BNP PARIBAS
Energy Commodities Export Project

METAL MARKETS 2005: THE ROAD AHEAD

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Price Forecasts

US$/tonne	2003	2004*	2005*	H1 '05*	H2 '05*	H1 '06*
Aluminium	1434	1710	1775	1850	1700	1650
% Change	6.3%	19.2%	3.8%	11.1%	-3.1%	-10.8%
Copper	1777	2850	2600	2750	2450	2250
% Change	14.1%	60.4%	-8.8%	-0.4%	-16.7%	-18.2%
Nickel	9640	13830	12000	13000	11000	10000
% Change	42.4%	43.5%	-13.2%	-4.6%	-21.7%	-23.1%
Tin	4896	8600	8700	9000	8400	8000
% Change	20.5%	75.7%	1.2%	11.6%	-8.0%	-11.1%
Lead	517	880	800	850	750	725
% Change	14.1%	70.2%	-9.1%	2.4%	-19.4%	-14.7%
Zinc	830	1055	1100	1150	1050	1050
% Change	6.5%	27.1%	4.3%	9.5%	-0.9%	-8.7%
Gold, oz	363	405	410	425	395	375
% Change	17.1%	11.6%	1.2%	6.0%	-3.2%	-11.8%
Silver, oz	4.91	6.65	6.00	6.75	5.25	5.00
% Change	6.8%	35.4%	-9.8%	4.4%	-23.2%	-25.9%

*Footnotes: * Forecast*
Figures are stated in US$
Source: BNP Paribas

London Desk:
Peter Stoner tel. +44 207 595 8935
peter.stoner@bnpparibas.com

Helen Lowe tel +44 207 595 8935
helen.lowe@bnpparibas.com

Russell Plackett tel + 44 207 595 8935
russell.plackett@bnpparibas.com

James Marks tel +44 207 595 8935
james.marks@bnpparibas.com

Piers Duggan tel +44 207 595 8935
piers.duggan@bnpparibas.com

New York Desk:
Craig Tuckman +1 212 841 3553
craig.tuckman@bnpparibas.com

Singapore Desk:
Wei Ming Chen +65 6210 1230
weiming.chen@bnpparibas.com

Tokyo Desk:
Takashi Saka + 813 5290 1274
takashi.saka@bnpparibas.com

Base Metals:

During 2004, the individual base metals experienced a least one (and often more) sharp correction in prices, only then to claw back the bulk of the losses. The result is that most prices, approaching the end of the year, are close to the bull market peaks, and in some cases, are setting new highs.

Against a background of tight physical markets for the base metals, it can be argued that the price performance in 2005 will be similar to that in 2004. The markets are likely to be characterised by extreme volatility, and period average prices will remain high by historical standards.

Economics: Goldilocks Redux......

- **Global recovery slower in 2005, but still solid**

The WTI price has come off by USD10/bbl since late October, which should support confidence and spending. Next year we forecast the price to slip to the mid-30s. While leading indicators have softened, higher stock and non-oil commodity prices attest to continuing robust conditions globally. Reflecting its role as the ‘weak man of the global economy’, Europe has withstood the shock least well. Core inflation is rising in the US, edging higher in Japan, and is stable in the eurozone. Exceptionally easy global monetary policy is no longer justified and overall conditions will tighten in 2005, with the US in the lead.

- **US forecast substantially unchanged (+3.5% in 2005)**

Economic growth will decelerate in 2005 to 3.5% from 4.4% in 2004. The diminishing influence from so much positive fiscal and monetary stimulus that had been in place over the past several years will probably continue to prop up economic growth in 2005 slightly above potential (3.2%). Both the Fed and the government have started

GDP: Economic Forecasts

GDP	2001	2002	2003	2004*	2005*	2006*
United States	0.5	2.2	3.1	4.4	3.5	2.7
Eurozone	1.6	0.9	0.5	1.8	2.0	2.4
Japan	0.4	-0.4	2.5	4.0	2.6	2.7
China	7.3	8.0	9.1	8.8	8.0	8.5
Hong Kong	0.5	2.3	3.3	7.0	4.5	4.5
Singapore	-1.9	2.2	1.1	8.5	5.0	5.0
South Korea	3.1	6.4	3.1	5.0	6.0	5.5
Taiwan	-2.2	3.6	3.2	6.0	5.0	5.5
Thailand	1.9	5.2	6.7	6.5	7.0	6.5
Malaysia	0.3	4.1	5.2	7.0	6.0	6.5
Indonesia	3.4	3.7	4.1	5.0	6.5	7.0
Philippines	4.5	4.4	4.5	4.5	5.0	6.0
India	5.8	4.0	8.1	7.5	7.0	8.0

Footnotes: * *Forecast*

Figures are year-on-year percentage changes unless otherwise indicated

Source: BNP Paribas

reducing the stimulus they injected into the economy. Budget deficits and interest rates are expected to continue in the direction of less stimulus in 2005, and therefore a bigger negative impact is likely to be felt in 2006. Growth is projected to fall below potential to 2.7%.

- **Eurozone: Loss of momentum**

According to the 'flash' estimate, GDP expanded by a meagre 0.3% q/q in Q3, half of the average growth rate in the first two quarters of the year and the worst performance for five quarters. Policymakers have shown concerns about the impact of oil prices and of the stronger euro on growth, and some (but not all) of the leading indicators have fallen more than we expected. Given the lower momentum and a higher exchange rate forecast, we have revised our growth forecast for 2005 down to 2% from 2.3%. Nevertheless with oil prices forecast to fall, momentum should pick up during the year.

- **Japan to record above-par growth in 2005**

Recent Japanese growth numbers have disappointed, with exports suffering from the slower pace of activity in the US in Q2. However, domestic demand has remained firm, especially consumption. We believe that the soft patch in the domestic economy bottomed in Q3, and, while some sluggishness may remain in Q4, the recovery will clearly get back on track in Q1 2005.

- **Asia to be the key driver (once again)**

Base metal demand growth remains robust. Many of the factors that supported the market in 2004 are likely to be present in 2005. Activity in the key downstream markets is robust with data on shipments and lead times pointing to a continuation of the firm demand conditions. There is, however, likely to be a shift in regional consumption trends, with demand in North America unlikely to be able to duplicate the above trend growth seen in 2004.

In the past, the relationship between metal prices and the OECD leading indicator was quite close. However, the eastwards shift in base metal consumption to non-OECD Asian economies means that this relationship is starting to break down.

The market will remain heavily reliant on the Asian region to support demand for base metals. In this regard most indicators are supportive. Although base metal prices temporarily reacted to moves by the Chinese authorities to curb growth, China is once again having a significant impact on the base metals. Where the country is a net importer of metal such as copper and nickel, imports remain at high levels. With the exception of aluminium, where the country is a net exporter, shipments are generally falling. At the same, China still has a voracious appetite for raw materials in the form of alumina, concentrate and scrap.

Consumption, elsewhere in Asia is also robust with a number of the ASEAN countries, and importantly India, enjoying both robust and metal-intensive growth. Given the strong demand, physical premiums in the region are high.

■ **Supply: struggling to keep pace**

A number of structural features on the supply-side suggest an extension of the bull market, even if the prices of some base metals have already peaked. The lack of investment in new mine capacity at Western producers continues to limit the supply response with the possible exception of the copper industry. Most of the corporate activity appears to be focused around greater industry consolidation rather than on a surge in investment in new capacity. Another feature is that mine production growth in China continues to lag well behind the growth in refined consumption/production. Again with the exception of copper, raw material tightness continues to characterise the base metals.

■ **Tight physical markets will ensure continued volatility**

The bottom line for most of the base metals is that reported inventories remain at exceptionally low levels. As such, this leaves the market vulnerable to supply disruptions. During 2004 there has been a myriad of labour disputes, and some high profile losses of production due to technical problems. With large swathes of the industry operating flat out, supply losses are likely to remain a feature of the market.

■ **Funds: a mid cycle crisis?**

It would appear from the bulk of the commentary in the trade press, that investment funds are responsible for almost all the moves in the base metals sector. The combination of the close inverse relationship between the dollar and the price of dollar-based commodities, the fastest global economic growth for 30 years, and low base metal inventroies, appeared to create a one-way bet for investment funds.

However in the previous Metal Markets report, we questioned whether “for every action there was a reaction.” We still hold the view that funds will surprise to the downside just as they have surprised to the upside so far in this cycle. As we have noted in our previous reports, there have already been sharp declines in prices triggered by fund and technical selling.

With prices for most base metals at levels not seen since the 1980s, the risk:reward ratio is moving against trading from the long side. Weak economic data on the US or China (temporary or otherwise) could easily trigger a sharp correction prices. In addition, BNP Paribas is also expecting a rebound in the EUR/USD rate as 2005 progresses, which could trigger some fund selling.

Price outlook:

From current inflated levels, we doubt whether the generally positive fundamentals will filter through to further sharp gains in prices. The market will have to become accustomed to high levels of volatility. In 2004, there have been corrections of up to 40% in the case of nickel and around 30% for lead. The key factor is that the metals then proceeded to recoup their losses. We expect a similar performance in 2005, with extreme volatility and high average annual prices.

Our price forecasts suggest that average prices for three metals – aluminium, tin and zinc will be higher in 2005 than in 2004, while the reverse will be true for copper, nickel and lead. In no case, however, are we expecting a dramatic collapse in average annual prices.

Bull markets typically come to an end due to a sharp slow down in demand growth rather than due to a surge in supply. BNP Paribas is projecting World GDP growth of 3.9% in 2006 compared to 4.1% in 2005 and 4.8% this year, which suggests that while base metal demand may slow it is unlikely to collapse. As most of the markets will remain tight, we are not expecting a typical end of cycle decline in prices in early 2006.

Both gold and silver have benefited from the increased level of speculative interest, with the prices of both metals briefly exceeding the psychological levels of $450 and $8.00 per oz respectively. The rally is inextricably linked to the dollar's decline. A steady stream of bullish news is required to keep gold and silver at these inflated levels. We do not believe that this will be forthcoming. Our average annual forecasts for 2005 of $410 and $6.00 suggest significant downside potential.

Aluminium: Light Metal Rising

As of December 7 LME aluminium cash settlement prices have averaged $1,707/tonne in 2004 an increase of some 19% over the 2003 average, and its largest annual rise since 1995. This is, however, the lowest increase seen in the base metals sector this year and helps to add weight, along with our analysis of the fundamentals, that the bull market in aluminium still has some way to run.

As stated in the Market Perspective, aluminium is one of the base metals where we expect to see continued price increases in 2005. Our analysis of the fundamentals suggests that aluminium will remain in deficit next year and while tightness in the market will not become as acute as that seen in copper this year, it should help to support further gains and attract speculative interest from metals where the peak is seen as behind them.

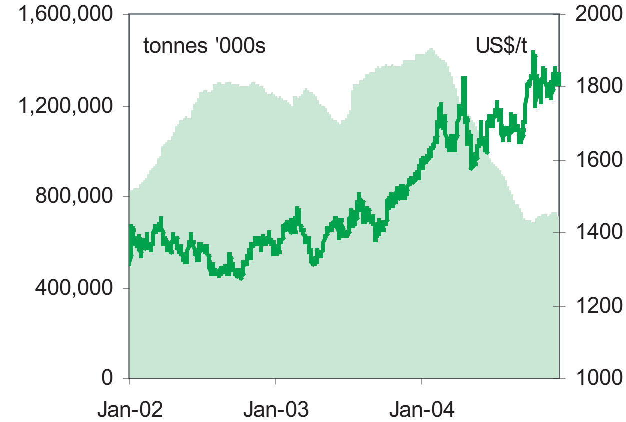
In recent weeks, prices have trended upward after the sector wide correction of October 11-13, which saw prices fall from $1,895/tonne to $1,748/tonne (-7.7%). By mid-December they had reached $1,834/tonne again and could test highs in early 2005 as market participants return in the New Year. Currently in thin trading LME open interest is at high levels, supported by expected favourable demand conditions in 2005 and record Euro/Dollar exchange rate levels. Factors that indicate a degree of increased price volatility and disengagement from the physical market fundamentals.

Sentiment remains bullish toward the metal however and as rising inventories have not stopped prices trending higher since our previous report report. LME stocks currently stand around 715,000 tonnes, up from lows of 678,475 tonnes. However, the year-to-date stock drawdown, 709,075 tonnes, remains higher than our forecast deficit for 2004, 450,000 tonnes. This can be partially accounted for by tonnages of off warrant material entering Eastern Europe before enlargement of the EU earlier this year, some of which has been attracted back to market by high prices and the market slipping in and out of backwardation during Q4.

Consumption

Consumption growth in the US has been strong in 2004 with the US service centres reporting a 13.1% y-o-y increase in aluminium shipments in October, although there was also a 5.8% decline from the September level.

Aluminium: LME Spot Price and Stocks Jan'02-Dec '04



US housing starts rebounded strongly in October, however the outlook is softening with permit issuance for new construction declining. Offtake from the automotive sector is also looking to dip in 2005 with producers currently cutting production levels for the year by 7-8%.

Mid West premium levels have recently been supported up around 7.5c/lb given supply disruptions, high freight costs and increasingly tight markets. We would expect this to subside however in the next quarter as Alcoa's Becancour smelter ramps up to full production after three months of strike action.

The extrusions market in the US is reportedly softer than the seasonal slowdown should warrant. Given unsustainable growth rates witnessed in 2004 a return to slower growth levels is expected. For North America, we see 2004 as having been the peak of this demand cycle, 2005 is expected to show continued growth although at lower levels.

Japanese markets were also strong in the beginning of the year, although the growth rates witnessed appear to be subsiding. The transport sector that accounted for the majority of growth has slowed in recent months along with manufacturing.

Latest data from the Japan Aluminium Association shows apparent consumption in that country up by 5.8% for the first nine months. However shipments of mill products fell by 3.2% year-on-year for October and we expect to see a slowing of demand growth in Q4.

Japanese contract premiums for the first quarter are currently being negotiated having reached nine-year highs of $90-91/ tonne in Q4. Anecdotal evidence suggests that producers are pushing for similar levels, however there may be some decline as consumers hold out of a better deal.

European demand growth has continued to disappoint, however we are continuing to forecast modest growth in 2005. Notable exceptions to this have been Russia and the UK, both posting +25% increases in apparent consumption in 2004 according to the WBMS. Growth in 2005 is expected to come from a small recovery in German and French manufacturing and continued strong growth from Russia as the country expands its extrusion and fabricated products capacity.

China is likely to have an even greater influence on next year's aluminium market as growth rates subside in the "Western World". The latest WBMS figures place growth in Chinese aluminium consumption for the first nine months up by 22.1% against the corresponding period of 2003. China is now the largest consumer of the metal. BNP Paribas is forecasting Asian growth of 11.2% this year (12.5m tonnes) followed by a cooling in 2005 to 8.8% (13.6m tonnes). In comparison, global consumption growth outside of Asia is forecast at 3.7% in 2004 and 2.9% in 2005.

Supply

The supply for both alumina and metal is tight. Although spot alumina quotes are off the highs, they remain above $400/ tonne given China's voracious appetite for the material. The latest IAI figures show a 4.8% y-o-y gain upto September; the bulk of this increase is being shipped to China.

Aluminium Market Balance (000 tonnes)

	2001	2002	2003	2004 (1)	2005 (1)	H1 '05	H2 '05	H1 '06
Asia	8802	9651	11243	12500	13600	6600	7000	7150
% Change	-3.0%	9.7%	16.5%	11.2%	8.8%	6.5%	11.1%	8.3%
Europe	7699	7981	8127	8300	8550	4300	4250	4500
% Change	4.0%	3.7%	1.8%	2.1%	3.0%	2.4%	3.7%	4.7%
N.America	6092	6376	6484	6900	7100	3600	3500	3650
% Change	-14.0%	4.7%	1.7%	6.4%	2.9%	2.9%	2.9%	1.4%
Other Regions	1698	1708	1803	1850	1900	930	970	975
% Change	0.9%	0.6%	5.5%	2.6%	2.7%	0.5%	4.9%	4.8%
Refined Demand	24291	25718	27657	29550	31150	15430	15720	16275
% Change	-3.8%	5.9%	7.5%	6.8%	5.4%	4.1%	6.8%	5.5%
Refined Supply	24436	26076	28005	29100	30600	15100	15500	16000
% Change	0.1%	6.7%	7.4%	3.9%	5.2%	5.6%	4.7%	6.0%
Market Balance	145	358	348	-450	-550	-330	-220	-275
Inventories								
LME	821	1241	1423					
Producer	1740	1660	1629					
Consumer	430	391	448					
Other	112	151	172					
Total	3103	3443	3672	3222	2672	2892	2672	2397
No. of weeks demand	6.6	7.0	6.9	5.7	4.5	4.9	4.4	3.8
LME Settlement Price	1444	1349	1434	1710	1775	1850	1700	1650
% Change	-6.8%	-6.6%	6.3%	19.2%	3.8%	11.1%	-3.1%	-10.8%

Footnotes: (1) Forecast

Source: WBMS,IAI and BNP Paribas

Reported primary production according to the IAI for the first ten months, which excludes China, was up by just over 1%. The German Aluminium Industry Association has warned of the effects of higher fuel prices on domestic production. Germany produces around 665,000 tonnes of aluminium a year. This is a situation that is likely to be reflected elsewhere as energy costs and alumina remain at high levels. Major increases to alumina production are not scheduled to reach the market until 2006.

China's production of aluminium continues to expand despite the increase to production costs, the closure of Soderberg capacity and the tightening of credit lines. The China Nonferrous Metals Industry Association (CNIA) reports ten-month production up by 18.9%, to 5.37m tonnes. Production is also trending upwards with October's output representing an annualised rate of 6.98m tonnes, against forecast full year output of 6.5m tonnes.

Despite this production growth China's exports of aluminium are expected to fall next year as government policies on the imports of alumina have been tightened. The moves are designed to prevent toll refining and to keep more aluminium in China for the downstream sector, thereby increasing the value added in China. The country is also expected to continue operating well below capacity, despite closure of Soderberg plants, as power prices increase. Several major Chinese producers have already stated that output is significantly down or will have to be cut further as power rates increase by as much as 40%. Only around 35% of China's aluminium smelters have their own source of electricity, although they represent a higher percentage of output given the amount of idle capacity in the country (circa. 1.5m tonnes).

Recently Chinese exports have been continuing to land in Singapore's LME warehouses, which currently hold 130,000 tonnes. The material leaving China, while the export tax rebate is still in effect, has placed downward pressure on premiums. Singapore premium levels are around $15-25/tonne down from recent levels of $25-35/tonne. The 8% export tax rebate (cut from 15% in October 2003) is widely expected to be abolished in the New Year, or even replaced with a tax, in further efforts to keep aluminium in China for domestic processing. The abolition of the rebate will also lessen the current premium of LME prices over the SHFE, making exports less attractive.

Market outlook

As a whole the fundamentals of the aluminium market remain strong and look set to continue well into 2005. While the market will become increasingly reliant upon China for growth, we do not forecast major falls in consumption in any region, keeping the market firmly in a deficit position.

Our forecast impact of dollar exchange rate movements in 2005 are neutral as such the forecast price increase will be brought about by only modest supply increases, reduced Chinese exports and continuing fair demand conditions. The impact of speculative activity, as always, remains difficult to gauge. However, this is likely to be on the long side, particularly earlier in the year.

In 2005, BNP Paribas is forecasting an average annual price of $1,775/tonne with H1 averaging $1,850/tonne and H2 $1,700/tonne. The fall in prices is expected to continue in 2006 with H1 averaging $1,600/tonne.

Copper: A tale of two halves

Annual average cash settlement prices for copper are set to record an average price of $2,850/tonne in 2004, a 60% increase over 2003. However BNP Paribas is forecasting significant increases to refined supply in 2005, particularly in H2. While the immediate outlook for copper is bullish we are forecasting a fall in average annual prices in next year.

LME cash prices have averaged $3,075/tonne in Q4, up to December 3 with a backwardation averaging $120/tonne. Despite the wide backwardation, inventories on the LME have continued their slide from Q4 peaks of over 100,000 tonnes to around 57,000 tonnes currently, over 25% of which has already been purchased. LME inventories were last seen at these levels in 1990.

Both Comex and SHFE stocks are also running at low levels with Comex stocks currently below 40,000 tonnes, having lost over 215,000 tonnes year-to-date. SHFE stocks continue to hover at low levels, on warrant material currently stands under 10,000 tonnes, amid uncertainty over a rumoured 30,000 tonne long position which its thought to have been rolled forward to avoid a delivery default.

Fears over availablility of refined material are largely limited to H1 as mine supply has been increasing steadily. A three-week strike at the 230,000 tpy El Abra mine did little to unsettle the market. Reflecting the increasing supply, TC/RCs have been negotiated up to $140/14c/lb in recent business as maintenance shutdowns restrict available smelter capacity in H1. Annual concentrate deals have been settled at around $85-8.5c/lb against levels of $40-45/4.0-4.5c/lb this time last year. The pendulum has clearly swung from the miners to the smelters.

Speculative interest has also returned to the copper market after a brief exit in the aftermath of the LME Week correction; CTFC data shows Comex net longs increasing to early October levels, net fund length was up at 28,300 contracts in the last week of November.

Consumption

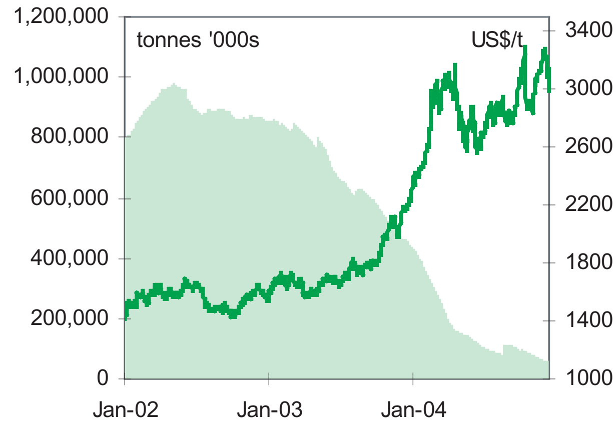
2004 has been a strong year for an expanding copper market, while 2005 also looks set to remain positive for demand. The bull market in 2004 was driven by the coupling of a cyclical upturn in North America, a rebound in Japan in H1 and continued strong growth in China, which was exacerbated by a tight supply situation. However several of these factors are likely to fall away in 2005. Growth rates in the Western World are expected to fall from unsustainable levels seen this year and a continuation of the bull run will be left increasingly dependant on the phenomenal growth see in China.

Evidence of this is already being seen as leading demand indicators turn down and increasingly industry statistics are reporting slower growth or declines against a strong Q4 2003. BNP Paribas is forecasting global annual growth in 2005 of 4.3%, the majority of this coming from China and a rebound from the European copper market after a lacklustre performance so far this cycle.

In the US, cathode premiums are currently around 6-6.5c/lb in thin market conditions as consumers work off inventory toward the end of the year. Premiums are expected to rebound slightly in Q1 as the LME backwardation continues to fail to attract more material. Annual contract premiums have been reported up at 7-7.5c/lb for North-East delivery. Meanwhile fabricators have increased charges on copper sheet, strip and bar products along with prices for extruded products citing rising costs for materials and energy.

In Europe, premiums are currently at $110-125/tonne. As the deficit in Europe rises in H1 premiums could rise to a range of $115-130/tonne. We are forecasting a 3.3% increase in demand in 2005 after a weaker 2004 than the other major consuming regions.

Copper: LME Spot Price and Stocks Jan'02-Dec '04



Chinese demand remains robust. In an increasingly tight Chinese market, the three-month contract was trading at a 14% premium to the LME in mid-December. Chinese fabricators are finding it hard to pass on higher prices to their customers however and margins are reportedly falling. BNP Paribas is forecasting GDP growth in 2005 of 8%, growth that is forecast to be copper intensive as investment in infrastructure continues.

Japanese growth has softened in H2 with the latest available data from the Japanese Electric Wire and Cable Makers Association showing a 3.1% y-o-y fall in shipments of copper wire and cable in October. Output of domestic rolled copper products is also down.

Supply

Refined supply is due to pick up after a period of rebuilding of stocks and pipeline material. BNP Paribas is forecasting 5.2% more refined output in 2005, although not enough to move the market to surplus for the full year.

Copper mine production from Chile has increased sharply in recent months, helped by increases from Escondida. Output from the country in the first ten months was 4.4m tonnes, up by 9%. October's production recorded a 13.8% rise y-o-y. The majority of the increase came in the form of copper contained in concentrate however and will take longer to reach the market as refined supply. Escondida, which produces a quarter of global concentrate supply available for toll refining, has settled annual TC/RCs in $83.5-85.5/8.5-8.55c/lb ranges. Net exports from Chile are forecast to remain flat in 2005, as increases in output from the country should roughly equate to the 200,000 tonne stockpile released by Codelco in 2004.

Indonesian output of concentrate has also increased steadily as Grasberg, the world's second biggest copper mine, reaches full production after the Q4 2003 landslide. Freeport McMoRan has said that H2 2004 sales have doubled from the mine. Buyers of concentrate in Asia and Europe are reportedly overstocked raising the possibility that refining charges could push even higher. The lack of smelting capacity also makes the concentrate market susceptible to supply disruptions at smelters.

Market outlook

2005 is developing as a year of two halves in the copper market, while indicators such as freight rates, copper equities, exchange rates and low inventories are positive for the copper price in the early part of 2005, they are unlikely to maintain high prices for the whole year. Mine production is up sharply and smelters have found it easy to source material, being able to negotiate TC/RCs significantly higher. Furthermore the copper market along with aluminium also remains more prone to price swings based on dollar movements than other base metals.

Inventories in 2005 are expected to decline modestly. With H1 tighter than H2 we would not rule out the possibility of new highs early in the year. If Q1 sees continued thin trading and minimal warehouse deliveries the market will continue to be susceptible to speculative interest, although this should wane as the year progresses and as other metals in the sector become more attractive. Our 2005 price forecast is $2,600/tonne for the full year, split $2,750/tonne and $2,450/tonne in H1 and H2 respectively. Continued declines are forecast for H1 2006.

Copper Market Balance (000 tonnes)

	2001	2002	2003	2004 (1)	2005 (1)	H1 '05	H2 '05	H1 '06
Asia	6233	7001	7345	8000	8500	4175	4325	4400
% Change	3.6%	12.3%	4.9%	8.9%	6.3%	7.1%	5.5%	5.4%
Europe	4549	4422	4438	4525	4625	2340	2285	2400
% Change	0.2%	-2.8%	0.4%	2.0%	2.2%	1.7%	2.7%	2.6%
N.America	3310	2969	2941	3175	3225	1630	1595	1650
% Change	-12.3%	-10.3%	-0.9%	8.0%	1.6%	1.9%	1.3%	1.2%
Other Regions	811	772	823	840	875	440	435	455
% Change	2.1%	-4.7%	6.6%	2.1%	4.2%	4.8%	3.6%	3.4%
Refined Demand	14902	15164	15546	16540	17225	8585	8640	8905
% Change	-1.5%	1.8%	2.5%	6.4%	4.1%	4.4%	3.8%	3.7%
Refined Supply	15632	15352	15200	15800	17100	8300	8800	8950
% Change	5.8%	-1.8%	-1.0%	3.9%	8.2%	7.8%	8.6%	7.8%
Market Balance	730	188	-346	-740	-125	-285	160	45
Inventories								
Exchanges	1138	1293	806					
Producer	608	530	787					
Consumer	198	209	170					
Merchants	24	15	19					
Total	1967	2047	1781	1041	916	756	916	961
No. of weeks demand	6.9	7.0	6.0	3.3	2.8	2.3	2.8	2.8
LME Settlement Price	1578	1558	1777	2850	2600	2750	2450	2250
% Change	-13.0%	-1.3%	14.1%	60.4%	-8.8%	-0.4%	-16.7%	-18.2%

Footnotes: (1) Forecast

Source: ICSG and BNP Paribas

In the nearer term it is unclear how long it will take consumers of copper to work off their inventories with European consumers likely to return to the market in force before North America in Q1. As stated a sharp increase in offtake in Q1 could push prices to new highs for this cycle.

Nickel: Shifting Gears

Nickel fully participated in the pre-LME Week rally with prices approaching the early 2004 highs of $17,700/tonne. The most recent peak was $16,595/tonne on October 4. As we have discussed in our previous research, moves above $15,000/tonne are unsustainable as a new set of fundamentals kick in. Higher prices quickly discourage the manufacture of high nickel content stainless steel and induce a significant increase in the scrap supply. Thus a surge in demand from the stainless sector of the magnitude expected at the beginning of the year failed to materialise and stocks did not run dry, as some had predicted.

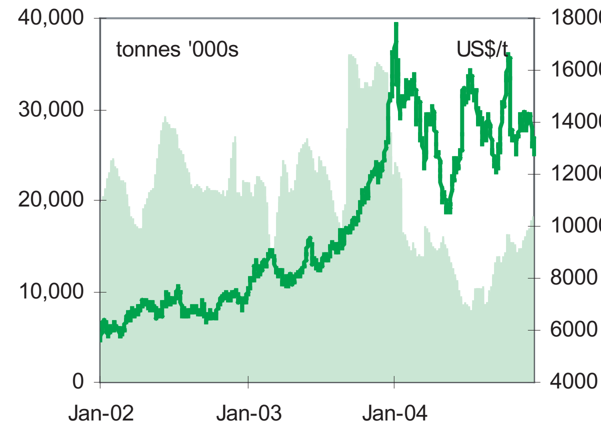
Reflecting the above, nickel consumption this year has grown by 3.3% against an increase in stainless steel production of between 7-8%. Reportedly consumers have also found nickel relatively easy to source despite the low reported stock level.

BNP Paribas believes that the peaks are now behind the nickel market and we expect that speculative investment will focus on other markets within the base metal sector. However, as we discuss below, the market will remain tight which should support high period average prices from a historical standpoint.

Nickel prices have averaged $13,850/tonne so far in 2004, a 44% y-o-y rise. The year has been marked by volatility that has persisted into December with LME cash settlement prices falling by 8% at the beginning of the month. Given relatively low stock levels and the concentration of stocks in Liverpool, the market remains susceptible to volatility. However we do not expect a repeat of price swings in the order of those witnessed in 2004.

After reaching lows of 7,800 tonnes in July, LME nickel stocks have trended higher, standing at close to 18,000 tonnes by mid December. The amount of material on cancelled warrant is also relatively small at less than 1,000 tonnes, implying that any stock drawdowns will be limited to the end of the year.

Nickel: LME Spot Price and Stocks Jan'02-Dec '04



Almost all deliveries into warehouses recently have entered Liverpool. The material, believed to be of Russian origin, commands a higher premium for European buyers, by around +$50/tonne than had it been delivered to Rotterdam. Currently over 75% of LME stocks are in Liverpool warehouses.

Consumption

Global nickel consumption was up by 1.6% y-o-y according to the International Nickel Study Group (INSG) for the first eight months of this year. Although BNP Paribas believes that the initial INSG data understates the growth, consumption is still far below the estimated increases to stainless steel production growth (+7%). As stated in previous research, this divergence can be attributed to substitution toward ferritic grades and away from austenitic grades containing higher nickel content (300 series), as well as the growth of low nickel containing 200 series in emerging markets. Higher prices have also encouraged large amounts of scrap to enter the market.

Nevertheless, the underlying health of the stainless steel sector is highlighted by the latest data from the Japan the Iron and Steel Association. Production in September rose 7.3% month-on-month to 282,987 tonnes. The market is underpinned by strong domestic demand. For the first ten months exports were down 0.9% y-o-y to 1.2m tonnes. Japanese consumption of nickel is down by 1% for the first eight months of the year according to INSG however, reflecting the increase in ferritic grades of stainless being produced.

Strong demand for stainless steel in China will remain a supporting factor for the nickel market. Domestic consumption may reach 4.2m tonnes this year with a move to 5m tpy possible by 2007. It is estimated that Chinese production of stainless steel up to August was 30% up y-o-y at around 1m tonnes. The commissioning of new capacity could lift production for the year as a whole to over 2m tonnes.

A major expansion is underway at Baosteel, China's largest stainless producer. A move to double capacity to 1.5m tpy should be completed by August 2005. In positive news for nickel demand, it has said that 75% of production from the newly commissioned 750,000 tpy plant would be high nickel content (8-10%) 300 series stainless steel.

Chinese demand is also be supported by strong growth in the battery market. In the first eight months of the year, China exported 390m nickel-hydrogen batteries (+25.1% y-o-y) and 490m nickel-cadmium batteries (+19.9% y-o-y). The battery sector is likely to consume 13,200 tonnes of nickel this year, up from 11,800 tonnes in 2003.

Reflecting the underlying strength of demand, and the end to destocking which characterised the early part of the year, Chinese imports of nickel are rising sharply once again. Imports in October were 7,394 tonnes, the highest level since January 2003.

Strong growth in Asia is the main factor driving nickel demand. Overall BNP Paribas is forecasting nickel consumption growth of 3.3% in 2004. Next year the combination of strong stainless steel production growth, and reduced substitution pressures as nickel prices decline, should allow a 4.1% increase to demand.

Nickel Market Balance (000 tonnes)

	2001	2002	2003	2004 (1)	2005 (1)	H1 '05	H2 '05	H1 '06
Asia	436	497	548	575	610	300	310	322
% Change	-5.8%	14.1%	10.1%	5.0%	6.1%	5.3%	6.9%	7.3%
Europe	465	483	478	485	498	253	245	260
% Change	4.6%	3.8%	-1.1%	1.5%	2.7%	3.3%	2.1%	2.8%
N.America	144	132	130	133	135	69	66	67
% Change	-12.8%	-8.6%	-1.1%	2.3%	1.5%	1.5%	1.5%	-2.9%
Other Regions	65	66	77	80	82	40	42	42
% Change	6.2%	0.8%	17.3%	4.2%	2.5%	2.6%	2.4%	5.0%
Refined Demand	1110	1177	1232	1273	1325	662	663	691
% Change	-2.1%	6.1%	4.7%	3.3%	4.1%	3.9%	4.2%	4.4%
Refined Supply	1152	1187	1206	1250	1320	655	665	690
% Change	6.4%	3.1%	1.6%	3.7%	5.6%	6.5%	4.7%	5.3%
Stockpile sales	0	0	60	15	0			
Market Balance	42	10	34	-8	-5	-7	2	-1
Inventories								
LME	19	22	23					
Country Stocks	79	75	73					
Total	99	97	96	88	83	81	83	82
No. of weeks demand	4.6	4.3	4.1	3.6	3.3	3.2	3.3	3.1
LME Settlement Price	6264	6772	9640	13830	12000	13000	11000	10000
% Change	-27.5%	8.1%	42.4%	43.5%	-13.2%	-4.6%	-15.4%	-9.1%

Footnotes: (1) Forecast

Source: WBMS, INSG and BNP Paribas

Supply

Attention on the supply side of the market tends to focus on the mega projects that are under development/ consideration. Since our previous Metals Markets report, Inco has confirmed its intention to proceed with the Goro project. This follows on from BHP Billiton's decision to develop Ravensthorpe. Falconbridge will decide whether to proceed with the Koniambo project in early 2005.

Despite the delays in many of these projects nickel production is rising sharply. The largest increase is taking place in China, where output up to October is running 25% ahead of last year with total production of 65,102 tonnes in this period. The increase has been driven by Jinchuan Nickel, which should produce 77,000 tonnes this year; output next year should be 100,000 tonnes

In addition, production is rising strongly in Canada reflecting the return to normal operations at Inco following strike-related losses. Similar reasons are behind the increase to UK production. Overall BNP Paribas is projecting a 3.7% increase to production this year followed by 5.6% in 2005.

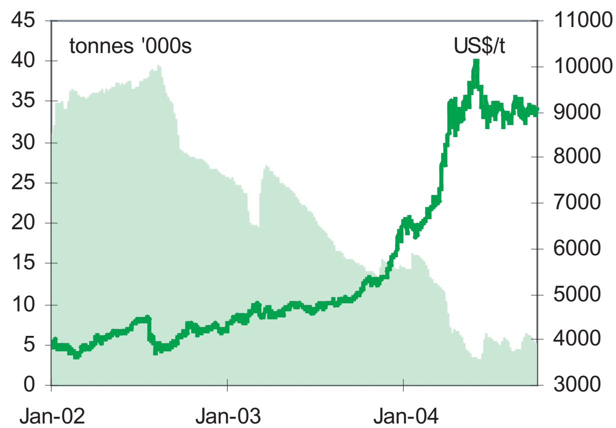
Market outlook

In the previous Metals Markets report, we concluded "the performance so far this year highlights how high prices tend to bring the nickel market back towards equilibrium much quicker than for the other base metals." This remains our view. Even though we are projecting the market to remain tight over the forecast period we do not expect prices to make new highs. Prices have fallen by 22.8% from the early October levels. We expect that prices will spend the bulk of 2005 in a $10,000-14,000/tonne range with an average of $12,000/tonne. In 2006, the downside potential is significantly greater and we project an average price of $10,000/tonne in the first half of the year.

Tin: Silent Running

In contrast to most of the other base metals, tin has been remarkably stable in recent months. Even the massive sector-wide sell off during LME week largely by-passed tin, as did the earlier sharp rise in base metal prices in September. In some respects, this reflects changes in the underlying fundamentals in that movements in LME inventories suggest that the extreme tightness that characterised the tin market earlier in the year has eased somewhat. LME inventories

Tin: LME Spot Price and Stocks
Jan'02-Oct '04



now stand at around 6,000 tonnes compared to 4,940 tonnes at the beginning of the final quarter and the low for the year of 2,745 tonnes on June 10.

The recent stability is highlighted in the accompanying chart. It is also reflected by the fact that monthly average cash prices over the last four months have been in a range of just $9,020-9,070/tonne. The data on producer and consumer stocks released by the World Bureau of Metal Statistics (WBMS) are also largely unchanged.

Consumption

The tin market continues to enjoy broad-based consumption growth. The latest figures from the WBMS suggest that Western World consumption expanded by 8.8% in the first nine months of the year to 181,400 tonnes. In common with most of the other base metals, Japan and the US have been the driving force behind the surge in demand, registering growth of close to 20% year-on-year in both countries. Although BNP Paribas believes that these initial estimates overstate the level of demand growth, it is clear nevertheless that the tin suppliers have enjoyed robust conditions in 2004.

The high level of premiums also confirms the strong demand conditions (and the tight supply). In the US market, which traditionally commands the highest premium, annual contracts are being negotiated at high levels. Premiums for 2005 are said to be $400/tonne higher than the previous year at $600-650/tonne. This would appear to bring 2005 annual terms into line with current spot quotes, which are currently in a wide range of $550-650/tonne. Although there is some consumer resistance to the massive hike, the potential for higher spot premiums means that these new terms may be accepted.

Asian consumption is also firm. Driven by a surge in offtake in China, Japan and Taiwan, consumption is estimated to have increased by 14% up to September. The strongest growth is taking place in China (+17.9%). Baoshan Iron & Steel has highlighted the continued strength of domestic demand from the tinplate market. According to the company, tinplate production in 2003 was 1.31m tonnes (1.2m tonnes in 2002) and imports were 520,000 tonnes (400,000 tonnes). The company expects the tinplate market to double to 3m tpy by 2012.

China's largest producer, Yunnan Tin Industry, has reported a 609% year-on-year increase in net profit in the January to September period. The company reports strong demand particularly from the tin chemicals sector. As such, the domestic market is absorbing the bulk of the 20.4% year-on-year increase to production reported so far this year.

Europe is the only region not to have enjoyed strong demand growth this year. The WBMS figures suggest that demand will be flat with 2003 at 78,000 tonnes. This merely extends a period of sluggish demand growth in the region. In Europe, premiums for Malaysian material in Rotterdam continue to be depressed in comparison to their plus $300/tonne peaks in the summer, and in December are quoted in a $180-240/tonne range. Looking further ahead, tin consumption in the EU will be supported by the introduction of the European Commission's Restriction of Hazardous Substances (RoHS)

Tin Market Balance (000 tonnes)

	2001	2002	2003	2004 (1)	2005 (1)	H1 '05	H2 '05	H1 '06
Asia	135	138	163	176	187	92	95	96
% Change	3.0%	2.5%	17.9%	7.9%	6.3%	7.0%	5.6%	4.3%
Europe	75	74	77	78	79	39	40	40
% Change	2.5%	-0.8%	3.9%	1.4%	1.3%	2.6%	0.0%	2.6%
N.America	55	51	50	54	54	27	27	28
% Change	-2.3%	-7.1%	-3.0%	8.5%	0.0%	-3.6%	3.8%	3.7%
Other Regions	16	17	18	18	19	10	9	10
% Change	1.4%	4.5%	7.2%	1.4%	5.6%	11.1%	0.0%	0.0%
Refined Demand	281	280	308	326	339	168	171	174
% Change	1.7%	-0.1%	9.7%	6.0%	4.0%	4.3%	3.6%	3.6%
Refined Supply	278	277	290	314	330	163	167	172
% Change	1.6%	-0.4%	4.9%	8.2%	5.1%	5.2%	5.0%	5.5%
Market Balance	-3	-3	-17	-12	-9	-5	-4	-2
Inventories								
LME	31	26	15					
Country Stocks	22	23	24					
Total	52	49	38	26	17	21	17	15
No. of weeks demand	9.7	9.0	6.4	4.2	2.6	3.3	2.6	2.3
LME Settlement Price	4483	4062	4896	8600	8700	9000	8400	8000
% Change	-17.5%	-9.4%	20.5%	75.7%	1.2%	0.0	0.0	0.0

Footnotes: (1) Forecast

Source: WBMS and BNP Paribas

directive in July 2006. This will ban the use of solder alloys containing lead in electronics manufacture.

Tin Technology – the industry organisation – has suggested that tin consumption this year should rise by 7% to 321,000 tonnes. With consumption set to slow to 4.0-4.5% in 2005. This is similar to BNP Paribas' own projections, which suggest a 6.0% advance this year followed by 4.0% growth in 2005.

Supply

We believe that tin production is rising strongly but that the increase is not necessarily captured by the WBMS data. For example, initial estimates suggest a 7.4% decline to global mine production in the first nine months of the year, while refined production was essentially flat at 209,100 tonnes in this period. The data probably excludes the growing level of informal production in Indonesia, and underestimates Chinese production growth, which is believed to be expanding by close to 20% year-on-year.

In our previous Metals Markets report, we have noted the decline in output at PT Timah, but we took the view that from a market balance perspective the impact would not be great given that lower production will be offset by higher output from the small-scale smelters. The latest report from PT Timah confirms that production is still lagging well behind last year's level. Tin-in-concentrate production in the first nine months of this year was 19% down year-on-year at 29,905 tonnes, while refined output dropped more sharply, falling by 33% to 23,818 tonnes. Q3 refined output was 22.8% lower than the previous quarter at 12,666 tonnes.

Informal tin production continues to expand. It is now estimated that monthly output from this source is in the region of 2,000-2,500 tpm, which more than makes up for lower output at PT Timah.

Antaike has released its forecast for Chinese tin production for 2004 and 2005. 110,000 tonnes of material should be produced this year. In the first ten months of the year, production was 20.4% higher at 92,548 tonnes. In 2005, Chinese tin production is expected to grow by a further 10%, equating to 121,000 tonnes. Most of the increase to Chinese output is coming from the myriad of small-scale producers. Yunnan Tin – the leading producer – plans to produce 31,000 tonnes of tin and tin alloy ingots (split 27,000/4,000 tonnes), which is largely unchanged from last year.

Outside the two leading producing countries, the increases are relatively modest in volume terms. Malaysian Smelting Corp (MSC) has secured concentrate supply from Bluestone Tin's Renison Bell mine in Tasmania, in a deal that is to run until at least July 2005. Under the agreement, Bluestone can either sell the concentrates directly to, or have them toll refined by MSC. The company has been searching for a new concentrate supply in the tight global market since the 2,200 tpy Ardlethan mine was closed in September.

Paranapanema, Brazil's largest tin producer, has stated that it will continue with the commissioning of its 50% operational Rocha Sa mine. Funding for the second phase from the BNDES development bank, ramping up production to 100%, has not yet been confirmed by the company.

According to the official figures from the Thai government, tin production in the country rose by 26% year-on-year to 14,500 tonnes from 11,500 tonnes a year earlier.

Market outook

The question for most base metals at this stage of the price cycle is whether the market will cling on to recent gains rather than necessarily making significant advances from current levels. In this regard, the tin market seems to be well placed.

The strength of demand appears to be able to absorb the extra production from China, Indonesia and Thailand. Outside of Asia, increases to output are very limited.

Given that tin has not really participated in the most recent rally in prices, despite its positive underlying fundamentals, BNP Paribas believes that there is still scope for tin to make new highs. On an average annual basis we are projecting \$8,600/tonne in 2004 and \$8,700/tonne in 2005.

In 2006, we are looking for the tin market to return towards balance. Nevertheless inventories will remain at low levels, which should support an average price of \$8,000/tonne in the first half of the year.

Lead: Rebirth Continues

Just prior to the publication of our previous Metal Markets report, LME inventories rose by 20,100 tonnes on Monday September 20. The market largely ignored this move with prices having recouped all their losses by the following day. The decline in prices in the LME Week sell-off was more extreme, with prices falling by around 13% to a recent low of $873/tonne on October 14. Prices then proceeded to rally and by mid-November prices were back above $1,000/tonne. A quick rebound from any correction has been a regular feature of the lead market in 2004.

Inventory movements over the past three months confirm the on-going tightness. After the mid-September surge, inventories quickly resumed their downtrend. From a high of 53,350 tonnes at the end of September, stocks are now below 45,000 tonnes. Another sign of the tightness is the high level of premiums. High freight costs and low inventory levels are seeing an increase to 2005 contract premiums in Europe with deals reportedly concluded around $150-160/tonne, up from an average $140/tonne in 2004. In 2003, the benchmark was $125/tonne.

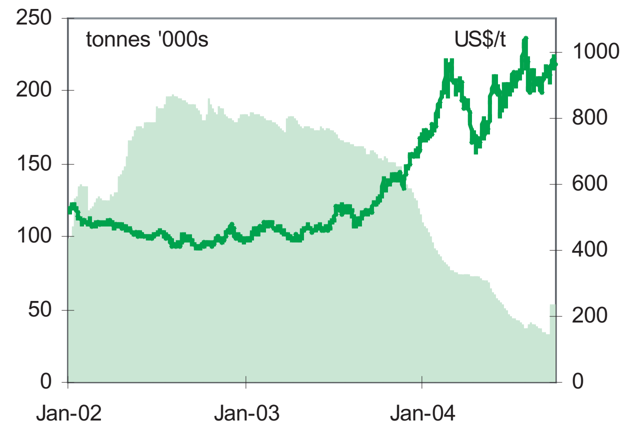
Consumption

Predictably little has changed on the demand side of the market. Consumption growth continues to make little contribution to the bull market. The latest ILZSG data suggest Western World consumption growth is flat with last year at 3.95m tonnes up to September. The only positive feature is that consumption may actually reverse three successive years of decline.

Lead continues to suffer from substitution pressure. Only limited end-use data is available on lead consumption; however they confirm the continued decline in the smaller end-use markets. For example in Germany, lead's use in the chemical sector has fallen by 35% over the last three years. In Italy, consumption of lead in ammunition has declined by a third, while lead's use in solder in the UK has fallen by 59%. Pending legislation in the EU will soon ban the use of lead in solders.

On a regional basis, Asia remains the only area of strong growth. Apart from continued declines in Japan, the expansion is reasonably broad-based and not totally reliant on China. We are noting growth in India, Indonesia, South Korea and Taiwan.

Lead: LME Spot Prices and Stocks Jan'02-Oct '04



Nevertheless the fastest expansion is being seen in China. Antaike – the Beijing-based research group – forecasts that consumption will grow by 10.9% this year to 1.22m tonnes, and by 10.7% next year to 1.35m tonnes. The latest data on the key battery sector confirm the underlying strength in demand. Chinese exports of SLI batteries totalled 14m units in the first ten months of this year, which represents a year-on-year advance of 5%. Exports of industrial batteries were 25.3% higher at 8.5m units. Despite concerns about the economy earlier in the year, car production rose by 17.5% to 4.33m units up to November.

Overall, BNP Paribas forecasts global consumption growth of 3.2% this year. We expect that this rate will slow slightly in 2005, back towards the 2.5% rate seen in 2002 and 2003.

Supply

One factor that is changing in the lead market is the level of mine production. The ILZSG data up to September suggests a 2.3% year-on-year fall. Global concentrate production may also decline reflecting a fall so far this year in China. Next year we expect a rise in mine production reflecting primarily increases in Australia, China and Ireland. The largest single increase will take place in Western Australia, where Ivernia is commissioning its 70,000 tpy Magellan mine early in the first quarter. Production for the year as a whole should be close to 60,000 tonnes. The second stage of the project will take capacity to 90,000 tpy and will also involve the construction of a refinery. Output at Perilya's Broken Hill operations should increase next year. Production in 2004 has been held back by unusual seismic activity that occurred in the second quarter. Increased tonnages coming from the higher grade South East A Lode at the South mine, and higher production from the North mine should also boost output in 2005.

There will also be higher output at BHP Billiton's Cannington operation, which is undergoing a debottlenecking programme that should eventually add around 40,000 tpy to lead concentrate capacity. Production in the first three quarters of this year is already 12.8% up on 2003 at 200,220 tonnes.

Unlike the copper market, we are not expecting the increase to mine output to have a dramatic impact on the spot treatment charge market in 2005, or to return the market to surplus. China continues to have a voracious appetite for concentrate as refined production surges ahead despite the decline in domestic mine output. In the first ten months of 2004, Chinese imports of concentrates rose by 27.4% to 663,129 tonnes (on a gross weight basis). There are reports that stocks of concentrate have been built up at port locations so we may see a temporary dip in imports in the next few months. Treatment charges for 2005 in the country are forecast to be set at similar levels to this year, and consensus opinion is in a $105-125/tonne range.

Western World refined output is also lower. However, higher Chinese production has lifted global output by just 0.9% so far this year. The latest data on Chinese refined lead output shows a 19.9% year-on-year gain in October to 164,965 tonnes, which took cumulative output to 1.43m tonnes, a 9.4% improvement on 2003. In 2005, BNP Paribas is forecasting an increase to global refined output of 4.0% to

Lead Market Balance (000 tonnes)

	2001	2002	2003	2004 (1)	2005 (1)	H1 '05	H2 '05	H1 '06
Asia	2064	2373	2661	2840	3000	1475	1525	1540
% Change	3.1%	15.0%	12.1%	6.7%	5.6%	5.4%	5.9%	4.4%
Europe	2070	2044	1930	1980	2030	1000	1030	1015
% Change	2.4%	-1.3%	-5.6%	2.6%	2.5%	2.0%	3.0%	1.5%
N.America	2003	1864	1845	1815	1850	920	930	925
% Change	-5.3%	-6.9%	-1.0%	-1.6%	1.9%	2.2%	1.6%	0.5%
Other Regions	358	374	367	385	395	195	200	201
% Change	-8.4%	4.5%	-1.9%	4.9%	2.6%	2.6%	2.6%	3.1%
Refined Demand	6495	6655	6803	7020	7275	3590	3685	3681
% Change	-0.5%	2.5%	2.2%	3.2%	3.6%	3.5%	3.8%	2.5%
Refined Supply	6619	6671	6747	6900	7175	3530	3645	3660
% Change	-1.1%	0.8%	1.1%	2.3%	4.0%	3.8%	4.1%	3.7%
Market Balance	124	16	-56	-120	-100	-60	-40	-21
Inventories								
LME	98	184	109					
Producer	188	142	136					
Consumer	149	156	138					
Other	1	1	2					
Total	436	483	385	265	165	205	165	144
No. of weeks demand	3.5	3.8	2.9	2.0	1.2	1.5	1.2	1.0
LME Settlement Price	476	453	517	880	800	850	750	725
% Change	4.8%	-4.8%	14.1%	70.2%	-9.1%	2.4%	-19.4%	-14.7%

Footnotes: (1) Forecast

Source: ILZSG and BNP Paribas

7.175m tonnes as new capacity is commissioned in China. In addition, we expect higher refined production in Australia, Canada and the UK.

Market outook

The ILZSG released its market balance projections for 2004/05 in early October. It forecasts that global consumption will expand by just over 2% in 2004 and 2.5% next year driven mainly by China, which should record growth of 9% and 8.5% respectively. Demand is projected to remain flat in the US, and in the EU. Overall ILZSG is projecting a deficit of 188,000 tonnes in 2004, followed by a deficit of 118,000 tonnes in 2005. This compares with BNP Paribas' own deficit forecasts of 120,000 tonnes and 100,000 tonnes respectively.

Despite the tight fundamentals, our average annual forecast price for next year of $800/tonne is below this year's likely outturn of $880/tonne. With lead prices in early December close to $1,000/tonne, the forecast may appear somewhat conservative. However, we believe that any moves over $1,000/tonne will be short-lived and that the market is vulnerable for a correction, even if there is no discernible weakness in the visible fundamentals. At some stage, we expect to see a repeat of the 2004 Q2 correction, which took prices from $975/tonne to below $700/tonne. Once this occurs, our forecast for next year may not look quite so bearish.

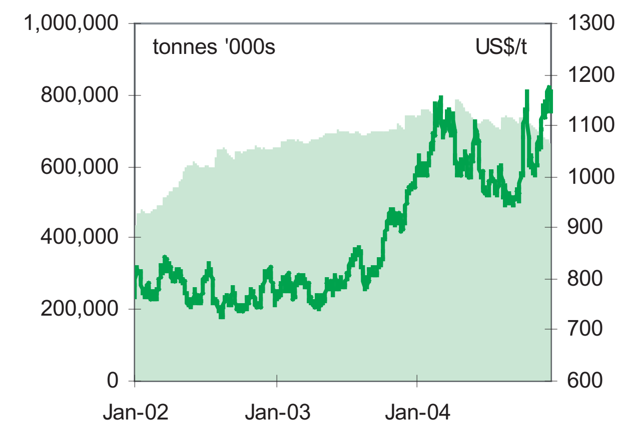
Our supply-demand balance analysis suggests that the market will remain in deficit in the early part of 2006. The tight market will keep prices at high levels from a historical standpoint. BNP Paribas forecasts an average price of $725/tonne in H1 2006.

Zinc: Not the Whipping Boy

The improvement in zinc prices during much of the bull market came about despite no improvement in its fundamentals. The most recent price move, after the correction during LME Week, has however been supported by a reduction in inventories. From a recent low of $1,005/tonne in late October, prices have risen by over 15% to around $1,170/tonne in early December.

Stock levels in LME warehouses have fallen below 700,000 tonnes for the first time since October 2003 as demand remains buoyant for the metal. As at December 8, LME warehouse stocks stood at 660,550 tonnes, a net decline of 80,350 tonnes so far this year. Another positive is that the amount of material on cancelled warrant has also increased significantly since mid-October, and in early December was fluctuating around 50,000 tonnes.

Zinc: LME Spot Price and Stocks Jan'02-Dec '04



Premium levels for SHG zinc for the galvanising industry next year are being negotiated. Initial deals indicate a rise of $10-15/tonne from $70-75/tonne to $80-85/tonne. The increase is being driven by lower production of zinc in Europe due to shortages of concentrate and higher freight rates. China's move to being a net importer of refined zinc has also contributed to the tightening of the physical market.

Consumption

The ILZSG consumption data suggest zinc demand is gaining momentum as the year has progressed. The latest figures reinforce this trend. ILZSG now estimates that Western World consumption to September was around 4.5% up on the same period a year earlier. The regional numbers show an exceptionally strong rebound in the US market with a 9.4% advance so far this year.

The latest figures on galvanised steel production also confirm the strong demand environment; output is running around 10% ahead of last year. The North American Die-Casting Association, which accounts for around 95% of the region's zinc die-casters, has said that demand growth is returning to the market with zinc shipments increasing over the last four months. 2004 has seen the strongest levels of orders growth since 2000 according to the association.

Somewhat predictably, demand conditions in Europe are lacklustre with consumption essentially flat from last year's level. Looking further ahead, ThyssenKrupp is set to boost its galvanising capacity to fill what it sees as a shortage of galvanised steel in Europe. A number of other steel mills have also announced plans to expand capacity, which should support long-term consumption growth from its largest end-use market–many of the developments are in Asia.

In India, galvanised steel capacity should increase by 30% next year which will take it to 6.3m tpy. There are plans to lift capacity to 7.5m tpy by 2008. In South Korea, Pohang Coated Steel has just commissioned a 300,000 tpy hot-dipped galvanising line. Sumitomo Metal Industries plans to invest in a similar-sized line in Japan, while, China Steel Corp in Taiwan is looking to double galvanised sheet capacity by 2007.

The main source of growth is from China. According to Antaike, galvanised steel consumption has grown at an average annual rate of growth of 24% since 1992. This year apparent consumption should be around 9m tonnes. This is expected to increase to 10m tonnes by 2005 and to 15m tonnes by the end of the decade.

By the end of 2004, Chinese galvanised steel production capacity is scheduled to be 10.59m tonnes. However, many of the recently expanded facilities are working at low utilisation rates and some have yet to be finished. Domestic output of galvanised steel this year is likely to be just over 5m tonnes. The bottom line is that production looks set to rise rapidly as the country tries to reduce its reliance on imported materials.

Zinc Market Balance (000 tonnes)

	2001	2002	2003	2004 (1)	2005 (1)	H1 '05	H2 '05	H1 '06
Asia	3759	4151	4652	5000	5300	2600	2700	2750
% Change	2.2%	10.4%	12.1%	7.5%	6.0%	5.1%	6.9%	5.8%
Europe	2812	2766	2803	2850	2925	1445	1480	1485
% Change	0.0%	-1.6%	1.3%	1.7%	2.6%	2.5%	2.8%	2.8%
N.America	1569	1639	1575	1695	1725	860	865	870
% Change	-9.6%	4.5%	-3.9%	7.6%	1.8%	2.4%	1.2%	1.2%
Other Regions	781	833	821	830	850	420	430	435
% Change	0.4%	6.7%	-1.4%	1.1%	2.4%	2.4%	2.4%	3.6%
Refined Demand	8921	9389	9851	10375	10800	5325	5475	5540
% Change	-0.9%	5.2%	4.9%	5.3%	4.1%	3.7%	4.5%	4.0%
Refined Supply	9292	9711	9865	10100	10500	5200	5300	5500
% Change	3.0%	4.5%	1.6%	2.4%	4.0%	4.0%	3.9%	5.8%
Market Balance	371	322	14	-275	-300	-125	-175	-40
Inventories								
LME	433	651	740					
Producer	367	315	326					
Consumer	120	118	114					
Other	12	11	12					
Total	932	1095	1192	917	617	792	617	577
No. of weeks demand	5.4	6.1	6.3	4.6	3.0	3.9	2.9	2.7
LME Settlement Price	886	779	830	1055	1100	1150	1050	1050
% Change	-21.5%	-12.1%	6.5%	27.1%	4.3%	9.5%	-0.9%	-8.7%

Footnotes: (1) Forecast

Source: ILZSG and BNP Paribas

Sharply higher galvanized steel production is one of the factors behind the likely 20% increase to Chinese zinc demand in 2004, following 12.9% growth in 2003. Such is the strength of demand that China is likely to be a net importer of refined zinc despite the sharp rise to production. In the first ten months of the year, net imports of zinc and zinc alloy were 155,160 tonnes.

The switch in China's trade position has boosted premiums in the region. Chinese fob material in November was in a range of $70-100/tonne up from a $50-80/tonne. Premiums in Taiwan have also increased slightly from $90-100/tonne to $90-110/tonne.

Supply

The level of concentrate production so far this year is in sharp contrast to 2003, when production expanded strongly by 7.5% to 9.56m tonnes. Up to October, Western World production was 2.5% below the corresponding period of last year. A 5% increase to Chinese production in this period to 1.36m tonnes has pushed global production marginally higher than last year.

Reflecting the tightening of the concentrate market, spot TCs in Europe are around $120/tonne, while Asian quotes are just below $100/tonne. Both the level of spot TCs and the data on mine production suggest a further decline for 2005 annual contracts when they are negotiated in Q1 from last year's level of $142-143/tonne.

In common with its sister metal, lead, we expect a larger increase to mine output in 2005. The commissioning of the 100,000 tpy Lanping mine, together with increases at many small- and medium-sized mines, should contribute to a 6.8% rise in Chinese mine production. Higher production is also expected in Australia, India, Ireland, Mexico Namibia, Peru and the US. Global mine production should rise by around 5% next year.

Despite the tightness in the concentrate market global refined production is rising. It is being primarily driven by the 10% increase to Chinese output up to October to 2.06m tonnes. Despite the problems affecting the Chinese smelters – power availability, shortages of concentrates and transport bottlenecks - we expect further increases to Chinese output next year, part of this increase is set to come from trial production runs at Yuguang Gold and Lead Group's new zinc smelter in Jiyuan City. The plant has a nominal capacity of 100,000 tpy and is one of three confirmed expansions of this size in China due to ramp up production in 2005.

Reflecting the late 2003 commissioning of a 100,000 tpy refinery by Kazakhmys in Kazakhstan, output in that country is also increasing sharply. Western World production is largely unchanged from 2003. Next year, we expect a slight rebound in production, most notably reflecting the full operation of the Porto Vesme smelter in Italy. The on-going expansion at Hindustan Zinc will provide an extra source of zinc.

Market outlook

LME zinc inventories have been slow to respond to the improvement in the fundamentals, with stocks still only 80,350 tonnes lower than at the beginning of 2004. The early part of the year was characterised by a draw down in off-exchange stocks. BNP Paribas believes that this process has worked its way through the system and that in the future inventory movements may more closely reflect changes in the underlying supply-demand balance position.

In this regard, we have increased our forecast of the market deficit for both 2004 and 2005. The turnaround in China's net trade position for refined zinc is the most dynamic aspect of the market. Although we expect that China will resume being a net exporter in 2005, the volumes involved will be small. It should be remembered that at the beginning of the decade, Chinese exported in excess of 500,000 tonnes of zinc. High concentrate output will allow a more significant increase to refined output in 2005. However this should be matched by strong demand from the galvanising sector.

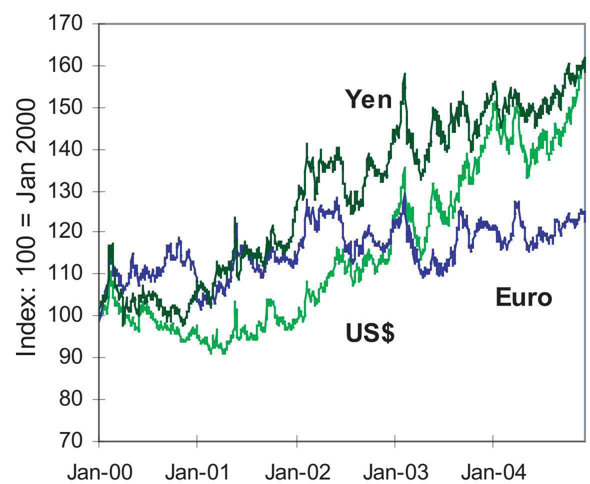
We are now projecting a 300,000 tonne deficit in 2005 compared to our previous projection of 165,000 tonnes. In terms of prices, we have raised our price forecast for next year to 1,100/tonne from $1,050/tonne. Zinc came late to the bull market; however we expect the market to maintain most of its gains in 2006 and project an average of $1,050/tonne in the first half of the year.

Precious metals:

Weakness in the value of the dollar has been the key factor behind the rise in gold and silver prices over the last quarter, with the correlation for gold particularly high. In terms of the dollar, despite a US presidential victory for the candidate seen as the most market friendly, an 8% rally in stocks since the October low and significantly stronger than expected payrolls, the US dollar (USD) has slipped significantly. As well as a re-establishment of short positions trimmed prior to the US election, the twin deficits, a perceived policy of benign neglect by the Administration and worries about a scaling back of other central bank purchases of USD have all weighed on the greenback. While we have retained our targets of 1.35 for EUR/USD and 90 for USD/JPY at end-2005, the weakness has come earlier than expected, and we have revised our end-2004 forecasts to 1.35 for EUR/USD and to 101 for USD/JPY.

Analysis of speculative activity as well as anecdotal evidence strongly supports the view that short-term speculators have often been trading gold on the back of changes in the dollar exchange rate. One reason why gold and silver are seen as a safe haven in times of dollar weakness is that other aspects of the fundamentals of these two commodities (particularly gold) have improved.

Indexed Gold Price



Gold: Luster Fading

Trends in mine production provide psychological support to the market. Mine production from the ten leading producing countries in the first half of the year was 9.2% down y-o-y at 852 tonnes. The largest drop (43%) occurred in Indonesia reflecting the 2003 Q4 pit-wall collapse at the giant Grasberg mine.

In Australia, the processing of lower grade stockpiled ore was partly responsible for the 15% drop in Australian output to 121 tonnes. Mine closures such as Newmont's Bronzewing mine also contributed to the decline. Lower grades and the closure/mothballing of marginal production areas led to a drop in South African production (down 7% to 172 tonnes).

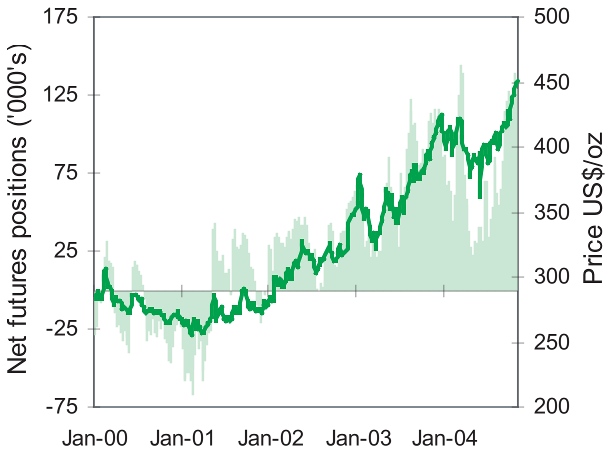
More important to the gold price was the continued process of dehedging by producers. GFMS estimates that the delta-adjusted hedge book at the end of Q2 was 1,997 tonnes, a decline of 252 tonnes y-o-y and 123 tonnes from the position measured at the end of March. The Q2 reduction was largely due to a reduction in forward positions by amongst others, AngloGold Ashanti, Barrick and Harmony. We expect that dehedging continued at elevated levels during the remainder of 2004, a process that should be maintained in 2005.

Sales from the central banks are believed to have declined in the third quarter by around 10% from the previous quarter to 77 tonnes. The sustained downtrend in official sector sales has provided underlying support to the gold market. Recent comments from the Banque de France that it would sell between 500t and 600t of gold under the auspices of the second Central Bank Gold Agreement were taken fully in the gold market's stride, as this had been more or less discounted for some time.

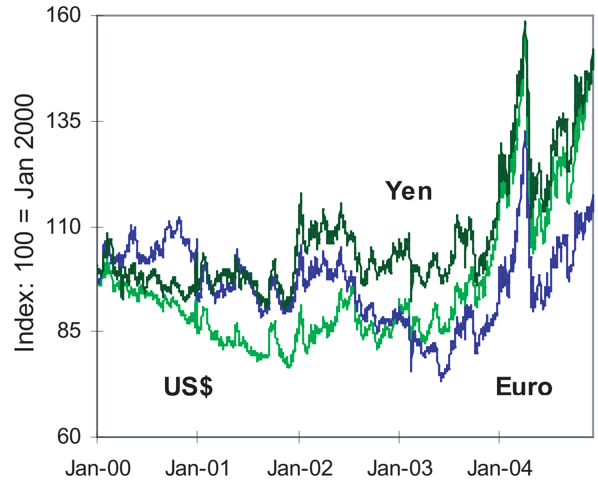
Physical offtake appears to be holding up surprisingly well despite the inflated gold price. East Asian bullion imports have grown strongly in 2004. For example, the jewellery sectors in Thailand and Malaysia have posted impressive gains in comparison with last year with strong export jewellery demand from the Middle East in particular. Consumption is also higher in the key markets such as Japan and Taiwan.

One area where demand has fallen is India largely as a result of legislative amendments regarding letters of credit. In July, the Reserve Bank of India reduced the number of days within which LC gold must be re-exported from 360 to 90 days. Somewhat surprisingly given the high prices individual gold purchases have remained strong in the Indian sub-continent. The Moslem festival of Eid al Fitr coincided with the Hindu festivals (notably Dhanteras and Diwali) and

Gold Non-Commercial Net Positions (Comex)



Indexed Silver Price



this made for exceptionally strong physical offtake. Despite registering record high prices in rupee terms, physical gold purchases were high and jewellers were taking no risks, building inventory despite rising prices.

Somewhat inevitably it is the recovery of investment demand, which has driven the market higher. In some respects the most significant driver of the recovery was the gold price itself. Earlier in the third quarter the strong support made buying into dips a relatively low risk strategy. Since then the price performance has attracted technical and momentum-based buying. The extension of the bull market in the base metals also helped to maintain investor interest. The chart showing the non-commercial net position for gold on Comex highlights the high level of investor interest.

Trading in November was influenced by the launch of the streetTRACKS gold ETF on the New York Stock Exchange. There were rumours that there had been some speculative position taking in advance of the launch. In the event, the launch on November 18 was successful and within a fortnight the amount of gold held in the trust had reached 100 tonnes, and the unexpected high volumes supported the bullish sentiment in the market.

In early December, there were signs of a long-awaited correction in the gold market. With speculative activity at or close to record levels, it will only take a small and temporary shift in the USD/EUR rate to trigger long liquidation. We believe that a constant stream of bullish developments will be required to support a $450 plus gold price i.e. a further significant fall in the dollar, new highs in the oil market and further deterioration of the situation in Iraq. Certainly, the first two points are not in our base case forecast. As such, we see prices slipping from current levels. The $15 decline in the gold price on December 8 reinforces this point. Our average forecast price of $410 per oz in 2005 implies a move back below $400 as the year progresses.

Silver: Shadow Company

Silver has been the star performer during much of the third quarter with the price rallying from $6.67 on September 30 to a high of $8.04 on December 2. The metal has been the beneficiary of a surge in investor activity. Irrespective of the level of investor interest, we tend to view moves above $8.00 as short-lived. The underlying fundamentals are little changed, although good offtake from the electronics sector is helping to offset silver’s declining usage in the photographic sector.

Mine production of silver is rising sharply. Output in the six largest producing countries, which account for around two-thirds of output, is running around 10% ahead of last year’s level. Australia has registered the strongest growth, with sharply higher output at Cannington reflecting record mill throughput resulting from a continuing debottlenecking programme. Q3 silver output at the mine was 12.7% up y-o-y.

BHP Billiton was also primarily responsible for the rise in Peruvian output (the second largest producer behind Mexico). The company recovers a small amount of silver from its restarted Tintaya copper operations, while Q3 production at Antamina was nearly 60% higher reflecting increased silver grades in the copper concentrates produced at the mine. The company's mining operations are focusing on a high-copper low-zinc part of the orebody.

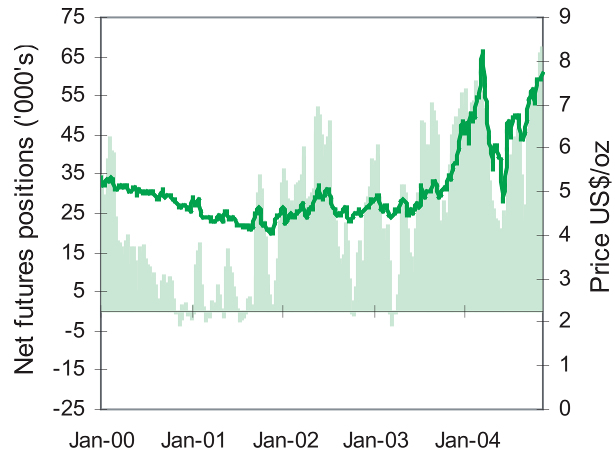
Output in Mexico is registering double-digit gains. Improved results at Grupo Mexico, Wheaton River's Luismin and Pan American Silver have contributed to the increase. Further gains should come at Industrias Penoles. The company is expanding capacity at the giant Fresnillo mine from 995 tonnes to 1,360 tonnes, which should be commissioned during the final quarter of this year.

In our previous Metals Markets report we noted, "there are some signs that the decline in demand from the photographic sector may be even faster than expected". All the evidence since then, suggests that this continues to be the case. However, demand conditions for silver's other end-uses are much more buoyant. Demand from the electronics sector in Asia is strong, while silver's use in jewellery and silverware has held up well given the high silver price.

The festival season benefited silver as well as gold and this helped to underpin prices above $7.25, and to fuel further moves higher over the course of the November. Speculative forces were readily tempted into the market on the back of strong physical demand at this level, and along with an improving technical picture. The $7.50-7.60 band put up some token resistance in the middle of the month, but once this was cleared it (as is often the case) became an area of support.

What may well be instructive about silver's trading patterns was the activity in the final week of November. After running into intermittent profit taking over the course of the month, albeit with a positive underlying tone, silver broke upward to test $7.80 at the end of the week. The significance of this was that the US markets were effectively sidelined ahead of Thanksgiving and underlined the fact that much of the recent profit talking in the market had come from the US, which tends to dominate the speculative activity in the silver market. Over the course of the month the net combined long speculative position on COMEX increased by 17% or almost 2,000 tonnes over the month to almost 13, 600t (or six months' global demand) illustrates the point.

Silver Non-Commercial Net Position (Comex)



The accompanying chart shows that the recent surge in prices is very similar to that which occurred at the beginning of the year. Although we do not necessarily expect a correction to below $5.00 that took place in the first quarter, silver looks vulnerable to a bout of long liquidation. In early December, prices fell quickly from a high of $8.04 to below $7.50. Our average annual forecast for next year of $6.00 suggests plenty of downside potential from current levels. Speculative interest in silver is likely to wane and in late 2005 and in 2006 we expect that silver will revert to trading a narrow range based on $5.00 per oz.