

# Fortis Asian metals monthly

May 2007



Gold, silver, aluminium,  
copper, lead, zinc, steel.

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## Strategic view

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### Introduction

China's economy continues to grow rapidly; official figures put Q1 2007 GDP growth at an annualised 11.1% (10.4% in Q4 2006, 10.6% in Q3 2006), beating independent expectations and reinforcing beliefs that the central authorities will further tighten money supply. China's consumer price inflation hit 3.3% in March, the first rise above 3% in more than two years. In late April the People's Bank of China said large banks would have to increase by 0.5% – to 11% – of their deposits on reserve at the central bank as from 15<sup>th</sup> May. This is the fourth increase in reserve requirements this year and the seventh since June 2006. Interest rate rises are looking less likely in the USA however, where economic growth in Q1 2007 was the weakest in four years; GDP rose 1.3% (on an annual basis), half the figure in Q4 2006.

### Gold

Gold swerved away from \$700/oz yet again in April and so far in May shows little inclination to burst through that level. This see-sawing could persist for some time.

### Silver

Dollar weakness and gold's strength supported silver sufficiently to enable it to nose, very briefly, above \$14/oz in April; however, the fact it failed to consolidate at that level was a sign of enduring relative weakness.

### Aluminium

China's wily producers have shown themselves remarkably skilled at adapting to changed circumstances. Exports of their aluminium products are soaring while those of primary metal have collapsed as a result of a changed tax regime last year. Globally, there is little in supply-demand terms to thrust the metal above \$3,000/t as yet.

### Copper

Surprise, surprise – \$8,000/t once again. But this case of history repeating itself feels very precarious, based as it is on a short data-run of increased Chinese imports. More volatility at high prices looks likely.

### Lead

Lead breached the \$2,000/t ramparts as supply-side disruptions look like proving more enduring than expected. Falling Chinese exports are also supportive.

### Zinc

A fresh stab at \$4,500/t looks plausible, especially if Australian producers continue to encounter local output problems.

### Steel

China takes steps to rein-in its aggressive exports, but as with all super-tankers, changing direction will be slow.

## Forecasts

### Price forecasts

		End-April	1-month	2-month	3-month	12-month
<b>Gold</b>	\$ per oz	677	650-700	>700	>700	650
<b>Silver</b>	\$ per oz	13.50	13.40-14.20	<14	<14	13
<b>Aluminium (3-month)</b>	\$ per tonne	2,850.50	2,750-2,850	2,800	2,800	2,800
<b>Copper (3-month)</b>	\$ per tonne	7,771	7,500-8,200	>8,000	>8,000	7,000
<b>Lead (3-month)</b>	\$ per tonne	2,010	1,900-2,200	1,900	1,900	1,500
<b>Zinc (3-month)</b>	\$ per tonne	3,706	3,700-4,300	3,500	3,500	3,000
		2-years	3-years	4-years	5-years	6-years
<b>Gold</b>	\$ per oz	550	490	450	450	400
<b>Silver</b>	c per oz	12	11	10	10	10
<b>Aluminium (3-month)</b>	\$ per tonne	2,000	2,000	2,000	1,900	1,900
<b>Copper (3-month)</b>	\$ per tonne	5,000	5,000	4,000	4,000	4,000
<b>Lead (3-month)</b>	\$ per tonne	1,000	1,000	900	900	800
<b>Zinc (3-month)</b>	\$ per tonne	2,500	2,000	2,000	1,900	1,900

Source: Virtual Metals

## Analysis

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### Could climate change worries help aluminium?

Aluminium has been one of the least interesting metals – in terms of investment return – for more than a year. While demand for aluminium is still growing reasonably strongly – certainly more than 5% this year – the metal has not witnessed for some time the same sort of supply-side problems that have helped nickel, tin, copper and even lead achieve tremendous price gains. Some aluminium industry participants have decided that it is time to give their product a bit of a PR boost. Hence, the new boss of the latest aluminium behemoth, Russia's UC Rusal, Alexander Bulygin, told the German business newspaper *Handelsblatt* in April that he believed aluminium could rise to \$4,000/t in 2008. In his view, the boost will come from higher demand fuelled by climate change worries, particularly from vehicle manufacturers seeking ways to reduce the weight of cars and thus improve fuel efficiency.

This view is shared by some of UC Rusal's north American rivals. Reuters reported (27<sup>th</sup> April) that Misha Riveros-Jacobson, president of Alcoa's automobile and truck structures division, told the Aluminum Association's spring meeting in Nashville: "The only way to regulate carbon dioxide emissions in vehicles is to get better fuel economy ... this definitely provides new opportunities for lightweight materials and for aluminium to get in the game to get creative in innovating and designing for fuel-efficiency." We can expect to hear more of the unattractive buzz-word "lightweighting" – which essentially means less steel and more aluminium.

There certainly *is* a trend of rising aluminium use in road transport vehicles. In 1973, a typical car contained 36 kg of aluminium; this has since risen 400% to 147 kg and, last year for the first time, aluminium displaced iron as the second most-used material in a car, behind steel. According to Riveros-Jacobson, over the next ten years tightening legislative controls will mean that car manufacturers spend much more of their time "lightweighting" their vehicles. In her view, 218 kg of every new vehicle produced in countries with stringent CO<sub>2</sub> emission restrictions – the EU, north America and Japan especially – will be, as she put it "up for grabs ... That's huge. We did the math and that's 7,500 billion pounds, if you take just the vehicles built in North America," she added.

### Maybe yes – maybe no

The maths she did was either wrong or incorrectly reported by Reuters – 7,500bn pounds of aluminium translates into more than 3.4bn tonnes, rather more than current global annual production of some 25 Mt.. At 218 kg per vehicle those 3.4bn tonnes equate to more than 15.6 *billion* new vehicles on the USA's roads over the next decade; American drivers love their new cars, but not that much. Either she or Reuters are out by a factor of 1,000. On current new vehicle sales in the USA, of some 16m vehicles a year, the amount of new aluminium demand – if all that amount, 218 kg, was aluminium and not shared with plastics or new high-tension steels – would be closer to 3.4 Mt ; which is significant enough, without exaggeration (or misquotation).

In any case, the changes wrought by climate change anxieties, misguided or not, to demand for all commodities – aluminium included – will resist such easy extrapolation. In the case of the aluminium industry's current wave of optimism concerning likely increased demand to achieve greater car fuel efficiency levels, there are some counter-balancing possibilities. For one thing, if achieving much greater fuel efficiency is the goal, there are simpler, faster and probably cheaper ways of achieving that than a mere substitution of steel and iron by aluminium. Less driving seems a racing certainty in countries with jammed roads, such as the UK, where road congestion charges seem an inevitability. Drivers choosing smaller vehicles is another rising trend, as governments (again, the UK is a good example here) tax bigger vehicles more heavily. These trends may, if anything, drive aluminium consumption down or at least off-set the widening use of

aluminium in cars. Governments everywhere are also beginning to tax air travel more heavily and while large passenger jets are not going to grind to a halt overnight, we can expect more legislative measures to make air travellers pause for thought before buying those plane tickets. And in this key area for aluminium demand, passenger aircraft, fresh developments to the design and building of planes are also set to erode aluminium consumption. The next Big Thing for aircraft manufacturers – again driven by an increasingly urgent desire to reduce fuel consumption – are planes made from carbon fibre composite materials, which are much lighter and therefore more fuel efficient. Boeing's newest creation is its 787 'Dreamliner' passenger jet, which aims at using 20% less aviation fuel than any competitor. Boeing plans that 50% of the primary structure of this plane will be made from composite materials, eliminating about 1,500 aluminium sheets per plane, a 30% reduction in aluminium compared with the conventional Boeing 777. This innovation is just around the corner – Boeing has an order book from more than 28 airlines for more than 400 B-787's at a total price of \$55bn. Alcoa is taking comfort from its suggestion that while overall aluminium volumes will be much less on the B-787 than previous large passenger aircraft, the value of its metal used on the plane will rise because of its higher use of sophisticated (and more expensive) aluminium alloys. This may well be true but, for the commodity itself, aluminium's share of this important sector is diminishing.

## Focus

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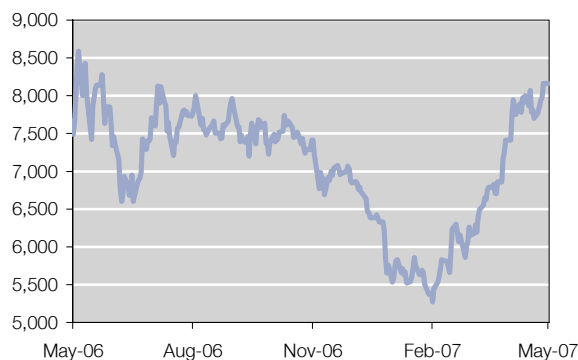
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### Copper – history repeating itself?

*With the London Metal Exchange copper price bursting through \$8,000/t once more, hopes have been raised that there is more to come. Our view however is more cautious. We feel that that it is premature to argue that the copper price will challenge last year's peak.*

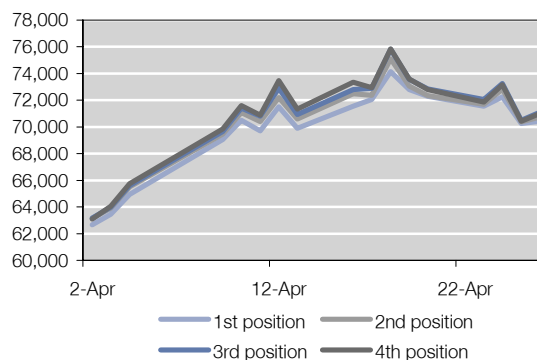
What price copper? It's a question that is today wide open. If all it takes to push the price back up to within a stone's throw of the May 2006 record of \$8,590/t is a month or two of bullish data from China, then the copper market is more prone to sentiment than might be considered rational. Some estimates now in the market suggest that copper will spike to almost \$12,000/t in 2007, but while we do not consider a slide back to \$4,000/t remotely feasible this year, there is equally nothing on the horizon to support the price rising by another \$4,000/t from its current level. The Chinese data for March was certainly strongly supportive; China's customs bureau said towards the end of April that the country's refined copper imports in March hit their highest level ever, with total imports of 202,955t, exceeding 200,000t for a single month for the first time. In the same month its refined copper exports dropped to 3,094 tonnes, 93% lower than March 2006, when China's State Reserves Bureau or SRB exported copper to cover short futures positions on the LME. Cumulatively, China's net imports of refined copper in Q1 2007 totalled 478,400t, almost 130,000t more than Q1 2006.

3-month LME copper price (\$/tonne)



Source: Reuters Ecowin

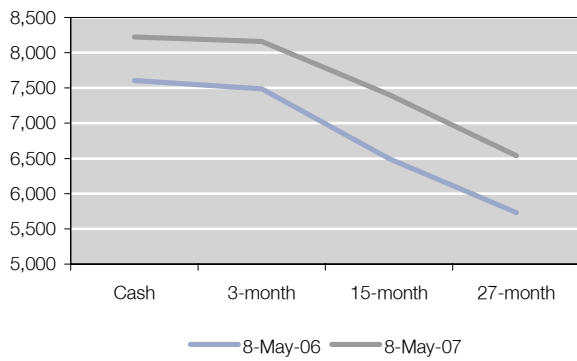
Copper price, SHFE (Yuan/tonne)



Source: Reuters Ecowin

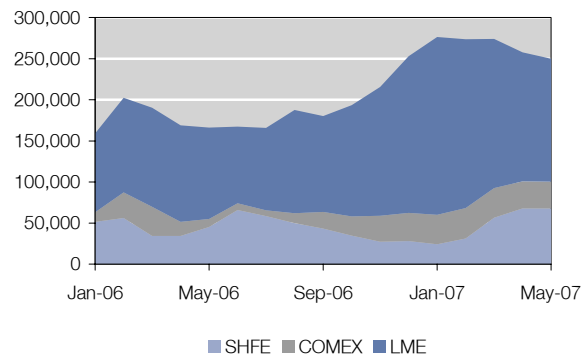
Yet, as we saw throughout 2H 2006, when copper slid all the way back down to \$6,330/t (and then fell even lower at the start of 2007), copper is more highly-strung than an Arab race horse. Little weight can be placed on a single month's (or even a full quarter's) imports into China; this metal was no doubt bought much earlier this year, when prices were much lower. Some additional price support is coming from LME warehouse stocks which, having regained tonnage in late 2006 and early 2007, have once more been falling – down by more than 20% since early February to 152,025t by 3<sup>rd</sup> May, less than four days' global consumption. Comex stocks, too, are currently at their lowest since last December.

Copper yield curve, LME, now and one year ago



Source: Reuters Ecowin

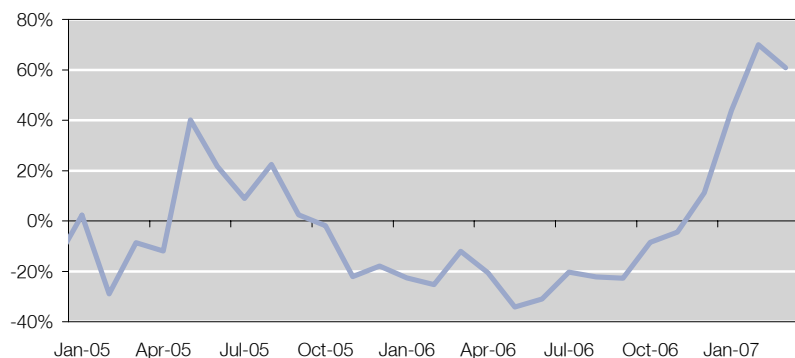
Stocks on leading exchanges, tonnes



Source: Reuters Ecowin

There is, however, plenty of fog around, making the underlying trend in copper prices very difficult to discern right now. For one thing, while China has once more been importing significant amounts of refined copper, its own refined copper production is also motoring along quite nicely. The country's national statistics bureau published data in April showing that its output of refined copper for Q1 2007 rose 4.2% (against the same period last year) to 701,700t. Much more difficult to get a handle on is precisely where China is actually putting all these extra tonnes of imported refined copper. Traders in China have been muttering that this extra quantity of refined imports is not, as yet, being reflected by metal actually being seen in the local Chinese market. And forecasts from the Chinese metal trader Minmetals do not support the view that China's recent surge in refined copper imports is likely to be sustained. It suggested in April that China's demand for refined copper may increase from 3.8 Mt in 2006 to as much as 4.7 Mt by 2010 – decent demand growth but the additional 300,000t/year should not be difficult to meet, given the plethora of mine expansions currently underway in different parts of the world. Latest data (April) from the International Copper Study Group (ICSG) also suggests that, while Chinese apparent consumption is rising strongly, the global refined copper market in January was in a modest 40,000t surplus. It put the rise in world refined copper usage at an estimated 6% in January (compared to January 2006), with this overall growth figure mainly accounted for by a 27% rise in China, one of 17% in India, and a rise of 9% in Japan. So why this import surge into China right now?

China imports unwrought copper (% change yoy)



Source: Reuters Ecowin

When the obvious has been excluded, only the glaringly obvious is left as a plausible explanation. While China's SRB maintains a very tight-lipped stance about its sales and purchases of copper, it is an open secret last year that it almost completely ran-down its copper reserves in the context of historically high prices, thereby helping cool down prices that at one point looked as if they

might do what nickel has done and race ahead of all expectations. The most plausible explanation for the remarkable rebound so far this year in Chinese refined copper imports is that the SRB opportunely took advantage of the relatively much lower copper price in January and February 2007 and switched from being a seller to a buyer, replenishing its copper stocks. If this is even part of the explanation, then when the SRB turns off the tap – as it will certainly do when it has reached its own undisclosed target – the current high price could plunge once more.

### **Yes – but only superficially**

A further reason why there is a case for arguing that this year's copper bull-run will be shorter-lived than last is the absence (so far) of any major supply-side disruptions. 2006 saw a rash of labour contracts being renegotiated in major producing countries, Chile especially, and nerves over the possibility of long strikes helped shift the price higher in 1H 2006. These contracts were settled and thus wage and other disputes should be less of a price-supportive factor this year. There still have been some supply-side disruptions, the most recent being Indonesian workers at Freeport-McMoRan's Grasberg mine registering their discontent in mid-April over welfare payments, although this has yet to interrupt productivity. There have also been some reports of lower-than-usual mine output. Zambia's refined copper production in Q1 2007 has been more than 10% lower when matched against the same period of 2006, at 112,824t, due to flooding in the copper-belt region. Antofagasta, the London-based owner of three Chilean copper mines, reported that its production in Q1 2007 dropped year-on-year, but only by 1%, to 105,900t. In April Xstrata reported that two shipments of copper from its Bajo de la Alumbrera mine in Argentina will be delayed until May, again following flooding. These however are all minor when compared with the sort of disruptions we saw in 1H 2006.

The biggest potential disruption to manifest itself so far in 2007 seems to have fizzled out before it ever really got off the ground. In Peru, the world's third-biggest copper producer, the National Federation of Metallurgic and Steel Miners – the country's biggest federation of mineworkers – called off a five day work stoppage on 4<sup>th</sup> May after failing to persuade other, less well-organised mining unions to join the strike; of the country's 120,000 mineworkers only about 5% joined the strike. It is possible that the simmering disgruntlement of mineworkers may see a resumption of work stoppages later this year but so far there seems little appetite for a conflict with management. This reluctance on the part of mineworkers in Peru to take strike action is in keeping with their record; the last major national strike happened in 2004, but it was very short-lived, the workers returning to their tools after 48 hours. On 5<sup>th</sup> May workers at two Peruvian copper mines and a smelter – all owned by Southern Copper – decided to call off their strike over working conditions, removing the final serious supply-side story to encourage bullishly-inclined speculators. Peru's biggest mining association, the National Society of Mining, Petroleum and Energy, lowered its estimate for the country's growth in copper production this year from its previous 13% to 10%, as a consequence of the strike. It now estimates Peru's total copper output in 2007 will be 1.15 Mt, versus 1.05 Mt in 2006.

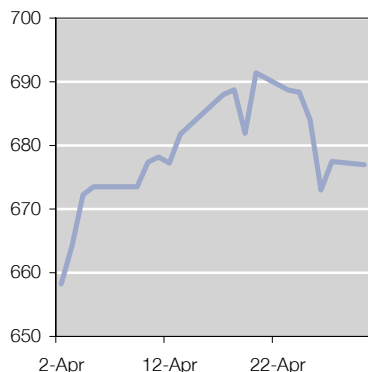
In the world's most important copper producing nation, Chile, production is strongly growing – up 13.5% in March (compared to the same month in 2006), according to the country's national statistics agency, at 502,106t. Its Q1 total output this year was almost 1.34 Mt, almost 7% higher, year-on-year. Last year Chile's refined copper output grew by less than 1%, thanks to poorer grades mined and industrial disruption. Copper speculators have scarcely been moved in their view of the copper market during the short-lived Peruvian stoppage; on Comex, the net short position of the non-commercials up to the week ending 24<sup>th</sup> April totalled 8,481 lots, while by 4<sup>th</sup> May this had been reduced by a mere 151 lots. In other words, the speculative market would also appear to be taking a sceptical view of copper at or around \$8,000/t.

### **Beware the unexpected**

While China's refined copper imports in March grabbed most of the attention, little notice was given to some other aspects of its copper data. In March, China's imports of copper concentrates (bulk weight, not contained metal) also rose substantially, by almost 16%, against those of March 2006, to more than 1.035 Mt. This reverses a trend which saw such imports fall by 11% during 2006 and is a sign that Chinese copper smelters are gearing up to produce more refined metal, both for the domestic market and also undoubtedly, longer-term, to shift increasingly to greater exports, in emulation of the export success of their colleagues in the primary aluminium business. While it is quite likely that we will see a drop-off in China's refined copper imports in the coming months, it may well be that we see a concomitant growth in its appetite for copper concentrates. This re-balancing of the global copper trade could create its own, related but different, uncertainties and provide an alternative kind of support for copper above \$7,000/t. Global smelter capacity is growing strongly, particularly in China, which will lead to lower treatment and refining charges as more smelters chase for bites out of a global concentrates' pie which is now growing less rapidly than smelter capacity. The background to all this, of course, is the global macro-economic outlook. Conflicting economic data from the USA means the trend there – economic recovery and stronger growth, or a retreat towards recession? – is still unclear. If history is any guide then a resurgence in American economic confidence usually accompanies the arrival of a new President; but the cavalry may not arrive in time on this occasion. In conclusion, we expect more copper price volatility at high levels, fluctuating between \$7,000/t-\$8,000t, for Q2 2007. By the middle of the year, however, there may be some much clearer indications of China's demand for both refined copper and copper concentrates, as well as a better indication of the direction of the USA economy. Until these indicators are in place copper will remain in investment limbo.

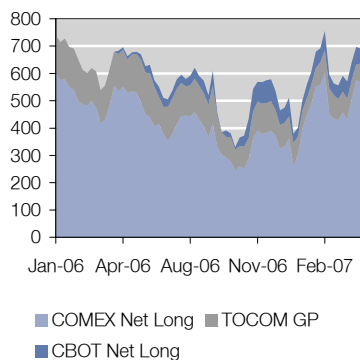
## Gold

Gold price (\$/oz)



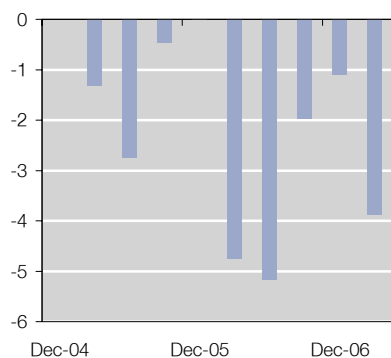
Source: London Bullion Market Association

Futures exchange - Net long positions



Source: Virtual Metals from CFTC, TOCOM

Quarterly Gold dehedging (Moz)



Source: Virtual Metals/Mitsui/Halliburton

### News

- May 4<sup>th</sup>: Gold hedging by mining companies fell 3.9 Moz to 36.7 Moz in Q1 2007 according to our latest estimates; we expect a total decline in 2007 of 8 Moz-11 Moz.
- May 1<sup>st</sup>: Barrick Gold reported a loss of \$159m for Q1 2007 (vs. profits of \$224m for the same period in 2006), attributable to its decision to close its non project-related hedge book at a cost of \$557m. Its Q1 production was 2.03 Moz and it expects total output in 2007 to be within its previous forecast of 8.1 Moz-8.4 Moz.
- Apr 23<sup>rd</sup>: Highland Gold Mining Ltd, Russia's fourth-largest gold miner, reported a loss of \$96.4m for 2006, following a fatal fire at its Darasun mine in Eastern Siberia last year. Highland accounted for 3% of all gold produced in Russia last year, with output of 167,544 oz. Output this year is likely to be between 160,000 oz-170,000 oz. Russia's overall gold output fell by 6% to 21.05t in Q1 2007, vs. 22.39t for Q1 2006.

### Analysis

- The ever-elusive \$700/oz

They seek it here, they seek it there, but \$700/oz slipped through the net once again in April, pulled back by the US dollar showing surprising strength; on 1<sup>st</sup> May, relatively healthy manufacturing data from the USA freshened up the dollar and gold dropped 1%, the June-dated Comex contract settling \$6.20 lower at \$677.30/oz, having traded earlier that day in a \$674.60/oz-\$682.30/oz range. These high and volatile prices are deterring physical buyers in key offtake centres; Turkey's gold imports in April fell 14.2% to 12.2t against the same month last year, and the overall figure for the first four months of 2007 shows a 2% decline, year-on-year, to 49.4t. India's imports in 2007 are likely to be flat in 2007, year-on-year, according to MMTC, the country's state-run (and biggest) gold importer. Spot gold prices hit a 26-year peak of \$730/oz last May and although they have never been anywhere close to that since, buyers are wary. Gold sales in the United Arab Emirates could thus fall by about 10% in volume (although values are rising on the higher price) for the second consecutive year in 2007 due to price volatility, according to some local traders. Meanwhile QVC, the influential TV shopping channel retailer, said in April it is considering reducing the airtime allocated to gold jewellery because high prices have weakened its appeal for viewers. Official sector gold sales by the signatories of the European Gold Agreement (EGA) by the end of April, 31 weeks into the EGA year (October to September) have been 208.2t, somewhat short of the 233.3t at the same stage last year.

### Outlook

Market talk subtly altered its tone in the second half of April, from being enthusiastic about \$700/oz being an inevitability to consideration that, having made several failed attempts, it might now begin to soften more noticeably. Much hinges on the US dollar and the USA economy, which is proving remarkably robust in difficult times. If the worst has passed for America's economy, gold will progressively suffer. Short-term London daily pm fix: \$650/oz-\$700/oz.

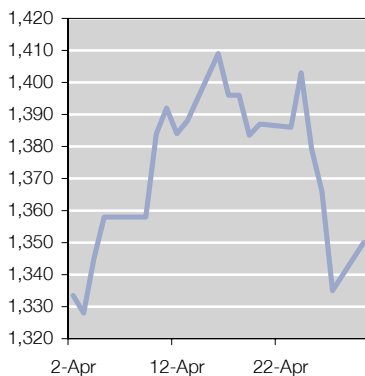
Market data (April unless stated)

Prices	US\$/oz:	Yuan/kg	Yen/gr	ETF investment	Ounces	Lease rates	1m	3m	6m	12m	Option volatility (end month, %)	
Average	679	168,769	2,597	US	301,895	Average	0.11	0.14	0.17	0.17	1-month	14.75
High	691	171,561	2,643	UK	29,257	High	0.12	0.15	0.18	0.20	3-month	15.50
Low	658	163,676	2,493	Aus	3,858	Low	0.10	0.12	0.15	0.13	6-month	15.90
				S.Africa	-						12-month	16.30

Source: Prices: London Bullion Market Association, Others: Virtual Metals

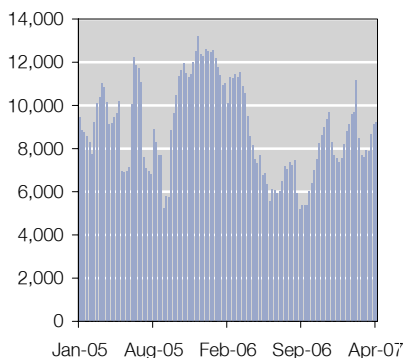
## Silver

Silver price (cents/oz)



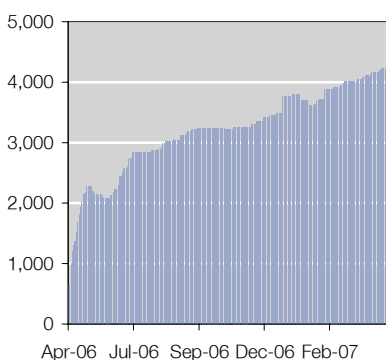
Source: London Bullion Market Association

Comex: Non-commercial net position (tonnes)



Source: Comex

Silver ETF offtake (tonnes)



Source: BGI website

### News

- May 3<sup>rd</sup>: Coeur D'Alène said it would buy two junior miners – Bolnisi Gold and Palmarejo Silver and Gold – in agreed deals that should be concluded by Q3 2007 and will raise its total production by 2009 to 32 Moz.
- Apr 26<sup>th</sup>: Silver Wheaton reported Q1 2007 profits rose 80% on higher silver sales and prices, at \$24.9m, from the sale of 3.3 Moz of silver, against profits of \$13.8m on the sale of 2.7 million ounces of silver in the same quarter for 2006. Silver Wheaton expects total 2007 sales of 15 Moz, rising in 2009 to 23 Moz and by 2012 to more than 28 Moz.
- Apr 23<sup>rd</sup>: Polymetal, Russia's biggest (and the world's fifth biggest) silver miner, expects its gold output to decline in 2007 (to 230,000 oz-250,000 oz against 256,000 oz in 2006), while its silver production will be between 16 Moz-18 Moz, compared to 17.3 Moz in 2006. Polymetal's silver output in Q1 this year fell by 16.6% to 3.554 Moz from 4.261 Moz in Q1 2006, primarily due to lower metal content in the mined ores.
- Apr 25<sup>th</sup>: Hochschild Mining reported output of 2.6 Moz (and 43,000 oz of gold) in Q1 2007 and said it was on track to deliver 26 Moz of silver equivalent in 2007, which would be a rise of 11% and equate to about 14 million ounces of silver and 200,000 oz of gold.

### Analysis

- Silver Wheaton adds volume

Goldcorp agreed to sell 25% of the silver produced at its Penasquito project in Mexico to Silver Wheaton for \$485m. The project is due to start production late 2008 and achieve full operation a year later. Goldcorp, one of the world's biggest gold producers, owns 49% of Silver Wheaton, which already buys all of the silver produced at Goldcorp's mines in Mexico. Silver Wheaton additionally agreed to pay Goldcorp an ongoing per-ounce operating fee of the lesser of \$3.90, subject to annual inflationary adjustments, and the prevailing market price per ounce of silver. Following this deal Silver Wheaton expects to have annual silver sales of 22 Moz in 2009, increasing to more than 26 Moz by 2012. Based on a feasibility study from July 2006, the Penasquito project has reserves of 17 years of gold, silver, zinc and lead production, with peak annual silver delivery to Silver Wheaton of 8.5 Moz. In Peru, where silver production has recently been rising strongly, a national strike hit parts of the mining industry. In the main, though, mining companies said they are unsure whether large enough numbers of miners are involved in the strike to have a negative impact on production. Peru's second largest silver miner, Hochschild Mining, said the strike had a limited effect.

### Outlook

**By the end of April Comex silver speculators had cut their net long position by 17% to 31,725 lots, coinciding with a slump in silver back down to \$13.705/oz (the July-dated contract on Comex) on 1<sup>st</sup> May. Silver has largely followed in gold's footsteps so far this year and this pattern should endure in the short-term. Investors in the ETF are staying the course so far, despite recent volatility. Short-term London daily fix: \$13.40/oz-\$14.20/oz.**

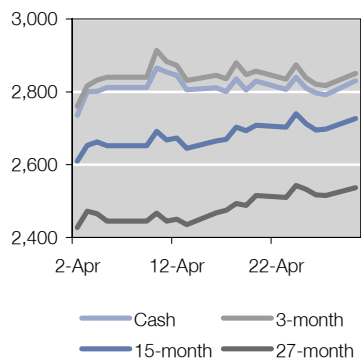
Market data (April unless stated)

Prices	c/oz	Yuan/kg	Yen/gr	Imports	kg	Lease rates	1m	3m	6m	12m	Option volatility (end month, %)	
Average	1,373.5	3,416	53	USA (Feb)	462,737	Average	0.01	0.13	0.53	1.09	1-month	24.50
High	1,409.0	3,503	54	Japan (Mar)	291,845	High	0.04	0.16	0.59	1.17	3-month	26.50
Low	1,328.0	3,301	51	China (Mar)	550,588	Low	-0.01	0.10	0.49	1.02	6-month	28.00
											12-month	28.75

Source: Prices: London Bullion Market Association, Others: Virtual Metals

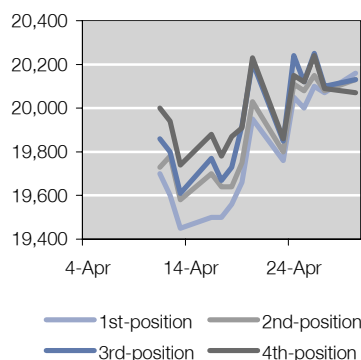
## Aluminium

LME aluminium price (\$/tonne)



Source: London Metal Exchange

SHFE aluminium price (yuan/tonne)



Source: Reuters Ecowin

LME and SHFE aluminium stocks (tonnes)



Source: Reuters Ecowin

### News

- May 9<sup>th</sup>: Trimet, the Hamburg-based independent aluminium producer, said it would re-start its mothballed HAW smelter; it should reach full capacity, of 133,000t/year of primary aluminium, by the end of 2007.
- May 7<sup>th</sup>: Alcoa launched a hostile bid for Alcan, valuing the company initially at \$27bn. If the two merged the combined entities would control an estimated 25% of global alumina and primary aluminium markets.
- May 7<sup>th</sup> European Union ministers approved proposals to halve (to 3%) the EU-wide tariff on imported primary aluminium with effect by mid-May.
- Apr 19<sup>th</sup>: China's aluminium products output rose 43% in Q1 2007, year-on-year, according to the country's statistics bureau. Alumina output rose 53.7%.
- Apr 17<sup>th</sup>: Russia's United Company Rusal, reported Q1 2007 production rose 2.5% over the combined production of its three shareholders a year ago, at 999,415t. Output of alumina rose 0.2% percent to 2.74 Mt.

### Analysis

- China's aluminium products exports soar

Latest figures from China show just how skilled the Chinese aluminium industry is at adapting to attempts by the central planning authorities to use fiscal measures to curtail expansion of this energy-hungry business. While the country's primary aluminium exports dropped 87% in March (measured against the same month in 2006), to 10,362t, its exports of aluminium products have risen 89% in Q1 2007 to 408,814t. The imposition of a 15% export tax late in 2006 on primary aluminium has certainly had the desired effect – but also had unexpected consequences. Total stocks of all forms of aluminium at western world smelters (excluding finished end-products) fell to 2.887 Mt at the end of March, according to the International Aluminium Institute (IAI). That compares with a revised 2.906 Mt in February and 2.997 Mt in March 2006. Unwrought metal stocks fell to 1.522 Mt versus a revised 1.570 Mt and 1.590 Mt respectively. Daily average primary aluminium output in March, excluding China, rose to 67,100t compared with 66,800t in February. Total production in March was 2.08 Mt, compared with 1.87 Mt in February and 2.024 Mt in March 2006. Including China, daily output was 98,200t in March, down from a revised 100,200t in February and against 88,000t in March 2006. Output in the whole of March, also including China, was 3.045 Mt, versus a revised 2.806 Mt in February.

### Outlook

**China's aluminium industry is giving the country's central planners a lesson in Darwinian free market survival; tax measures alone will not be enough to stem the export flow of metal, now almost all via aluminium products. We consider prices will be range-bound for some to come, with many new projects set to come on-stream in the next two years. LME 3-month contract short-term: \$2,750/t-\$2,850/t.**

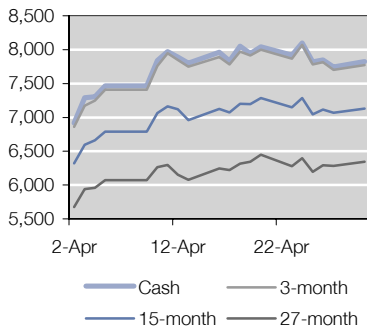
Market data (April unless stated)

LME prices (\$/t)	Cash	3-month	15-month	27-month	Stocks (tonnes)	LME	SHFE	Prod (kt)	Nov	Dec	LME Open Interest (contracts)
Average	2,813	2,844	2,680	2,480	Mar-07	811200	17,293	Europe	655	727	Aluminium 805275
High	2,865	2,914	2,740	2,543	Apr-07	826525	18,973	Americas	611	689	
Low	2,735	2,760	2,610	2,427				Asia	283	311	
								Other	321	353	
								Total	1870	2080	

Source: London Metal Exchange, except Production: International Aluminium Association

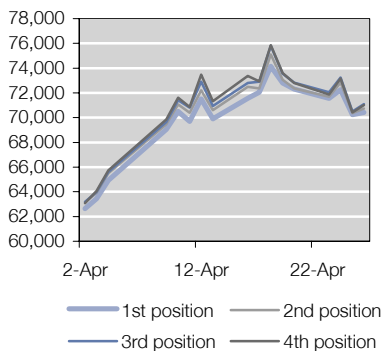
## Copper

Copper price (\$/tonne)



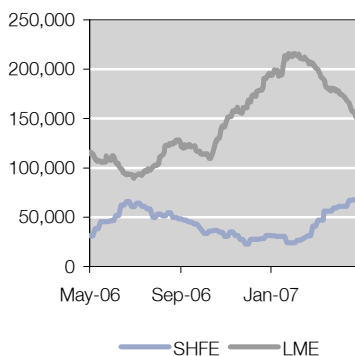
Source: London Metal Exchange

Copper price, SHFE (Yuan/tonne)



Source: Reuters Ecowin

Copper stocks (tonnes)



Source: Reuters Ecowin

### News

- Apr 30<sup>th</sup>: Mexico’s copper production rose 7.7% in February (vs. February 2006) to 31,210t, according to the National Statistics Institute.
- Apr 30<sup>th</sup>: Anglo American won the concession for Peru’s Michiquillay copper project with a bid of \$403m. The government has estimated the project will need at least \$700m in investment. Michiquillay lies in the northern district of Cajamarca and has reserves estimated at 544 Mt with an ore-grade of 0.69% copper.
- Apr 23<sup>rd</sup>: Norilsk Nickel updated its Bystrinskoye ore deposit resources, stating they amount to 2.39 Mt of copper in measured, indicated and inferred resources.
- Apr 19<sup>th</sup>: Rio Tinto reported Q1 2007 refined copper output of 101,600t, 19% higher year-on-year as a result of enhanced production from a new plant at its Escondida mine in Chile.
- Apr 16<sup>th</sup>: Chile’s Codelco, the world’s biggest copper miner, said its \$907m Gaby copper was now 50% built, slightly ahead of schedule. It will produce its first cathode in March 2008.

### Analysis

- Spikes above \$8,000/t into early May

The LME’s benchmark 3-month contract settled at \$8,000/t on 20<sup>th</sup> April, having threatened to do so for the two previous days (trading as high as \$8,100/t on the 18<sup>th</sup>), and settled even higher, at \$8,069.50/t on the 24<sup>th</sup>. April ended much more weakly however, with the 3-month contract closing the month at \$7,771/t. Several factors underpinned the rise, including a possible strike at Freeport McMoRan’s Grasberg mine in Indonesia, and shrinking LME inventories, down about 20% at the end of April from the start of the year. Additional support came from China’s import data, which showed refined copper and copper-product shipments to China rose 56% in the first two months of the year (compared with the same period in 2006) to 468,849t. In March alone, refined copper imports rose to an all-time high, with total inward-bound shipments exceeding 200,000t. China’s biggest copper producer, Jiangxi Copper, said in April it plans to increase its smelting capacity by 75% to 700,000t by the end of 2007. Jiangxi said its 300,000t/year expansion at the Guixi smelter would be completed by the end of 2007. The International Copper Study Group (ICSG) said the global refined copper market was in surplus by 40,000t in January, 26,000t more than the same month of 2006. It put world refined copper output in January at 1.547 Mt, while usage totalled 1.507 Mt. It also saw world refined copper usage in January as being 6% up on the same month last year – Chinese usage increased by 27%, while Indian and Japanese usage were up by 17% and 9% respectively.

### Outlook

**The big question right now for copper investors is how much China’s refined copper import surge is ‘authentic’ demand, against how much has been bought to replenish the country’s state reserves’ stockpile. We expect this level of imports to drop in the coming months and the price will – barring more supply-side disruptions – fall accordingly. LME 3-month contract short-term: \$7,500/t-\$8,200/t.**

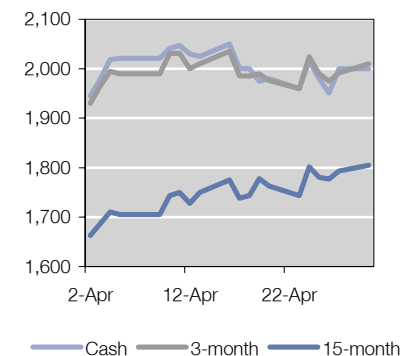
Market data (March unless stated)

LME prices (\$/t)	Cash	3-month	15-month	27-month	Stocks (tonnes)	LME	SHFE	SHFE	Contracts traded (avg)	LME Open Interest (contracts)
Average	7,738	7,681	6,997	6,188	Mar-07	181,075	28,126	Feb-07	59,653	Copper 367,726
High	8,100	8,069	7,285	6,450	Apr-07	156,550	24,071	Mar-07	55,079	
Low	6,916	6,850	6,320	5,675						

Source: London Metal Exchange

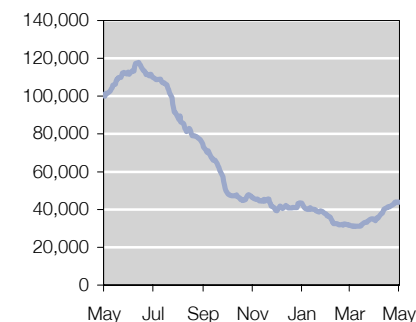
## Lead

LME lead price (\$/tonne)



Source: Reuters Ecowin

LME stocks, tonnes



Source: Virtual Metals from LME

### News

- Apr 13<sup>th</sup>: Canada's Ivornia – which earlier declared force majeure on deliveries from its Magellan mine in Australia as a result of health fears in the mine vicinity – said it might take up to four months to find new shipping arrangements.

### Analysis

- Price climbs on continued supply-side problems

Lead prices remained very strong in April, buoyed up by continuing supply problems from Australian miners, and data from China showing that its Q1 2007 exports were very weak. Q1 2007 Chinese refined lead exports were 43,278t, almost 72% lower year-on-year, while its imports rose 10.6% to 6,811t. The drop in exports is partly explained by China's having last September removed a 13% tax rebate on refined lead exports. Lead's real (inflation-adjusted) high was notched up in 1979, when it climbed to \$2,800/t; it touched a new nominal high of \$2,045/t on 10<sup>th</sup> April. We believe that lead has become significantly overvalued and, once seasonally lower demand kicks in during Q2-Q3 2007, LME stocks will rise and the price will drop significantly from its current levels. LME stocks hit a low point in mid-March and are about 70% lower than the recent peak of 117,900t in mid-2006. Moreover – although doubts linger as to the intention's of the country's President, Evo Morales, for Bolivia's mining sector – Apex Silver's San Cristobal mine in Bolivia is due to begin shipments in Q3 output that might reach 85,000t/year. At the same time, consumption has been rising, according to the International Lead and Zinc Study Group (ILZSG), which in April put global refined lead consumption at 1.444 Mt in the first two months of 2007, up from 1.283 Mt a year earlier. Over the same period refined production rose to 1.392 Mt from 1.326 Mt, giving a global lead market deficit of 52,000t in January-February. Additional data from the ILZSG showed February producer stocks fell to 125,000t from 133,000t in January. The ILZSG latest data also showed strong growth in refined production in the first two months of 2007 in China, up 12.7% year-on-year. Chinese usage of lead in January and February rose by 149,000t or 45.6% year-on-year, the ILZSG said.

Sings of an easing of demand in Europe came from falling physical lead premiums in the region in April, when duty-paid lead premiums in Rotterdam were \$180/t-\$200/t above cash, down from a peak of around \$230/t at the end of March. Spot premiums look most likely to fall.

### Outlook

**Some talk is now in the market of lead prices rising as high as \$3,500/t, outstripping aluminium and possibly even zinc; we do not consider prices at that level to be likely or, if achieved, sustainable for more than a very brief period. Problems with Australian supply hover over the market and until those are resolved there is scope for prices to sustain themselves around \$2,000/t; but, given a resumption of supply from Australia and the normal seasonal easing of demand, much higher prices look unsustainable in the mid-term. LME 3-month contract short-term: \$1,900/t-\$2,200/t.**

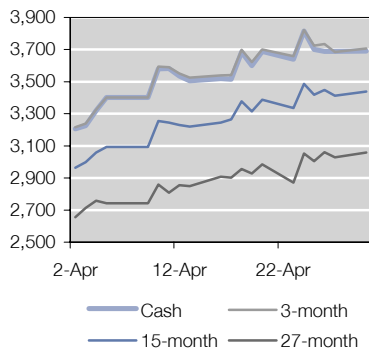
Market data (April unless stated)

LME prices (\$/t)	Cash	3-month	15-month	LME stocks	Lead	LME Open Interest (contracts)
Average	2,003	1,993	1,745	Mar-07	33,675	Lead 84,036
High	2,050	2,035	1,805	Apr-07	42,475	
Low	1,945	1,930	1,663			

Source: London Metal Exchange except Option volatility: Virtual Metals

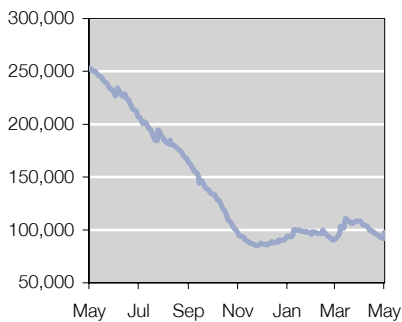
## Zinc

LME zinc price (\$/tonne)



Source: Reuters Ecowin

LME stocks, tonnes



Source: Reuters Ecowin

### News

- May 2<sup>nd</sup>: Some confusion reigned over whether or not Xstrata can go ahead with its planned conversion from underground to open-cast mining at its McArthur River zinc mine in Australia. In April, the supreme court of the Northern Territory – where the mine is situated – overturned an earlier approval, but the state's government has again authorised the project, although an appeal has been launched.
- Apr 23<sup>rd</sup>: China's biggest zinc producer by output, the state-run Hunan Nonferrous Metals, said it plans to raise zinc and lead production by 10% in 2007. This follows last year's 12.01% increase in its zinc output (to 402,222t).

### Analysis

- Uncertainty hangs over Xstrata's McArthur River

Xstrata stopped mining at its McArthur River lead-zinc operation in Australia following the ruling by the Northern Territory's Supreme Court. The court's judgement – which overturned an earlier ruling giving Xstrata the permission it sought – has raised the possibility once again that the mine will eventually be closed, as Xstrata has threatened if it does not get legal rights to go to open-cast operations. Xstrata has said it will meanwhile continue producing concentrate from stockpiled ore, sufficient to cover three months' normal production. McArthur River produced 135,000t of zinc in concentrate in 2006, but output will now be less than half that this year. Were the open-cast plan finally to go ahead, it would see McArthur River increase zinc concentrate output from 320,000t/year-430,000t/year. Without this expansion, the zinc market will be more vulnerable than expected and perhaps halve the expected surplus of some 1 Mt between 2008 and 2010. Another Australian zinc producer, Perilya – the country's third biggest zinc producer – reported in April that its most recent quarterly results (Q3) showed output plunged by more than 50% following a fatal accident at the mine in January. Total contained zinc production up to the end of March 2007 was 11,800t, against 28,000t in the previous quarter. Perilya's operations have returned to normal and it hopes to meet its full fiscal 2007 production target of between 100,000t-105,000t of zinc and between 60,000t-65,000t of lead. Another Australian producer, CBH Resources, reported in April that its output of zinc concentrate dropped to 14,500t in end-March 2007 quarter from 16,300t in the previous quarter. Global refined zinc use fell to 1.813 Mt in January and February 2007 compared to 1.814 Mt for the same period of 2006, according to the International Lead and Zinc Study Group (ILZSG). Refined zinc production in the period rose to 1.857 Mt, versus 1.731 Mt for the same two months in 2006, giving a refined zinc surplus of 44,000t. Producer stocks were, however, lower at the end of February, at 299,000t, against 318,000t in January and 326,000t at the end of 2006.

### Outlook

**The LME 3-month contract averaged \$3,543/mt in April but supply-side worries have reasserted themselves and in early May \$4,500/t again looked a possible target. Further gains will hinge on movements in stock levels, now again (10<sup>th</sup> May) back down to the lowest level in 15 years. LME 3-month short- \$3,700/t-\$4,300/t.**

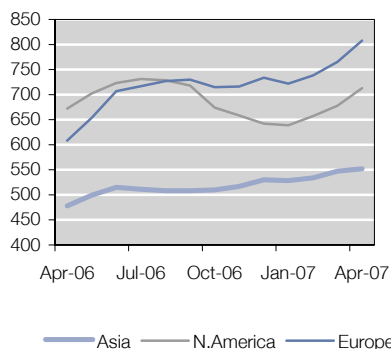
Market data (April unless stated)

LME prices (\$/t)	Cash	3-month	15-month	27-month	LME stocks	Zinc	LME Open Interest (contracts)
Average	3,543	3,556	3,256	2,880	Mar-07	106,100	Zinc 200,941
High	3,815	3,821	3,485	3,060	Apr-07	95,150	
Low	3,206	3,215	2,963	2,655			

Source: London Metal Exchange except Option volatility: Virtual Metals

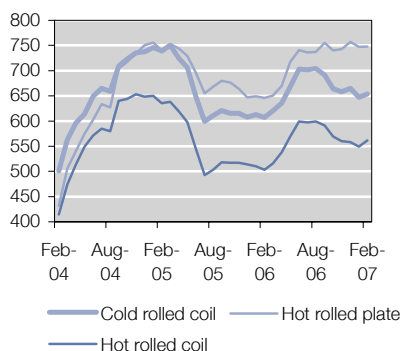
## Steel

Composite steel prices (\$/tonne)



Source: MEPS, Reuters Ecowin

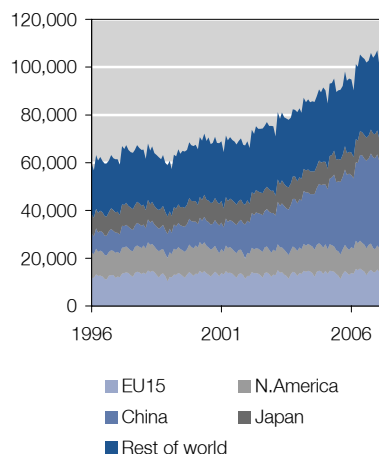
Steel products, world prices (\$/tonne)



Source: MEPS, Reuters Ecowin

Note: "World" is average of Asia, North America and Europe.

World steel production, monthly (tonnes)



Source: Reuters Ecowin

### News

- May 5<sup>th</sup>: Venezuela's President Hugo Chavez vowed to force the country's biggest steel-maker, Sidor-Ternium, majority owned by Argentine private investors, to supply the local market or, in his words, "I'll grab the company."
- Apr 20<sup>th</sup>: World crude steel production rose 8.5% in March 2007 (compared with the same month in 2006) to 110.9 Mt, according to the International Iron and Steel Institute.
- Apr 19<sup>th</sup>: China produced 26.2% more steel products in Q1 2007 than the same quarter 2006, according to the country's National Statistics Bureau, and 20.4% more crude steel in March, year-on-year, at 40.16 Mt. Total crude steel output for Q1 2007 was 114.7 Mt, 22.3% higher, year-on-year.

### Analysis

- China tries to rein-in exports

Nippon Steel plans to increase its automotive sheet output capacity at its Shanghai joint venture by 50% by 2009, with annual capacity rising by 450,000t. The joint venture is 50% owned by Baosteel Group, a subsidiary of Baoshan Iron and Steel, 38% by Nippon Steel and 12% by Arcelor Mittal. The move is inspired by the rapid growth in the Chinese automobile sector; the country's car output rose to 7.3m units in 2006, exceeding Japan's domestic production of 5.4m units. Qi Xiangdong, vice secretary general of the China Iron and Steel Association, said in late April that China may consider imposing steel export quotas if exports do not stay within the government target. Beijing removed export rebates on most types of steel products and reduced rebates on high value-added steel products to 5% on 15<sup>th</sup> April and, if this move does not have what Qi described as the "desired effect" [of slowing the country's export growth] then further measures would be taken to tighten exports. Exports of about 10% of China's steel output could be considered appropriate and would help keep international steel prices stable, said Qi. China's net steel exports in 2006 were 24.5 Mt in 2006; in Q1 2007 it exported a total of 15.9 Mt of steel products and billet, or 12.5% of its total steel products output for 2006.

### Outlook

**The change to the tax regime in April concerning China's steel products exports will – eventually – reduce the scale of those exports. Whether this happens fast enough to satisfy EU and USA steel producers, who have been threatening action via the World Trade Organisation, is an open question. There is still very strong overseas demand for cheaper Chinese steel products, the prices of which are particularly competitive as a result of growing Chinese domestic over-supply. On 6<sup>th</sup> May China's Iron and Steel Association forecast weakening global demand for steel which, together with lower export rebates, would see China's steel exports for 2007 in total being unchanged from those of 2006 or even slightly lower.**

Market data (April unless stated)

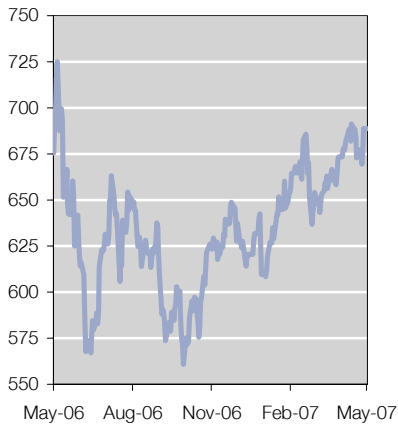
Prices (\$/t)	Asia Composite	N. America Composite	Europe Composite	World Composite
Feb-07	534	657	738	643.00
Mar-07	547	678	765	663.00
Apr-07	552	713	808	691.00

Source: Reuters Ecowin from MEPS

Note: Composite prices are a weighted average of the low transaction values for all carbon steel products in the flat & long categories identified in three regions (EU, Asia, and North America)

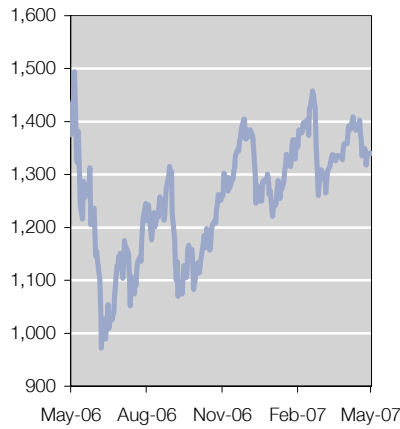
# Prices

**Gold (\$/oz)**



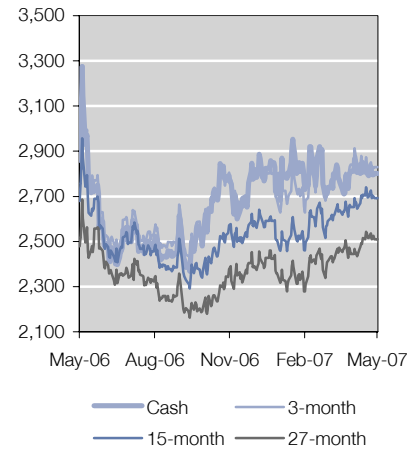
Source: London Bullion Market Association

**Silver (cents/oz)**



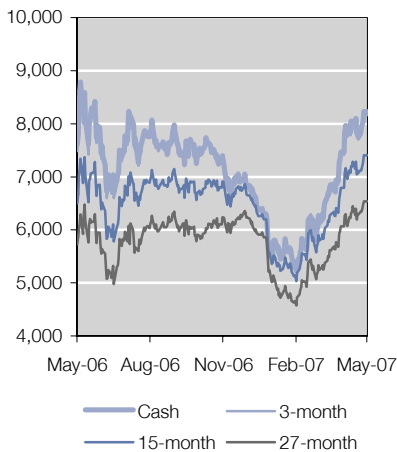
Source: London Bullion Market Association

**Aluminium (\$/tonne)**



Source: London Metal Exchange

**Copper (\$/tonne)**



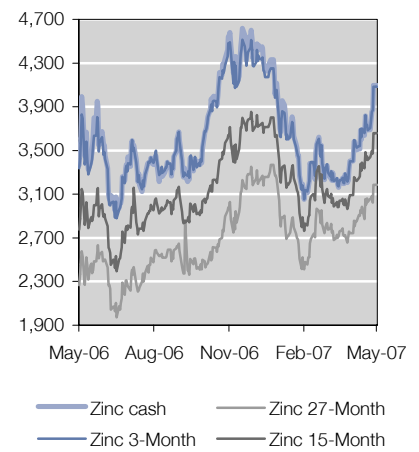
Source: London Metal Exchange

**Lead (\$/tonne)**



Source: London Metal Exchange

**Zinc (\$/tonne)**



Source: London Metal Exchange

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Virtual Metals comprises a uniquely skilled team, with a collective 50 years' experience in the precious metals markets and all that this implies – a plethora of market contacts and personal networks of long-standing trust and wisdom. Our clients include world-class mining companies, for whom Virtual Metals specialises in proprietary research covering gold, silver and the platinum group metals.

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