainder of the year are expected to slow – it will still be growth – which for now is keeping the region's secondary smelters busy.

LME cash and 3-month aluminium alloy price



Sources: LME; Standard Bank Research

NASAAC

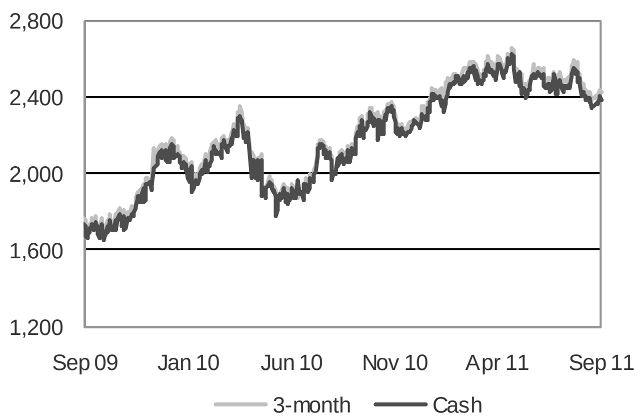
Stock levels of NASAAC material in LME warehouses have now stabilised at just over 150,000 tonnes, which does not seem to have held back prices. In fact, cash NASAAC has been fairly steadily trading at aa premium over the primary contract throughout much of August. Having dipped to the mid $2,300s in mid-August, prices are back up at $2,400/ tonne, but remain just off the year to date average of $2,470/tonne.

In reality the picture is similar to that being witnessed in Europe; one of improving demand from the auto sector following its summer doldrums. Production schedules for the North American auto producers – particularly the Japanese brands – are showing a notable improvement on the past couple of quarters. In turn this should gradually translate into increased demand for aluminium castings and hence secondary metal.

Nevertheless the question now must be how the average North American consumer will respond to the recent developments in the economy. Disappointing employment figures do little to settle the nerves of nation's consumers, many of whom are still reeling from the effects of the last downturn.

Will the wider public still feel like dipping their hands into their pockets to purchase a new auto if they are less than confident about job security? Is there enough demand out there to turn these new higher auto production schedules into reality? We are becoming increasingly concerned about these prospects and believe that while the NASAAC contract seems to have found a floor at around $2,350/ tonne, the upside potential in the short term is limited.

LME cash and 3-month NASAAC price



Sources: LME; Standard Bank Research

Copper — Forecasts put on negative watch

The global economic outlook has deteriorated and we are increasingly concerned that copper demand growth will not reach our expectations. September will be a telling time in this regard. It is when consumers emerge from the summer slow period, and should allow us to better gauge their appetite for restocking for the run-in to the year end. At the moment, the early signs are that order books and sentiment are both ominously weak.

China is key on the copper demand front. Understocked, but credit-starved, fabricators have been opportunistic buyers during August, but they remain extremely price sensitive and there is no sign that this activity will become the strategic re-stocking we, and others, have been waiting for. However, post-summer consumption may still pick up as power shortages ease and manufacturing recovers from its seasonal low in July. August PMI data was not convincing, putting more focus on September's indicators.

We will also be watching policymakers closely, both in China, and in the US where the specially extended FOMC meeting later this month will shed more light on the Fed's next move to kick-start the US economy.

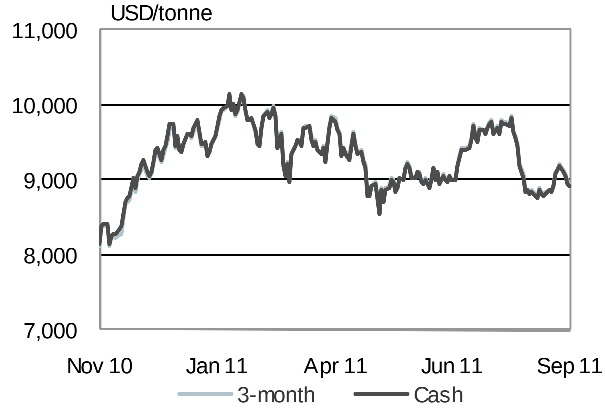
Either way, September is a key month for copper – there are a number of events, decisions and data releases that could go a long way to setting the tone for the next six months. While it may be premature to revise our outlook ahead of these developments, in a month's time we should be in a better position to commit to downgrades of our demand and price forecasts or stick to our guns.

Although we have been, and remain, bullish in terms of copper's fundamental outlook, we have always strived to keep our view measured and realistic. Many of the bearish factors weighing on the market now are already factored into our models, so, any further downgrades to our base case forecasts will be reasonably modest. Whatever happens, copper will be a deficit market this year, with just the size of that deficit open to debate. Our base case for 2012 had been for prices to average $10,000/tonne on the back of a 242,000-tonne deficit, with our bear case looking for $9,350/tonne in what could be an essentially balanced market. We give warning now that our bear case may well become our base case.

Chinese demand recovering, but how fast?

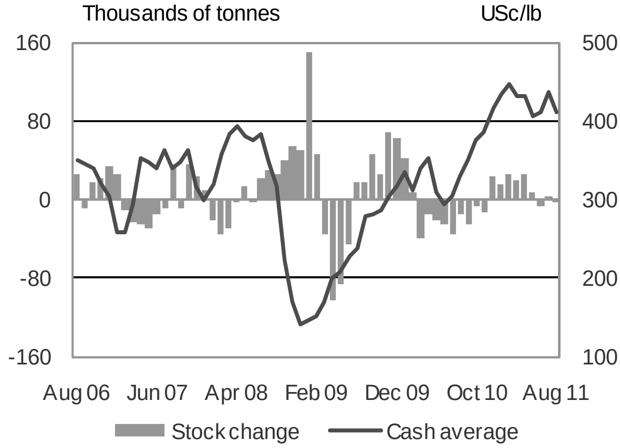
Apparent consumption of refined copper in China is recovering. In the seven months to July, year-on-year growth was still negative, but only by around 2.5%, which is an improvement from growth rates seen in H1. Given the opening of the arbitrage window in August, accompanied by a significant (albeit very price-sensitive) pick-up and arb-related buying, and re-

LME cash and 3-month copper price



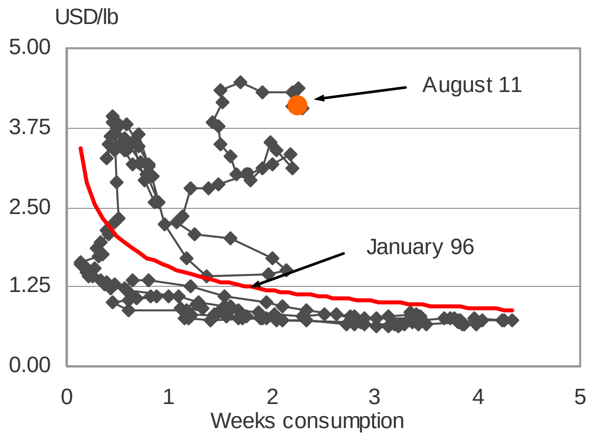
Sources: LME; Standard Bank Research

Monthly change to LME copper stocks vs. cash price



Sources: LME; Standard Bank Research

Month-end LME copper stocks vs. cash price



Sources: LME; Standard Bank Research

ports of sizeable withdrawals from bonded warehouses to accompany a net down-month for SHFE stocks, apparent demand is likely to show further improvements in August and September.

Chinese demand is moving in the right direction, but whether growth will reach our target of +6.5% by the end of the year is quite another matter. This forecast, along with our 2012 forecast of +8%, assumes the start of restocking late this year, spilling over into H1 next year. This looks increasingly in doubt now. However, we also need to bear in mind that downstream indicators continue to paint a far more positive picture, with production of power cables, for example, up 30% year-to-date and total semis production up 18%.

Clearly, fabricators' usage of cathode remains high overall, and so their inventories continue to be run down. They just appear to have neither the will nor financial capacity to embark on any significant restocking activity, yet.

Supply growth slowing again

TC/RCs are coming down after their peak following the Japanese smelter closures after the March 11 earthquake. A series of mine strikes have caused disruptions in the concentrate market that have also helped tighten TC/RCs. Utilisation rates at Chinese smelters may now consequently come down. Also on the supply side, it looks like yet another disappointing year for Chilean production, with mine output now likely to come in flat at best. African production is also falling behind our expectations, as Zambian growth has stuttered and slipped below government targets this year.

Annual Global Supply/Demand Balance for Copper, 2002-2012

Thousands of tonnes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mine production											
Total	**13,578**	**13,785**	**14,607**	**14,922**	**14,990**	**15,483**	**15,546**	**15,950**	**16,097**	**16,443**	**17,383**
Year-on-year % change	(0.4%)	1.5%	6.0%	2.2%	0.5%	3.3%	0.4%	2.6%	0.9%	2.1%	5.7%
Refined production											
Africa	447	454	508	513	563	627	680	770	922	1,020	1,200
North America	2,326	2,074	2,198	2,162	2,155	2,175	2,210	2,060	2,080	2,110	2,135
Latin America	3,564	3,608	3,566	3,549	3,553	3,595	3,535	3,600	3,660	3,725	3,818
Asia (ex. China)	3,358	3,489	3,541	3,831	4,200	4,330	4,340	4,030	4,100	4,160	4,210
China	1,613	1,836	2,199	2,600	3,047	3,497	3,779	4,252	4,800	5,184	5,547
Australasia	543	484	490	469	429	442	502	446	430	455	480
Europe	3,420	3,309	3,449	3,533	3,605	3,620	3,710	3,560	3,610	3,660	3,760
Total	**15,271**	**15,254**	**15,951**	**16,657**	**17,552**	**18,286**	**18,756**	**18,718**	**19,602**	**20,314**	**21,150**
Year-on-year % change	(2.4%)	(0.1%)	4.6%	4.4%	5.4%	4.2%	2.6%	(0.2%)	4.7%	3.6%	4.1%
Refined consumption											
North America	2,971	2,900	3,101	2,967	2,863	2,805	2,720	2,610	2,690	2,750	2,778
Latin America	432	494	541	552	554	568	580	560	580	610	640
Asia (ex. China)	4,196	4,216	4,564	4,522	4,680	4,900	4,860	4,500	4,950	5,198	5,405
China	2,774	3,097	3,371	3,540	3,820	4,525	4,930	5,670	6,294	6,703	7,239
Europe	4,651	4,754	5,031	4,814	5,208	5,155	5,050	4,545	4,795	4,891	4,964
Others	337	332	333	355	343	350	352	340	351	362	366
Total	**15,361**	**15,793**	**16,941**	**16,750**	**17,468**	**18,303**	**18,492**	**18,225**	**19,660**	**20,513**	**21,392**
Year-on-year % change	1.8%	2.8%	7.3%	(1.1%)	4.3%	4.8%	1.0%	(1.4%)	7.9%	4.3%	4.3%
Implied surplus (deficit)	**(90)**	**(539)**	**(990)**	**(93)**	**84**	**(17)**	**264**	**493**	**(58)**	**(199)**	**(242)**
Stocks analysis											
LME	856	431	49	92	191	199	341	502	378		
COMEX	362	255	44	6	31	14	31	90	60		
SHFE	75	121	32	58	31	26	15	95	132		
Producer	240	238	233	238	283	259	256	258	262		
Merchant	19	23	20	17	18	21	26	27	97		
Consumer	161	145	141	135	149	154	135	125	145		
Total	**1,712**	**1,212**	**519**	**546**	**703**	**673**	**804**	**1,297**	**1,239**	**1,040**	**798**
Stocks as weeks of consumption	5.8	4.0	1.6	1.7	2.1	1.9	2.3	3.7	3.3	2.6	1.9
LME cash prices											
Historical & base case ($/tonne)	**$1,558**	**$1,780**	**$2,866**	**$3,684**	**$6,730**	**$7,126**	**$6,969**	**$5,150**	**$7,539**	**$9,525**	**$10,000**
(cents/lb)	70.7c	80.7c	130.0c	167.1c	305.3c	323.2c	316.1c	233.6c	342.0c	432.0c	453.6c

Sources: ICSG; WBMS; LME; COMEX; SHFE; Standard CIB Research

Lead — China's fundamentals starting to look more constructive again

Clarity is starting to emerge about the scale of disruptions to the Chinese lead and lead-acid battery markets caused by the government's inspections this year. Affected battery makers are beginning to resume operations, while we are starting to see a significant drop-off in secondary lead production as recyclers have been hard hit too. The net effect of these trends is potentially bullish in the short term. Beyond this, the end result is more neutral in terms of the longer-term supply-demand balance, with the main benefit being to the environment as the clampdown has facilitated the consolidation and modernisation of the industry.

The LME lead cash price averaged $2,571/tonne in the eight months to August, which is just 0.5% below our forecast annual average of $2,585/tonne. However, it may now be a challenge to maintain prices over the remainder of the year at a level that keeps our annual target in sight.

Along with the exogenous factors driving the base metals in general, lead is likely to remain particularly sensitive to news flow from China, as there could be further shifts in sentiment as significant disruptions to either/both supply or demand in the coming months.

Surplus in H1…

The latest data from the ILZSG suggests that the global refined lead market was in a provisional surplus of 100,000 tonnes in the first half of the year, while the WBMS pegs the estimated oversupply during the same period at 14,100 tonne. We are still looking for a small net deficit of around 50,000 tonnes for the full year, and this is still achievable.

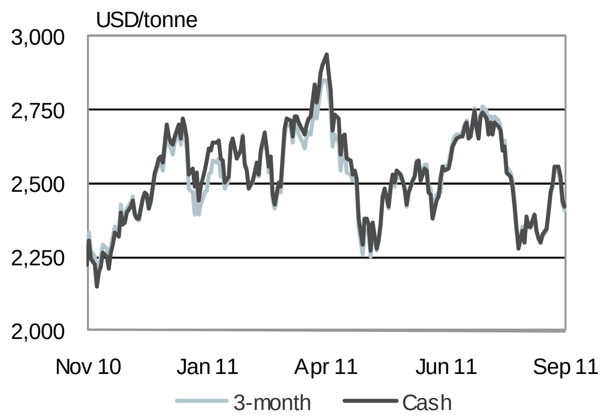
…but annual deficit target still doable

Chinese consumption was disrupted by battery plant closures enforced during the government's pollution clampdown, particularly in Q2. Together with the disruptions to the global auto industry supply chain following the March 11 earthquake in Japan, this is likely to have weighed on demand in the first half. A recovery in demand growth is expected in the second half, led by a wave of Chinese battery makers now restarting operations, so this could push the market balance back into deficit and in line with our original forecasts.

Chinese secondary supply hit hard…

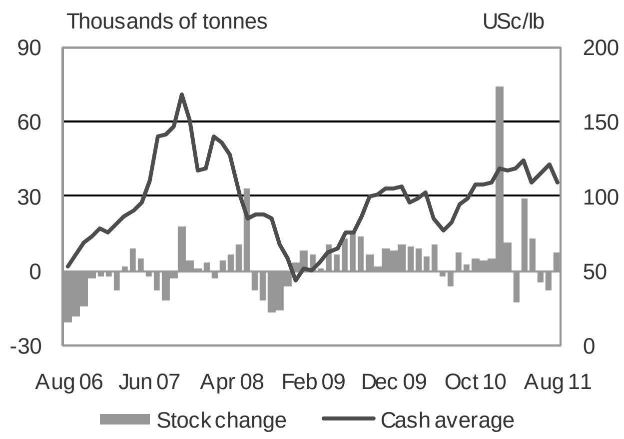
As ever, Chinese production is the wild card. It is usually stronger in the second half of the year than the first, so this seasonality threatens to counteract the effect of recovering demand from battery makers. However, the focus of the government's environmental clampdown has shifted to re-

LME cash and 3-month lead price



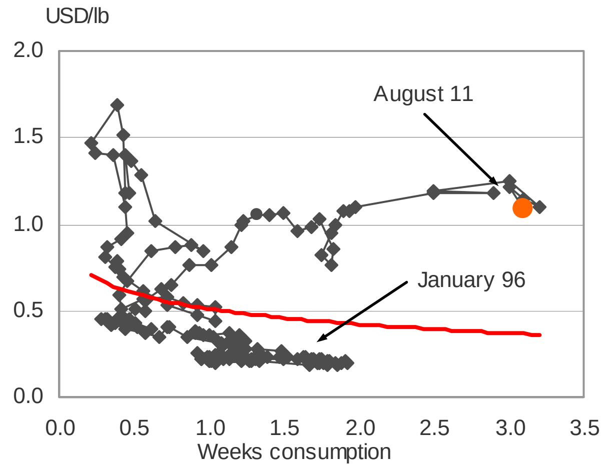
Sources: LME; Standard Bank Research

Monthly change to LME lead stocks vs. cash price



Sources: LME; Standard Bank Research

Month-end LME lead stocks vs. cash price



Sources: LME; Standard Bank Research

cyclers, and while CNIA data shows that secondary lead output has already been hit hard, there may be worse to come. Last year, secondary refined lead production in China grew at a double-digit pace, maintaining the strong growth path that has seen an expansion of around 20% pa for the last decade. However, in the seven months to July this year, growth had turned negative, contracting by 4.8% year-on-year (while output from primary sources was up 18% on the back of a 20% rise in domestic mine production and a 3.4% increase in concentrate imports). In August, Beijing announced a proposal to set minimum capacities for lead recyclers of 30,000 tpy for existing plants and 50,000 tpy for new facilities. But only about 100 of the 280 listed lead recyclers in China are bigger than 30,000 tpy. This means around two-thirds face closure if the proposal is approved, and given the government's much tougher stance on pollution this year we assume it will be.

…which will be a drag on overall supply growth

To put this in perspective, 30% of total Chinese production comes from recycling, which accounted for 1.37m tonnes in output last year. If two-thirds of this capacity is closed (albeit much only temporarily as upgrades or expansions are carried out to align plants and projects with the new policy), some 900,000 tpy could be affected. This is equivalent to the annual production of Germany, India and Korea combined – the third, fourth and fifth largest lead producing nations in the world. So, Beijing's proposed policy on recyclers forewarns that Chinese secondary production, is likely to contract further this year. Together with more general factors (power curbs and narrower margins on higher costs and lower prices), this is set to be a drag on overall Chinese output in the short to medium term. Alongside improving consumption, China's fundamentals are looking better.

Annual Global Supply/Demand Balance for Lead, 2002-2012

Thousands of tonnes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mine production											
Total	**2,831**	**3,120**	**3,138**	**3,437**	**3,525**	**3,626**	**3,749**	**3,851**	**4,134**	**4,460**	**4,680**
Year-on-year % change	(6.6%)	10.2%	0.6%	9.5%	2.6%	2.9%	3.4%	2.7%	7.3%	7.9%	4.9%
Refined production											
Africa	144	138	100	111	120	121	116	93	106	120	124
North America	1,848	1,854	1,745	1,775	1,806	1,802	1,827	1,720	1,780	1,760	1,770
Latin America	244	238	270	270	266	265	241	153	133	220	260
Asia (ex. China)	1,036	1,066	1,058	1,093	1,106	1,152	1,180	1,130	1,210	1,300	1,390
China	1,325	1,564	1,934	2,391	2,715	2,757	3,106	3,698	4,200	4,600	5,100
Australasia	311	315	281	277	253	252	270	259	234	262	271
Europe	1,762	1,589	1,569	1,702	1,661	1,779	1,812	1,652	1,675	1,700	1,740
Total	**6,670**	**6,764**	**6,957**	**7,619**	**7,927**	**8,128**	**8,552**	**8,705**	**9,338**	**9,962**	**10,655**
Year-on-year % change	0.7%	1.4%	2.9%	9.5%	4.0%	2.5%	5.2%	1.8%	7.3%	6.7%	7.0%
Refined consumption											
North America	1,861	1,823	1,816	1,891	1,923	1,777	1,848	1,720	1,770	1,830	1,850
Latin America	205	207	224	237	236	221	241	230	244	253	260
Asia (ex. China)	1,458	1,535	1,585	1,533	1,566	1,610	1,620	1,470	1,620	1,701	1,769
China	957	1,183	1,510	1,973	2,213	2,543	2,890	3,360	3,864	4,405	4,934
Europe	2,027	1,933	2,007	1,998	1,968	1,944	1,850	1,525	1,650	1,710	1,750
Others	134	153	153	142	145	140	142	140	142	144	145
Total	**6,642**	**6,834**	**7,295**	**7,774**	**8,051**	**8,235**	**8,591**	**8,445**	**9,290**	**10,043**	**10,708**
Year-on-year % change	2.6%	2.9%	6.7%	6.6%	3.6%	2.3%	4.3%	(1.7%)	10.0%	8.1%	6.6%
Implied surplus (deficit)	**34**	**(10)**	**(282)**	**(119)**	**(105)**	**(107)**	**(39)**	**260**	**49**	**(79)**	**(50)**
Stocks analysis											
LME	184	109	40	44	41	45	45	147	209		
Producer	142	138	127	145	137	97	114	106	129		
Consumer	156	159	132	118	130	138	146	135	111		
Merchant	1	1	1	2	2	2	1	1	1		
Total	**483**	**407**	**300**	**309**	**310**	**282**	**306**	**389**	**450**	**371**	**321**
Stocks as weeks of consumption	3.8	3.1	2.1	2.1	2.0	1.8	1.9	2.4	2.5	1.9	1.6
LME cash prices											
Historical & base case ($/tonne)	**$453**	**$516**	**$887**	**$976**	**$1,288**	**$2,595**	**$2,090**	**$1,661**	**$2,182**	**$2,585**	**$2,600**
(cents/lb)	20.5c	23.4c	40.2c	44.3c	58.4c	117.7c	94.8c	75.3c	99.0c	117.3c	117.9c

Sources: ILZSG; WBMS; LME; Standard CIB Research

Nickel — Still pricing in the surplus

In last month's report, the title of our nickel analysis was "the surplus has arrived." It has been our forecast for many months that the mid-year period will see a transition from deficit in the global nickel market during H1 2011 to surplus in H2. August was the first month this year that saw LME stocks post a net rise, while the latest INSG data suggests that supply provisionally overtook demand as early as May, so it does appear that the surplus has indeed arrived on cue.

We may see pockets of tightness as we go forward caused by supply disruptions or bursts of price-related consumer restocking, but on the whole, the nickel market now looks comfortably supplied and should remain that way during next year and through 2013 too. In fact, assuming the much-delayed new generation of HPAL projects finally start to trickle on stream over the next few years, the nickel market looks increasingly well supplied the further forward we look. This forecast allows for slower ramp-ups for the HPAL projects than their operators are targeting and a fairly generous demand forecast of 6-8% pa.

Nickel prices have been moving within a downward trending channel since February, reaching new lows for the year during the early-August sell-off and again as the rebounds failed later in the month. Clearly the market is still pricing in the return an extended period of surplus, especially as the deteriorating global economic outlook is creating the perception that previous demand forecasts may turn out to be too optimistic.

The average price for the first eight months of the year was $24,925/tonne, just under our forecast of $25,250/tonne. It is likely to take QE3, another major supply disruption or an improvement in the macro backdrop to give prices sufficient lift over the remaining months of the year to hit our average. So, our forecast is now back on negative watch.

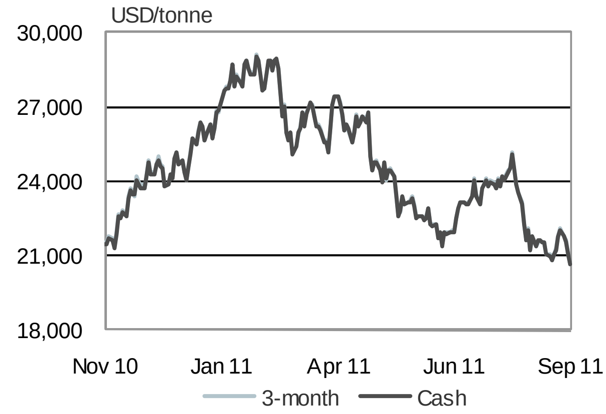
Chinese nickel demand has been very strong…

Chinese consumption during the first half of the year remained consistently high at 52,000-58,000 tpm, according to INSG estimates. However, since June, strong imports and domestic production mean our calculations for apparent consumption show another strong month in July (the highest for two years), while anecdotal evidence in August pointing to a flurry of arbitrage-related nickel buying activity from China suggests that last month's apparent consumption could have been even higher.

…but stainless mills now cutting back

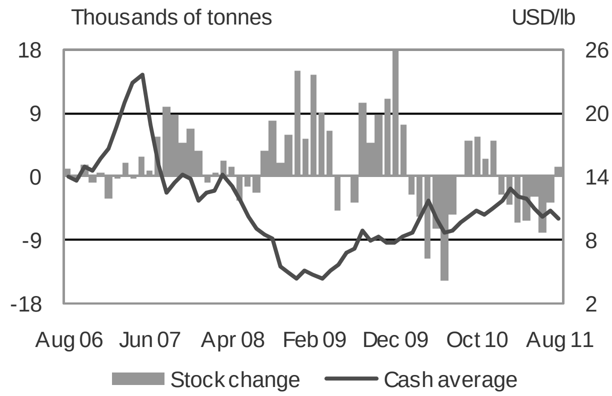
That said, we are wary of mixed signals from the stainless market in China. On the one hand, mills seem to be keen buyers of nickel units at the moment, with primary nickel benefitting from a tighter NPI market due to a number of shutdowns because of power disruptions and low nickel prices. On the other hand,

LME cash and 3-month nickel price



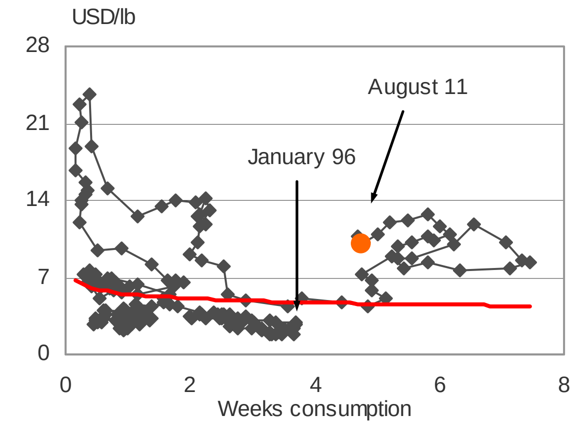
Sources: LME; Standard Bank Research

Monthly change to LME nickel stocks vs. cash price



Sources: LME; Standard Bank Research

Month-end LME nickel stocks vs. cash price



Sources: LME; Standard Bank Research

however, a rise in stainless steel stocks in the local Wuxi market during August, following down-months in June and July, is a concern. It supports reports of weaker-than-expected end-user demand for stainless and has prompted a round of extended maintenance shut-downs in September. While this will help to firm up the fundamental picture in the stainless steel market, it raises concerns about nickel consumption in the short term and the sustainability of the recent pick-up in buying activity.

Outside China, demand outlook has soured…

While Chinese nickel demand appears to have stayed very robust so far (up 26% year-on-year by our estimates), INSG data shows that demand has tailed off in other regions, dragging the global monthly average down to 123,100 tpm in Q2, from 131,300 tpm in Q1. Normally, Q3 is a seasonally weaker period, so we should be wary of a further slowdown, even allowing for what appears to have been another largely strong quarter for Chinese demand. As for Q4, the recent financial turmoil and run of worrying macroeconomic indicators have hit sentiment in the stainless market. Stainless consumers, end-users and stockists have become risk-averse. Although some post-summer return in stainless orders is still likely in the US and Europe, where inventories have been carefully managed, overall the seasonal pick-up in regional markets outside China might not be as strong as usual.

…at the same time that supply is surging

While demand growth has slowed and is looking increasingly fragile, nickel supply is doing the opposite. INSG data showed a strong first half, as ramp-ups of new and restarted capacity started to be felt and offset a string of disruptions. Refined production was up 8.2% year-on-year in the first half and mine production jumped 20.8%.

Annual Global Supply/Demand Balance for Nickel, 2002-2012

Thousands of tonnes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mine production											
Total	**1,248**	**1,264**	**1,327**	**1,387**	**1,503**	**1,595**	**1,540**	**1,329**	**1,454**	**1,598**	**1,700**
Year-on-year % change	1.9%	1.3%	5.0%	4.5%	8.4%	6.1%	(3.4%)	(13.7%)	9.4%	9.9%	6.4%
Refined production											
Africa	55	54	57	56	55	50	42	36	40	44	50
North America	145	124	152	140	147	154	168	117	112	142	168
Latin America	146	157	161	168	171	168	137	122	127	160	194
Asia (ex. China)	167	174	177	173	167	180	178	179	204	212	224
China	54	65	73	98	137	219	200	254	380	420	450
Australasia	181	167	166	178	163	156	142	167	158	164	190
Europe	434	451	468	463	512	514	510	454	455	470	482
Total	**1,181**	**1,191**	**1,253**	**1,276**	**1,352**	**1,441**	**1,377**	**1,329**	**1,476**	**1,612**	**1,758**
Year-on-year % change	2.3%	0.9%	5.2%	1.8%	6.0%	6.6%	(4.4%)	(3.5%)	11.1%	9.2%	9.1%
Refined consumption											
North America	133	130	139	148	155	145	137	126	144	151	154
Latin America	27	29	26	26	25	26	28	22	27	28	30
Asia (ex. China)	408	422	430	402	429	380	348	299	354	380	391
China	94	125	150	190	245	330	360	412	585	644	741
Europe	476	461	454	447	492	424	400	316	362	376	388
Others	38	48	46	34	46	41	44	39	40	42	44
Total	**1,176**	**1,215**	**1,245**	**1,247**	**1,392**	**1,346**	**1,317**	**1,214**	**1,512**	**1,621**	**1,748**
Year-on-year % change	6.5%	3.3%	2.5%	0.2%	11.6%	(3.3%)	(2.2%)	(7.8%)	24.5%	7.2%	7.8%
Implied surplus (deficit)	**(51)**	**37**	**8**	**29**	**(40)**	**95**	**60**	**115**	**(36)**	**(8)**	**12**
Stocks analysis											
LME	22	24	21	36	7	48	79	158	137		
Producer	69	73	72	71	75	70	71	89	79		
Consumer and merchant	18	22	5	4	6	9	6	4	14		
Total	**109**	**119**	**98**	**111**	**88**	**127**	**156**	**251**	**230**	**222**	**234**
Stocks as weeks of consumption	4.8	5.1	4.1	4.6	3.3	4.9	6.2	10.8	7.9	7.1	7.0
LME cash prices											
Historical & base case ($/tonne)	**$6,772**	**$9,640**	**$13,852**	**$14,735**	**$24,287**	**$37,181**	**$21,074**	**$14,272**	**$21,809**	**$25,300**	**$23,000**
($/lb)	$3.07	$4.37	$6.28	$6.68	$11.02	$16.87	$9.56	$6.47	$9.89	$11.48	$10.43

Sources: INSG; WBMS; LME; Standard CIB Research

Zinc — Taking the pulse of the galvanized steel market

One of the key points to jump out at us from the latest set of ILZSG supply-demand data was a record high month for mine production in June. It is bearish for zinc's medium term outlook that mine supply is so strong given an already oversupplied refined market, especially at a time when the global economy has entered a soft patch and is even facing recession. It puts the focus on whether demand for refined zinc is strong enough to absorb the relentless flow of material entering the market. So, this month we take the pulse of zinc's main consuming sector, galvanized steel.

The bottom line is that zinc has been in surplus consistently since 2006. With supply still surging and the demand outlook souring, we cannot expect zinc to break this run now.

At least the proliferation of warehouse financing deals has provided a home for the surplus metal. And with key interest rates set to remain low for at least a few more years, that surplus will continue to be effectively ring-fenced, supporting prices and particularly premiums.

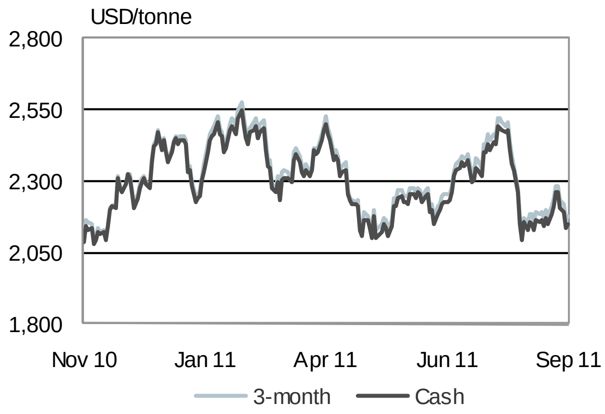
Further forward, there is still the risk of zinc supply and demand moving closer to balance, as projected tightness in the concentrate market (following the closure of mines like Brunswick and Century) will spread into the refined metal market. However, it will be interesting to see if the start of this tightness coincides with the end of favourable conditions for warehouse rent deals. Potentially, the large overhang of metal currently tied up will seep out to counteract any structural supply/demand deficit that does emerge. We may have a long wait for the next zinc bull market.

Weaker prices in August have taken the year-to-date cash average down to $2,318/tonne, and slightly out of sight of our annual forecast of $2,390/tonne. However, zinc has range-traded sideways, largely between $2,550/tonne and $2,100/tonne, since last November. Our base case forecast still assumes that this range holds for the remainder of the year. However, if the global economic outlook continues to deteriorate, the bottom of the range will look increasingly vulnerable, with a bear case scenario envisaging a breach which would open the door to sub-$2,000/tonne levels again.

US galvanised steel market, not too bad, yet

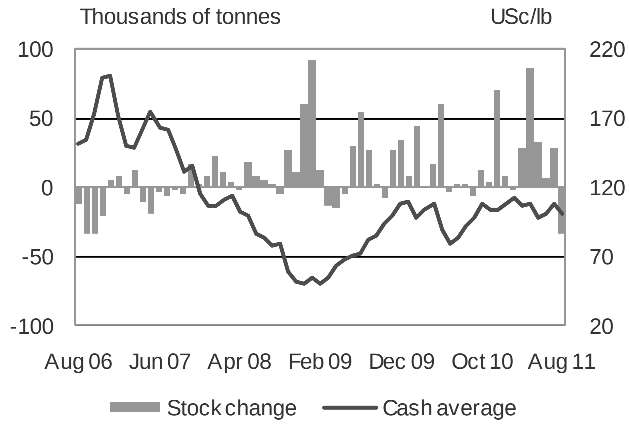
The rising perception that the US could slip into another recession – and before some sectors of the economy, particularly building and construction, have been able to fully recover from the previous downturn – is weighing on the North American galvanised steel market. Service centre inventories increased nearly 9% month on month to about 2.6 months of supply in July on a nearly 15% decline in shipments. Although a cause for concern, an inventory

LME cash and 3-month zinc price



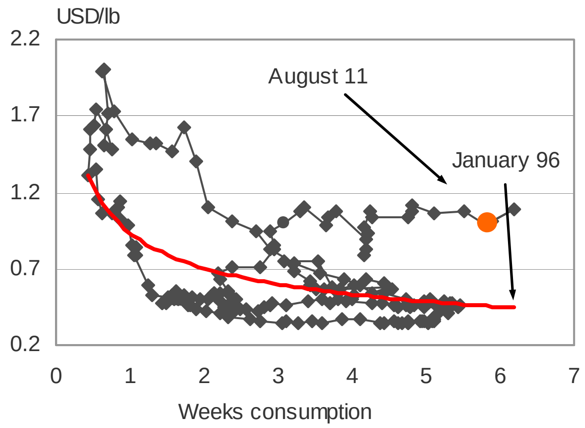
Sources: LME; Standard Bank Research

Monthly change to LME zinc stocks vs. cash price



Sources: LME; Standard Bank Research

Month-end LME zinc stocks vs. cash price



Sources: LME; Standard Bank Research

spike is not all that uncommon during the traditionally slow summer season, though it was more pronounced than usual this year. Underlying demand, however, is not that much softer at the moment and a post-summer pick-up is still expected, albeit perhaps more muted than previously expected.

Nevertheless, it is believed that much of the July inventory build-up at service centres has already been worked down, so we should not be viewing the US galvanized steel sector too bearishly at the moment. This potentially bodes well for zinc usage, especially with ThyssenKrupp, Severstal and possibly RG Steel bringing on new HDG capacity over the remainder of the year.

Concerns beyond the seasonal pick-up

In Europe, it is a similar story, with HDG inventories largely getting worked through during the summer and steel buyers returning to order for their post-summer requirements from this month. This should push out lead times from current low levels. Beyond a seasonal pick-up, however, the outlook quickly becomes grim and order books sparse as the wider macro environment begins to plague the market.

China props up Asia

In Asia, recent Japanese data has been less than favourable. The post-quake recovery in the domestic demand is slipping, which combines with fragile export markets to create a worrying picture. China on the other hand continues to prop up the Asian HDG market. Demand for both domestic and exported material has been consistent and this does not look likely to change for the remainder of the year. China has also achieved record output volumes for HDG, which look destined for the export market.

Annual Global Supply/Demand Balance for Zinc, 2002-2012

Thousands of tonnes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mine production											
Total	**8,904**	**9,520**	**9,709**	**10,146**	**10,447**	**11,119**	**11,653**	**11,343**	**11,350**	**12,400**	**13,000**
Year-on-year % change	(0.3%)	6.9%	2.0%	4.5%	3.0%	6.4%	4.8%	(2.7%)	0.1%	9.3%	4.8%
Refined production											
Africa	147	197	260	273	257	279	262	265	269	272	276
North America	1,438	1,431	1,496	1,401	1,377	1,394	1,404	1,235	1,360	1,380	1,400
Latin America	465	499	496	482	486	545	565	460	535	580	600
Asia (ex. China)	2,034	2,136	2,187	2,280	2,412	2,433	2,676	2,433	2,560	2,690	2,780
China	2,155	2,319	2,720	2,776	3,163	3,743	3,913	4,357	5,164	5,835	6,536
Australasia	567	553	474	457	466	502	499	519	498	510	520
Europe	2,904	2,744	2,720	2,563	2,508	2,516	2,476	2,044	2,390	2,400	2,440
Total	**9,710**	**9,879**	**10,353**	**10,232**	**10,669**	**11,412**	**11,795**	**11,313**	**12,776**	**13,667**	**14,552**
Year-on-year % change	5.3%	1.7%	4.8%	(1.2%)	4.3%	7.0%	3.4%	(4.1%)	12.9%	7.0%	6.5%
Refined consumption											
North America	1,634	1,573	1,680	1,496	1,540	1,520	1,478	1,240	1,360	1,410	1,460
Latin America	389	378	443	414	436	457	461	365	452	474	504
Asia (ex. China)	2,359	2,505	2,551	2,525	2,578	2,533	2,510	2,224	2,600	2,700	2,800
China	1,750	2,155	2,690	3,041	3,225	3,563	4,144	4,730	5,260	5,918	6,628
Europe	2,754	2,780	2,833	2,684	2,786	2,850	2,620	1,939	2,420	2,500	2,550
Others	470	440	457	452	475	480	472	400	460	480	505
Total	**9,356**	**9,831**	**10,654**	**10,612**	**11,040**	**11,403**	**11,685**	**10,898**	**12,552**	**13,482**	**14,447**
Year-on-year % change	4.9%	5.1%	8.4%	(0.4%)	4.0%	3.3%	2.5%	(6.7%)	15.2%	7.4%	7.2%
Implied surplus (deficit)	**357**	**55**	**(269)**	**(351)**	**(343)**	**19**	**110**	**415**	**224**	**186**	**105**
Stocks analysis											
LME	651	740	629	394	91	89	254	489	701		
SHFE	0	0	0	0	0	54	63	172	311		
Producer	315	293	280	308	332	347	366	317	318		
Consumer	115	114	116	111	114	101	128	105	97		
Merchant	14	12	13	15	12	11	17	13	11		
Total	**1,095**	**1,159**	**1,038**	**828**	**549**	**602**	**828**	**1,096**	**1,438**	**1,624**	**1,729**
Stocks as weeks of consumption	6.1	6.1	5.1	4.1	2.6	2.7	3.7	5.2	6.0	6.3	6.2
LME cash prices											
Historical & base case ($/tonne)	**$779**	**$828**	**$1,048**	**$1,382**	**$3,273**	**$3,250**	**$1,873**	**$1,612**	**$2,159**	**$2,390**	**$2,500**
(cents/lb)	35.3c	37.6c	47.5c	62.7c	148.5c	147.4c	85.0c	73.1c	97.9c	108.4c	113.4c

Sources: ILZSG; WBMS; LME; SHFE; Standard CIB Research

Tin — Price fall has brought out the bargain hunters

Despite the severity of the sell-off in early August and the relatively lacklustre price recovery, we maintain our view that tin is one of the few base metal markets in a structural deficit. Indeed, with surging LME warrant cancellations and rising premiums recently, the fundamentals still look robust overall despite concerns about the macroeconomic outlook. Destocking by consumers and producers earlier in the year, as prices surged, seems to have switched to restocking at the lower price levels.

The August sell-off brought the average price for the first eight months down to $28,531/tonne, from $29,113/tonne in the first seven months, so it is moving away from our annual forecast of $29,625/tonne. With LME stocks now coming under considerable pressure, Chinese imports expected to rise, supply disruptions never far away and scope for short covering after the big price fall, we would not be surprised to see prices rebound.

However, achieving our forecast by the year end is starting to feel like a lot to ask. Aside from tin's own fundamentals, it depends on a broad return of risk appetite across the base metals and financial markets more generally, and this is looking increasingly doubtful now.

Signs of strong pent-up demand…

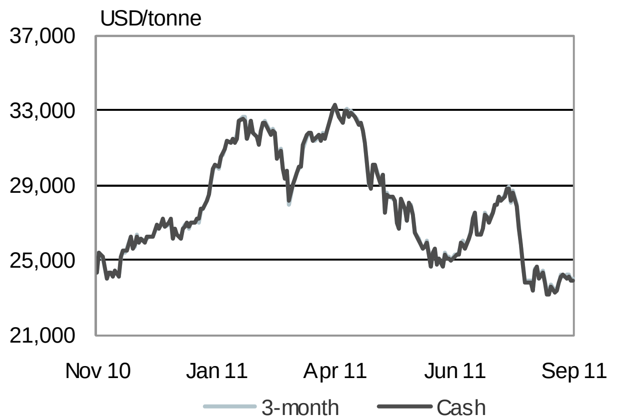
LME cancelled warrants are back up at a level equivalent to more than 10% of total stocks and were last at a five-year high. As a result, Asian warehouses have started to see significant daily withdrawals. This activity suggests that there is plenty of pent-up demand among tin consumers who have been keen dip-buyers following the early-August sell-off. With prices having corrected more than $10,000/tonne or 30% from their April highs, and with plenty of concerns still in the background about potential supply disruptions, who can blame them?

We also keep our eye on the South Korean Public Procurement Service's tenders for tin, as the premiums it pays provides a useful indicator of the state of the physical market in Asia. The latest tender was won at a premium of $800/tonne, well above the $577/tonne paid in August, albeit for a smaller tonnage of 100 tonnes versus 300 tonnes previously. Nevertheless, we take this as evidence that the market has tightened lately on improved demand, triggered by the drop in prices.

…but mixed signals cloud short-term outlook

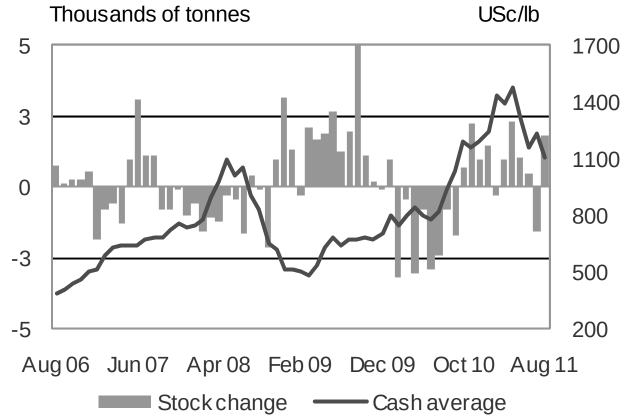
In terms of the solder market, Cookson was upbeat in its outlook for the second half of the year that accompanied its

LME cash and 3-month tin price



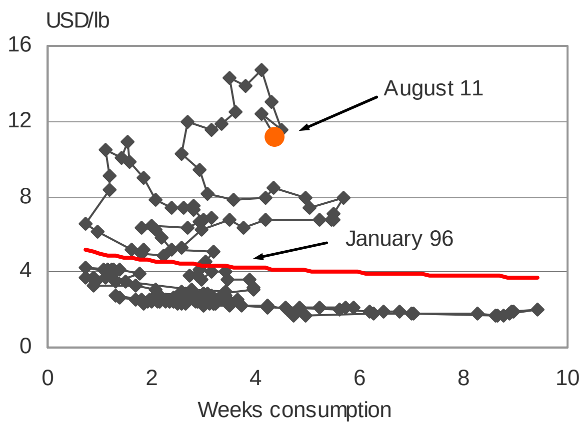
Sources: LME; Standard Bank Research

Monthly change to LME tin stocks vs. cash price



Sources: LME; Standard Bank Research

Month-end LME tin stocks vs. cash price



Sources: LME; Standard Bank Research

H1 results, but we have to question how resilient the electronic sector's appetite for solder will be in the face of mounting concerns about the broader economic outlook, which is dragging down business and consumer sentiment and spending.

Furthermore, indications from the tinplate sector are not too encouraging either, with market leaders – ArcelorMittal in Europe, Baosteel in Asia and MMK in Russia – cutting output in an attempt to keep prices elevated (and tinmill operations profitable in the face of higher raw material costs and resistance among can makers to accept price increases).

Chinese destocking over, demand recovering

Chinese producer destocking has been a drag on tin prices this year and underpinned the extended rise in LME stocks for most of the year-to-date. According to ITRI, official Chinese export data significantly understates the true level of exported tin, and suggests as much as 16,000 tonnes may have left China between October 2010 and May this year, even though customs show official exports of just 973 tonnes from January to July. A consensus has emerged however that this destocking is now over, while a record domestic price premium over LME prices in August also lends support to this view.

Imports disappointed in July, almost halving from June's nine-month high. However, we expect much stronger Chinese import data for August and September, as evidenced by the wider domestic price differential, firmer Asian premiums, a pick-up in demand for LME warrants and anecdotal evidence. Our calculations show that Chinese apparent demand growth for refined tin was flat year-on-year in the first seven months, so a pick-up since then should put it back on course to meet our target for the full year of around 4%.

Annual Global Supply/Demand Balance for Tin, 2002-2012

Thousands of tonnes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mine production											
Total	**248**	**255**	**286**	**342**	**335**	**350**	**318**	**305**	**308**	**316**	**326**
Year-on-year % change	0.2%	2.9%	11.9%	19.7%	(2.0%)	4.5%	(9.1%)	(4.1%)	0.8%	2.8%	3.2%
Refined production											
Latin America	54	59	66	63	65	58	61	63	67	73	81
Asia (ex. China)	114	104	112	153	142	131	134	132	124	131	137
China	84	98	117	122	132	149	129	134	145	150	157
Europe	17	14	15	11	11	11	12	9	11	12	13
Others	2	2	3	3	3	2	2	1	1	2	2
Total	**269**	**278**	**313**	**352**	**353**	**351**	**338**	**339**	**348**	**367**	**390**
Year-on-year % change	0.1%	3.1%	12.8%	12.6%	0.2%	(0.6%)	(3.7%)	0.3%	2.5%	5.6%	6.1%
Refined consumption											
North America	51	50	59	48	54	40	33	31	33	32	33
Latin America	12	14	16	10	11	9	10	10	11	13	14
Asia (ex. China)	86	90	97	102	109	100	98	85	96	99	102
China	53	72	93	116	115	134	128	136	156	163	172
Europe	69	72	69	65	71	69	66	51	61	63	66
Others	6	5	6	6	5	6	5	4	5	6	7
Total	**277**	**303**	**341**	**347**	**365**	**358**	**340**	**317**	**362**	**374**	**394**
Year-on-year % change	(2.1%)	9.3%	12.4%	1.8%	5.2%	(1.9%)	(5.1%)	(6.8%)	14.2%	3.3%	5.3%
Implied surplus (deficit)	**1**	**(16)**	**(19)**	**13**	**(3)**	**(2)**	**2**	**22**	**(14)**	**(7)**	**(5)**
Stocks analysis											
LME	25.6	14.5	8.1	16.7	13.0	12.1	7.8	26.8	16.4		
USA	7.3	6.5	6.1	5.4	5.7	9.1	7.9	7.5	7.0		
Indonesia	6.7	6.7	3.8	5.3	5.2	4.6	7.2	2.8	3.0		
Brazil	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5		
Others	5.5	6.7	6.4	7.3	6.1	6.0	5.9	5.4	4.0		
Total	**48.7**	**38.0**	**28.0**	**38.3**	**33.6**	**35.4**	**32.4**	**46.1**	**33.9**	**26.9**	**22.4**
Stocks as weeks of consumption	9.1	6.5	4.3	5.7	4.8	5.1	5.0	7.6	4.9	3.7	3.0
LME cash prices											
Historical & base case ($/tonne)	**$4,062**	**$4,896**	**$8,513**	**$7,370**	**$8,763**	**$14,536**	**$18,539**	**$13,402**	**$20,447**	**$29,625**	**$30,400**
(cents/lb)	184.2c	222.1c	386.1c	334.3c	397.5c	659.3c	840.9c	607.9c	927.5c	1,343.8c	1,378.9c

Sources: WBMS; LME; Standard CIB Research

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