

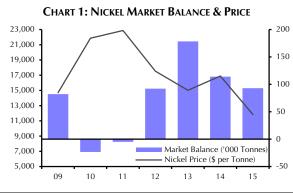
High stocks to weigh on the nickel price, for now

- Demand for nickel is expected to pick up this year ...
- ... and mine supply and refined nickel production could fall
- But the overhang of stocks means that prices may only revive in 2017

Having underperformed in the first quarter, the price of nickel surged in April, only to fall back more recently. The rally did, however, raise the question of whether the four-year long downturn in nickel prices was finally coming to an end. While we expect the price of nickel to end the year higher, the recent spike appeared premature given still-high stocks and a lack of clarity on the demand-supply fundamentals. In this *Metals & Mining Watch*, we will make the case for a modest rebound in prices by end-2016 and for a stronger rally in 2017.

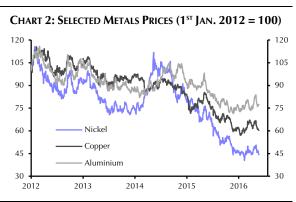
Some recent history

The price of nickel fell by 30% last year and, at end-2015, had fallen by nearly 65% from early 2012. With four years of consecutive market surpluses, the fall in price was perhaps not too surprising. (See Chart 1.)



Sources – INSG, Thomson Reuters, Capital Economics

However, many metals markets have been in surplus since 2012, including copper and aluminium, but their prices have not fallen to the same extent. (See Chart 2.)



Sources – Thomson Reuters, Capital Economics

Undeniably, a factor weighing on nickel prices in the last couple of years has been the scale of exchange stocks. Even though LME stocks have been falling recently, they remain high at more than 12 weeks of consumption. And, in any case, the dip in LME stocks has been more than offset by steady increases in SHFE stocks. (See Chart 3.)



Sources - Thomson Reuters, Capital Economics

Instead, we think the explanation for the relative weakness in nickel prices lies on the demand side. About 90% of refined nickel is used to make alloys, of which over two-thirds is accounted for by stainless steel. As such, the



outlook for stainless steel demand has a powerful influence on the nickel market. (Nickel demand from the non-stainless steel sector is more steady and predictable). See our *Industrial Metals Focus*, "Analysing the drivers of the nickel price", published on 26th March 2015).

The stainless steel sector has been in a long period of destocking, which has weighed on nickel demand. According to recently released data from the International Stainless Steel Forum, global stainless steel output fell by 0.3% in 2015, with a 0.6% dip in China. China's national data show a larger 6.7% y/y contraction.

There is a certain circularity, however, with stainless steel producers somewhat hostage to the price of nickel as well. This is evident from the close correlation in prices. (See Chart 4.) That said, the price of nickel has even underperformed that of stainless steel for much of the last year.



Sources - Thomson Reuters, Capital Economics

Demand to pick up this year

There are widely differing views on recent demand trends in nickel, notably in the estimates of China's demand. By way of example, the International Nickel Study Group (INSG) report a negligible 0.8% rise in global nickel demand in 2015, while the World Bulletin of Metal Statistics show a jump of over 11%. The wild annual divergence appears to be mostly down to different ways of accounting for stocks. Indeed, **averaging the data for the last two years from both sources paints a broadly similar picture of slow growth in demand of about 3% a year**. This compares with annual growth of around 9% in 2010-13.

However, we expect demand to revive this year, in part because of a relative lack of secondary nickel supply (as low prices have discouraged recycling). The outlook for the wider steel sector is also positive with the front-loading of state infrastructure spending in China and some firming of the property sector there. But we expect the stainless steel sector to benefit more, particularly as China's stainless steel producers are coming to the end of the destocking phase. Output of the higher-value nickel-based steel had already held up rather better than total steel production. (See Chart 5.)



Source - World Steel Association, Thomson Reuters

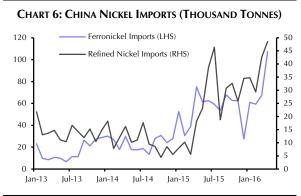
Nickel supply should fall

The nickel mine and refinery sectors have been struggling for some time. Indeed, there is a consensus among industry bodies that more than two-thirds of refined nickel producers are loss making at current prices. However, **supply cuts have been slow to materialise**. We think this reflects a number of factors including falls in producing countries' currencies (Russia, Brazil) and lower oil prices (cutting costs). Indeed, China's producers, in particular, have benefitted from lower power costs. Also, we think some producers were just hanging on in the hope that other high-cost producers would exit the market.

In particular, there was a perceived wisdom that the combination of low prices and difficulty in accessing nickel ore (after Indonesia's export ban) would lead to lower nickel pig iron (NPI, a



low-quality refined nickel) in China. Certainly NPI production has fallen, but again estimates of the scale of the decline vary, with some suggesting that output fell by just 1% in 2015. We suspect the fall in output was larger given that imports of refined nickel and ferronickel (a substitute for NPI in stainless steel mills) have soared in the last 12 months or so. (See Chart 6.)



Source – Bloomberg, Thomson Reuters

We expect China's NPI production to fall again this year, in part owing to lower ore exports from the Philippines. (Mine supply from the Philippines is being negatively affected by adverse weather as well as tighter regulatory procedures.) Moreover, planned and unplanned plant closures, notably in Australia and Russia, will also weigh on global output. These will more than offset higher Indonesian production, which is primarily NPI or ferronickel from Chinese-owned smelters.

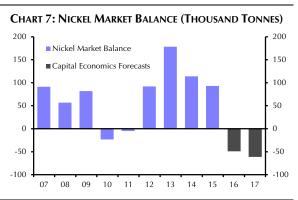
Turning to mine supply, signs of cutbacks are more evident. Mined nickel output is estimated to have fallen by around 3% last year. A large part of the contraction can be accounted for by Indonesia, as that country's miners faced a ban on ore exports. But output also fell in Australia, Russia and Botswana. Ultimately lower ore supply will act as a constraint on refined output.

Implications for prices

Having risen by 25% between its February low of \$7,562 per tonne and recent high of \$9,478 on 3rd May, **the price of nickel has fallen back again and stands at just \$8,338 today**. Reports of higher stainless steel output in the first quarter –

preliminary data suggest China's output rose by 6% y/y – and a resurgence in retail investors' optimism on the outlook for commodity prices prompted the recent price surge. (Bearing in mind that the nickel price has a history of swinging price movements.) However, **the rally appeared premature given the sheer scale of stocks**. (See Chart 3 again.) Of course, prices can rise *in anticipation* of a supply shortfall, but given the time it will take to draw down stocks, a pullback in prices was always a high risk.

That said, our current demand and supply forecasts suggest that the market will be in deficit this year, with the shortfall increasing in 2017. (See Chart 7.)



Sources - INSG, WBMS, Capital Economics

As such, we expect some renewed upward pressure on prices to emerge in the second half of this year, with a more significant rise in 2017, as stocks become less onerous. Our end-2016 and end-2017 price forecasts are \$9,000 per tonne and \$11,000 respectively, up by 8% and 22% from today. What's more, given the propensity for exaggerated movements, the end-2017 price may yet be much higher.

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Forecast Summary

| End-Period | 2015 | 2016 | | 2016 | | | | 2017 | | | |
|---------------------------------------|--------|--------|----------------------|-----------|--------|--------|--------|--------|--------|--------|--|
| | Actual | | Latest | Forecasts | | | | | | | |
| | Q4 | Q1 | 25 th May | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | |
| Industrial Metals & Ores (US\$ per | tonne) | | | | | | | | | | |
| Alumina | 210 | 258 | 270 | 260 | 265 | 275 | 280 | 290 | 300 | 300 | |
| Aluminium | 1,500 | 1,511 | 1,539 | 1,600 | 1,650 | 1,700 | 1,725 | 1,750 | 1,775 | 1,800 | |
| Cobalt | 23,950 | 21,952 | 23,300 | 22,500 | 23,000 | 24,000 | 25,000 | 25,500 | 26,000 | 26,500 | |
| Copper | 4,706 | 4,881 | 4,636 | 5,000 | 5,250 | 5,500 | 5,600 | 5,750 | 5,850 | 6,000 | |
| Iron Ore | 43 | 53 | 50 | 52 | 48 | 45 | 47 | 50 | 52 | 55 | |
| Lead | 1,797 | 1,697 | 1,646 | 1,700 | 1,750 | 1,800 | 1,850 | 1,900 | 1,950 | 2,000 | |
| Molybdenum | 11,625 | 11,742 | 14,826 | 14,000 | 14,500 | 15,000 | 15,500 | 16,000 | 16,500 | 17,000 | |
| Nickel | 8,780 | 8,449 | 8,338 | 8,500 | 8,750 | 9,000 | 9,500 | 10,000 | 10,500 | 11,000 | |
| Tin | 14,591 | 16,729 | 15,494 | 17,000 | 17,250 | 17,500 | 17,800 | 18,000 | 18,500 | 19,000 | |
| US Steel (HRC) | 391 | 443 | 607 | 600 | 575 | 550 | 550 | 525 | 525 | 500 | |
| Zinc | 1,593 | 1,808 | 1,821 | 1,800 | 1,900 | 2,000 | 2,050 | 2,100 | 2,150 | 2,200 | |
| | | | | | | | | | | | |
| Precious Metals (US\$ per troy ounce) | | | | | | | | | | | |
| Gold | 1,114 | 1,237 | 1,220 | 1,300 | 1,325 | 1,350 | 1,360 | 1,375 | 1,390 | 1,400 | |
| Silver | 13.83 | 15.42 | 16.31 | 17.50 | 18.50 | 19.50 | 20.00 | 20.50 | 20.75 | 21.00 | |