

Metals & Mining Chartbook

Q2 2008

- ▶ Metals to peak as supply catches up to slowing demand, copper remains tight
- ▶ Iron ore and coal tightness to ease as new capacity and swing producers arrive
- ▶ Steel shortage remains but spot prices to peak in 3Q

16 June 2008

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Disclaimer & Disclosures

This report must be read with the disclosures and the analyst certifications in the Disclosure appendix, and with the Disclaimer, which forms part of it

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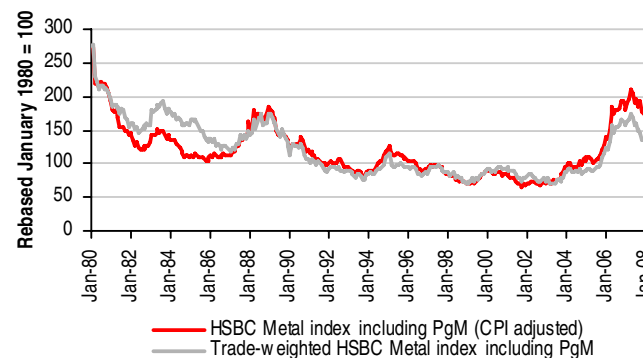
Cycle peaking

Commodity price review: Metals peaking, Bulks to ease

Following a 'perfect storm' to start off the year, the commodities rally is now facing its biggest challenge yet. Firstly, global demand conditions are easing at a time of accelerating inflation, particularly in emerging market countries. Secondly, the USD is now regaining strength as the highest levels of the US administration voice their support. This could derail funds flows from the 'short dollar/long commodities' trade that has underpinned the commodities rally for some time now. Finally, our supply / demand analysis indicates recent tightness easing as supply responds to elevated prices and demand recedes.

In metals, easing supply constraints have already hit nickel and zinc markets, where we cut price assumptions by 7-15% in 2008 and 2009. For copper and aluminium, higher energy costs have caused us to upgrade prices by 7-10% in forecast years but emerging surpluses should see 2008 as the peak of the current cycle. In bulk commodities, we expect record contract iron ore and coal prices to attract new capacity and swing producers into the market, thereby easing current market tightness.

TWI versus USD price index for metals



Source: Thomson Financial Datastream, HSBC

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Perfect storm passes, headwinds ahead

- ▶ Notwithstanding supply issues, global demand is weakening at a time of rising production rates
- ▶ USD strengthening and tightening measures on rising inflationary fears may see funds flows retract
- ▶ Metals to peak, but copper to remain tight. Bulks tightness to ease, contract prices to fall next year

Now for the real test

The extended commodities cycle is now 6 years strong, underpinned by tight supply / demand fundamentals and more recently by inflation fears and USD weakness. We believe that these drivers are now receding, and as we write our third edition of the Metals & Mining Chartbook, the commodities cycle is now confronted with its most challenging test yet.

Global demand conditions are easing and should continue to do so as central banks globally look to rein in spiralling inflation. While rising inflation may prompt further buying of commodities as an investment hedge, this would be tempered by inflation's dampening effects on economic growth and industrial demand. In the near term, we are approaching the seasonally weak 3Q demand period. In addition, now that the USD is gaining some strength from supportive commentary from the US administration, the 'short dollar / long

commodities' bet may have run its course.

Fundamentally, our supply / demand analysis suggests that recent market tightness should ease. These conditions will certainly test the strength of speculative investor demand for commodities.

Currently, a hot debate is raging over the impact of speculators or 'funds' on commodity prices. In a recent testimony before the US Senate Committee, Michael Masters made the point that 'Index Speculators' (made up of Corporate and Government Pension Funds, Sovereign Wealth Funds, University Endowments and other Institutional Investors), now account for a larger share of outstanding commodities futures contracts than any other market participant. As at end 2003, Mr Masters estimates that assets allocated to commodity index trading stood at USD13bn, but by March 2008, that figure had ballooned to USD260bn. Mr Masters also contends that over the past five years, the increase

in oil demand from Index Speculators (c848m barrels) in the past five years is almost equal to the annual increase in demand from China!

Other high profile speakers, notably George Soros, have also voiced concerns to the US Senate Committee over the impact of speculators. As HSBC's Global Equity Strategist, Kevin Gardiner, noted in his recent Equity Insight dated 9th June, 'if increased financial involvement in commodity markets is indeed partly responsible for recent volatility, then the likelihood of a political/regulatory backlash will be heightened.'

To a large degree, we believe the commodities rally has also been driven by a weak dollar for the most part of this year. HSBC's currency team, however, forecasts a steady improvement in the USD and this remains an important component in our expectations for falling commodity prices. Under this scenario, we believe commodities prices will revert more to fundamentals.

Our supply / demand work shows growing market surpluses for base metals. Supply disruptions remain a threat to the market, but for now, global output appears more than adequate for current demand. In the year to date, metals demand has generally disappointed, with Chinese metals demand weaker than expected. Chinese copper demand remains soft, with what seems to be de-stocking over recent months in anticipation of better (i.e. lower) prices over the summer period. Elsewhere, consumption growth rates for aluminium (+12% ytd versus 38% in 2007) and nickel (+6% ytd versus 32% in 2007) are sharply down from last year's levels.

We've made aluminium the focus of this edition. Our view is somewhat contrary to the growing bullish market view driven by power-related issues. While downside to aluminium price is limited by rising costs of production driven by increasing energy costs, we believe that upside is equally capped by the arrival of new supply from cheaper power producing regions. In the near

term, rising inventories indicate that supply is still outpacing slowing demand, despite the year's supply disruptions. While we have raised aluminium price forecasts by 7% and 11% in 08e and 09e due to the persistence of high energy costs, we expect energy costs to retrace as a result of falling oil and coal prices. We expect a growing market surplus to emerge in 2H 2008, and forecast prices to fall steadily from a 1H peak.

On copper, while it is the metal furthest away from long-term prices, we think the combination of production disruptions, low inventories and supply growth constraints will ensure the market remains in deficit in 2008, supporting high prices. We have raised forecasts by 9% and 7% in 2008 and 2009 respectively.

In other metals, we have cut forecasts for nickel and zinc by 7-15% over the forecast period. With nickel prices falling below USD25,000/t though, end-users seem to have stopped looking for substitutes. We expect the market to remain tight in 2008 before going into surplus in 2009. For

zinc, high TCs and falling premiums show that both concentrate and refined metal are in good supply. We expect a further decline in zinc price as the inventory build-up accelerates.

In the bulk commodities, we maintain our view that iron ore and coal tightness should ease as new capacity and swing producers arrive, leading to falling contract prices in 2009. For now though, the current tightness should see Australian iron ore producers succeed in achieving a historic 'freight premium' in ore sold to Chinese steelmakers. We anticipate Australian suppliers will soon lock in a contract price hike of +90%, against the Brazilian settlement of +71% for the year commencing 1 Apr 08. For 2009, given our forecast of iron ore markets tipping into a small surplus, we forecast Australian ore prices to fall by 10%. For Brazilian ore, falling freight rates may mean that they are able to partially claw back some of the freight premium; we forecast Brazilian contract ore prices to achieve a 5% fall in 2009.

Commodity price changes

		2008e			2009e			2010e			Long term (real)		
		Old	New	Chg	Old	New	Chg	Old	New	Chg	Old	New	Chg
Aluminium	USD/lb	1.17	1.25	7%	1.10	1.22	11%	1.10	1.15	5%	1.05	1.05	0%
Copper	USD/lb	3.35	3.64	9%	3.00	3.21	7%	2.60	2.64	2%	1.60	1.85	16%
Zinc	USD/lb	1.04	0.95	-9%	0.92	0.78	-15%	0.81	0.72	-11%	0.70	0.70	0%
Nickel	USD/lb	13.13	12.15	-7%	12.00	10.55	-12%	11.50	9.34	-19%	6.50	6.50	0%
Iron ore (fines) Australia	USD/t	86.68	96.31	11%	78.00	86.68	11%	66.30	73.68	11%	50.00	50.00	0%
Iron ore (fines) Brazil	USD/t	81.33	81.33	0%	73.20	77.26	6%	62.22	65.67	6%	50.00	50.00	0%
Ferrochrome	USD/lb	1.83	2.23	22%	2.40	2.70	13%	2.00	2.20	10%	1.00	1.20	20%

Source: HSBC estimates

HSBC commodities price forecasts

Commodity prices

Year ending December	Spot*	2007	Y-o-y	2008e	Y-o-y	2009e	Y-o-y	2010e	Y-o-y	2011e	Y-o-y	2012e	Y-o-y	Real (LT) mid-cycle	Delta LT vs Spot	
Currencies																
USD:AUD	USD	0.95	0.84	12%	0.87	4%	0.80	-8%	0.74	-1%	0.74	0%	0.74	0%	0.75	-21%
SAR:USD	USD	8.00	7.07	-5%	7.53	-6%	7.23	4%	7.25	0%	7.25	0%	7.25	0%	7.50	6%
USD:EUR	USD	1.56	1.37	-8%	1.49	-9%	1.31	12%	1.30	1%	1.30	0%	1.30	0%	1.30	16%
Base metals																
Aluminium	USD/lb	1.31	1.20	3%	1.25	5%	1.22	-2%	1.15	-6%	1.10	-4%	1.05	-5%	1.05	-20%
Copper	USD/lb	3.62	3.24	7%	3.64	12%	3.21	-12%	2.64	-18%	2.26	-15%	2.17	-4%	1.85	-49%
Zinc	USD/lb	0.84	1.48	1%	0.95	-36%	0.78	-17%	0.72	-8%	0.71	-2%	0.75	6%	0.70	-17%
Lead	USD/lb	0.86	1.17	102%	1.03	-12%	0.80	-22%	0.70	-13%	0.60	-14%	0.55	-8%	0.45	-48%
Nickel	USD/lb	10.39	16.94	55%	12.15	-28%	10.55	-13%	9.34	-11%	8.84	-5%	8.60	-3%	6.50	-37%
Precious metals																
Gold	USD/oz	880	693	15%	915	32%	850	-7%	725	-15%	725	0%	725	0%	600	-32%
Silver	USD/oz	16.58	13.25	15%	17.25	30%	15.50	-10%	14.00	-10%	14.00	0%	14.00	0%	12.00	-28%
Platinum	USD/oz	2,026	1,294	12%	2,100	62%	1,725	-18%	1,575	-9%	1,575	0%	1,575	0%	1,325	-35%
Palladium	USD/oz	430	353	10%	360	2%	340	-6%	320	-6%	320	0%	320	0%	315	-27%
Rhodium	USD/oz	9,535	6,163	36%	9,500	54%	7,300	-23%	4,000	-45%	4,000	0%	4,000	0%	3,000	-69%
Bulks & energy																
Alumina	USD/t	404	329	3%	372	13%	363	-2%	342	-6%	327	-4%	313	-5%	324	-20%
Iron Ore-Fines (Australia fob)	USD/t	50.63	50.63	10%	96.31	90%	86.68	-10%	73.68	-15%	62.63	-15%	56.37	-10%	39.50	-22%
Iron Ore-Lump (Australia fob)	USD/t	64.63	64.63	10%	122.80	90%	110.52	-10%	93.94	-15%	79.85	-15%	71.87	-10%	50.00	-23%
Ferrocchrome	USD/lb	2.65	0.90	26%	2.23	148%	2.70	21%	2.20	-19%	1.90	-14%	1.50	-21%	1.20	-55%
Coking Coal	USD/t	98.00	98.00	-15%	300.00	206%	200.00	-33%	150.00	-25%	127.50	-15%	127.50	0%	90.00	-8%
Steam coal (Globalcoal, Newcastle)	USD/t	135.00	55.00	8%	125.00	127%	93.75	-25%	79.69	-15%	71.72	-10%	71.72	0%	55.00	-59%
Oil (WTI) USD/ bbl	USD/bbl	136.38	71.39	8%	91.88	29%	75.00	-18%	60.00	-20%	61.00	2%	62.00	2%	61.00	-55%

Note: * = coking coal and iron ore are 2007 contract prices, all other prices are closing 11 June 2008 closing prices
Source: Thomson Financial Datastream, McCloskey Coal Report, HSBC estimates

Aluminium: rally losing power

- ▶ Downside supported by rising costs of production driven by increasing energy costs
- ▶ Upside capped by growing inventories indicating supply still outpacing slowing demand
- ▶ 2008 surplus to remain, price forecasts raised by 7% and 11% in 08e and 09e respectively

A passing storm

Power-related supply disruptions, which shook aluminium markets earlier this year, appear to be largely behind us. In all the excitement, the sharp fall in aluminium demand hardly rated a mention. In our view, rising warehouse inventories (to multi-year highs) indicate a market that is adequately supplied. With Chinese output now back to normal, a weaker demand environment should take aluminium prices lower into H 2.

Aluminium bulls will argue that demand continues to grow briskly while persistent power shortages and higher energy costs will squeeze out marginal producers, forcing prices higher. The floor price may now be higher because of higher costs, but we believe any spike in aluminium prices will only invite marginal producers back into the game. In the near term, costs of production for marginal players (in China) are cUSD2,700/t, but in the longer term, lower energy

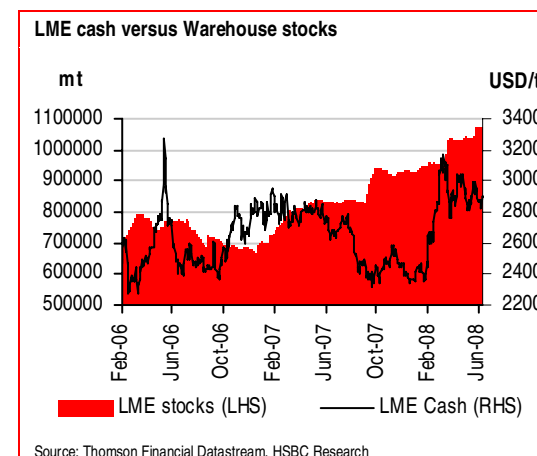
costs (oil and coal) should mean the cost support level is nearer to USD2300/t.

Despite supply disruptions, global output growth remains healthy at 7% ytd. Output outside China has helped, continuing to grow at a healthy rate of nearly 6% ytd, driven by the combination of greenfield and restarts of idled capacity.

However, demand growth has slowed this year. In the first five months to May08, CRU estimates that global aluminium demand growth has averaged 5%, down from 10% in 2007, largely because Chinese demand growth fell to sub-trend levels of 12%, compared with 38% for 2007. Outside China, growth has remained anaemic at 2%.

For the remainder of 2008, we forecast a recovery in both demand and supply growth, but we expect a meaningful H 2 surplus to emerge. We forecast an aluminium surplus of 539mt in 2008, driven by supply growth of 9.2% and demand growth of

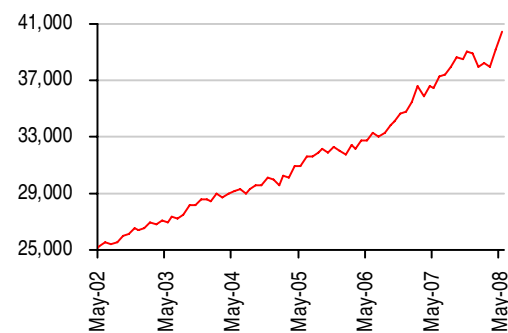
8.6%. Given the likelihood of higher energy costs persisting, we raise our aluminium price forecasts for 2008 by 7% to USD1.25/lb and for 2009 by 11% to USD1.22/lb.



Supply – up trend returns

Supply issues have been at the heart of the aluminium debate so far this year. China's snowstorm and power shortages in South Africa significantly disrupted Q1 output. The industry is now making up lost ground, with output figures for May highlighting a strong rebound from the February lows. Aluminium output is running at an annualised rate of over 40mt, compared with 38mt last year. While higher energy costs have lifted the industry cost curve, in the absence of more power outages, we forecast supply growth of 9.2% in 2008, driven by new greenfield capacity and restarts of idled capacity.

Annualised world aluminium output restores uptrend



Source: IAI, CRU, HSBC

Lower cost supply coming through

While the market has been focused on power issues, a plethora of low-cost new capacity is coming to the market. Greenfield startups will arrive from the USD2.4bn Sohar smelter in Oman, along with Vedanta's 500ktpa Jharsuguda smelter in India. Alcoa's recent Fjardal Icelandic smelter will continue to ramp up to its full capacity of 344,000t pa, from 56,000t in 2007. In addition, we should continue to see brownfield capacity ramp up, particularly Rusal's Irkutsk (+160,000t pa) and Sayansk (+300,000t pa) plants, along with recent restarts at Trimet's 132,000t pa facility together with Ormet's 270,000t pa Hannibal smelter. Finally, idled or swing capacity remains a threat if prices become attractive enough.

Power issues remain a risk

China's snowstorm exposed the problems of the Chinese power sector. Coal transportation bottlenecks and low coal inventories led to power shortages at a time of peak demand. Output now appears to have returned to normal.

Severe droughts in Brazil and New Zealand have also affected hydropower facilities and in turn aluminium output from these countries. South Africa's power situation, however, is structural, with insufficient investment in capacity culminating in reduced power availability and a 10% cut to output for BHP's smelters.

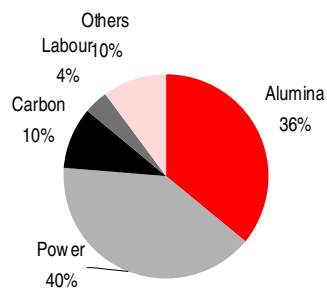
Costs – alumina surplus providing relief

With energy accounting for 30% to 40% of the cost of producing aluminium, the recent spike in oil and thermal coal prices have pushed up the high end of the cost curve. We expect supply tightness will ease and forecast falling oil and coal prices.

However, alumina is an equally important input, c40% of aluminium production costs. China's reliance on alumina imports is declining; they have fallen 16% so far this year as its own production expands, rising 20% year to April 2008. That should ensure a meaningful surplus for alumina. For H1 2008, CRU estimates a surplus of c800,000t, or about 2% of global output. However, with close to 10mt of effective capacity set to become available during the year, this surplus is set to grow.

With power and alumina prices potentially moving in opposing directions, we believe the market may be overemphasising the cost-push factor in aluminium. That said, short-run marginal costs (assuming spot energy and alumina costs) are estimated by CRU to be USD2700 to USD2800/t. In the near term, we expect this level to provide the floor for aluminium prices in 2008.

China short-run marginal costs – USD2760/t



Source: CRU

Demand surprises on the downside

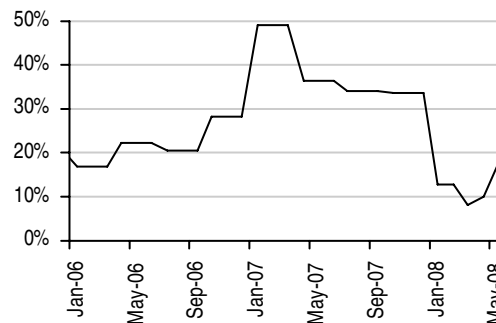
Following lower economic growth forecasts from HSBC's economics team, we now estimate global aluminium demand growth of 8.6%, down from 9.0%. We forecast China's demand to remain strong, growing 21% in 2008, but that is still down from 2007's 38% growth. Elsewhere, we forecast lacklustre consumption growth for Japan (0.3%) and North America (1.1%) and expect European demand to slow to +1.8%. Our forecasts imply a recovery in demand, because in the first five months of the year, global aluminium demand surprised on the downside, averaging 5% growth compared with 10.1% in 2007. This was driven largely by Chinese growth slowing to sub-trend levels of 12% from 38% for 2007. Outside China, growth has remained slow, at 2%.

China demand growth sharply down

The significance of China's continued demand cannot be underestimated. In 2007, China's spectacular growth in demand accounted for 96% of total global growth. Its slowing growth so far this year is particularly concerning – the 12% growth in the first five months of 2008 is well below our 2008 forecast of 21%.

Underlying economic growth, substitution and increased intensity of use were key drivers of 2007's strong growth. All three factors appear to be slowing this year.

China aluminium demand growth sharply down

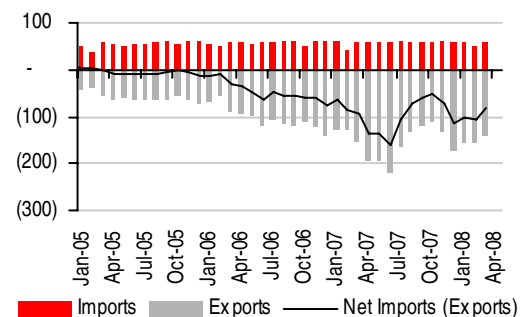


Source: CRU, HSBC

The slackness in demand has led to warehouse inventories reaching near two-year highs on the Shanghai exchange. We understand the slower growth can be attributed to tightening credit and to the strengthening Rmb, which has affected exports. Furthermore, aluminium demand from the construction of Olympic stadiums, a meaningful component of Chinese demand over the past three years, is now largely behind us

A looming threat to Chinese demand is the potential for further hikes to export taxes, particularly on semi-fabricated products. In late May 2008, China's Ministry of Commerce commented on a further increase to the primary aluminium export tax, as well semi-aluminium products. If exports of aluminium semis are redirected back to the domestic market, this would clearly have a depressing impact on Chinese primary aluminium demand and prices. Aluminium product net exports in Q1 of 289,000t accounted for close to 10% of primary aluminium exports.

China aluminium products trade



Source: China Non-Ferrous Metal Statistics, Antaike, CEIC, HSBC

Anaemic demand growth outside China

Demand growth in the world outside China has remained weak in the first five months of the year. US demand has continued to fall and Europe and Japan to weaken. In total, the three regions accounted for close to a third of overall demand in 2007. We forecast ex-China demand will grow 2.7% in 2008, reflecting firm growth in emerging countries and North American restocking.

S/D balance, price forecasts

In the near term, we expect aluminium's transition back into a market surplus will see prices drift down in H2. We expect output to continue to outpace demand growth in the forecast period.

► **Market surplus to grow to 539,000t in 2008** from a surplus of 295,000t in 2007. The forecast reflects output growth of 9.2%, down from our earlier forecast of 9.4%, and demand growth of 8.6%, down from 9.0%.

► **2008 remains a tale of two halves** – With supply disruptions behind us, prices should fall into H2 as inventories grow, averaging USD2,822/t, or USD1.28/lb, in H1 2008. As Chinese supply returns to normal and new greenfield capacity ramps up, we forecast prices will drift back to cost support levels of cUSD2,700/t, or USD1.23/lb. We raise 2009e by 11% to USD1.22/lb and 2010e by 5% to USD1.15/lb.

HSBC aluminium supply/demand model

	2007	2008E	2009E	2010E
World production	38,106	41,615	44,710	47,865
YoY	12.4%	9.2%	7.4%	7.1%
World consumption	37,811	41,076	44,299	47,508
YoY	10.1%	8.6%	7.8%	7.2%
Capacity utilisation	92%	91%	92%	92%
World balance	295	539	411	357
Reported stocks (WW)	2,715	3,254	3,666	4,023
Stock/consumption (wks)	5.5	6.4	7.0	7.4
Aluminium price, USD/t	2,636	2,756	2,690	2,535
Aluminium price, USD/lb	1.20	1.25	1.22	1.15
Previous	1.20	1.17	1.10	1.10
Change	0%	7%	11%	5%

Source: HSBC, CRU, World Bureau of Metal Statistics

Aluminium: supply & demand model

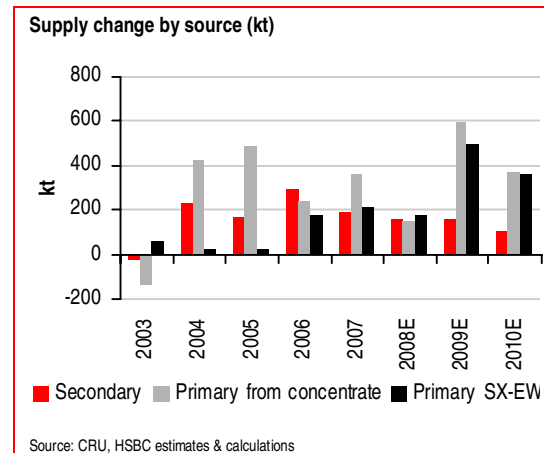
	2001	2002	2003	2004	2005	2006	2007	2008e	2009e	2010e	2011e	2012e	Change 2007-12e	CAGR 2007-12e
World														
World capacity	27,542	28,503	31,261	34,530	36,683	38,472	41,455	45,924	48,599	51,912	55,770	59,185	20,713	9.0%
<i>Y-o-y change</i>	5.5%	3.5%	9.7%	10.5%	6.2%	4.9%	7.8%	10.8%	5.8%	6.8%	7.4%	6.1%		
World production	24,524	26,081	27,842	29,895	31,970	33,909	38,106	41,615	44,710	47,865	51,535	54,775	20,866	10.1%
<i>Y-o-y change</i>	0.1%	6.4%	6.8%	7.4%	6.9%	6.1%	12.4%	9.2%	7.4%	7.1%	7.7%	6.3%		
World consumption	23,860	25,537	27,654	30,323	31,890	34,352	37,811	41,076	44,299	47,508	50,706	53,783	19,431	9.4%
<i>Y-o-y change</i>	-4.5%	7.0%	8.3%	9.7%	5.2%	7.7%	10.1%	8.6%	7.8%	7.2%	6.7%	6.1%		
Capacity utilisation	89%	92%	89%	87%	87%	88%	92%	91%	92%	92%	92%	93%		
World balance	664	544	188	(428)	80	(443)	295	539	411	357	829	992		
Reported stocks (WW)	3,038	3,389	3,527	2,830	2,864	2,647	2,715	3,254	3,666	4,023	4,851	5,843		
Stock/ consumption (weeks)	7.8	8.3	8.2	6.1	6.0	5.4	5.5	6.4	7.0	7.4	8.7	10.2		
Capacity utilisation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
China														
Capacity		4,487	6,441	8,960	10,400	11,562	14,049	17,213	19,185	21,423	23,414	25,482	13,920	17.1%
<i>Y-o-y change</i>		0.0%	43.5%	39.1%	16.1%	11.2%	21.5%	22.5%	11.5%	11.7%	9.3%	8.8%		
Production	3,431	4,390	5,500	6,686	7,812	9,324	12,573	14,700	17,200	19,300	21,500	23,800	14,476	20.6%
<i>Y-o-y change</i>	22.5%	28.0%	25.3%	21.6%	16.8%	19.4%	34.8%	16.9%	17.0%	12.2%	11.4%	10.7%		
Consumption	3,539	4,318	5,151	6,065	7,162	8,752	12,051	14,615	17,086	19,393	21,720	23,892	15,140	22.2%
<i>Y-o-y change</i>	9.3%	22.0%	19.3%	17.7%	18.1%	22.2%	37.7%	21.3%	16.9%	13.5%	12.0%	10.0%		
Capacity utilisation		98%	85%	75%	75%	81%	89%	85%	90%	90%	92%	93%		
China net (imports)/ exports	(108)	72	349	621	650	572	522	85	114	(93)	(220)	(92)		
World ex China														
Capacity		24,016	24,820	25,570	26,283	26,910	27,406	28,711	29,414	30,489	32,356	33,703		
<i>Y-o-y change</i>		-	3.3%	3.0%	2.8%	2.4%	1.8%	4.8%	2.4%	3.7%	6.1%	4.2%		
Production		21,691	22,342	23,209	24,158	24,585	25,533	26,915	27,510	28,565	30,035	30,975		
<i>Y-o-y change</i>		2.8%	3.0%	3.9%	4.1%	1.8%	3.9%	5.4%	2.2%	3.8%	5.1%	3.1%		
Consumption		21,219	22,503	24,258	24,728	25,600	25,760	26,460	27,212	28,115	28,987	29,891		
<i>Y-o-y change</i>		4.4%	6.1%	7.8%	1.9%	3.5%	0.6%	2.7%	2.8%	3.3%	3.1%	3.1%		
Prices														
Aluminium price, USD/ t	1,452	1,365	1,425	1,716	1,899	2,563	2,636	2,756	2,690	2,535	2,425	2,315		
Aluminium price, USD/ lb	0.66	0.62	0.65	0.78	0.86	1.16	1.20	1.25	1.22	1.15	1.10	1.05		

Source: HSBC estimates, CRU, World Bureau of Metal Statistics

Copper: market is tight and stays tight

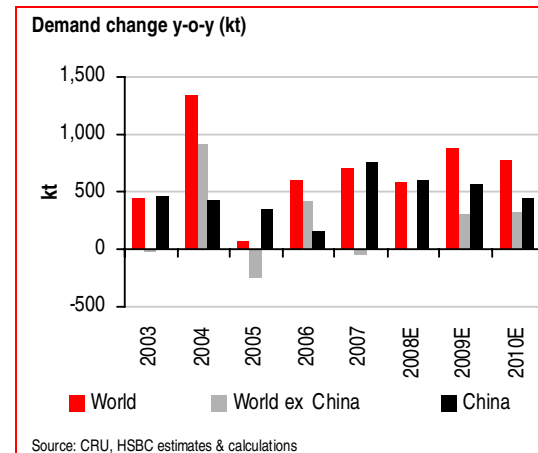
- ▶ Concentrate is in short supply and the supply side remains short of material
- ▶ Despite substitution effects and western economic slowdown, China drives global demand
- ▶ We expect the market to remain in deficit in 2008, which should support pricing

Supply



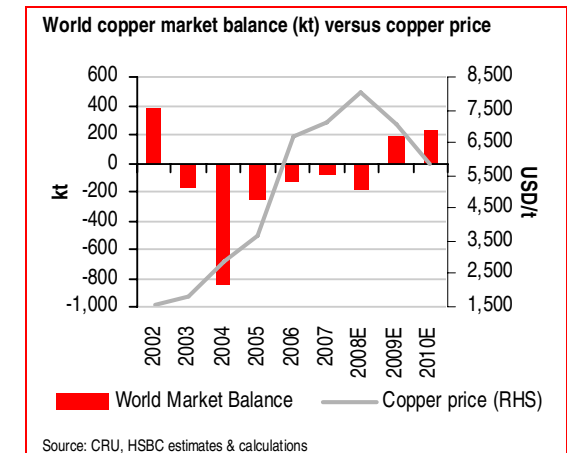
- ▶ Concentrate supply continues to be curbed by power shortages, low headgrades, labour unrest, and adverse weather; not all smelters will be able to source the required feed
- ▶ Power outages and labour unrest will remain on the agenda and pose some risk to our 2009 concentrate figure. c200kt of the 2009 concentrate increase is expected to come from Africa
- ▶ We expect supply to grow 2.7% in 2008e and 6.7% in 2009e when significant SX-EW production comes online

Demand



- ▶ C50% of US consumption is construction related, also in Europe construction is a major demand driver and the
- ▶ The high copper price is driving substitution into plastics and aluminium
- ▶ We expect global demand to grow 3.3% in 2008e and 4.7% in 2009e as re-stocking kicks in on lower prices. China continues to account for the major share of the increase

Market balance/ Pricing



- ▶ We expect the market to remain rather tight and even our small surpluses in 2009e and thereafter should just be an opportunity to restock inventory along the value chain
- ▶ We forecast a copper price of USD3.64/lb for 2008e slightly declining to USD3.21/lb in 2009e and USD2.64/lb 2010e as the extreme tightness eases somewhat
- ▶ Given the tight market upcoming labour negotiations in S. America could cause further copper price spikes

Copper: supply & demand model

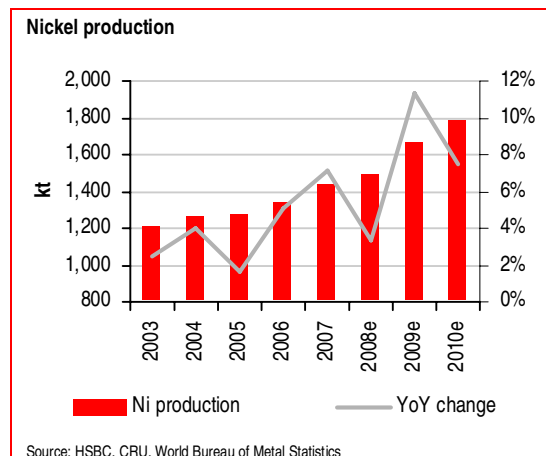
	2003	2004	2005	2006	2007	2008e	2009e	2010e	2011e	2012e	Change 2007-12e	CAGR 2007-12e
Primary smelter feed												
Copper in concentrate output	10,650	11,601	11,912	11,818	12,076	12,518	13,251	13,683	14,121	14,660	2,584	4.0%
By-product copper (Norilsk, Inco, cement)	210	337	350	240	243	243	243	243	243	243		
Primary feed availability from mines	10,860	11,938	12,262	12,058	12,319	12,761	13,494	13,926	14,364	14,903	2,584	3.9%
Y-o-y growth	1.3%	9.9%	2.7%	-1.7%	2.2%	3.6%	5.7%	3.2%	3.1%	3.8%		
Primary smelter demand												
Smelter production	11,441	11,883	12,385	12,839	13,229	13,294	13,984	14,431	14,895	15,480	2,251	3.2%
Less low and medium grade scrap	688	717	785	903	958	1,003	1,097	1,175	1,257	1,353		
Less secondary dust and residues	115	116	106	102	104	105	110	113	117	122		
Add EW from concentrates	34	72	76	106	104	178	250	318	376	410		
Add smelter loss	341	356	370	382	393	395	415	429	443	460		
% Smelter loss	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%		
Primary smelter feed requirement	11,013	11,478	11,940	12,322	12,664	12,760	13,443	13,889	14,339	14,874	2,210	3.3%
Y-o-y growth	0.5%	4.2%	4.0%	3.2%	2.8%	0.8%	5.4%	3.3%	3.2%	3.7%		
Primary smelter feed balance	-153	460	322	-264	-345	2	51	36	25	28		
Refined production												
Primary fire/ electro-refined production	10,585	11,010	11,501	11,742	12,102	12,254	12,849	13,216	13,597	14,084		
Secondary refined production	1,753	1,978	2,141	2,435	2,627	2,787	2,942	3,048	3,175	3,295		
Total refined production	12,339	12,988	13,642	14,177	14,729	15,042	15,791	16,264	16,772	17,379		
Electrowon cathode production	2,841	2,864	2,891	3,070	3,278	3,454	3,951	4,313	4,685	4,641	1,363	7.2%
- SX EW production	2,703	2,712	2,744	2,905	3,102	3,298	3,796	4,157	4,533	4,487	1,385	7.7%
- EW production from NiCu EW	138	152	147	165	176	156	155	156	153	154		
World refined production	15,180	15,852	16,533	17,247	18,007	18,496	19,741	20,577	21,457	22,020	4,013	4.1%
Y-o-y growth	-0.7%	4.4%	4.3%	4.3%	4.4%	2.7%	6.7%	4.2%	4.3%	2.6%		
Refined consumption												
World	15,353	16,704	16,781	17,378	18,089	18,680	19,562	20,344	21,240	22,099	4,010	4.1%
Y-o-y growth	3.1%	8.8%	0.5%	3.6%	4.1%	3.3%	4.7%	4.0%	4.4%	4.0%		
China	3,022	3,458	3,810	3,958	4,721	5,318	5,884	6,337	6,844	7,306	2,585	9.1%
Y-o-y growth	18.2%	14.4%	10.2%	3.9%	19.3%	12.6%	10.6%	7.7%	8.0%	6.7%		
World ex China	12,331	13,245	13,010	13,420	13,368	13,362	13,678	14,007	14,396	14,793	1,425	2.0%
Y-o-y growth	-0.1%	7.4%	-1.8%	3.1%	-0.4%	0.0%	2.4%	2.4%	2.8%	2.8%		
World market balance	-173	-852	-248	-130	-82	-184	180	233	218	-79		
Total stocks	1,336	442	452	592	573	389	568	801	1,019	940		
Stock consumption ratio (weeks)	4.5	1.4	1.4	1.8	1.6	1.1	1.5	2.0	2.5	2.2		
Change in mine output	199	1,101	351	-25	469	618	1,230	794	811	494		
Change in concentrate output	158	951	311	-94	258	442	733	432	438	539		
Change in concentrate demand	53	465	462	382	342	96	683	446	450	535		
Change in refined output	-100	672	681	715	760	488	1,246	836	880	563		
Change in refined consumption	455	1,351	77	597	712	591	882	782	895	859		
Copper price USD/ t	1,778	2,867	3,680	6,696	7,140	8,022	7,078	5,823	4,976	4,792		
Copper price USD/ lb	0.81	1.30	1.67	3.04	3.24	3.64	3.21	2.64	2.26	2.17		
Annual contract TC/ RC/ PP, USD/ t	307	345	650	438	325	269	283	283	339	424		
Annual contract TC/ RC/ PP, USD/ lb	0.14	0.16	0.29	0.20	0.15	0.12	0.13	0.13	0.15	0.19		
IP growth	3.5%	5.5%	4.0%	6.4%	6.2%	4.7%	4.8%	5.0%	4.5%	4.0%		

Source: HSBC estimates, CRU, World Bureau of Metal Statistics

Nickel: slowly moving into surplus

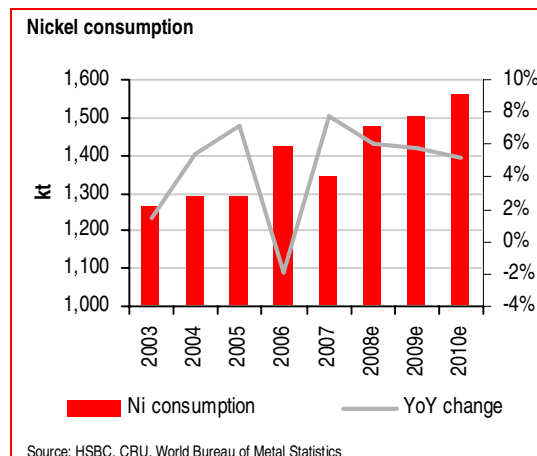
- ▶ With Ni prices falling below USD25,000/t, end users seem to have stopped looking for substitutes
- ▶ We expect the market to remain tight in 2008 before going into surplus in 2009
- ▶ High existing stocks should cater for growth in demand and limit price growth

Supply



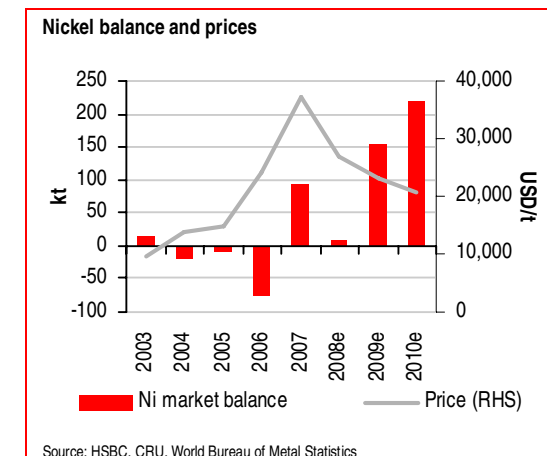
- ▶ We see primary nickel production increasing by 3.4% in 2008 and 11.4% in 2009 with the large part of new supply coming from CVRD expansions
- ▶ Ni pig iron production has tripled in 2007 but we see only 11% growth in 2008 due to rising costs and shortages of coke and power
- ▶ Strikes in South America and ongoing power shortages put growth in supply this year at risk-CRU estimates for Q108 production show that refined nickel production was actually lower than in 2007

Demand



- ▶ About 63% of primary Ni demand came from stainless steel industry in 2007
- ▶ High Ni prices triggered substitution into ferritic stainless steel production and share of austenitic stainless steel fell to 73% in 2007 from 77% in 2006, and we expect it to stabilise around these levels longer-term
- ▶ We see demand for primary Ni growing by 10.6% in 08 on the back of strong 11.6% increased demand from stainless steel industry

Market balance/ Pricing



- ▶ We expect the market to remain tight in 2008, when the growth in Ni demand will be outpacing the growth in production
- ▶ Beyond 2008 we see supply-side catching up in response to high Ni prices and the market to be moving into increasing surplus
- ▶ We forecast Ni prices to average USD12.24/lb in 2008 and gradually falling to reach USD8.58/lb in 2012

Nickel: supply & demand model

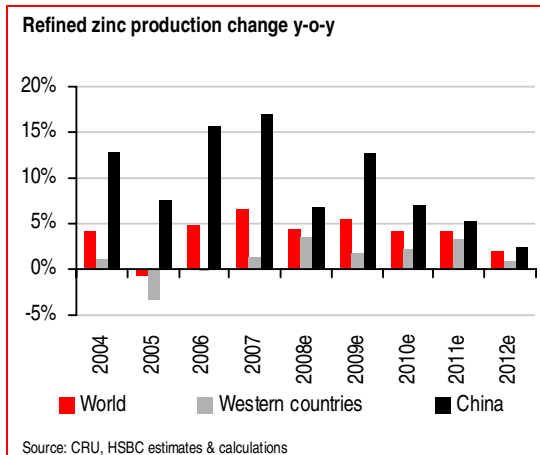
	2003	2004	2005	2006	2007	2008e	2009e	2010e	2011e	2012e	Change 2007-12e	CAGR 2007-12e
Supply												
World production, nickel	1,212	1,261	1,281	1,346	1,441	1,540	1,719	1,856	1,931	2,084		
Less disruption allowance						49	59	72	93	98		
World production, nickel	1,212	1,261	1,281	1,346	1,441	1,490	1,660	1,784	1,838	1,987	545	6.6%
Y-o-y change	2.4%	4.0%	1.6%	5.1%	7.1%	3.4%	11.4%	7.5%	3.1%	8.1%		
Demand												
Stainless production												
US	2,335	2,382	2,231	2,498	2,171	2,193	2,220	2,264	2,309	2,355	185	1.6%
Europe	8,484	8,795	8,306	9,329	8,137	8,499	8,795	8,975	9,440	9,773	1,636	3.7%
China	1,897	2,470	3,692	5,300	7,528	8,281	9,109	9,929	10,823	11,797	4,268	9.4%
Rest of Western world	10,233	11,101	10,753	11,560	11,157	11,693	12,331	12,761	13,198	13,788	2,631	4.3%
World stainless production	22,949	24,748	24,982	28,687	28,993	30,666	32,455	33,929	35,770	37,713	8,719	5.4%
Y-o-y change	13.3%	7.8%	0.9%	14.8%	1.1%	5.8%	5.8%	4.5%	5.4%	5.4%		
World ex China stainless production	21,052	22,278	21,290	23,387	21,465	22,385	23,345	24,000	24,948	25,916	4,451	3.8%
Y-o-y change	8.9%	5.8%	-4.4%	9.8%	-8.2%	4.3%	4.3%	2.8%	3.9%	3.9%		
Austenitic production	17,994	19,124	18,817	22,105	21,091	22,948	23,836	24,797	26,101	27,492	6,402	5.4%
Austenitic ratio	78.4	77.3	75.3	77.1	72.7	74.8	73.4	73.1	73.0	72.9		
Nickel content	8.8%	8.6%	8.4%	8.1%	7.6%	7.8%	7.8%	7.6%	7.9%	7.8%		
Nickel units	1,575	1,636	1,582	1,789	1,606	1,784	1,849	1,893	2,071	2,153		
Nickel in stainless, y-o-y	13.1%	3.9%	-3.3%	13.1%	-10.2%	11.1%	3.6%	2.4%	9.4%	4.0%		
Primary ratio	53.8%	52.0%	51.4%	53.5%	52.6%	53.1%	50.9%	51.2%	55.9%	55.2%		
Primary nickel units	846	850	814	957	845	947	941	970	1,157	1,188	343	7.1%
Non stainless demand	421	444	475	467	503	533	564	593	623	652	149	5.3%
Y-o-y change	1.4%	5.4%	7.1%	-1.9%	7.7%	6.1%	5.8%	5.2%	5.0%	4.7%		
Global consumption, nickel	1,267	1,294	1,289	1,423	1,347	1,480	1,505	1,564	1,779	1,840	492	6.4%
Y-o-y change	8.5%	2.1%	-0.3%	10.4%	-5.3%	9.9%	1.7%	3.9%	13.8%	3.4%		
Surplus/ (deficit)	-55	-33	-9	-77	94	10	154	220	59	147		
Norilsk stock movements	70	15	0	0	0	0	0	0	0	0		
Effective market balance	15	-18	-9	-77	94	10	154	220	59	147		
Stocks												
Total stocks	175	172	163	154	215	225	379	599	658	805		
Stocks/ consumption ratio (weeks)	7.2	6.9	6.6	5.6	8.3	7.9	13.1	19.9	19.2	22.8		
Prices												
Prices USD/ t	9,641	13,918	14,754	24,058	37,346	26,779	23,263	20,585	19,489	18,960		
Prices USD/ lb	4.37	6.31	6.69	10.91	16.94	12.15	10.55	9.34	8.84	8.60		

Source: HSBC estimates, CRU, World Bureau of Metal Statistics

Zinc: material is in good supply at both ends

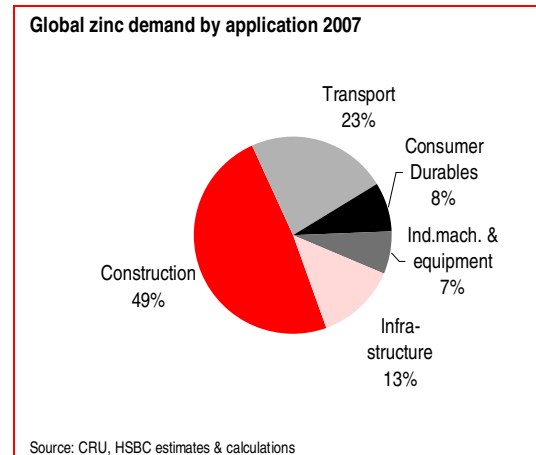
- ▶ High TCs and falling premiums show that both concentrate and refined metal is in good supply
- ▶ Demand growth comes only from China; we expect Western world demand will hardly grow
- ▶ We expect a further decline in zinc price as the inventory build-up accelerates

Supply



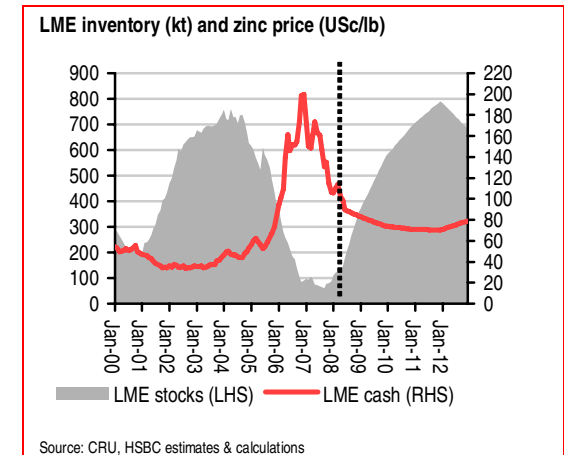
- ▶ Concentrate should be in good supply till 2010 due to a number of new project starts. Smelters have any incentive to run at full capacity due to favourable TC environment
- ▶ Chinese disruptions are only temporary and minor overall. global pressure on product premiums show that refined metal is in good supply
- ▶ We expect global refined zinc production to grow by 4.3% in 2008e and 5.3% in 2009e

Demand



- ▶ Almost half of global consumption goes into construction which makes us expect Western World demand to show another small decline, 0.4%, in 2008e
- ▶ Emerging market growth continues but raised Chinese export tax for galvanised steel slowed demand growth there
- ▶ Zinc substituted by other metals during the previous high price period will not return in our view but lower prices will limit further substitution. We expect global demand to grow by 3.0% in 2008e and 5.3% in 2009e

Market balance/ Pricing



- ▶ We expect a surplus of 315kt this year, growing slightly to 336kt in 2009e which drives inventories upwards
- ▶ Current prices incorporate the expectation of further inventory built already but we assume a growing 2009 surplus will put more pressure on the zinc price. Due to the unconsolidated nature of the industry we expect cutbacks to occur rather slowly. Based on this, we expect further zinc price declines to USD0.78/lb in 2009e and USD0.72/lb in 2010e
- ▶ Chinese power problems and potential government action in case of a huge domestic surplus are major risks to our view

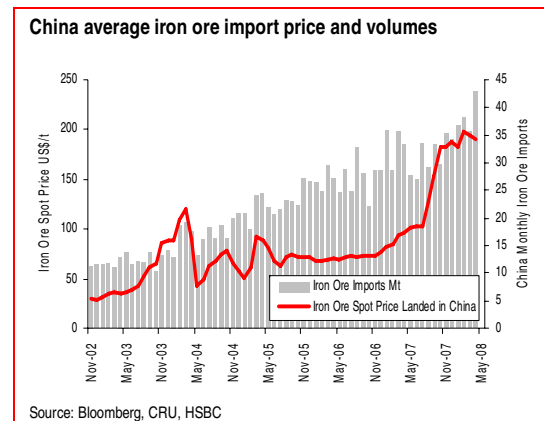
Zinc: supply & demand model

	2004	2005	2006	2007	2008e	2009e	2010e	2011e	2012e	Change 2007-12e	CAGR 2007-12e
Supply											
World mine production	9,359	9,789	10,236	11,316	11,833	12,631	13,119	13,279	13,387	2,071	18%
<i>Y-o-y change</i>	-1.4%	4.6%	4.6%	10.5%	4.6%	6.7%	3.9%	1.2%	0.8%		
Western world	6,645	6,430	6,419	6,509	6,729	6,842	6,994	7,217	7,282	773	12%
Eastern block	3,560	3,719	4,210	4,816	5,090	5,612	5,970	6,284	6,472	1,656	34%
Smelter capacity	11,477	11,926	12,374	12,793	13,340	14,143	14,729	15,411	15,688	2,895	23%
<i>Utilisation</i>	88.9%	85.1%	85.9%	88.5%	88.6%	88.1%	88.0%	87.6%	87.7%		
Total world smelter production	10,205	10,148	10,629	11,325	11,819	12,454	12,964	13,501	13,754	2,429	21%
<i>% y-o-y</i>	4.1%	-0.6%	4.7%	6.6%	4.4%	5.4%	4.1%	4.1%	1.9%		
of which secondary (scrap)	792	837	874	924	971	1,046	1,102	1,161	1,197		
Processing losses and pipeline stocks	580	563	582	619	643	704	745	786	799		
US stockpile sales	32	29	28	8	5	2	0	0	0		
Total supply	10,237	10,177	10,657	11,333	11,824	12,454	12,964	13,501	13,754	2,421	21%
<i>% y-o-y</i>	4.3%	-0.6%	4.7%	6.3%	4.3%	5.3%	4.1%	4.1%	1.9%		
Demand											
North America	1,660	1,556	1,557	1,430	1,373	1,428	1,485	1,507	1,530	100	7%
South & Central America	429	409	421	450	466	496	526	552	569	119	26%
Europe	2,732	2,676	2,715	2,731	2,731	2,814	2,901	2,986	3,063	332	12%
Asia, ex China	2,534	2,515	2,566	2,558	2,595	2,680	2,784	2,895	3,011	453	18%
China	2,550	2,975	3,300	3,575	3,897	4,247	4,587	4,931	5,301	1,726	48%
Australasia	263	253	250	235	237	239	241	243	246	11	4%
Africa	191	201	199	209	211	214	218	223	227	18	9%
Other/ adjusted	0	0	0	0	0	0	0	0	0		
Total world consumption	10,359	10,585	11,008	11,188	11,509	12,118	12,742	13,337	13,947	2,759	25%
<i>% y-o-y</i>	6.9%	2.2%	4.0%	1.6%	2.9%	5.3%	5.2%	4.7%	4.6%		
Total western world consumption	7,292	7,091	7,162	7,070	7,041	7,259	7,499	7,707	7,901	831	12%
<i>% y-o-y</i>	3.1%	-2.8%	1.0%	-1.3%	-0.4%	3.1%	3.3%	2.8%	2.5%		
Total world balance	-122	-408	-351	145	315	336	222	164	-192		
Stocks											
Total stocks	1,022	808	507	554	870	1,206	1,428	1,592	1,400		
Weeks' consumption	5.1	4.0	2.4	2.6	3.9	5.2	5.8	6.2	5.2		
<i>% change y-o-y</i>											
Total world mine production	-1.4%	4.6%	4.6%	10.5%	4.6%	6.7%	3.9%	1.2%	0.8%		
Total world smelter capacity	3.4%	3.9%	3.8%	3.4%	4.3%	6.0%	4.1%	4.6%	1.8%		
Total world smelter production	4.1%	-0.6%	4.7%	6.6%	4.4%	5.4%	4.1%	4.1%	1.9%		
Total world consumption	6.9%	2.2%	4.0%	1.6%	2.9%	5.3%	5.2%	4.7%	4.6%		
Western World consumption	3.1%	-2.8%	1.0%	-1.3%	-0.4%	3.1%	3.3%	2.8%	2.5%		
Chinese consumption	22.9%	16.7%	10.9%	8.3%	9.0%	9.0%	8.0%	7.5%	7.5%		
Prices											
Zinc USD/ t	1,048	1,385	3,252	3,269	2,095	1,729	1,593	1,555	1,653		
Zinc USD/ lb	0.48	0.63	1.48	1.48	0.95	0.78	0.72	0.71	0.75		
Zinc TC USD/ lb	149	188	387	287	336	354	311	263	235		

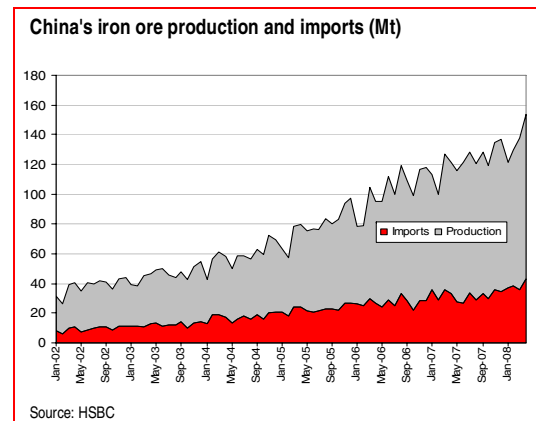
Source: HSBC estimates, CRU, World Bureau of Metal Statistics

Iron ore: enjoying its time in the sun

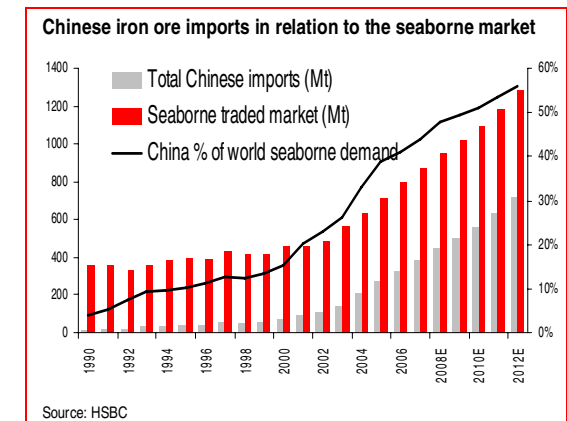
Chinese imports and prices



China's production



China as a % of seaborne market



- ▶ Despite the increase in iron ore supply on the seaborne market in 2008, spot market prices are currently trading cUSD50/t above current estimated settlement contract prices. The 71% contract price increase did little to subdue demand, and the negotiations between Australian iron ore miners and their customers point towards settlement rates closer to 90%. These negotiations have not been concluded as we write
- ▶ We believe contract Australian iron ore prices will fall by c10% in JFY2009, while Brazilian iron ore prices should remain at current levels, in light of the availability of an additional 20mt of Brazilian and 35mt of Australian ore in 2009, even as demand continues to increase. The big Australian and Brazilian capacity expansions will have more significant impacts early in the next decade, and we expect price declines of c15% in 2010
- ▶ Chinese domestic iron ore production reached 68mt in April of 2008, a level just 1mt above production in June of 2007. The growth seems to be constant, yet declines in volume are not out of the question

- ▶ Despite the surge in landed iron ore prices in China, which effectively doubled in the March 2007-2008 period to USD194/t, the volume of imports has continued increasing, reaching 42.9Mt in April 2008. The average price of imports rose 85% during 2007 to USD125/t and has since increased a further 50%, topping USD190/t. In addition, the contract prices agreed with Brazilian Southern System, cUSD84/t, are currently USD100/t below the price for spot iron ore sales in China
- ▶ The increase in imports, constrained by availability of ships and other logistical issues, has effectively halved its growth rate on a year-on-year basis, to 16% from 35%
- ▶ Coking coal availability could limit Chinese steel production, and with it, demand for iron ore, as coking coal prices are above USD300/t. On the other hand, demand for steel after the earthquakes that affected central China could boost demand

- ▶ The wild card remain domestic iron ore production in China at a current full-year run rate of c818Mt (annualised April output), well above the level in 2007 of 700mt.
- ▶ The ongoing decline of China's iron ore grades makes production growth an increasingly difficult act to balance, as the current estimated Fe grades of 30% can hardly compete with Australian or Brazilian iron ore content of 60%+
- ▶ New players to the iron ore market, both in Australia and Brazil, could correct the deficit in the iron ore market, but that depends on producers, both old and new, meeting their production targets
- ▶ We anticipate Australian suppliers will soon lock in a contract price hike of +90%, against the Brazilian settlement of +71% for the year commencing 1 Apr 08. For 2009, given our forecast of iron ore markets tipping into a small surplus, we forecast Australian ore prices to fall by 10%. For Brazilian ore, falling freight rates may mean that they are able to partially claw back some of the freight premium, we forecast Brazilian contract ore prices achieve a 5% fall in 2009.

Iron ore: supply & demand model

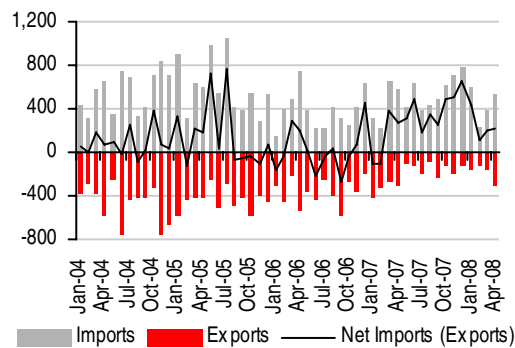
	2004	2005	2006	2007	2008e	2009e	2010e	2011e	2012e	Change 2007-12e	CAGR 2007-12e
Iron Ore demand - Seaborne market, mt											
China	208	275	326	384	413	462	521	596	684	299.8	12.2%
Y-o-y change	40.4%	32.3%	18.6%	17.6%	7.8%	11.8%	12.8%	14.3%	14.7%		
World ex China	421	433	470	490	508	525	546	562	562	72.7	2.8%
Y-o-y change	0.8%	2.9%	8.4%	4.3%	3.6%	3.5%	3.9%	3.0%	0.0%		
World	629	708	796	873	921	987	1,067	1,158	1,246	372.5	7.4%
Y-o-y change	11.1%	12.6%	12.4%	9.7%	5.4%	7.2%	8.1%	8.6%	7.6%		
Annual increase/ (decrease)	63	79	88	77	48	66	80	91	88		
Iron Ore supply - Seaborne market, mt											
Australia	223.7	250.0	276.7	303.1	346.3	381.4	412.9	454.9	509.9	206.8	11.0%
Y-o-y change	11%	12%	11%	10%	14%	10%	8%	10%	12%		
Brazil	215.4	238.0	260.3	299.7	352.1	372.5	397.8	451.1	493.6	193.9	-9.0%
Y-o-y change	12%	10%	9%	15%	17%	6%	7%	13%	9%		
South Africa	28.5	28.8	30.3	32.1	40.0	46.5	47.0	46.9	46.9	14.8	7.9%
Y-o-y change	4%	1%	5%	6%	25%	16%	1%	0%	0%		
India	75.6	96.1	86.3	90.2	89.4	89.8	90.2	97.8	96.1	5.9	1.3%
Y-o-y change	35%	27%	-10%	5%	-1%	1%	0%	8%	-2%		
Sweden	15.8	17.0	17.3	18.0	18.5	19.4	20.9	20.9	20.9	2.9	3.0%
Y-o-y change	3%	8%	2%	4%	3%	5%	8%	0%	0%		
Peru	7.0	7.1	7.5	7.5	7.5	7.5	7.5	7.5	7.5	0.0	0.0%
Y-o-y change	59%	1%	6%	0%	0%	0%	0%	0%	0%		
Chile	7.5	7.9	8.2	8.2	9.2	10.2	11.2	11.2	11.2	3.0	6.4%
Y-o-y change	3%	5%	4%	0%	12%	11%	10%	0%	0%		
Russia	9.0	10.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	5.0	6.7%
Y-o-y change	6%	11%	20%	8%	8%	7%	7%	6%	6%		
Mauritania	10.7	10.7	11.5	13.0	14.0	14.0	14.0	14.0	14.0	1.0	1.5%
Y-o-y change	6%	0%	7%	13%	8%	0%	0%	0%	0%		
Canada	24.2	29.3	36.6	37.0	36.9	36.8	36.7	37.4	36.8	-0.2	-0.1%
Y-o-y change	-26%	21%	25%	1%	0%	0%	0%	2%	-2%		
Venezuela	11.9	13.6	14.7	16.2	17.1	17.1	17.0	17.0	16.8	0.6	0.8%
Y-o-y change	6%	14%	9%	10%	6%	0%	0%	0%	-1%		
Sub total	629	708	762	838	945	1,010	1,071	1,176	1,272	433.7	8.7%
Y-o-y change	11.1%	12.6%	7.5%	10.0%	12.8%	6.9%	6.0%	9.8%	8.2%		
Annual increase/ (decrease)	63	79	53	76	107	65	61	104	96		
Market balance, mt											
Notional surplus/ (deficit)	-	-	(35)	(35)	24	23	4	17	26		
Surplus/ (deficit) as % of demand	-	-	-4.3%	-4.1%	2.6%	2.3%	0.4%	1.5%	2.1%		
Price trends											
USD/ t lump ore – contract (Brazil)	28.92	49.60	59.03	64.63	110.52	110.52	99.47	84.55	71.87		
Annual change	18.6%	71.5%	19.0%	9.5%	71.0%	0%	-10.0%	-15.0%	-15.0%		
USD/ t lump ore – contract (Australia)	28.92	49.60	59.03	64.63	122.80	110.52	99.47	84.55	71.87		
Annual change	18.6%	71.5%	19.0%	9.5%	90.0%	-10%	-10.0%	-15.0%	-15.0%		

Source: HSBC estimates, Tex Report, AME

Coking coal: led by steel growth

Supply

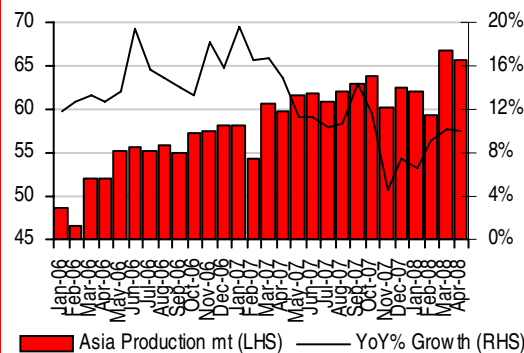
China – 70% supply from small mines, net coking coal importer since 2004 (kt)



Source: China Coal Resource, HSBC.

Demand

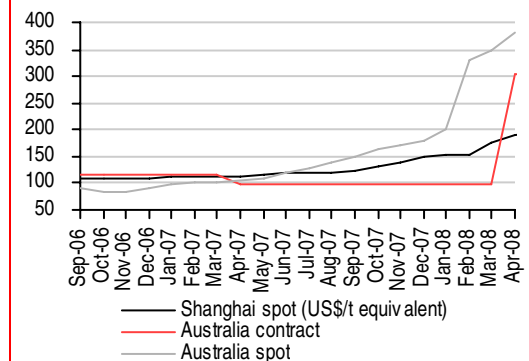
Asia steel production growth the key driver



Source: IISI, HSBC.

Market balance/ Pricing

China coking coal prices rising, but still below Australia contract/spot prices (US\$/t)



Source: China Coal Resource, CRU, HSBC.

- ▶ Coking coal markets tightened sharply at the beginning of 2008 given weather-related disruptions (the Queensland floods).
- ▶ BHP Billiton Mitsubishi Alliance, the world's largest coking coal producer, lifted force majeure on its coal shipments on 5 June
- ▶ China has difficulty increasing coking coal production, given resources are scarce and supply mainly comes from small mines (70%). Consolidation of small mines and rising environmental and safety regulations have constrained the increase in supply
- ▶ Swing producers including US, Canada and Russia are returning to the market. US coking coal exports were 7.9mt in Q1 2008. Applying March exports of 3.3mt for the rest of the year, 2008 exports could exceed 37.6mt, an increase of 12mt from 2007.
- Russia's government is planning to impose an export duty of up to 20% on coking coal. According to McCloskey, domestic prices are expected to rise another 25%-40% in the near future to USD225/t while export prices rise 200% to USD300/t.

- ▶ IISI in its medium-term outlook in mid-April forecast global steel demand to grow 6.7% to 1,282mt.
- ▶ Asia steel production growth remains strong. In January-April 2008, crude steel output rose 8.9%, accounted for 74% of world's incremental growth, driven by China (50%) and India (13%)
- ▶ 2008 seaborne demand to increase by around 4% as world basic oxygen furnace (BOF) production is forecast by HSBC to increase by 5% from 867mt to 907mt.
- ▶ Looking to 2009, we forecast coking coal demand to increase by 6% or 16mt, driven by steel demand growth of 5%, skewed to Asia and Central/South America.
- ▶ China has been a net coking coal importer since 2004. New crude steel output additions will require an addition of around 30mt of coking coal if crude steel production increases by 10% or 50mt from 2007.

- ▶ Given Queensland floods, the leading Australian coking coal producer settled coking coal prices at around USD300/t. Australian spot prices are US\$380/t in April.
- ▶ High prices will encourage swing products to return to the market. We expect the tight coking coal supply to ease with Australia back to production and US increasing supply. We expect contract prices to fall 33% in 2009 to cUSD200/t.
- ▶ Looking to 2010e, we still see demand growth averaging 5% pa, and this should ensure that coking coal prices remain high. We do not expect to see hard coking coal below USD100/t in the next five years.
- ▶ Current Shanghai coking coal prices has reached RMB1,350/t (US\$195/t), an increase of 44% compared to 2007. We expect prices to remain at a high level in 2008.
- ▶ Coking coal prices in China are more market driven than thermal coal, and less likely to face government measures on prices.

Coking coal: supply & demand model

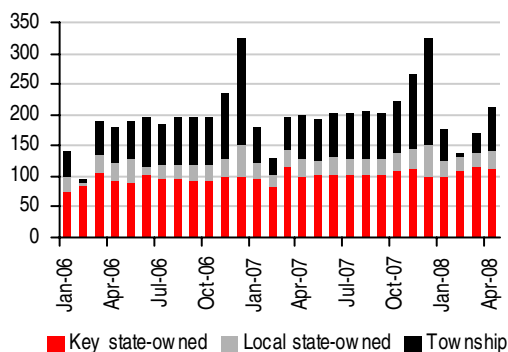
	2004	2005	2006	2007e	2008e	2009e	2010e	Change 2007-10e	CAGR 2007-10e
Coking coal exports									
Australia	116.7	124.9	127.5	135.2	133.0	147.3	149.8	15	3.5%
% change Y-o-y	5%	7%	2%	6%	-2%	11%	2%		
USA	24.3	26.0	23.9	19.0	21.0	24.0	26.0	7	11.0%
% change Y-o-y	22%	7%	-8%	-21%	11%	14%	8%		
South Africa	4.3	3.8	4.0	3.9	3.6	3.4	3.4	-1	-4.5%
% change Y-o-y	10%	-12%	5%	-3%	-8%	-6%	0%		
Indonesia	2.9	4.1	4.1	4.5	5.1	5.9	8.0	4	21.1%
% change Y-o-y	32%	41%	0%	10%	13%	16%	36%		
Canada	26.0	26.6	29.0	33.0	34.0	38.0	38.0	5	4.8%
% change Y-o-y	8%	2%	9%	14%	3%	12%	0%		
Poland	3.0	2.6	2.5	2.1	2.0	2.0	2.0	0	-1.6%
% change Y-o-y	11%	-13%	-4%	-16%	-5%	0%	0%		
China	5.7	5.3	4.4	5.0	8.5	8.0	6.0	1	6.3%
% change Y-o-y	-56%	-7%	-17%	14%	70%	-6%	-25%		
Colombia	2.3	2.3	2.8	3.1	3.8	4.0	5.0	2	17.3%
% change Y-o-y	53%	0%	22%	11%	23%	5%	25%		
Russia	15.5	15.9	16.7	17.3	18.0	20.0	22.0	5	8.3%
% change Y-o-y	18%	3%	5%	4%	4%	11%	10%		
Other	29.2	22.0	22.5	28.9	27.0	27.4	32.8	4	4.3%
% change Y-o-y	115%	-25%	2%	28%	-7%	1%	20%		
Total Coking exports	230	234	237	252	256	280	293	41	5.2%
% change Y-o-y	12%	2%	2%	6%	2%	9%	5%		
Coking Coal imports									
Europe	75.5	77.1	76.9	77.8	78.7	82.4	82.8	5	2.1%
% change Y-o-y	14%	2%	0%	1%	1%	5%	0%		
Asia	118.8	120.8	126.0	136.8	145.8	155.2	166.3	29	6.7%
% change Y-o-y	7%	2%	4%	9%	7%	6%	7%		
Asia ex China	112.0	113.6	121.3	122.5	122.5	122.5	122.5	0	0.0%
% change Y-o-y	4%	1%	7%	1%	0%	0%	0%		
China	6.8	7.2	4.7	5.4	5.8	6.2	6.6	1	6.7%
% change Y-o-y	162%	6%	-35%	16%	7%	6%	7%		
NAFTA	7.1	7.1	7.1	7.2	7.2	7.2	7.2	0	0.0%
% change Y-o-y	1%	0%	0%	1%	0%	0%	0%		
Central and South America	17.7	17.1	17.9	19.4	20.0	22.2	23.1	4	5.9%
% change Y-o-y	16%	-3%	5%	9%	3%	11%	4%		
Other	4.0	4.2	4.8	5.0	5.3	5.6	5.9		
% change Y-o-y	3%	5%	14%	5%	5%	6%	6%		
Total Coking Coal imports	230	234	237	252	263	279	292	40	5.1%
% change Y-o-y	12%	2%	2%	6%	4%	6%	5%		
Supply surplus/ (deficit)	0	0	0	0	-7	1	1		
Surplus/ deficit as % of exports	0%	0%	0%	0%	-3%	0%	0%		

Source: HSBC estimates, McCloskey, Tex Report

Thermal coal: China's policy risk

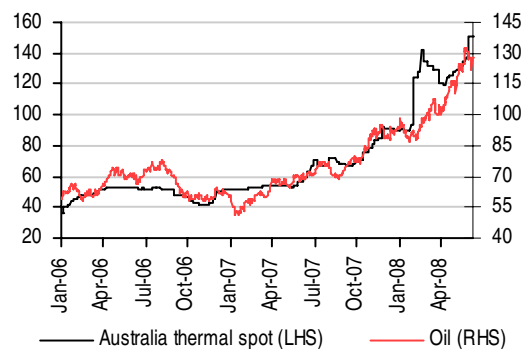
Supply

China – supply tension to ease with small mines resuming production, following the Olympic Games (mt)



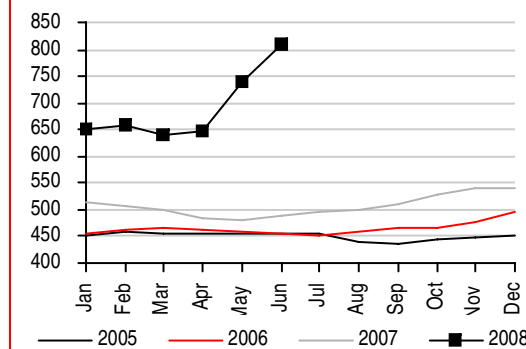
Demand

Oil prices at record high, renew interest on alternative energy



Market balance/ Pricing

Qinhuangdao domestic thermal coal price continue to rise, +19% mom to RMB810/t (US\$117/t) on 9 Jun



- ▶ Crisis conditions, including Queensland floods and China snowstorm, that brought about this year's supply disruptions have now passed.
- ▶ Transport bottlenecks and weather-related issues in Australia and Indonesia drive thermal coal spot prices to US\$152/t, up 21% from April. Newcastle also has some switching of semi-soft coking coal at the expense of thermal coal.
- ▶ On higher prices, US thermal coal exports rose 67% to 3.78mt in Q108. Applying March exports of 1.82mt for the rest of the year, 2008 exports could exceed 20mt, a double of 10.68mt in 2007.
- ▶ China has set its export quota at 53mt in 2008 with the first batch 31.8mt (60%) quota released. Given uncertainty in the policy, a risk remains the remaining quota may not be fully released.
- ▶ China's State Council released a circular to step up the re-opening of small mines, a third of output, and requested large mines to raise production to ensure sufficient power supply for summer.

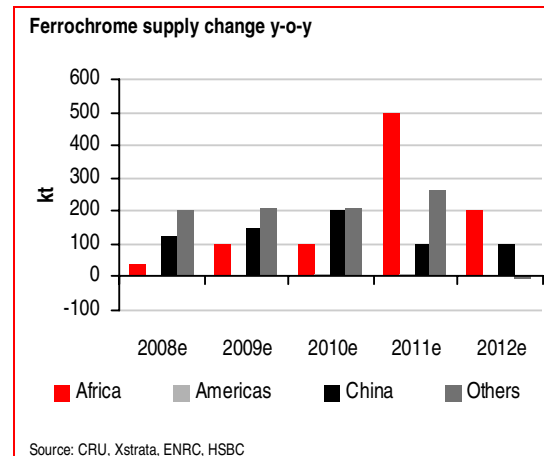
- ▶ Oil prices and freight costs are both at record high, driving renew interest on alternative energy including coal. Baltic Freight Index has doubled from the low in end-January 2008.
- ▶ Demand growth from electricity in Asia is strong, in line with the region's economic expansion and industrialization. The majority of the increased electricity demand will be met through coal-fired power plants based on cost competitiveness.
- ▶ Asia accounted for 92% of world incremental demand in 2007, driven by China (71%) and India (10%). India is planning to build a number of large coal fired power generators (4GW each).
- ▶ The China Electricity Council forecasts that power demand growth will be around 10% pa during 2007-2010. A further 90GW of new generating capacity is scheduled to come on line in 2008.
- ▶ Shandong, Shaanxi and Hunan provinces in China announced temporary coal price measures to cap spot prices on thermal coal supply to power generators until September.

- ▶ Crisis conditions passed, we expect thermal coal contract prices to fall 25% to cUSD94/t in JFY2009 but still be at cUSD80/t in JFY2010.
- ▶ Upside potential for thermal coal prices should additional supply constraints emerge or China reduce its export volume.
- ▶ The mid-term outlook remains robust given infrastructure constraints in key export markets (Australia and South Africa) and by the fact that Chinese net thermal coal exports have moderated and are likely to remain at these historical lower levels.
- ▶ China temporary coal price measures, in our view, are mild (ie to maintain spot prices at the current high levels), but clearly highlight the risk of coal price intervention in China.
- ▶ With more coal supply, we expect China domestic thermal spot coal prices to fall in the 2H. However, prices in the near term are likely to remain at a high level, as we do not expect transport bottlenecks to ease prior to the Olympic Games.

Ferrochrome: still looking to the upside

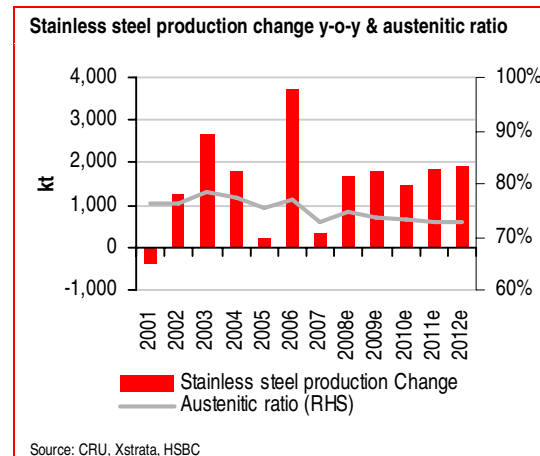
- ▶ South Africa supplies the world, but its ferrochrome production is curbed by power shortage
- ▶ We expect stainless steel production to pick up again, which drives demand
- ▶ Spot prices shot up 169% y-o-y, which we expect to spill over to the contract market

Supply



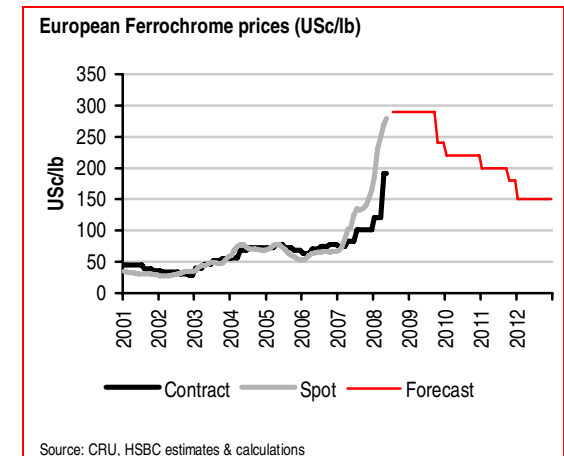
- ▶ IS. Africa's output (c45%) of global supply remains curbed due to shortage of power. It is unlikely that expansion projects in S. Africa that are not in a ramp-up phase yet will be realised before 2012
- ▶ With the energy intensive winter period ahead supply disruptions in the energy intensive ferrochrome market are a clear possibility
- ▶ We expect output to grow by 4.0% in 2008e and 5.1% in 2009e

Demand



- ▶ We expect global stainless steel production to grow by 5.8% in 2008e and 5.8% in 2009e
- ▶ Ferritic grade stainless steel should continue to gain share from austenitic due to the substantial cost advantage (USD1839/t at current spot prices)
- ▶ We expect primary ferrochrome demand growth of 4.2% in 2008 and 4.9% in 2009e as some temporary shut down austenitic capacity is coming back to the market

Market balance/ Pricing



- ▶ Contract prices have increased by 59% in Q2 2008 q-o-q on short supply and rising production costs (ore, shipping, power)
- ▶ Spot prices have risen even further to USD2.80/lb in May and we expect this to spill over in the term market in Q3-08. We look for prices moving up to USD2.9/lb in Q3-08 and USD2.23/lb on average for 2008e (+148% y-o-y) and 21% to USD2.7/lb in 2009e
- ▶ We expect prices to level-off over the medium term but clearly higher production costs should support prices well above historic levels

Ferrochrome: supply & demand model

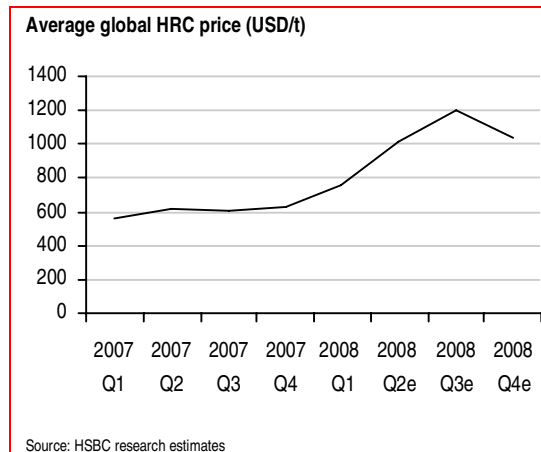
	2003	2004	2005	2006	2007	2008e	2009e	2010e	2011e	2012e	Change 2007-12e	CAGR 2007-12e
Stainless production												
US	2,335	2,382	2,231	2,498	2,171	2,193	2,220	2,264	2,309	2,355	185	1.6%
Europe	8,484	8,795	8,306	9,329	8,137	8,499	8,795	8,975	9,440	9,773	1,636	3.7%
China	1,897	2,470	3,692	5,300	7,528	8,281	9,109	9,929	10,823	11,797	4,268	9.4%
Rest of World	10,233	11,101	10,753	11,560	11,157	11,693	12,331	12,761	13,198	13,788	2,631	4.3%
World stainless production	22,949	24,748	24,982	28,687	28,993	30,666	32,455	33,929	35,770	37,713	8,719	5.4%
Y-o-y change	13.3%	7.8%	0.9%	14.8%	1.1%	5.8%	5.8%	4.5%	5.4%	5.4%		
World ex China stainless production	21,052	22,278	21,290	23,387	21,465	22,385	23,345	24,000	24,948	25,916	4,451	3.8%
Y-o-y change	8.9%	5.8%	-4.4%	9.8%	-8.2%	4.3%	4.3%	2.8%	3.9%	3.9%		
Austenitic production	17,994	19,124	18,817	22,105	21,091	22,948	23,836	24,797	26,101	27,492	6,402	5.4%
Austenitic ratio	78.4	77.3	75.3	77.1	72.7	74.8	73.4	73.1	73.0	72.9		
Ferritic production	4,955	5,623	6,165	6,582	7,903	7,718	8,619	9,133	9,669	10,220	2,318	5.3%
Nickel content - Austenitic	8.8%	8.6%	8.4%	8.1%	7.6%	7.8%	7.8%	7.6%	7.9%	7.8%		
Nickel units	1,575	1,636	1,582	1,789	1,606	1,784	1,849	1,893	2,071	2,153	547	6.0%
Nickel in stainless, y-o-y	13.1%	3.9%	-3.3%	13.1%	-10.2%	11.1%	3.6%	2.4%	9.4%	4.0%		
Primary ratio	53.8%	52.0%	51.4%	53.5%	52.6%	53.1%	50.9%	51.2%	55.9%	55.2%		
Chrome content - austenitic (18% Cr)	1,741	1,789	1,743	2,127	1,997	2,193	2,184	2,287	2,624	2,730	733	6.5%
Chrome content - ferritic (22% Cr)	1,090	1,237	1,356	1,448	1,739	1,698	1,896	2,009	2,127	2,248	510	5.3%
Chrome content - primary stainless	2,831	3,026	3,099	3,575	3,735	3,891	4,081	4,296	4,752	4,978	1,243	5.9%
Y-o-y change	10.4%	6.9%	2.4%	15.4%	4.5%	4.2%	4.9%	5.3%	10.6%	4.8%		
Capacity changes charge/ HCFeCr												
Europe					845	865	935	940	945	905	60	1.4%
South Africa					3,562	3,600	3,700	3,800	4,300	4,500	938	4.8%
Zimbabwe					250	250	250	250	250	250		
Subtotal Africa					3,812	3,850	3,950	4,050	4,550	4,750	938	4.5%
Brazil					190	190	190	200	210	210	20	2.0%
Subtotal Americas					190	190	190	200	210	210	20	2.0%
China					1,226	1,350	1,500	1,700	1,801	1,901	675	9.2%
India					773	890	1,000	1,150	1,200	1,237	464	9.9%
Iran					20	50	50	70	70	70	50	28.5%
Kazakhstan					934	970	1,000	1,030	1,240	1,240	306	5.8%
Subtotal Asia & Middle East					1,727	1,910	2,050	2,250	2,510	2,547	820	8.1%
Total capacity					7,800	8,165	8,625	9,140	10,016	10,313	2,513	5.7%
Y-o-y change						4.7%	5.6%	6.0%	9.6%	3.0%		
Prices												
Prices USD/t	1,058	1,494	1,609	1,578	1,984	4,916	5,952	4,850	4,189	3,307		
Prices USD/lb	0.48	0.68	0.73	0.72	0.90	2.23	2.70	2.20	1.90	1.50		

Source: ENRC, HSBC estimates

Steel: we revise Q3 prices up USD200/t

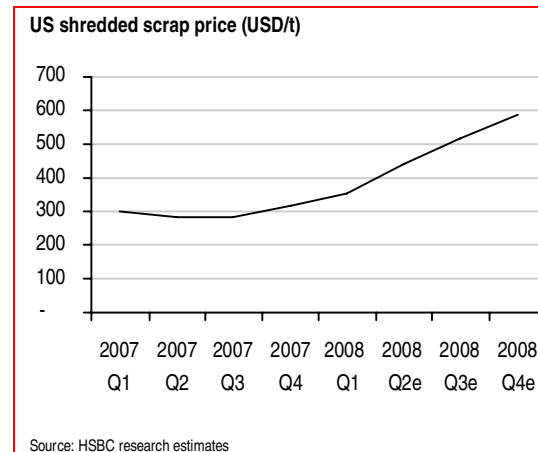
- ▶ We revise our global price expectations for HRC from USD908 per tonne in Q32008 to USD1,205
- ▶ Spot steel prices will rise almost USD550 from Q32007 to Q32008 against cost increases generally below USD300 per tonne, we forecast
- ▶ Companies are looking to set up new annual steel contracts, abolishing the current contracts for 2008 and replacing them with one starting mid 2008

HRC prices



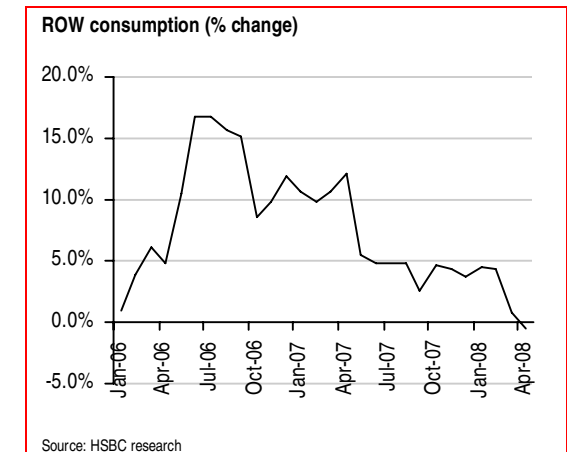
- ▶ Prices doubled 2003 to 2005 and appear to be doubling again 2007 to 2008
- ▶ Q1 prices were generally in line with Q42007; prices began to take off in February 2008
- ▶ We expect spot market to peak in August 2008

Scrap prices



- ▶ US scrap prices are currently very high, approaching USD600 a tonne against USD 265 in August 2007; this is driving long steel product prices.
- ▶ Iron ore prices increased over 70% in Q22008 on a global basis and coking coal prices trebled in price in Q22008
- ▶ The costs of making steel in China increases sharply in 2007, mainly due to increased shipping charges

Demand



- ▶ Taking estimated finished steel production in ROW (ex China) as proxy for consumption when taken with imports from China, ROW demand is slowing drastically.
- ▶ ROW demand also slowed in high price environment of 2005 and generated a price fall for steel
- ▶ Demand has yet to respond to peak steel prices

Finished steel consumption (mt)

	2000	2001	2002	2003	2004	2005	2006	2007e	2008e	2009e	2010e	2011e	2012e	2013e
World	761.0 7.6%	773.0 1.6%	824.0 6.6%	895.0 8.6%	984.0 9.9%	1035.0 5.2%	1130.0 9.2%	1198.4 6.1%	1267.2 5.7%	1337.3 5.5%	1412.9 5.7%	1494.3 5.8%	1582.1 5.9%	1676.8 6.0%
China	124.3 0.0%	153.6 23.6%	186.3 21.3%	240.5 29.1%	275.8 14.7%	328.3 19.0%	357.4 8.9%	398.0 11.4%	437.8 10.0%	477.2 9.0%	520.2 9.0%	567.0 9.0%	618.0 9.0%	673.6 9.0%
World ex China	636.4 8.9%	619.9 -2.6%	637.4 2.8%	654.3 2.7%	707.8 8.2%	706.6 -0.2%	773.0 9.4%	800.4 3.5%	829.4 3.6%	860.1 3.7%	892.7 3.8%	927.3 3.9%	964.1 4.0%	1003.2 4.1%

Source: CRU, HSBC

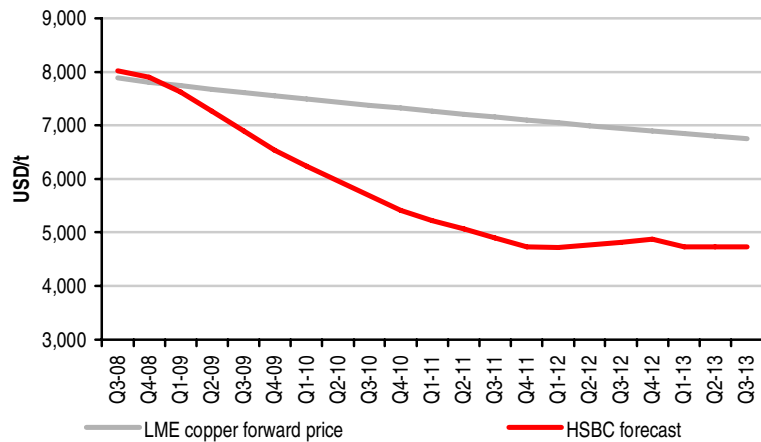
Finished steel production (mt)

	2000	2001	2002	2003	2004	2005	2006	2007	2008e	2009e	2010e	2011e	2012e	2013e
World	760.7 0.0%	773.4 1.7%	823.8 6.5%	894.8 8.6%	983.6 9.9%	1,034.9 5.2%	1,130.5 9.2%	1,204.2 6.5%	1,267.2 5.2%	1,337.0 5.5%	1,412.4 5.6%	1,495.0 5.9%	1,582.1 5.8%	1,676.9 6.0%
China	114.2 0.0%	137.3 20.2%	166.1 21.0%	205.2 23.6%	258.2 25.8%	321.2 24.4%	389.7 21.3%	445.3 14.3%	483.0 8.5%	526.5 9.0%	573.9 9.0%	625.5 9.0%	661.8 5.8%	743.2 12.3%
World ex China	646.5 0.0%	636.2 -1.6%	657.7 3.4%	689.6 4.8%	725.5 5.2%	713.7 -1.6%	740.8 3.8%	758.9 2.4%	784.2 3.3%	810.5 3.4%	838.5 3.5%	869.5 3.7%	900.3 3.5%	933.7 3.7%

Source: IISI, HSBC estimates

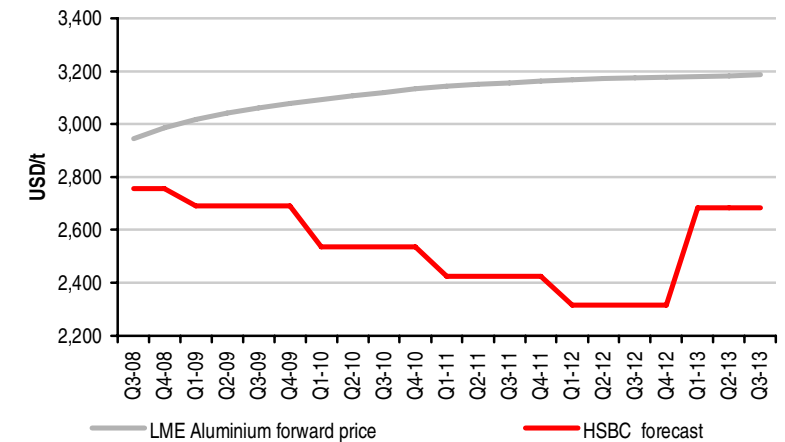
Commodities forward curve

LME copper forward prices versus HSBC copper price forecasts



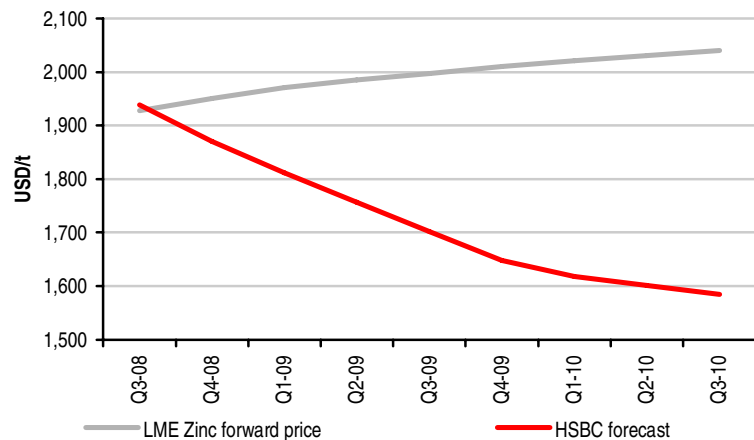
Note: forward prices are as of 11 June 2008 Source: Bloomberg, HSBC

LME high grade aluminium forward prices versus HSBC aluminium price forecasts



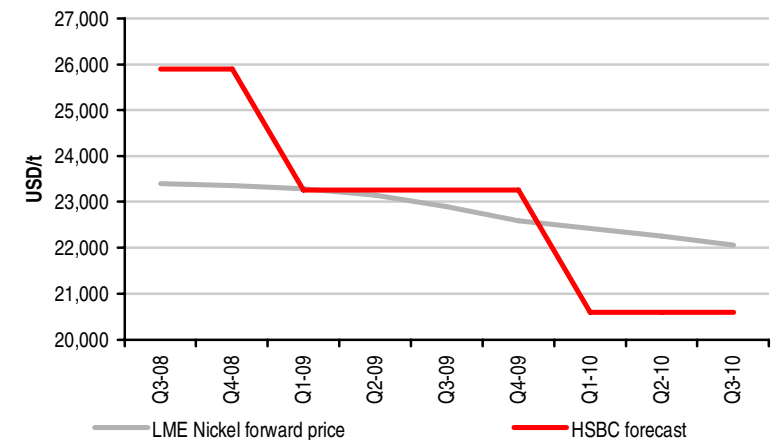
Note: forward prices are as of 11 June 2008; Source: Bloomberg, HSBC

LME zinc forward prices versus HSBC zinc price forecasts



Note: forward prices are as of 11 June 2008; Source: Bloomberg, HSBC

LME Nickel forward prices versus HSBC nickel price forecasts



Note: forward prices are as of 11 June 2008; Source: Bloomberg, HSBC

Commodities consumption trends

1950-1981

		Western world					China											
		Aluminium 000t	Copper 000t	Nickel 000t	Zinc 000t	OECD IP change y-o-y	Aluminium %	Copper %	Nickel %	Zinc %	Aluminium 000t	Copper 000t	Nickel 000t	Zinc 000t	Aluminium %	Copper %	Nickel %	Zinc %
	1950	1,339	2,595	128	1,828	-	-	-	-	-	-	-	-	-	-	-	-	-
	1951	1,553	2,650	121	1,783	9.4%	16.0%	2.1%	(5.5%)	(2.5%)	-	-	-	-	-	-	-	-
	1952	1,684	2,736	137	1,646	1.4%	8.4%	3.2%	13.2%	(7.7%)	-	-	-	-	-	-	-	-
	1953	2,060	2,636	141	1,837	8.5%	22.3%	(3.7%)	2.9%	11.6%	-	-	-	-	-	-	-	-
	1954	2,099	2,870	138	1,977	(1.2%)	1.9%	8.9%	(2.1%)	7.6%	-	-	-	-	-	-	-	-
	1955	2,602	3,268	162	2,281	11.3%	24.0%	13.9%	17.4%	15.4%	-	-	-	-	-	-	-	-
	1956	2,700	3,360	182	2,164	4.9%	3.8%	2.8%	12.3%	(5.1%)	-	-	-	-	-	-	-	-
	1957	2,372	3,336	184	2,167	3.6%	(12.1%)	(0.7%)	1.1%	0.1%	-	-	-	-	-	-	-	-
Recession	1958	2,479	3,369	140	2,164	(2.1%)	4.5%	1.0%	(23.9%)	(0.1%)	-	-	-	-	-	-	-	-
	1959	3,207	3,552	190	2,328	8.1%	29.4%	5.4%	35.7%	7.6%	-	-	-	-	-	-	-	-
	1960	3,237	3,829	219	2,498	7.8%	0.9%	7.8%	15.3%	7.3%	90	90	-	80	-	-	-	-
	1961	3,458	4,009	226	2,624	(3.9%)	6.8%	4.7%	3.2%	5.0%	80	120	-	100	(11.1%)	33.3%	-	25.0%
	1962	3,893	4,122	213	2,757	7.2%	12.6%	2.8%	(5.8%)	5.1%	85	120	-	100	6.3%	0.0%	-	0.0%
	1963	4,322	4,398	235	2,952	6.2%	11.0%	6.7%	10.3%	7.1%	85	120	-	100	0.0%	0.0%	-	0.0%
	1964	4,809	4,928	290	3,254	7.7%	11.3%	12.1%	23.4%	10.2%	85	120	-	100	0.0%	0.0%	-	0.0%
	1965	5,232	5,052	317	3,348	6.7%	8.8%	2.5%	9.3%	2.9%	95	120	-	100	11.8%	0.0%	-	0.0%
	1966	6,045	5,243	349	2,923	7.0%	15.5%	3.8%	10.1%	(12.7%)	95	130	-	100	0.0%	8.3%	-	0.0%
	1967	6,088	4,918	358	3,439	3.8%	0.7%	(6.2%)	2.6%	17.7%	130	140	-	100	36.8%	7.7%	-	0.0%
	1968	7,035	5,168	370	3,781	6.7%	15.6%	5.1%	3.4%	9.9%	160	150	-	100	23.1%	7.1%	-	0.0%
	1969	7,732	5,750	383	4,104	8.1%	9.9%	11.3%	3.5%	8.5%	200	180	-	110	25.0%	20.0%	-	10.0%
	1970	7,935	5,920	451	3,950	3.0%	2.6%	3.0%	17.8%	(3.8%)	225	200	-	115	12.5%	11.1%	-	4.5%
	1971	8,469	5,813	396	4,027	2.0%	6.7%	(1.8%)	(12.2%)	1.9%	245	210	-	115	8.9%	5.0%	-	0.0%
	1972	9,449	6,360	435	4,490	7.0%	11.6%	9.4%	9.8%	11.5%	295	240	-	120	20.4%	14.3%	-	4.3%
	1973	11,187	6,982	514	4,994	9.3%	18.4%	9.8%	18.2%	11.2%	370	270	-	125	25.4%	12.5%	-	4.2%
Recession	1974	11,246	6,609	556	4,613	(0.3%)	0.5%	(5.3%)	8.2%	(7.6%)	400	280	-	140	8.1%	3.7%	-	12.0%
Recession	1975	8,627	5,620	415	3,595	(8.1%)	(23.3%)	(15.0%)	(25.4%)	(22.1%)	440	300	-	180	10.0%	7.1%	-	28.6%
	1976	11,073	6,605	499	4,254	8.2%	28.4%	17.5%	20.2%	18.3%	470	320	-	180	6.8%	6.7%	-	0.0%
	1977	11,358	6,958	473	4,331	4.3%	2.6%	5.3%	(5.2%)	1.8%	510	330	-	185	8.5%	3.1%	-	2.8%
	1978	12,027	7,351	533	4,724	3.9%	5.9%	5.6%	12.7%	9.1%	560	340	-	185	9.8%	3.0%	-	0.0%
	1979	12,607	7,553	599	4,829	4.6%	4.8%	2.7%	12.4%	2.2%	580	340	-	190	3.6%	0.0%	-	2.7%
Recession	1980	11,969	7,415	546	4,557	0.0%	(5.1%)	(1.8%)	(8.8%)	(5.6%)	550	330	-	259	(5.2%)	(2.9%)	-	36.3%
Recession	1981	11,198	7,437	486	4,496	0.1%	(6.4%)	0.3%	(11.0%)	(1.3%)	560	370	-	278	1.8%	12.1%	-	7.3%

Source: HSBC, WBMS, CRU, Other

1982-2007

		Western world								China								
		Aluminium 000t	Copper 000t	Nickel 000t	Zinc 000t	OECD IP change y-o-y	Aluminium %	Copper %	Nickel %	Zinc %	Aluminium 000t	Copper 000t	Nickel 000t	Zinc 000t	Aluminium %	Copper %	Nickel %	Zinc %
Recession	1982	10,911	6,992	456	4,308	(2.4%)	(2.6%)	(6.0%)	(6.2%)	(4.2%)	550	380	-	304	(1.8%)	2.7%	-	9.4%
	1983	11,942	7,105	501	4,626	1.5%	9.4%	1.6%	9.9%	7.4%	600	380	-	322	9.1%	0.0%	-	5.9%
	1984	12,510	7,692	584	4,774	6.1%	4.8%	8.3%	16.6%	3.2%	630	390	-	337	5.0%	2.6%	-	4.7%
	1985	12,556	7,512	563	4,804	3.0%	0.4%	(2.3%)	(3.6%)	0.6%	720	420	-	349	14.3%	7.7%	-	3.6%
	1986	12,837	7,787	582	4,950	0.7%	2.2%	3.7%	3.4%	3.0%	836	450	-	382	16.1%	7.1%	-	9.5%
	1987	13,573	8,211	644	5,116	3.3%	5.7%	5.4%	10.7%	3.4%	727	470	-	409	(13.0%)	4.4%	-	7.1%
	1988	14,382	8,361	674	5,334	5.7%	6.0%	1.8%	4.7%	4.3%	658	465	-	435	(9.5%)	(1.1%)	-	6.4%
	1989	14,669	8,738	673	5,244	3.4%	2.0%	4.5%	(0.1%)	(1.7%)	920	528	-	485	39.8%	13.5%	-	11.5%
	1990	15,041	8,772	686	5,253	2.3%	2.5%	0.4%	1.9%	0.2%	861	625	-	550	(6.4%)	18.4%	-	13.4%
Recession	1991	15,044	8,929	663	5,370	(0.5%)	0.0%	1.8%	(3.4%)	2.2%	938	750	-	595	8.9%	20.0%	-	8.2%
Recession	1992	15,517	9,051	630	5,427	(0.5%)	3.1%	1.4%	(5.0%)	1.1%	1,254	880	38	658	33.7%	17.3%	-	10.6%
Recession	1993	15,901	9,356	674	5,552	(0.5%)	2.5%	3.4%	7.0%	2.3%	1,318	991	39	720	5.1%	12.6%	3.5%	9.4%
	1994	17,840	10,020	776	5,846	4.4%	12.2%	7.1%	15.1%	5.3%	1,484	1,045	41	780	12.6%	5.4%	5.1%	8.3%
	1995	17,670	10,190	901	6,259	3.9%	(1.0%)	1.7%	16.0%	7.1%	1,875	1,175	41	875	26.3%	12.4%	1.0%	12.2%
	1996	17,895	10,700	878	6,272	2.5%	1.3%	5.0%	(2.5%)	0.2%	2,158	1,260	44	980	15.1%	7.2%	5.3%	12.0%
	1997	18,895	11,220	944	6,507	5.3%	5.6%	4.9%	7.5%	3.7%	2,013	1,309	45	1,020	(6.7%)	3.9%	3.0%	4.1%
Asia crisis	1998	18,795	11,420	941	6,582	2.2%	(0.5%)	1.8%	(0.3%)	1.2%	2,519	1,402	44	1,085	25.1%	7.1%	(2.2%)	6.4%
	1999	19,618	11,960	999	6,805	3.1%	4.4%	4.7%	6.1%	3.4%	2,846	1,540	48	1,200	13.0%	9.8%	10.3%	10.6%
	2000	20,463	12,760	1,025	7,132	5.4%	4.3%	6.7%	2.6%	4.8%	3,238	1,900	63	1,350	13.8%	23.4%	31.4%	12.5%
Recession	2001	18,926	11,389	986	6,968	(2.3%)	(7.5%)	(10.7%)	(3.8%)	(2.3%)	3,539	2,256	87	1,525	9.3%	18.7%	37.6%	13.0%
	2002	19,787	11,565	1,031	7,064	0.3%	4.5%	1.5%	4.5%	1.4%	4,318	2,558	98	1,750	22.0%	13.4%	12.5%	14.8%
	2003	20,831	11,486	1,069	7,073	1.5%	5.3%	(0.7%)	3.7%	0.1%	5,151	3,022	131	2,075	19.3%	18.1%	32.8%	18.6%
	2004	22,319	12,232	1,067	7,295	3.3%	7.1%	6.5%	(0.2%)	3.1%	6,065	3,458	156	2,550	17.7%	14.4%	19.4%	22.9%
	2005	22,973	11,882	1,017	7,124	2.3%	2.9%	(2.9%)	(4.7%)	(2.3%)	7,162	3,810	185	2,975	18.1%	10.2%	18.9%	16.7%
	2006	23,770	12,168	1,097	7,213	4.2%	3.5%	2.4%	7.9%	1.2%	8,752	3,958	258	3,300	22.2%	3.9%	39.2%	10.9%
	2007	23,768	12,223	965	7,125	2.9%	(0.0%)	0.5%	(12.0%)	(1.2%)	12,051	4,721	341	3,575	37.7%	19.3%	32.0%	8.3%

Source: HSBC, WBMS, CRU, Other

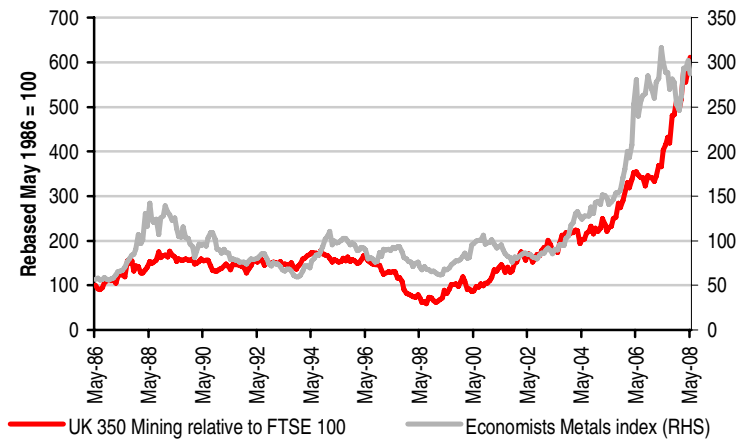
Growth rates 1950-2007

		Western world				China			
		Aluminium 000t	Copper 000t	Nickel 000t	Zinc 000t	Aluminium 000t	Copper 000t	Nickel 000t	Zinc 000t
CAGR	1950-06	5.2%	2.8%	3.6%	2.4%	-	-	-	-
CAGR	1950-73	9.7%	4.4%	6.2%	4.5%	-	-	-	-
CAGR	1974-93	1.8%	1.8%	1.0%	1.0%	6.5%	6.9%	-	9.0%
CAGR	1985-93	3.0%	2.8%	2.3%	1.8%	7.9%	11.3%	-	9.5%
CAGR	1985-07	2.9%	2.2%	2.5%	1.8%	13.7%	11.6%	-	11.2%
CAGR	1994-07	2.2%	1.5%	1.7%	1.5%	17.5%	12.3%	17.7%	12.4%
CAGR	2000-07	2.2%	-0.6%	-0.9%	0.0%	20.7%	13.9%	27.1%	14.9%

Source: HSBC, WBMS, CRU, Other

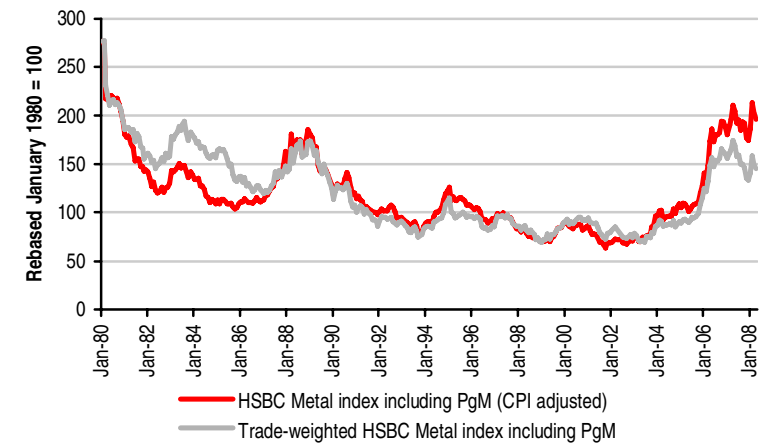
Macro indicators

Metals prices drive performance



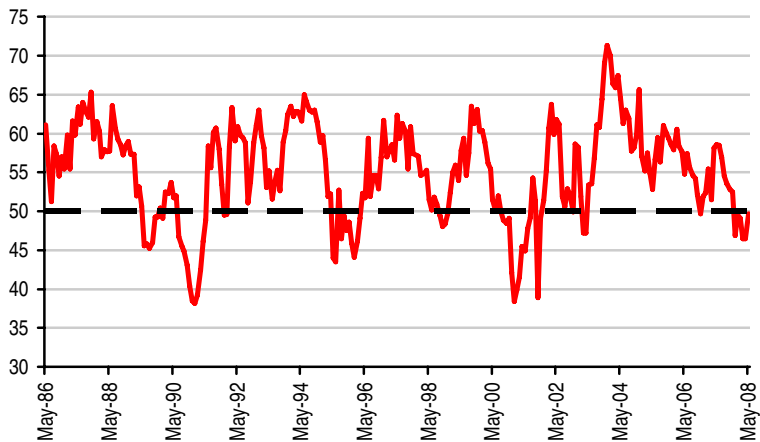
Source: Thomson Financial Datastream, HSBC

TWI versus USD price index for metals



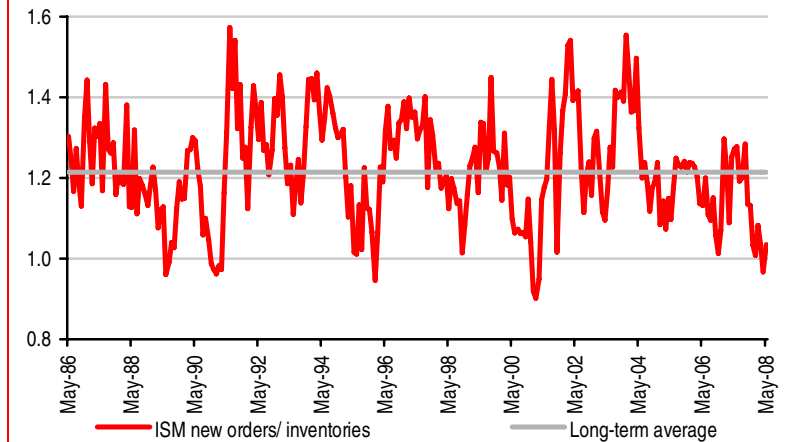
Source: Thomson Financial Datastream, HSBC

ISM new orders



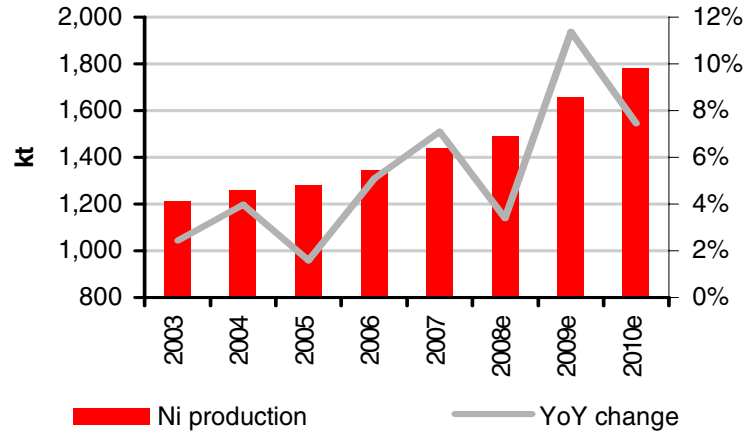
Source: Thomson Financial Datastream, HSBC

ISM new orders to inventory ratio



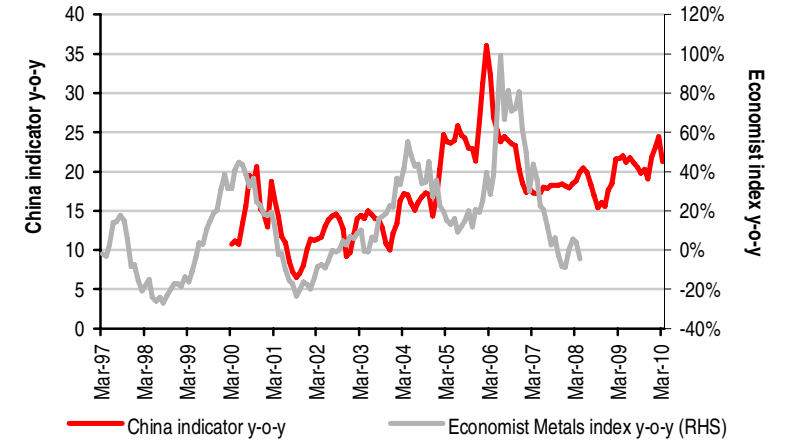
Source: Thomson Financial Datastream, HSBC

China OECD lead indicators diverge



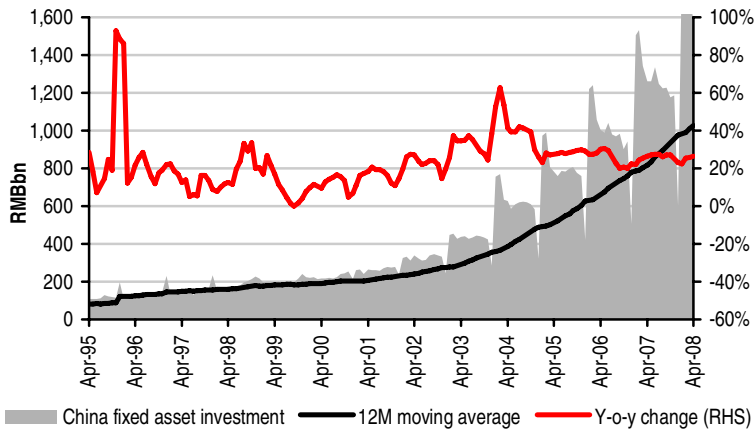
Source: Thomson Financial Datastream, HSBC

HSBC China lead indicator* and Economist Metals index



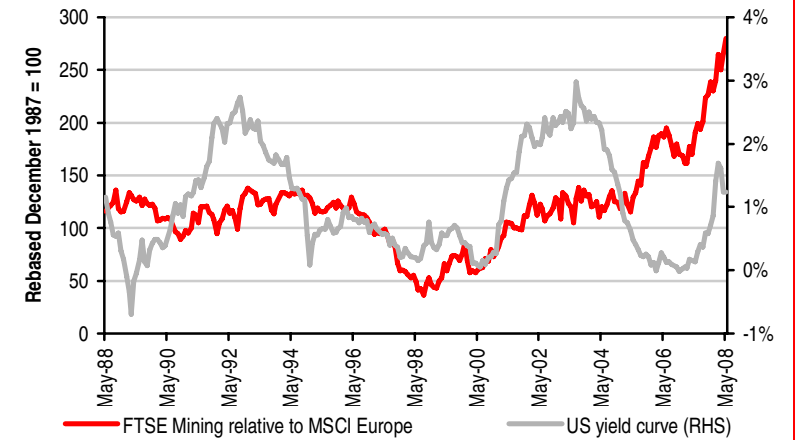
Note: * = advance 24 months
 Source: Thomson Financial Datastream, HSBC

China fixed-asset investment



Source: HSBC, National Bureau of Statistics of China

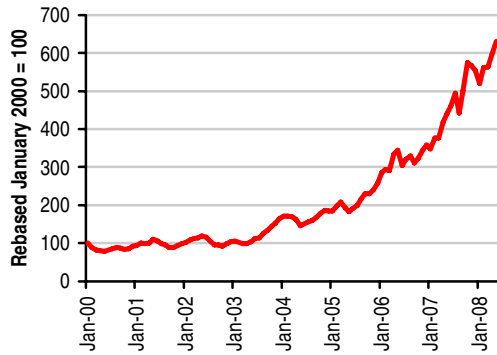
FTSE mining relative to MSCI Europe and US yield curve



Source: Thomson Financial Datastream, HSBC

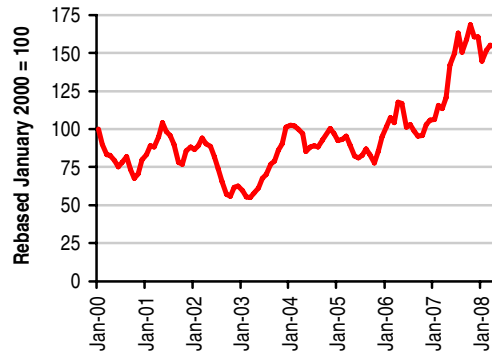
Commodities indices performance

HSBC Global Mining 100 index



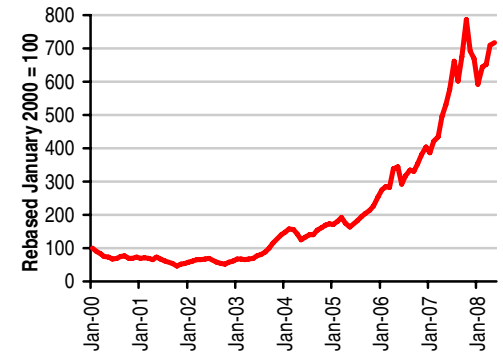
Source: Thomson Financial Datastream, HSBC

HSBC Global Aluminium index



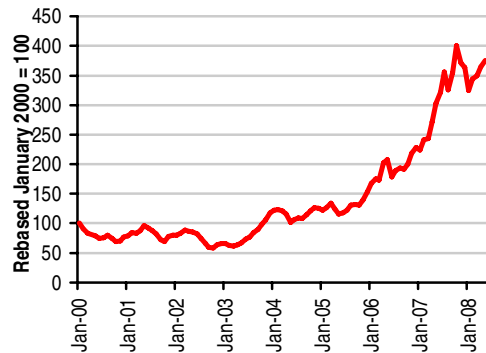
Source: Thomson Financial Datastream, HSBC

HSBC Global Copper index



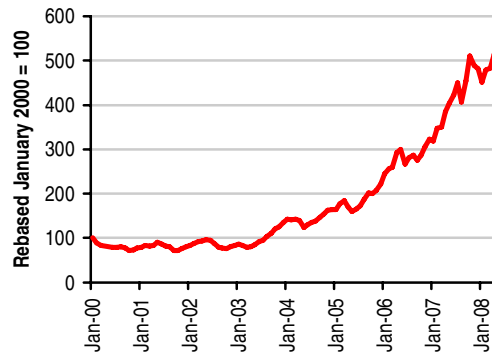
Source: Thomson Financial Datastream, HSBC

HSBC Global Base Metals index



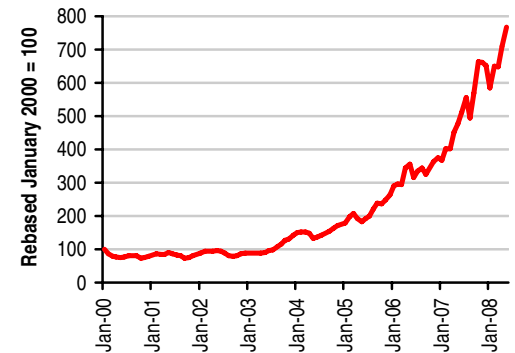
Source: Thomson Financial Datastream, HSBC

HSBC Global Mining & Steel index



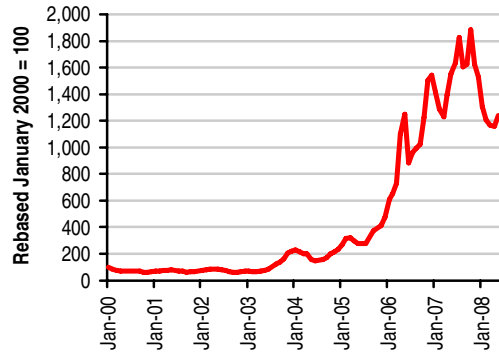
Source: Thomson Financial Datastream, HSBC

HSBC Global Diversified Miners



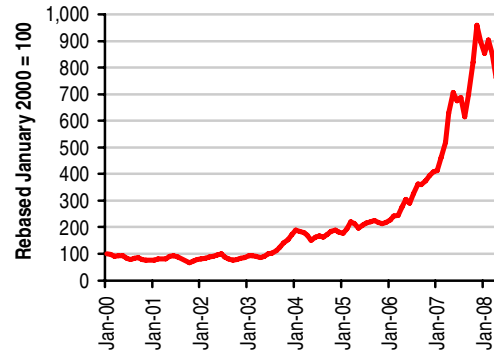
Source: Thomson Financial Datastream, HSBC

HSBC Global Zinc/ Lead index



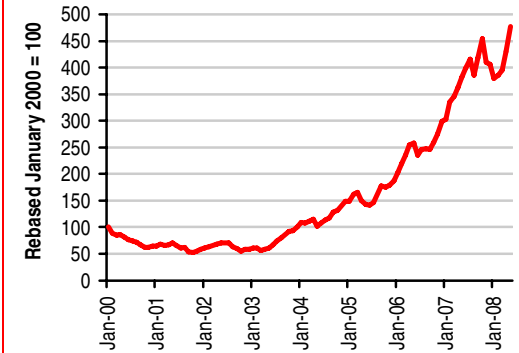
Source: Thomson Financial Datastream, HSBC

HSBC Global Nickel index



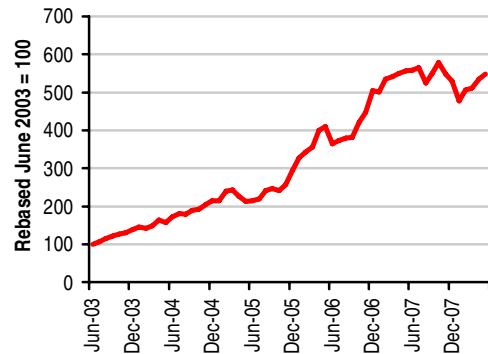
Source: Thomson Financial Datastream, HSBC

HSBC Global Steel index



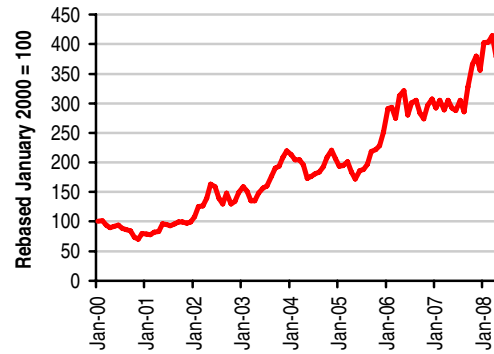
Source: Thomson Financial Datastream, HSBC

HSBC Global Stainless Steel index



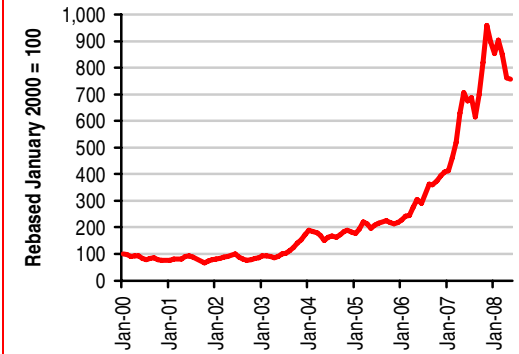
Source: Thomson Financial Datastream, HSBC

HSBC Global Gold index



Source: Thomson Financial Datastream, HSBC

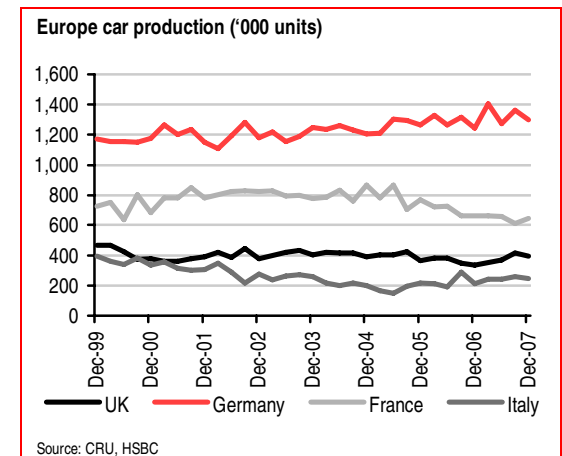
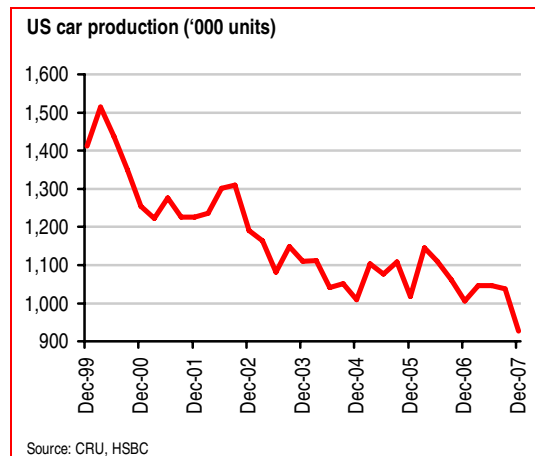
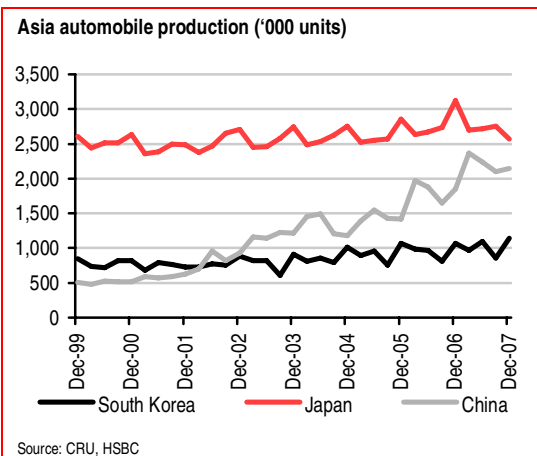
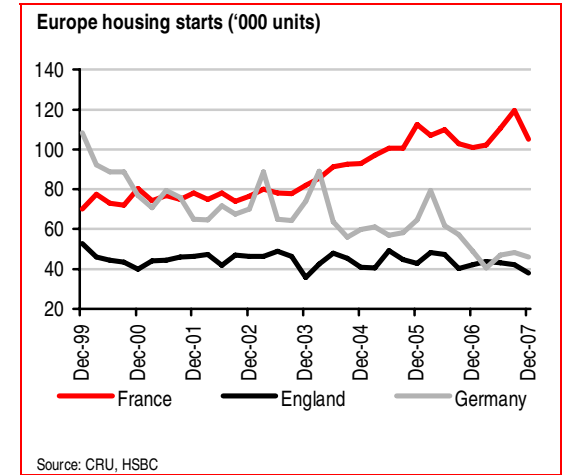
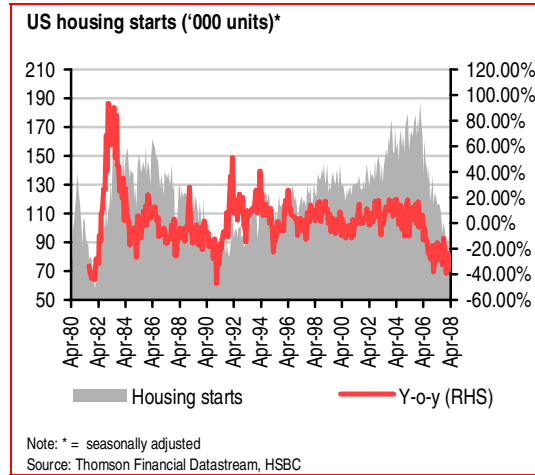
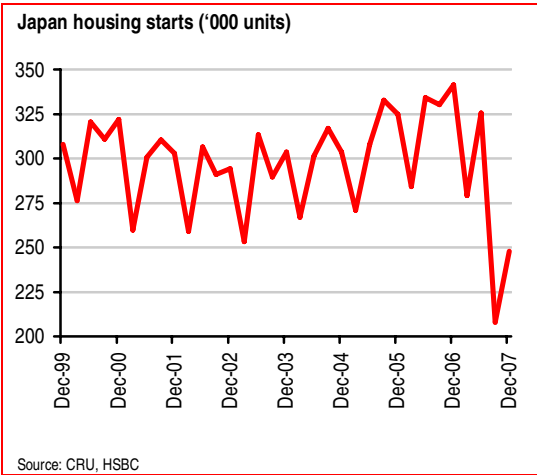
HSBC Global Platinum index



Source: Thomson Financial Datastream, HSBC

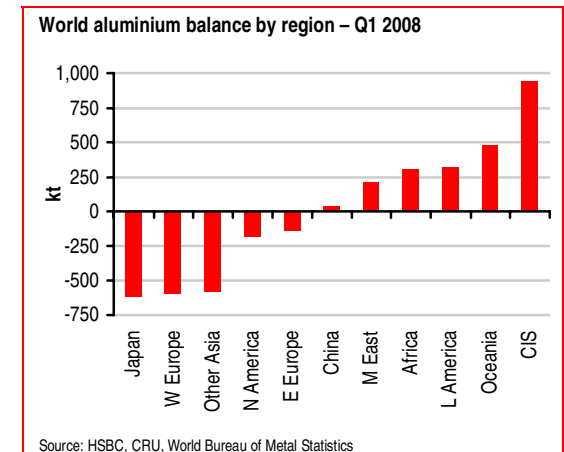
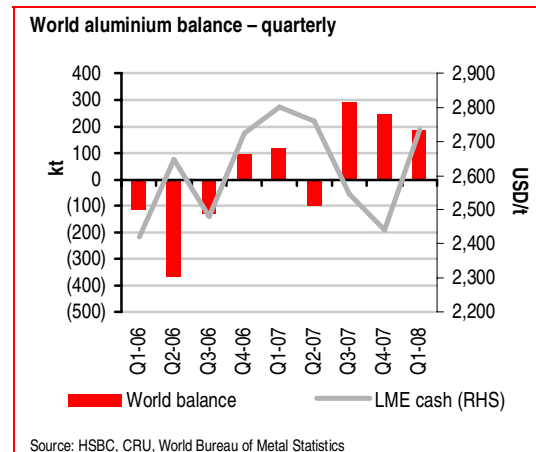
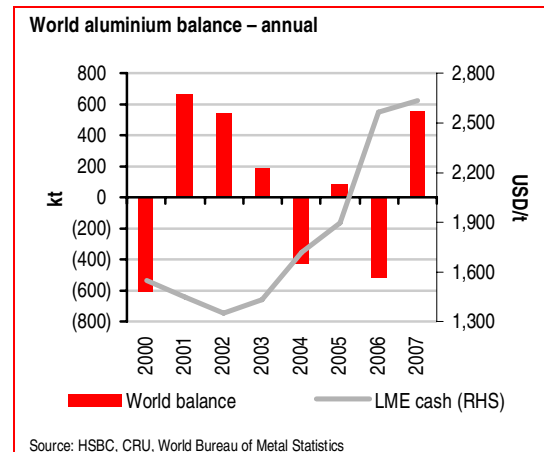
Commodities demand indicators

Housing starts and vehicle production



Aluminium & alumina

Aluminium balance



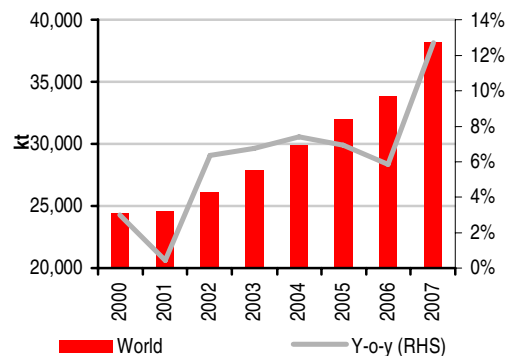
World aluminium balance by region (kt)

	2000	2001	2002	2003	2004	2005	2006	2007	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
North America	-1,040	-754	-914	-948	-1,767	-1,660	-1,914	-1,140	-210	-454	-316	-258	-112	-186
Latin America	1,224	1,052	1,252	1,263	1,209	1,126	1,187	1,214	257	312	280	325	298	324
West Europe	-1,863	-1,671	-1,799	-2,148	-2,174	-1,987	-2,215	-2,523	-602	-677	-661	-575	-610	-599
East Europe	-238	-246	-265	-308	-306	-344	-435	-467	-118	-118	-130	-111	-107	-134
CIS	2,900	2,946	2,873	3,146	3,179	3,225	3,200	3,439	806	799	831	888	921	940
China	-574	-108	72	349	621	649	504	785	154	463	114	134	75	39
Middle East	589	581	572	527	592	860	709	741	181	196	176	187	183	216
Japan	-2,294	-2,127	-2,111	-2,308	-2,395	-2,342	-2,355	-2,277	-605	-588	-574	-550	-565	-616
Other Asia	-1,843	-1,761	-1,959	-2,243	-2,547	-2,620	-2,307	-2,358	-565	-580	-575	-565	-638	-587
Africa	831	995	1,012	1,060	1,325	1,350	1,321	1,269	335	316	302	327	323	309
Oceania	1,702	1,757	1,811	1,798	1,833	1,824	1,792	1,869	463	447	455	488	480	476
World balance	(606)	664	544	188	(428)	81	(515)	553	96	115	(100)	290	248	182

Source: HSBC, CRU, World Bureau of Metal Statistics

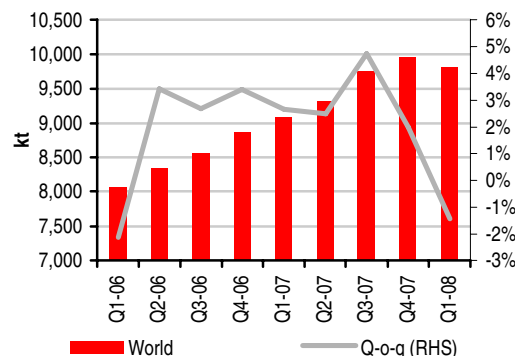
Aluminium production

World aluminium production – annual



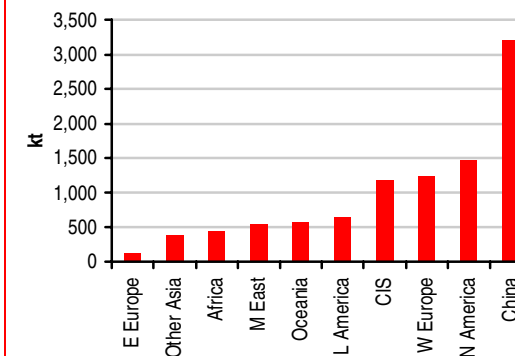
Source: HSBC, CRU, World Bureau of Metal Statistics

World aluminium production – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

World aluminium production by region – Q1 2008



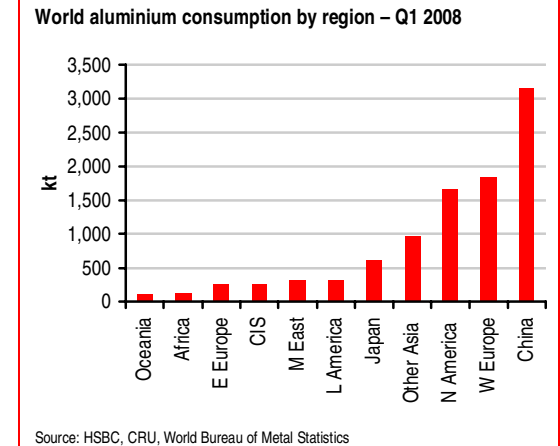
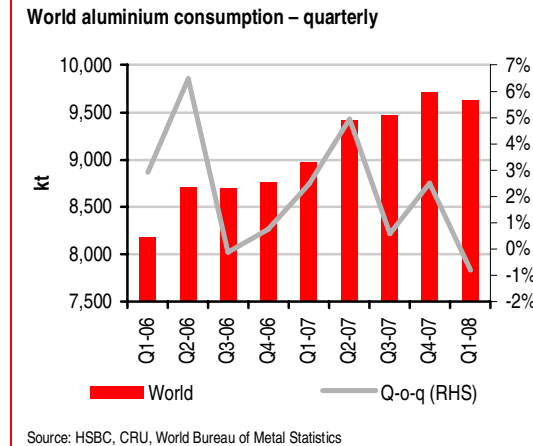
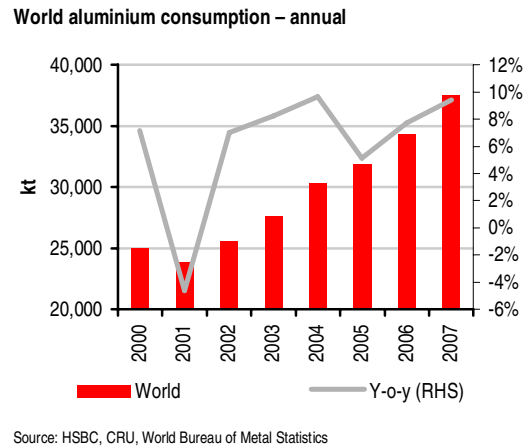
Source: HSBC, CRU, World Bureau of Metal Statistics

World aluminium production by region (kt)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	5,241	-14%	5,433	4%	5,505	1%	5,110	-7%	5,378	5%	5,493	2%	5,731	4%	1,364	-1%	1,389	2%	1,397	1%	1,443	3%	1,433	-1%	1,458	2%	1,466	1%
Latin America	1,976	-8%	2,211	12%	2,266	3%	2,358	4%	2,392	1%	2,368	-1%	2,489	5%	599	1%	599	0%	585	-2%	599	2%	650	8%	654	1%	654	0%
West Europe	4,226	4%	4,226	0%	4,282	1%	4,637	8%	4,701	1%	5,081	8%	4,702	-7%	1,160	0%	1,176	1%	1,148	-2%	1,179	3%	1,160	-2%	1,215	5%	1,240	2%
East Europe	377	1%	387	3%	413	7%	460	11%	484	5%	486	1%	490	1%	123	2%	122	-1%	122	0%	122	1%	123	1%	123	0%	121	-2%
CIS	3,697	2%	3,768	2%	3,937	4%	4,095	4%	4,179	2%	4,070	-3%	4,418	9%	1,025	1%	1,031	1%	1,019	-1%	1,057	4%	1,155	9%	1,187	3%	1,195	1%
China	3,431	23%	4,390	28%	5,500	25%	6,686	22%	7,812	17%	9,256	18%	12,871	39%	2,511	8%	2,718	8%	3,027	11%	3,124	3%	3,309	6%	3,410	3%	3,206	-6%
Middle East	1,231	1%	1,250	2%	1,281	2%	1,448	13%	1,771	22%	1,822	3%	1,976	8%	458	2%	470	3%	471	0%	470	0%	517	10%	518	0%	541	4%
Other Asia	872	-1%	875	0%	1,034	18%	1,142	10%	1,250	9%	1,329	6%	1,456	10%	333	2%	352	5%	348	-1%	362	4%	375	4%	372	-1%	381	2%
Africa	1,361	16%	1,372	1%	1,428	4%	1,711	20%	1,753	2%	1,771	1%	1,758	-1%	447	2%	448	0%	435	-3%	421	-3%	457	9%	445	-3%	436	-2%
Oceania	2,114	1%	2,170	3%	2,195	1%	2,246	2%	2,252	0%	2,160	-4%	2,249	4%	548	3%	555	1%	542	-2%	544	0%	586	8%	577	-2%	576	0%
World	24,524	0%	26,081	6%	27,841	7%	29,895	7%	31,970	7%	33,837	6%	38,141	13%	8,568	3%	8,858	3%	9,095	3%	9,322	2%	9,765	5%	9,959	2%	9,816	-1%

Source: HSBC, CRU, World Bureau of Metal Statistics

Aluminium consumption



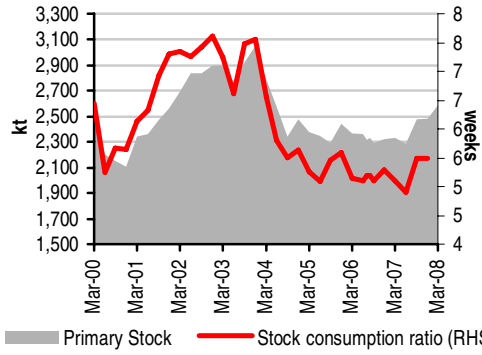
World aluminium consumption by region (kt)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	5,995	-16%	6,347	6%	6,453	2%	6,876	7%	7,038	2%	7,407	5%	6,871	-7%	1,837	-9%	1,599	-13%	1,850	16%	1,760	-5%	1,691	-4%	1,570	-7%	1,652	5%
Latin America	924	1%	959	4%	1,003	5%	1,150	15%	1,265	10%	1,182	-7%	1,274	8%	262	-18%	341	30%	274	-20%	320	17%	325	2%	356	10%	330	-7%
West Europe	5,897	-1%	6,026	2%	6,430	7%	6,811	6%	6,688	-2%	7,297	9%	7,225	-1%	1,733	-2%	1,777	3%	1,825	3%	1,840	1%	1,735	-6%	1,825	5%	1,839	1%
East Europe	622	2%	651	5%	721	11%	766	6%	828	8%	922	11%	957	4%	227	-4%	240	6%	240	0%	253	5%	234	-7%	230	-2%	255	11%
CIS	751	5%	895	19%	791	-12%	917	16%	954	4%	870	-9%	980	13%	237	14%	225	-5%	220	-2%	226	3%	267	18%	266	0%	255	-4%
China	3,539	5%	4,318	22%	5,151	19%	6,065	18%	7,162	18%	8,752	22%	12,085	38%	2,406	9%	2,564	7%	2,565	0%	3,011	17%	3,175	5%	3,335	5%	3,167	-5%
Middle East	650	4%	679	4%	754	11%	856	14%	911	6%	1,113	22%	1,235	11%	276	-2%	290	5%	276	-5%	294	7%	330	12%	335	2%	325	-3%
Japan	2,127	-7%	2,111	-1%	2,308	9%	2,395	4%	2,342	-2%	2,355	1%	2,277	-3%	580	4%	605	4%	588	-3%	574	-2%	550	-4%	565	3%	616	9%
Other Asia	2,632	-3%	2,835	8%	3,277	16%	3,689	13%	3,870	5%	3,636	-6%	3,814	5%	938	3%	917	-2%	928	1%	936	1%	940	0%	1,010	7%	968	-4%
Africa	366	6%	359	-2%	368	3%	386	5%	403	4%	449	12%	490	9%	111	-3%	113	2%	119	5%	119	0%	130	9%	122	-6%	127	4%
Oceania	357	-9%	359	1%	397	11%	412	4%	428	4%	368	-14%	380	3%	93	1%	92	-1%	96	5%	90	-6%	98	9%	97	-1%	100	3%
World	23,860	-5%	25,538	7%	27,654	8%	30,323	10%	31,890	5%	34,352	8%	37,587	9%	8,698	0%	8,763	1%	8,980	2%	9,422	5%	9,475	1%	9,711	2%	9,634	-1%

Source: HSBC, CRU, World Bureau of Metal Statistics

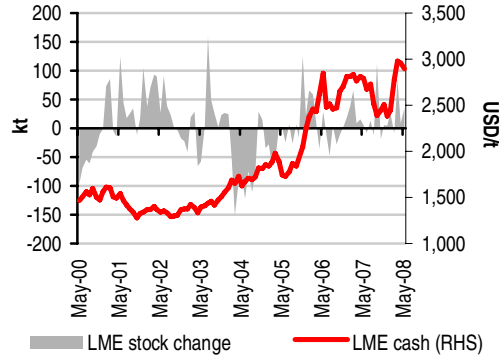
Aluminium stocks, prices, capacity and utilisation

World aluminium stock



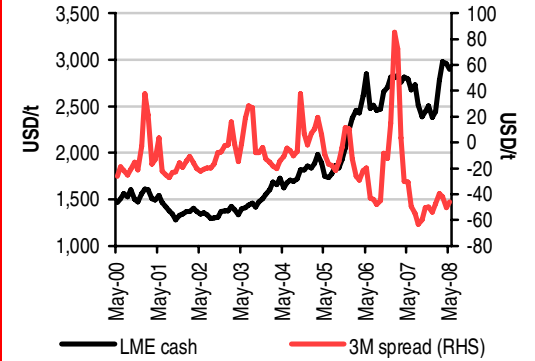
Source: WBMS, CRU, HSBC

LME stock change



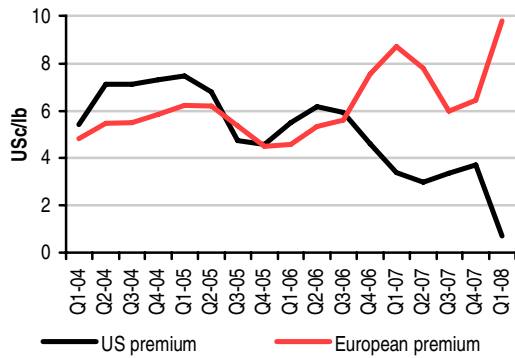
Source: Thomson Financial Datastream, HSBC

LME cash price and three-month spread



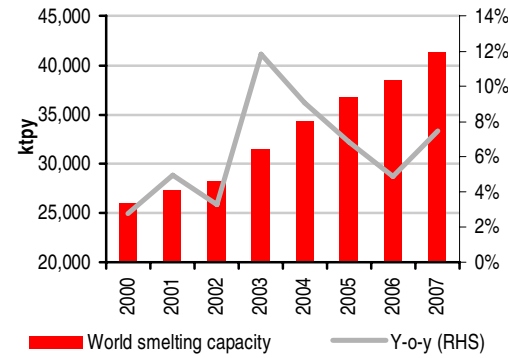
Source: Thomson Financial Datastream, HSBC

Aluminium quarterly average price premium over LME cash



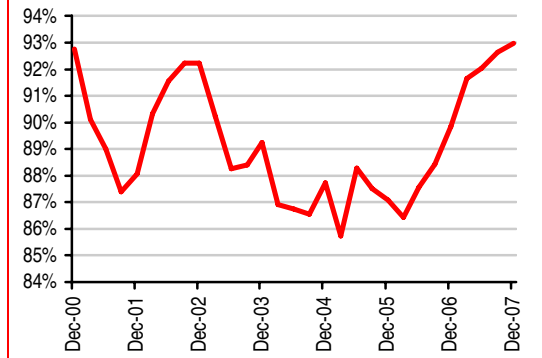
Source: CRU, HSBC

World smelting capacity



Source: CRU, HSBC

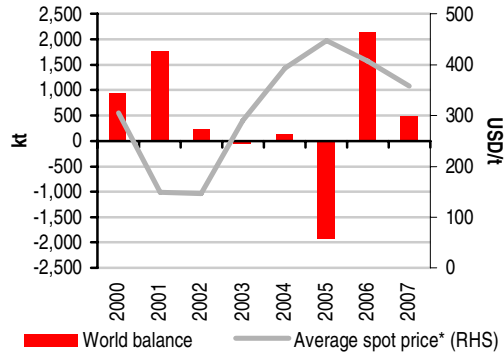
World smelting capacity utilisation



Source: CRU, HSBC

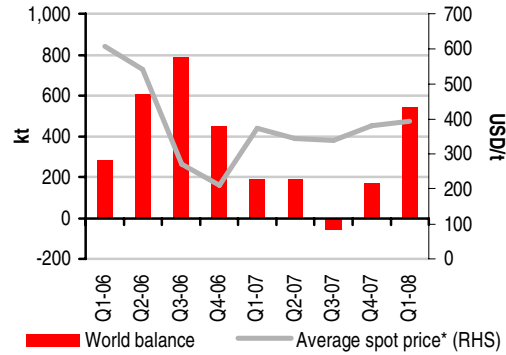
Alumina demand and supply

World alumina balance – annual



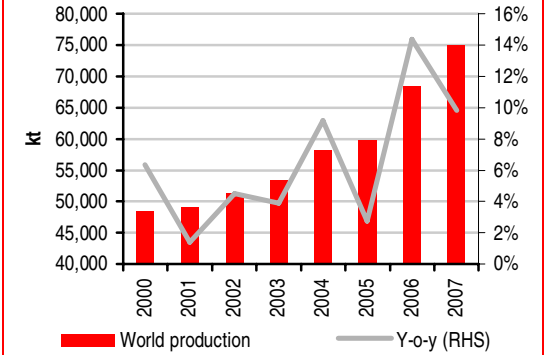
Note: * = average spot prices for Australia and Caribbean
 Source: HSBC, CRU, World Bureau of Metal Statistics

World alumina balance – quarterly



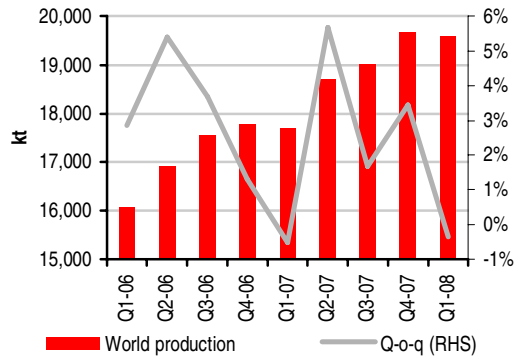
Note: * = average spot prices for Australia and Caribbean
 Source: HSBC, CRU, World Bureau of Metal Statistics

World alumina production – annual



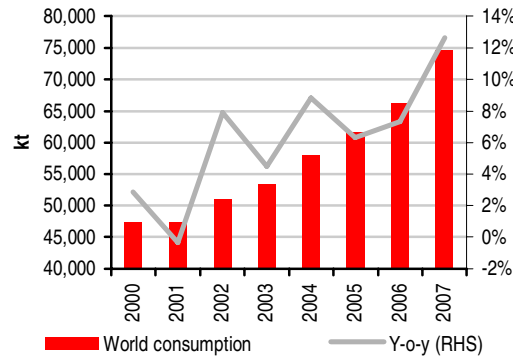
Source: HSBC, CRU, World Bureau of Metal Statistics

World production consumption – quarterly



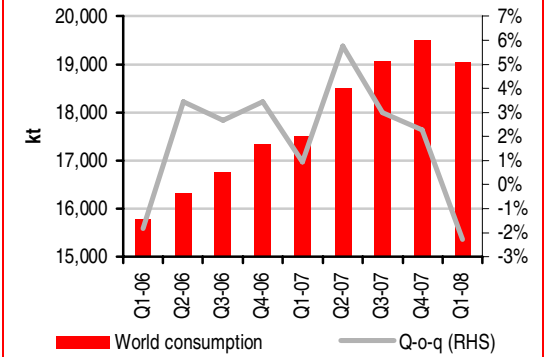
Source: HSBC, CRU, World Bureau of Metal Statistics

World alumina consumption – annual



Source: HSBC, CRU, World Bureau of Metal Statistics

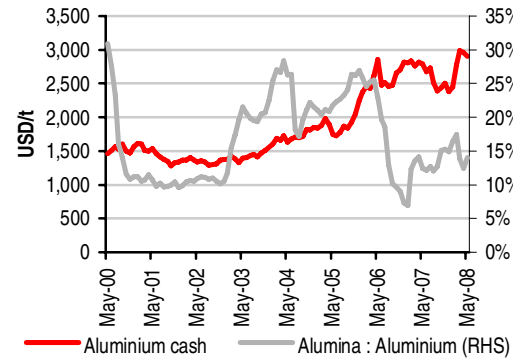
World alumina consumption – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

Alumina prices and region-wise production

Aluminium and alumina prices



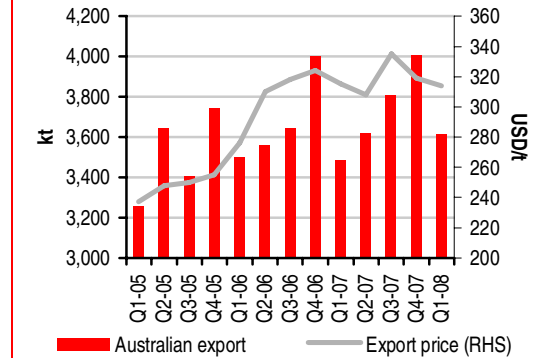
Source: Thomson Financial Datastream, CRU, HSBC

Australian alumina export – annual



Source: HSBC, CRU, World Bureau of Metal Statistics

Australian alumina export – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

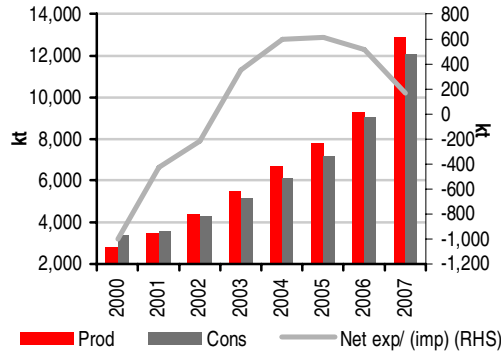
World alumina production by region (kt)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	4,748	0%	4,704	-1%	5,204	11%	6,072	17%	5,648	-7%	6,107	8%	5327	-13%	1,581	2%	1,456	-8%	1,302	-11%	1,306	0%	1,310	0%	1,410	8%	1,300	-8%
Latin America	10,119	-5%	10,461	3%	11,649	11%	12,183	5%	12,317	1%	13,934	13%	14568	5%	3,563	-1%	3,604	1%	3,488	-3%	3,574	2%	3,735	4%	3,770	1%	3,900	3%
West Europe	4,762	-5%	4,956	4%	4,834	-2%	5,761	19%	5,323	-8%	5,879	10%	5856	0%	1,513	7%	1,450	-4%	1,596	10%	1,520	-5%	1,390	-9%	1,350	-3%	1,335	-1%
East Europe	844	83%	664	-21%	660	-1%	521	-21%	629	21%	598	-5%	158	-74%	149	-6%	129	-14%	39	-70%	39	1%	40	2%	40	0%	40	0%
CIS	5,155	3%	5,289	3%	5,594	6%	5,912	6%	6,058	2%	6,099	1%	6004	-2%	1,541	2%	1,527	-1%	1,484	-3%	1,455	-2%	1,530	5%	1,535	0%	1,500	-2%
China	4,391	8%	5,034	15%	5,460	8%	6,426	18%	7,439	16%	13,451	81%	20141	50%	3,631	14%	3,957	9%	4,340	10%	5,131	18%	5,190	1%	5,480	6%	5,600	2%
Middle East	0	nm	38	nm	37	-3%	43	15%	133	211%	143	7%	167	17%	36	3%	36	0%	36	0%	41	15%	44	6%	45	2%	50	11%
Other Asia	2,150	8%	2,565	19%	2,820	10%	2,908	3%	2,938	1%	2,870	-2%	3192	11%	688	-3%	696	1%	769	10%	733	-5%	790	8%	900	14%	930	3%
Africa	608	18%	636	5%	687	8%	740	8%	699	-6%	504	-28%	472	-6%	112	-28%	116	3%	97	-16%	100	3%	140	40%	135	-4%	148	10%
Oceania	16,271	3%	16,900	4%	16,300	-4%	17,583	8%	18,568	6%	18,749	1%	19177	2%	4,742	2%	4,813	1%	4,541	-6%	4,796	6%	4,840	1%	5,000	3%	4,790	-4%
World production	49,048	1%	51,247	4%	53,244	4%	58,148	9%	59,753	3%	68,334	14%	75061	10%	17,555	4%	17,785	1%	17,692	-1%	18,695	6%	19,009	2%	19,665	3%	19,593	0%

Source: HSBC, CRU, World Bureau of Metal Statistics

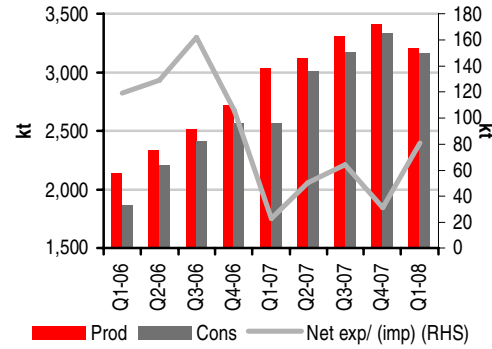
China summary

Aluminium production, consumption & net trade – annual



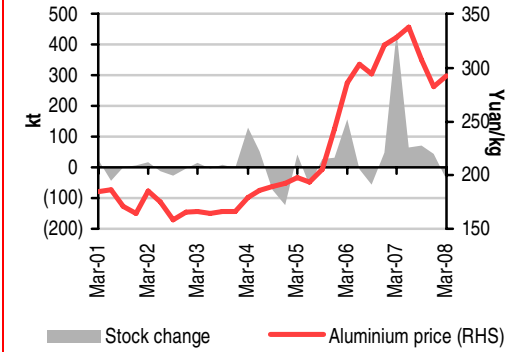
Source: HSBC, CRU, World Bureau of Metal Statistics

Aluminium production, consumption & net trade – quarterly



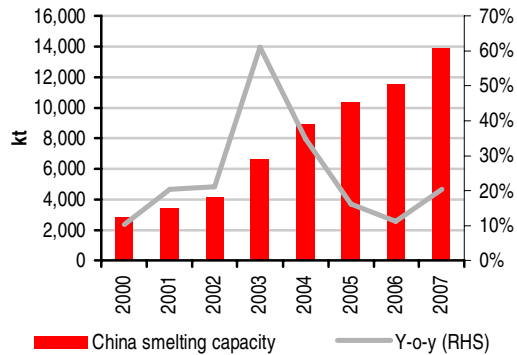
Source: HSBC, CRU, World Bureau of Metal Statistics

Change in Chinese aluminium stock



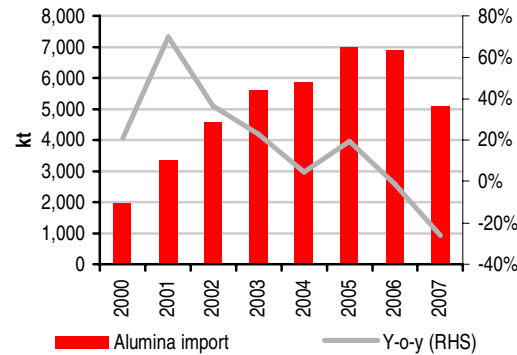
Source: CRU, HSBC Research

China smelting capacity



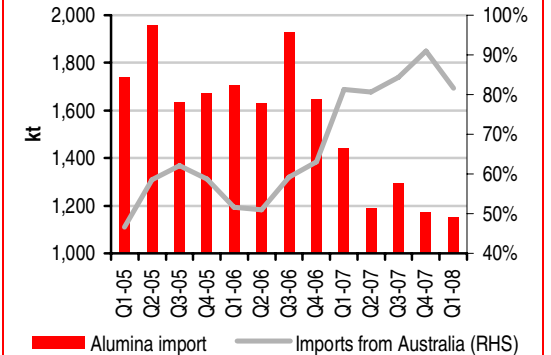
Source: CRU, HSBC Research

Alumina import by China – annual



Source: CRU, HSBC Research

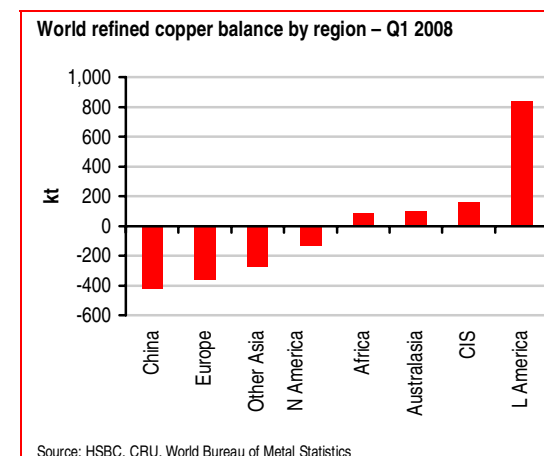
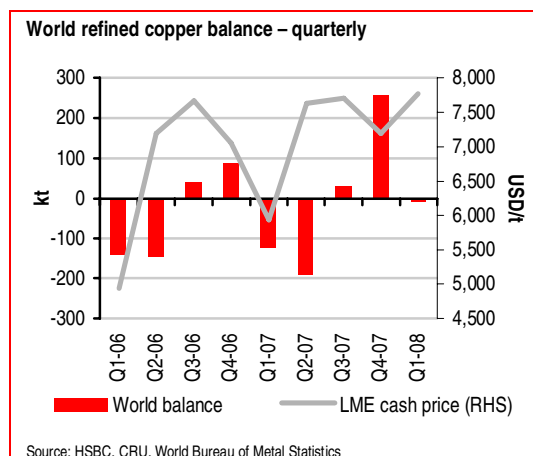
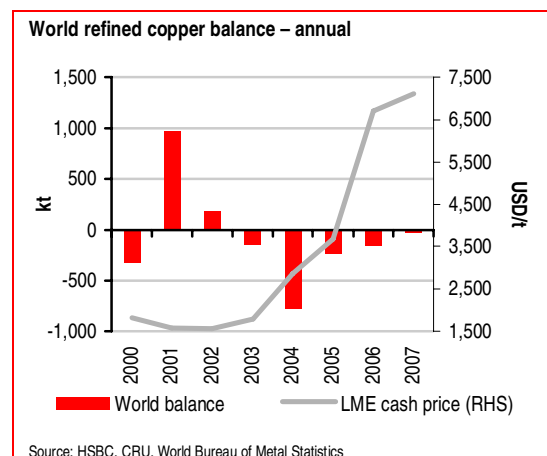
Alumina import by China – quarterly



Source: CRU, HSBC Research

Copper

Copper balance



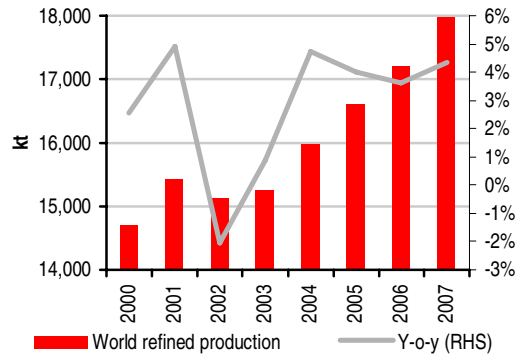
World refined copper balance by region (kt)

	2002	2003	2004	2005	2006	2007	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
North America	-864	-652	-967	-687	-724	-547	-125	-141	-188	-164	-54	-136
South & Central America	3,054	3,096	3,084	2,939	3,134	3,060	860	765	795	705	795	838
Europe	-1,397	-1,709	-1,692	-1,565	-1,900	-1,639	-440	-492	-472	-370	-304	-361
CIS	985	890	958	771	642	583	165	153	126	147	157	161
China	-1,055	-1,250	-1,158	-1,174	-1,097	-1,251	-302	-428	-318	-232	-273	-422
Other Asia	-1,206	-1,133	-1,672	-1,230	-1,076	-971	-292	-157	-316	-240	-259	-274
Australasia	375	319	340	380	364	306	97	83	81	74	68	96
Africa	285	295	329	326	498	432	125	95	101	109	127	90
World balance	177	-144	-778	-240	-159	-28	88	-122	-192	29	256	-8

Source: HSBC, CRU, World Bureau of Metal Statistics

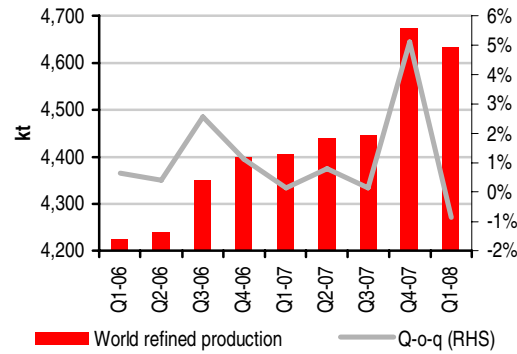
Copper production

World refined copper production – annual



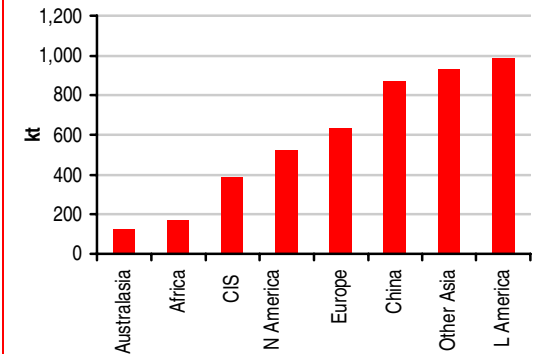
Source: HSBC, CRU, World Bureau of Metal Statistics

World refined copper production – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

World refined copper production by region – Q1 2008



Source: HSBC, CRU, World Bureau of Metal Statistics

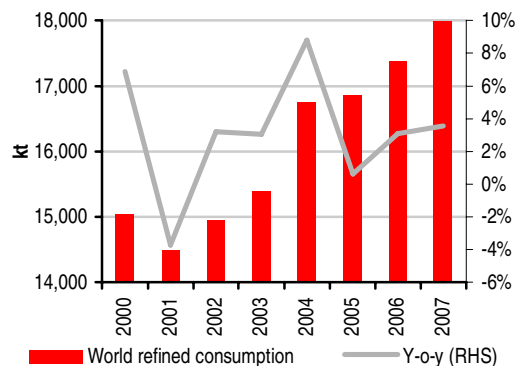
World refined copper production by region (kt)

	Annual												Quarterly													
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	2,286	-13%	2,128	-7%	2,185	3%	2,219	2%	2,183	-2%	2,083	-5%	531	-2%	561	6%	520	-7%	505	-3%	499	-1%	560	12%	525	-6%
S&C America	3,456	-2%	3,586	4%	3,610	1%	3,526	-2%	3,716	5%	3,627	-2%	925	3%	1,005	9%	910	-10%	939	3%	848	-10%	931	10%	986	6%
Europe	2,501	6%	2,452	-2%	2,435	-1%	2,433	0%	2,407	-1%	2,438	1%	601	-1%	601	0%	614	2%	606	-1%	600	-1%	618	3%	631	2%
CIS	1,425	0%	1,401	-2%	1,593	14%	1,499	-6%	1,419	-5%	1,474	4%	374	8%	357	-5%	371	4%	364	-2%	359	-1%	380	6%	390	3%
China	1,595	4%	1,806	13%	2,298	27%	2,620	14%	2,856	9%	3,498	22%	725	0%	703	-3%	749	7%	842	12%	926	10%	982	6%	869	-11%
Other Asia	2,795	-4%	2,917	4%	2,839	-3%	3,280	16%	3,423	4%	3,725	9%	884	7%	857	-3%	971	13%	909	-6%	932	3%	913	-2%	936	2%
Australasia	570	-4%	473	-17%	499	5%	510	2%	505	-1%	444	-12%	128	2%	134	5%	118	-12%	115	-2%	108	-6%	103	-5%	129	25%
Africa	490	5%	488	0%	514	5%	527	3%	705	34%	677	-4%	182	2%	181	-1%	154	-15%	161	4%	174	9%	188	8%	168	-11%
World refined production	15,118	-2%	15,251	1%	15,973	5%	16,614	4%	17,214	4%	17,966	4%	4,350	3%	4,399	1%	4,405	0%	4,440	1%	4,446	0%	4,674	5%	4,634	-1%

Source: HSBC, CRU, World Bureau of Metal Statistics

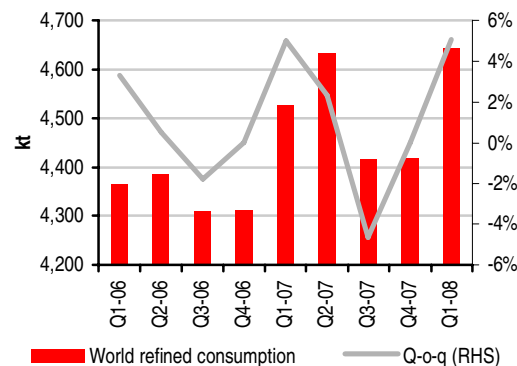
Copper consumption

World refined copper consumption – annual



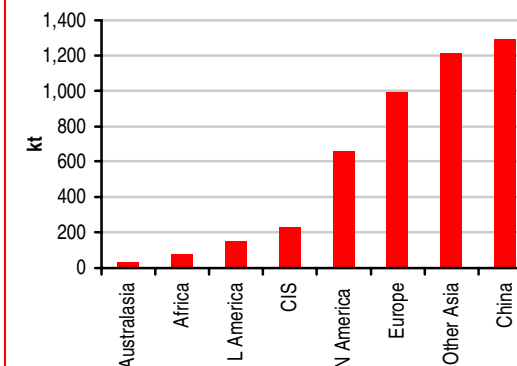
Source: HSBC, CRU, World Bureau of Metal Statistics

World refined copper consumption – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

World refined copper consumption by region – Q1 2008



Source: HSBC, CRU, World Bureau of Metal Statistics

World refined copper consumption by region (kt)

	Annual												Quarterly													
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	3,150	9%	2,780	-12%	3,152	13%	2,906	-8%	2,907	0%	2,631	-10%	720	-6%	686	-5%	661	-4%	694	5%	662	-4%	614	-7%	661	8%
S&C America	402	-26%	490	22%	526	7%	587	12%	582	-1%	568	-2%	142	-5%	145	2%	145	0%	145	0%	143	-1%	136	-5%	148	9%
Europe	3,898	-5%	4,161	7%	4,127	-1%	3,998	-3%	4,307	8%	4,077	-5%	1,066	-4%	1,041	-2%	1,106	6%	1,079	-2%	971	-10%	922	-5%	992	8%
CIS	440	22%	511	16%	635	24%	728	15%	777	7%	891	15%	190	-5%	192	1%	218	13%	238	9%	212	-11%	223	5%	229	3%
China	2,650	12%	3,056	15%	3,456	13%	3,794	10%	3,953	4%	4,749	20%	1,005	7%	1,005	0%	1,177	17%	1,160	-1%	1,158	0%	1,255	8%	1,291	3%
Other Asia	4,001	4%	4,050	1%	4,511	11%	4,510	0%	4,499	0%	4,696	4%	1,103	-3%	1,149	4%	1,127	-2%	1,225	9%	1,172	-4%	1,172	0%	1,210	3%
Australasia	195	11%	154	-21%	159	3%	130	-18%	141	8%	138	-2%	34	6%	37	9%	35	-7%	34	-1%	35	1%	35	1%	33	-6%
Africa	205	24%	193	-6%	185	-4%	201	9%	207	3%	245	18%	50	2%	56	12%	60	6%	60	0%	65	9%	61	-6%	78	28%
World refined consumption	14,941	3%	15,395	3%	16,751	9%	16,854	1%	17,373	3%	17,994	4%	4,310	-2%	4,311	0%	4,527	5%	4,633	2%	4,417	-5%	4,418	0%	4,642	5%

Source: HSBC, CRU, World Bureau of Metal Statistics

Mine and smelter production

Mine (kt contained copper) production by region

	2001	2002	2003	2004	2005	2006	2007
Africa	552	535	574	631	699	833	971
China	636	624	655	776	807	908	965
Other Asia	1487	1589	1432	1285	1566	1381	1387
Australasia	1,075	1,108	1,042	1,038	1,110	1,067	1,034
E Europe	598	631	628	657	646	625	599
W Europe	239	205	216	232	241	232	222
CIS	1,203	1,183	1,202	1,235	1,192	1,222	1,171
N America	2,322	1,999	1,965	2,072	2,110	2,091	2,103
L America	5,751	5,658	6,005	6,783	6,696	6,772	7,140
Mine	13,863	13,532	13,719	14,707	15,067	15,132	15,593
Y-o-y	3%	-2%	1%	7%	2%	0%	3%

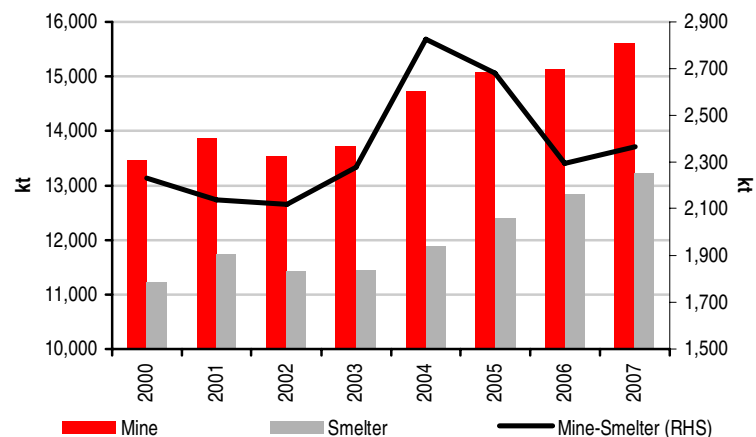
Source: HSBC, CRU, World Bureau of Metal Statistics

Smelter (kt recoverable copper) production by region

	2001	2002	2003	2004	2005	2006	2007
Africa	341	292	334	361	344	354	458
China	1,176	1,237	1,439	1,671	1,935	2,109	2,306
Other Asia	2,771	2,811	2,831	2,817	3,076	3,287	3,544
Australasia	480	450	398	439	380	380	383
E Europe	693	729	766	796	806	816	801
W Europe	1,152	1,192	1,114	1,082	1,112	1,123	1,088
CIS	1,184	1,236	1,216	1,269	1,260	1,291	1,247
N America	1,795	1,454	1,207	1,287	1,286	1,277	1,336
L America	2,133	2,015	2,135	2,161	2,187	2,202	2,066
Smelter	11,726	11,415	11,441	11,883	12,385	12,839	13,229
Y-o-y	5%	-3%	0%	4%	4%	4%	3%

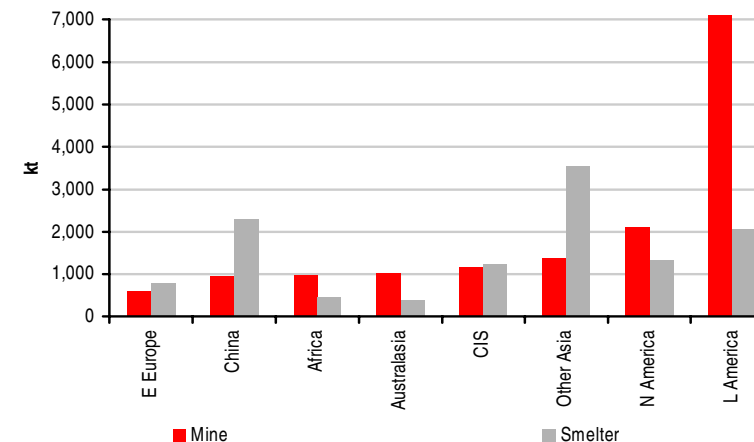
Source: HSBC, CRU, World Bureau of Metal Statistics

Mine and smelter production



Source: CRU, HSBC

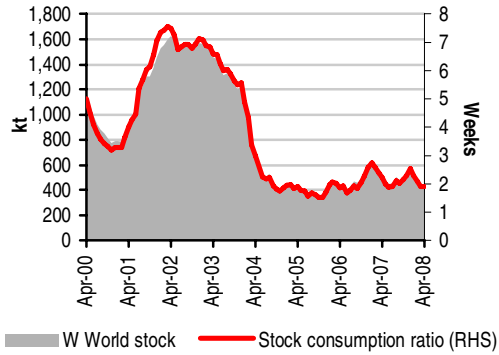
Mine and smelter production by region – 2007



Source: CRU, HSBC

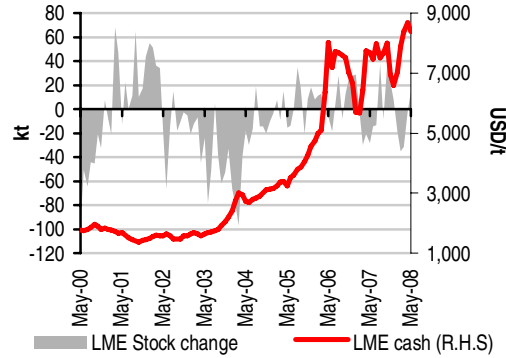
Copper stock prices

Western world refined copper stocks



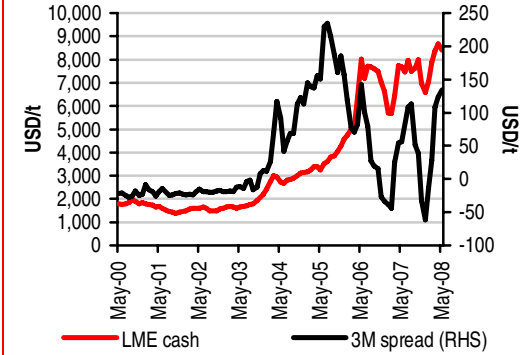
Source: WBMS, CRU, HSBC

LME Stock change



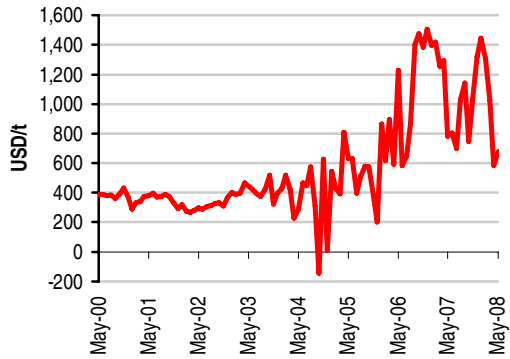
Source: Thomson Financial Datastream, HSBC

LME cash price and three-month spread



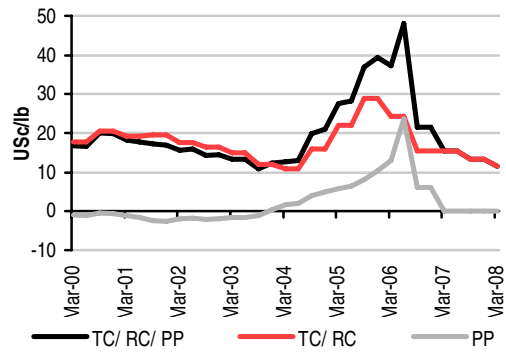
Source: Thomson Financial Datastream, HSBC

Shanghai copper price premium over LME cash



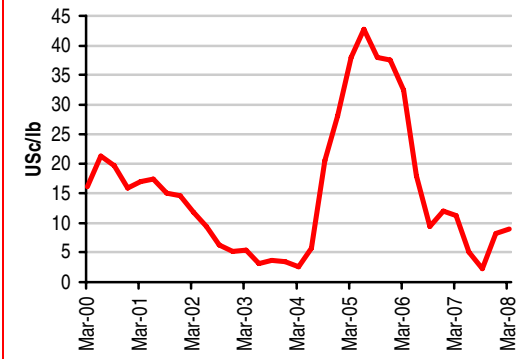
Source: CRU, HSBC

Annual contract TC/ RC/ PP for standard grade copper



Source: CRU, HSBC

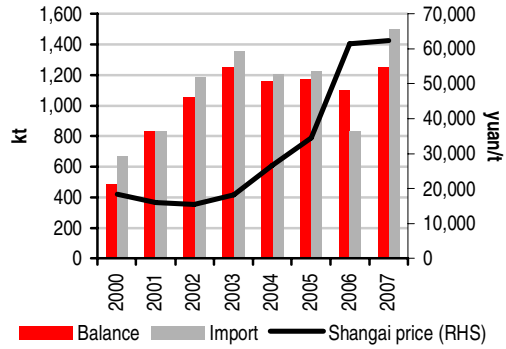
Spot TC/ RC charges for standard grade copper



Source: CRU, HSBC

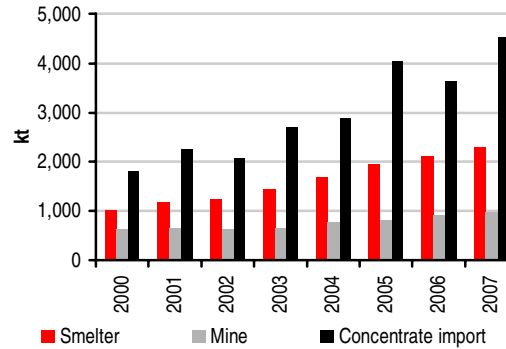
China summary and speculative positions

Refined copper balance and imports



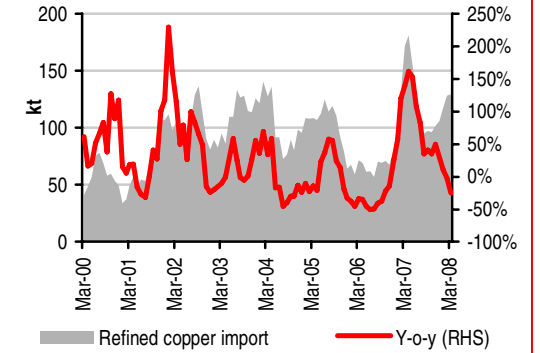
Source: HSBC, CRU, World Bureau of Metal Statistics

Smelter and mine production and concentrate imports



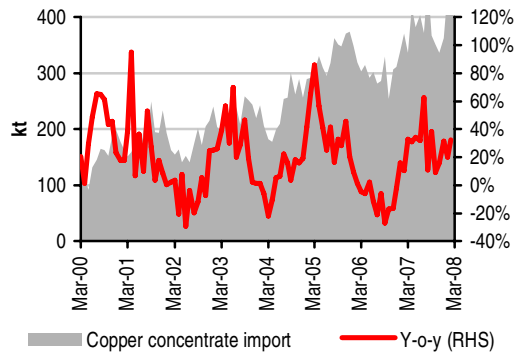
Source: HSBC, CRU, World Bureau of Metal Statistics

Refined copper monthly imports



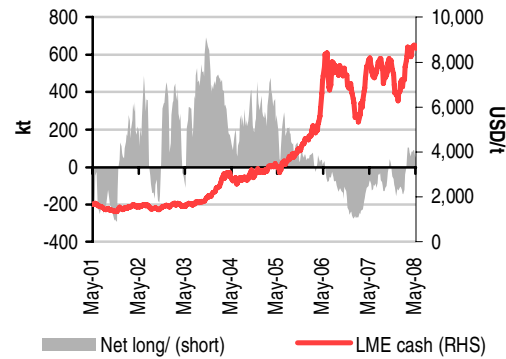
Source: HSBC, CRU, World Bureau of Metal Statistics

Copper concentrate monthly imports



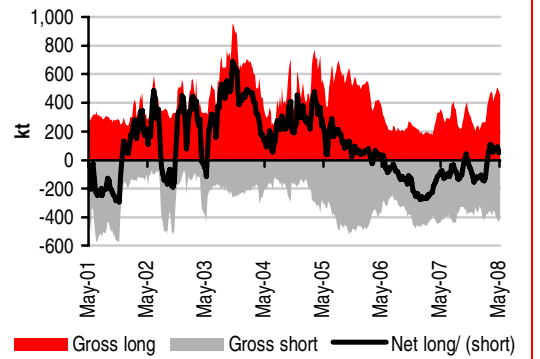
Source: HSBC, CRU, World Bureau of Metal Statistics

Comex net long/ (short) speculative position



Source: CFTC Commitment of Traders Report, HSBC

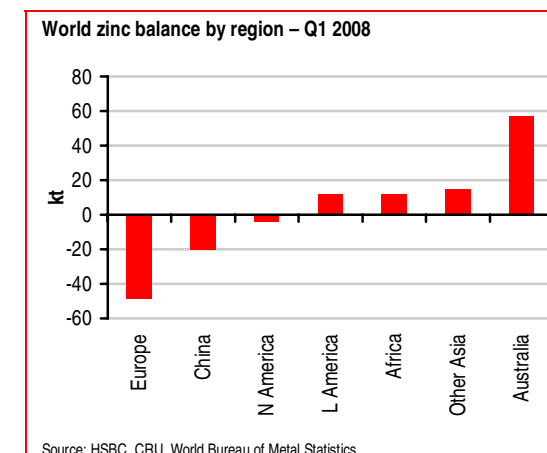
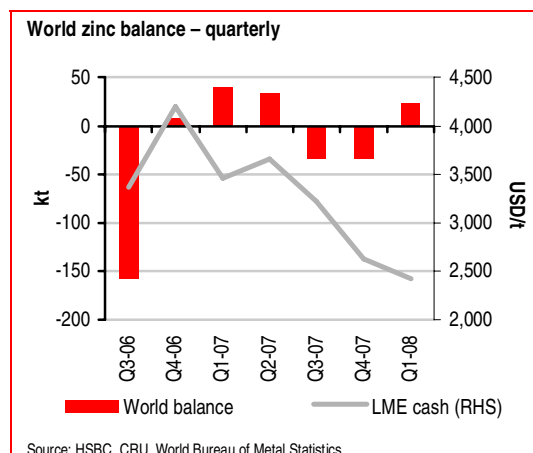
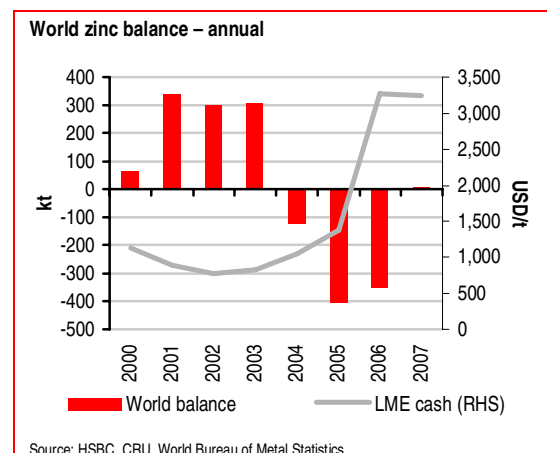
Comex gross long, gross short and net long/ (short) speculative positions



Source: CFTC Commitment of Traders Report, HSBC

Zinc

Zinc balance



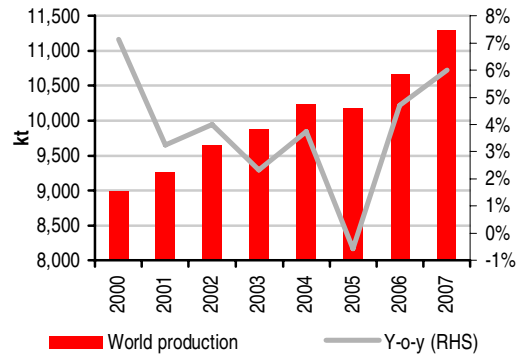
World zinc balance by region (kt)

	2001	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
China	548	420	270	7	(192)	(91)	138	(53)	60	66	41	(2)	33	(20)
Other Asia	(352)	(360)	(357)	(379)	(283)	(198)	(199)	(79)	(52)	(59)	(57)	(65)	(20)	15
Europe	91	124	36	67	(122)	(230)	(304)	(69)	(63)	(52)	(37)	(42)	(174)	(49)
North America	(270)	(214)	(59)	(165)	(146)	(171)	0	(37)	(15)	(3)	(9)	3	9	(4)
Latin America	47	70	114	69	63	71	26	17	13	12	9	(3)	7	12
Australia	323	314	288	209	204	214	254	49	58	53	63	52	87	57
Africa	(46)	(54)	13	71	68	54	92	14	7	22	24	23	24	12
World balance	340	301	307	(122)	(408)	(351)	6	(158)	8	40	34	(34)	(34)	23
LME cash (RHS)	886	778	827	1,048	1,382	3,272	3,244	3,363	4,197	3,463	3,659	3,223	2,624	2,423

Source: HSBC, CRU, World Bureau of Metal Statistics

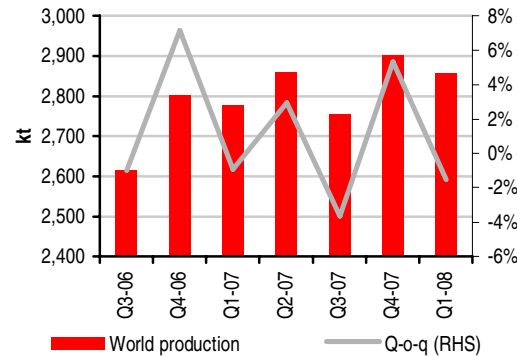
Zinc production

World zinc production – annual



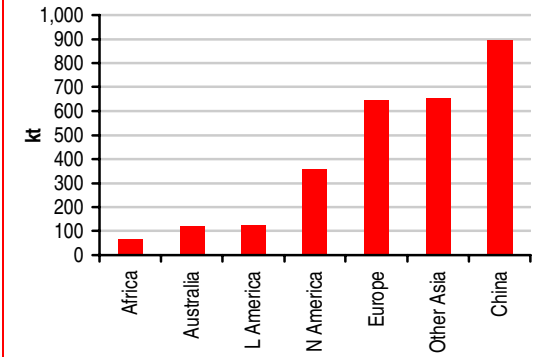
Source: HSBC, CRU, World Bureau of Metal Statistics

World zinc production – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

World zinc production by region – Q1 2008



Source: HSBC, CRU, World Bureau of Metal Statistics

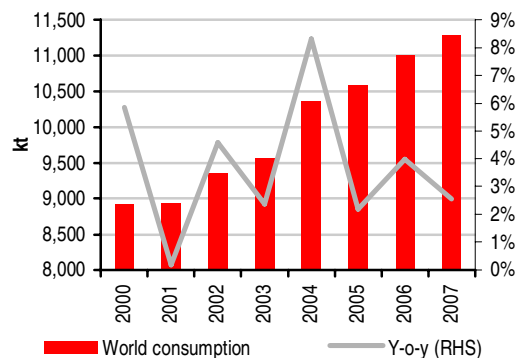
World zinc production by region (kt)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
China	2,066	6%	2,133	3%	2,309	8%	2,557	11%	2,783	9%	3,209	15%	3,740	17%	787	-2%	922	17%	875	-5%	960	10%	902	-6%	1,004	11%	895	-11%
Other Asia	1,907	5%	2,050	7%	2,129	4%	2,155	1%	2,232	4%	2,368	6%	2,367	0%	568	-3%	600	6%	592	-1%	588	-1%	568	-3%	619	9%	654	6%
Europe	2,860	3%	2,867	0%	2,755	-4%	2,799	2%	2,554	-9%	2,485	-3%	2,531	2%	607	0%	623	3%	645	3%	640	-1%	623	-3%	625	0%	644	3%
North America	1,308	-6%	1,420	9%	1,427	0%	1,495	5%	1,410	-6%	1,386	-2%	1,389	0%	347	0%	350	1%	354	1%	351	-1%	367	5%	318	-13%	356	12%
Latin America	437	2%	461	6%	502	9%	498	-1%	472	-5%	492	4%	474	-4%	125	6%	126	1%	120	-5%	122	1%	110	-9%	123	12%	125	2%
Australia	556	14%	567	2%	553	-2%	472	-15%	457	-3%	464	1%	502	8%	120	6%	124	3%	119	-4%	127	7%	118	-7%	139	18%	120	-13%
Africa	138		146		195		262		269		253	-6%	291	15%	62	-9%	58	-6%	73	26%	74	1%	70	-5%	75	8%	64	-15%
World production	9,273	3%	9,644	4%	9,870	2%	10,237	4%	10,177	-1%	10,657	5%	11,295	6%	2,616	-1%	2,803	7%	2,778	-1%	2,860	3%	2,756	-4%	2,903	5%	2,858	-2%

Source: HSBC, CRU, World Bureau of Metal Statistics

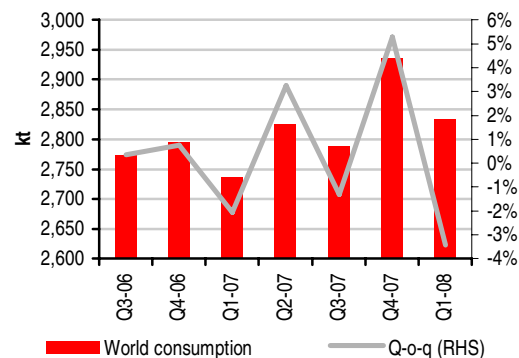
Zinc consumption

World zinc consumption – annual



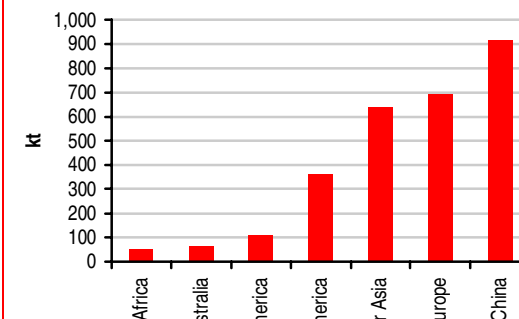
Source: HSBC, CRU, World Bureau of Metal Statistics

World zinc consumption – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

World zinc consumption by region – Q1 2008



Source: HSBC, CRU, World Bureau of Metal Statistics

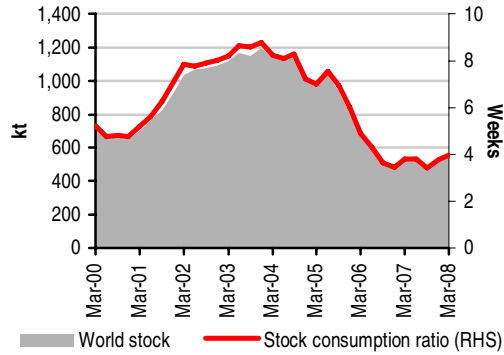
World zinc consumption by region (kt)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
China	1,519	10%	1,713	13%	2,039	19%	2,550	25%	2,975	17%	3,300	11%	3,603	9%	840	5%	862	3%	809	-6%	919	14%	903	-2%	972	8%	915	-4%
Other Asia	2,259	-1%	2,409	7%	2,485	3%	2,534	2%	2,515	-1%	2,566	2%	2,566	0%	647	1%	652	1%	651	0%	645	-1%	633	-2%	639	1%	639	-5%
Europe	2,769	-1%	2,742	-1%	2,718	-1%	2,732	1%	2,676	-2%	2,715	1%	2,835	4%	676	-4%	686	1%	697	2%	676	-3%	664	-2%	798	20%	693	-1%
North America	1,578	-6%	1,634	4%	1,487	-9%	1,660	12%	1,556	-6%	1,557	0%	1,388	-11%	384	-4%	365	-5%	357	-2%	360	1%	364	1%	308	-15%	360	-2%
Latin America	390	5%	392	0%	388	-1%	429	11%	409	-5%	421	3%	449	7%	108	3%	113	5%	108	-4%	113	4%	113	0%	116	3%	113	2%
Australia	233	7%	252	8%	265	5%	263	-1%	253	-4%	250	-1%	248	-1%	71	4%	66	-7%	66	0%	65	-2%	66	2%	51	-22%	63	-11%
Africa	185		200		181		191		201		199		200	0%	48	-4%	51	6%	51		50	-2%	47	-6%	52	10%	52	-11%
World consumption	8,933	0%	9,343	5%	9,563	2%	10,359	8%	10,585	2%	11,008	4%	11,289	3%	2,774	0%	2,795	1%	2,738	-2%	2,826	3%	2,789	-1%	2,936	5%	2,835	-2%

Source: HSBC, CRU, World Bureau of Metal Statistics

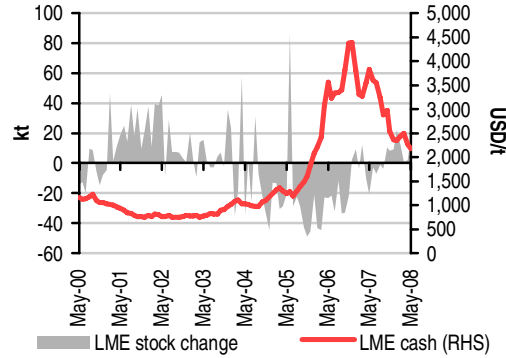
Zinc stocks, prices and China summary

World zinc stocks



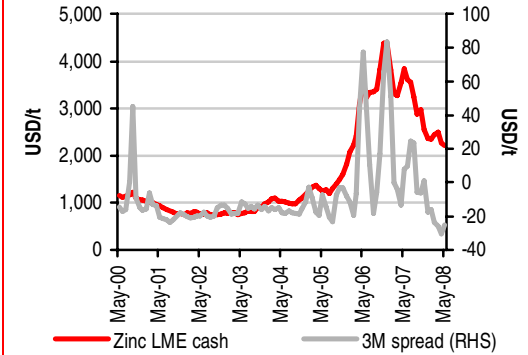
Source: Thomson Financial Datastream, CRU, HSBC

LME stock change



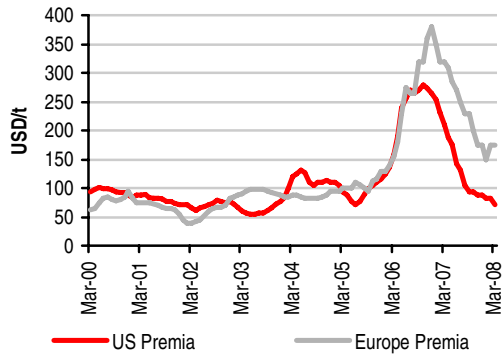
Source: Thomson Financial Datastream, HSBC

LME cash and three-month spread



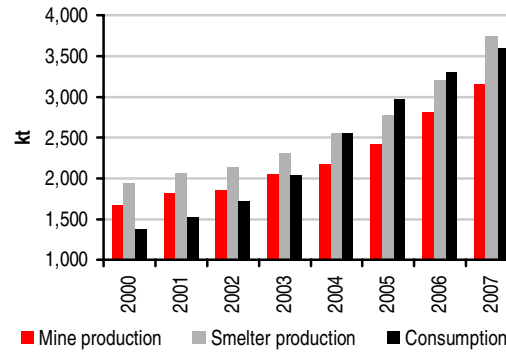
Source: Thomson Financial Datastream, HSBC

Zinc US and European producer premium over LME cash



Source: Thomson Financial Datastream, CRU, HSBC

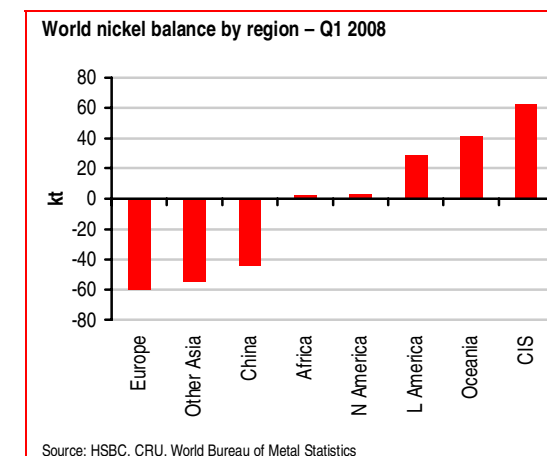
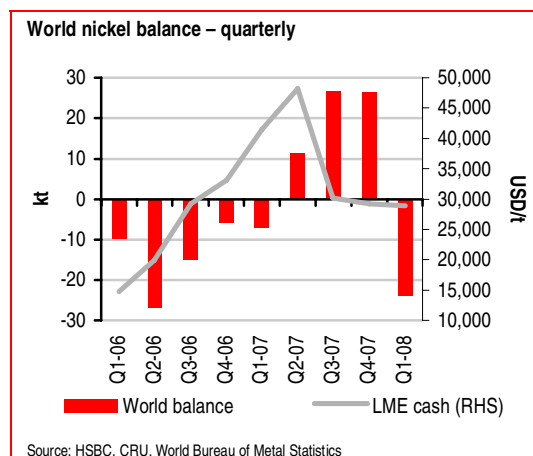
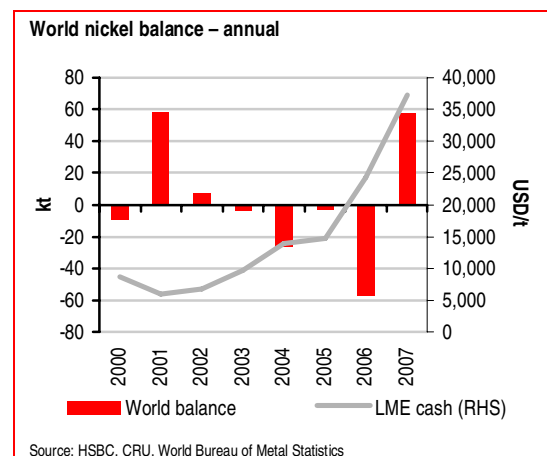
Chinese production and consumption



Source: HSBC, CRU, World Bureau of Metal Statistics

Nickel

Nickel balance



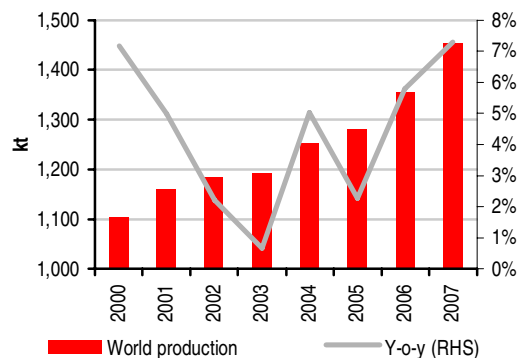
World nickel balance by region (kt contained Nickel)

	2001	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
North America	-2	9	-14	6	-4	15	12	1	6	2	7	-4	7	3
South & Central America	106	119	124	135	141	140	143	34	35	35	36	38	34	29
Europe	-239	-263	-267	-253	-232	-249	-194	-57	-59	-59	-54	-39	-43	-60
CIS	218	211	226	242	244	252	255	64	64	66	66	62	63	62
China	-36	-37	-67	-79	-102	-128	-128	-26	-29	-32	-28	-31	-37	-44
Other Asia	-208	-228	-264	-265	-229	-261	-205	-73	-65	-61	-61	-43	-40	-55
Africa	21	17	11	9	14	8	11	0	1	1	2	4	3	2
Oceania	173	179	178	164	166	164	164	42	42	41	45	39	39	41
Change in Norilsk stocks	26	0	70	15	0	0	0	0	0	0	0	0	0	0
World balance	58	7	-4	-26	-3	-57	57	-15	-6	-7	12	27	26	-24

Source: HSBC, CRU, World Bureau of Metal Statistics

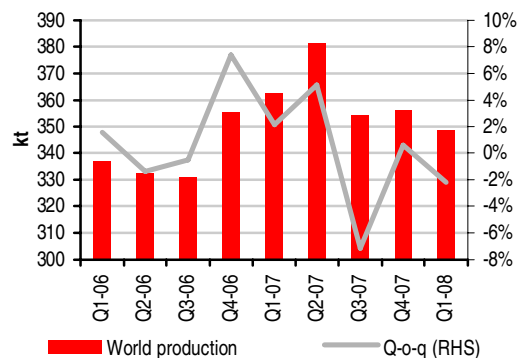
Nickel production

World nickel production – annual



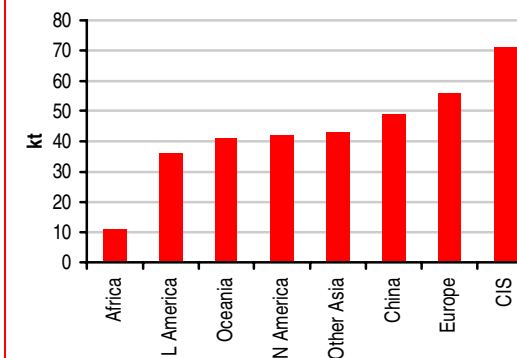
Source: HSBC, CRU, World Bureau of Metal Statistics

World nickel production – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

World nickel production by region – Q1 2008



Source: HSBC, CRU, World Bureau of Metal Statistics

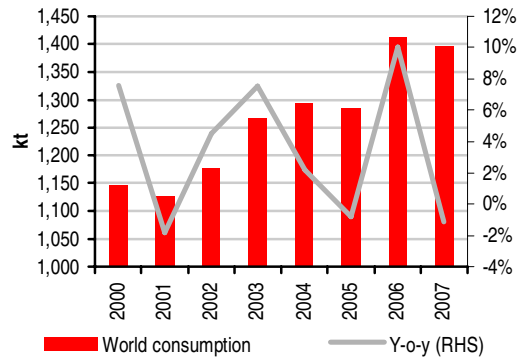
World nickel production by region (kt contained nickel)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	140	5%	145	4%	124	-14%	153	23%	139	-9%	165	18%	167	2%	39	-9%	41	5%	41	-1%	46	13%	35	-24%	46	31%	42	-10%
S&C America	133	12%	147	11%	154	5%	163	6%	170	4%	170	0%	171	1%	42	-2%	42	1%	44	3%	43	0%	43	0%	41	-6%	36	-12%
Europe	191	6%	195	2%	186	-5%	193	4%	203	5%	209	3%	225	7%	50	4%	56	12%	55	-1%	56	1%	56	0%	58	3%	56	-3%
CIS	252	3%	244	-3%	261	7%	271	4%	274	1%	285	4%	288	1%	72	1%	72	0%	74	3%	74	0%	69	-7%	70	1%	71	0%
China	51	-2%	55	8%	64	18%	76	17%	96	28%	140	45%	204	46%	38	27%	43	14%	50	14%	57	14%	55	-3%	43	-21%	49	14%
Other Asia	165	-3%	166	1%	170	3%	177	4%	177	0%	166	-6%	180	9%	34	-25%	44	30%	45	2%	46	3%	44	-6%	45	4%	43	-5%
Africa	53	5%	53	-1%	54	3%	54	0%	54	-1%	54	1%	52	-3%	13	2%	14	2%	13	-1%	14	0%	12	-11%	13	12%	11	-20%
Oceania	174	12%	181	4%	179	-1%	165	-8%	168	1%	166	-1%	166	0%	43	7%	43	1%	41	-4%	46	10%	40	-12%	39	-1%	41	5%
World production	1,159	5%	1,185	2%	1,193	1%	1,253	5%	1,281	2%	1,355	6%	1,454	7%	331	-1%	355	7%	363	2%	381	5%	354	-7%	356	1%	348	-2%

Source: HSBC, CRU, World Bureau of Metal Statistics

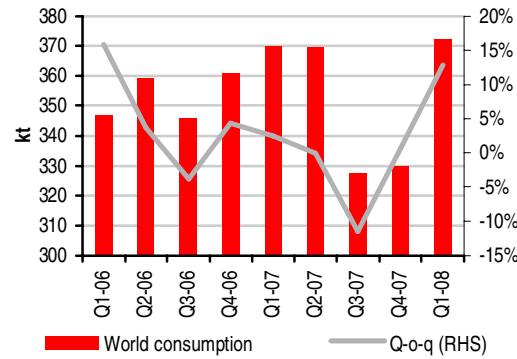
Nickel consumption

World nickel consumption – annual



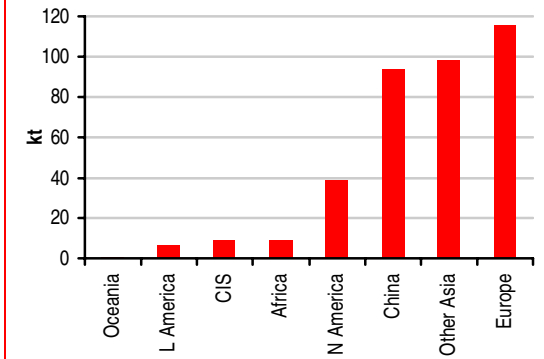
Source: HSBC, CRU, World Bureau of Metal Statistics

World nickel consumption – quarterly



Source: HSBC, CRU, World Bureau of Metal Statistics

World nickel consumption by region – Q1 2008



Source: HSBC, CRU, World Bureau of Metal Statistics

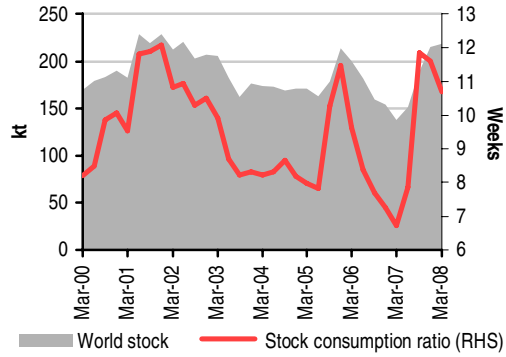
World nickel consumption by region (kt contained nickel)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	142	-12%	137	-4%	138	1%	147	6%	143	-3%	150	5%	155	3%	38	-3%	35	-8%	39	11%	39	0%	39	-1%	39	0%	39	1%
S&C America	27	9%	28	3%	30	9%	28	-8%	29	3%	30	2%	28	-5%	7	-2%	7	1%	8	9%	8	-6%	6	-24%	7	16%	7	4%
Europe	430	2%	458	6%	453	-1%	445	-2%	435	-2%	458	5%	419	-9%	107	-11%	115	7%	114	-1%	110	-4%	94	-14%	101	7%	116	15%
CIS	33	-1%	33	-2%	34	5%	30	-13%	30	-1%	33	11%	33	-1%	8	0%	8	-1%	8	1%	9	1%	8	-8%	8	-4%	9	16%
China	86	43%	91	6%	132	44%	155	18%	198	28%	268	35%	332	24%	64	-2%	72	12%	81	12%	85	4%	86	2%	80	-7%	94	17%
Other Asia	373	-9%	394	6%	434	10%	442	2%	406	-8%	426	5%	385	-10%	106	0%	109	2%	106	-3%	108	2%	86	-20%	85	-1%	98	15%
Africa	33	-7%	36	10%	43	20%	45	4%	40	-11%	46	15%	42	-9%	13	17%	13	-4%	12	-2%	12	-7%	8	-31%	10	27%	9	-9%
Oceania	2	0%	2	1%	2	-1%	2	1%	2	-1%	2	11%	2	7%	1	0%	1	0%	1	1%	1	-2%	1	20%	1	-8%	1	27%
World consumption	1,127	-2%	1,178	5%	1,267	8%	1,294	2%	1,284	-1%	1,413	10%	1,397	-1%	346	-4%	361	4%	370	2%	370	0%	327	-11%	330	1%	372	13%

Source: HSBC, CRU, World Bureau of Metal Statistics

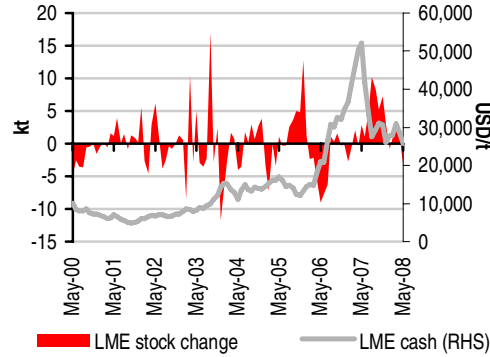
Nickel stocks and prices

World nickel stocks



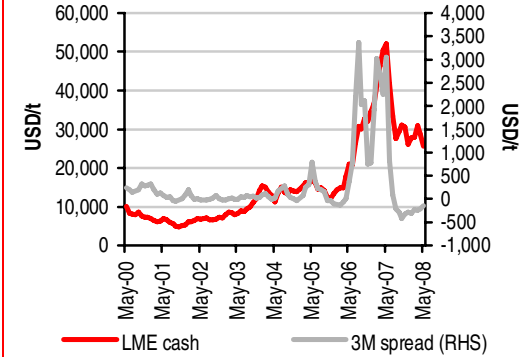
Source: WBMS, CRU, HSBC

Change in LME stocks



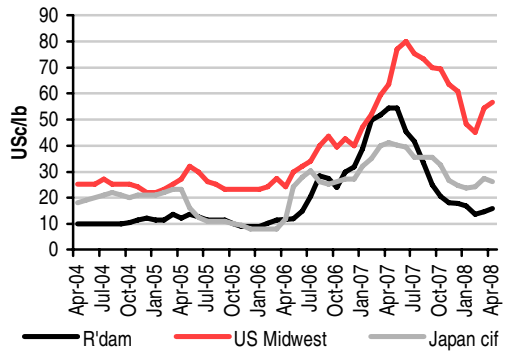
Source: Thomson Financial Datastream, HSBC

LME cash price and three-month spread



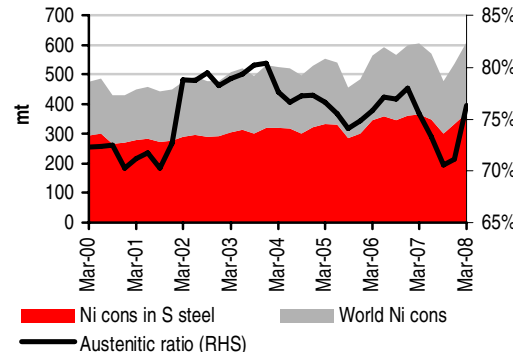
Source: Thomson Financial Datastream, HSBC

Merchant premiums for melting grade Nickel



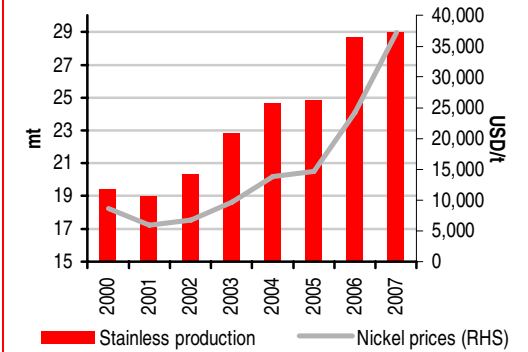
Source: CRU, HSBC

Nickel consumption in stainless steel production



Source: CRU, HSBC

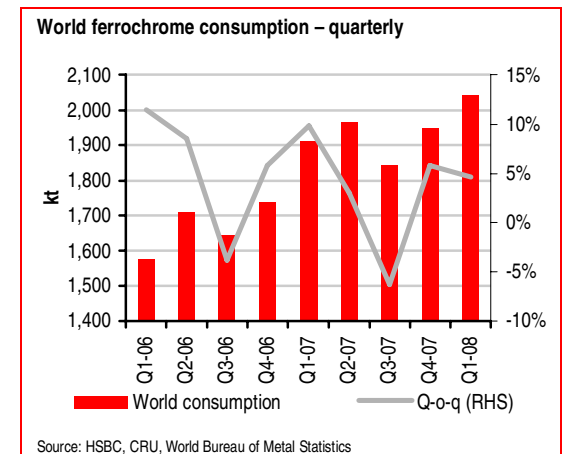
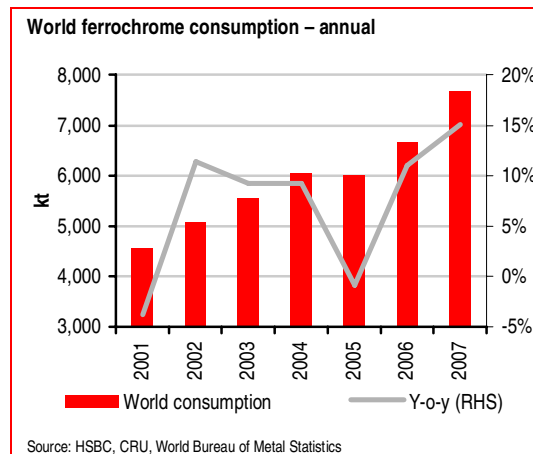
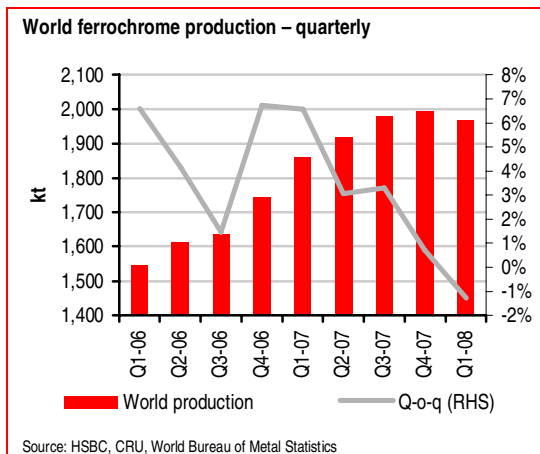
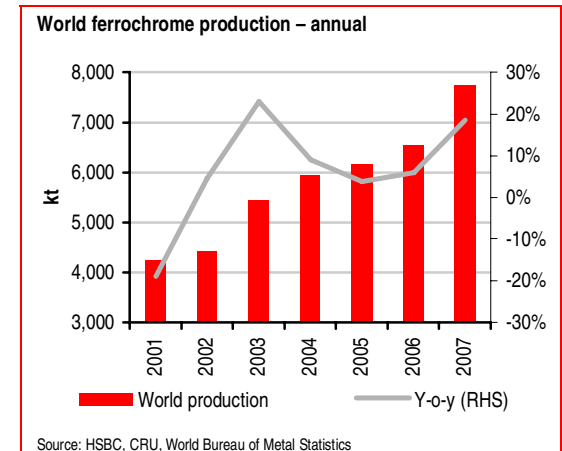
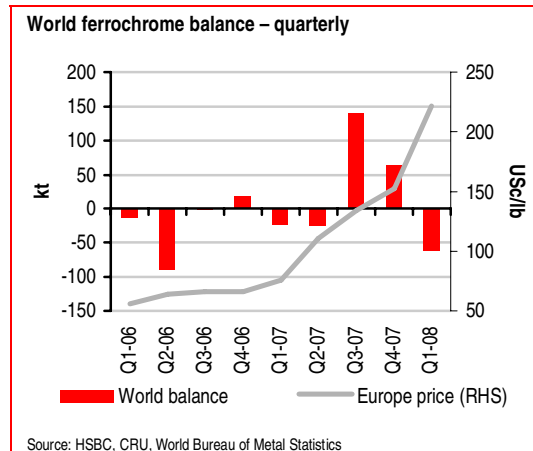
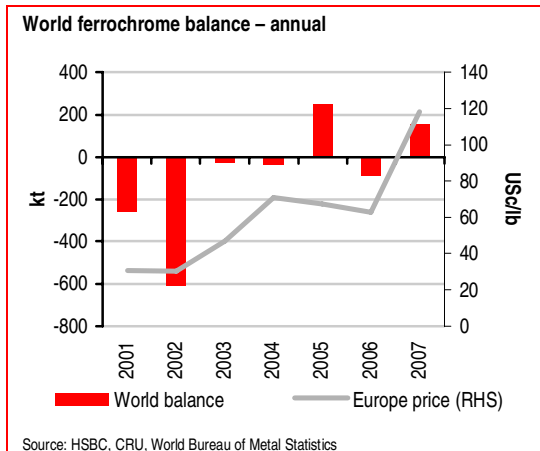
World stainless steel production and nickel prices



Source: Thomson Financial Datastream, CRU, IISI, HSBC

Ferrochrome

Ferrochrome balance, consumption and production



Region-wise production and consumption

World ferrochrome production by region (kt)

	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
South Africa	na	na	3,001	2,694	2,784	3,474	672	775	815	864	906	891	813
Kazakhstan	na	na	801	850	877	1,032	219	219	258	258	258	258	263
China	na	na	531	738	1,016	1,297	254	254	324	324	324	324	380
Rest of World	na	na	1,612	1,888	1,862	1,948	490	497	464	471	492	521	513
World production	4,432	5,449	5,945	6,170	6,539	7,751	1,635	1,745	1,860	1,917	1,980	1,994	1,968
Y-o-y/ Q-o-q	4.6%	22.9%	9.1%	3.8%	6.0%	18.5%	1.5%	6.7%	6.6%	3.0%	3.3%	0.7%	-1.3%

Source: HSBC, CRU, World Bureau of Metal Statistics

World ferrochrome consumption by region (kt)

	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
US	480	480	484	444	455	445	96	106	109	119	91	126	117
Europe	1,960	1,968	1,983	1,822	2,021	1,911	511	547	520	488	442	461	514
Japan	853	897	942	966	853	1,011	203	223	271	248	238	254	241
Rest of World	1,373	1,640	1,737	1,679	1,840	1,732	438	496	440	442	409	440	442
Former Eastern bloc	404	557	905	1,088	1,493	2,570	395	366	569	668	663	669	727
World consumption	5,070	5,541	6,049	5,999	6,662	7,667	1,642	1,738	1,909	1,966	1,842	1,950	2,041
Y-o-y/ Q-o-Q	11.4%	9.3%	9.2%	-0.8%	11.0%	15.1%	-3.8%	5.8%	9.9%	3.0%	-6.3%	5.8%	4.7%

Source: HSBC, CRU, World Bureau of Metal Statistics

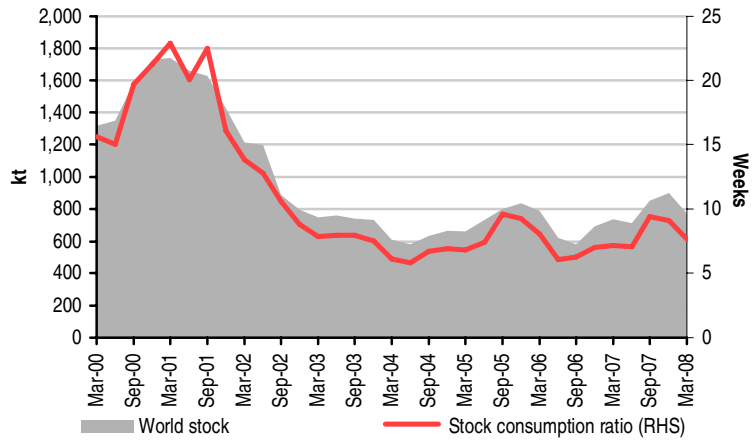
World ferrochrome balance by region (kt)

	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
World production	4,432	5,449	5,945	6,170	6,539	7,751	1,635	1,745	1,860	1,917	1,980	1,994	1,968
World consumption	5,070	5,541	6,049	5,999	6,662	7,667	1,642	1,738	1,909	1,966	1,842	1,950	2,041
Change in stocks	-30	-65	-68	-80	-36	-72	-5	-11	-25	-24	-3	-20	-10
World balance	-608	-27	-36	251	-87	156	-2	19	-24	-25	141	64	-62

Source: HSBC, CRU, World Bureau of Metal Statistics

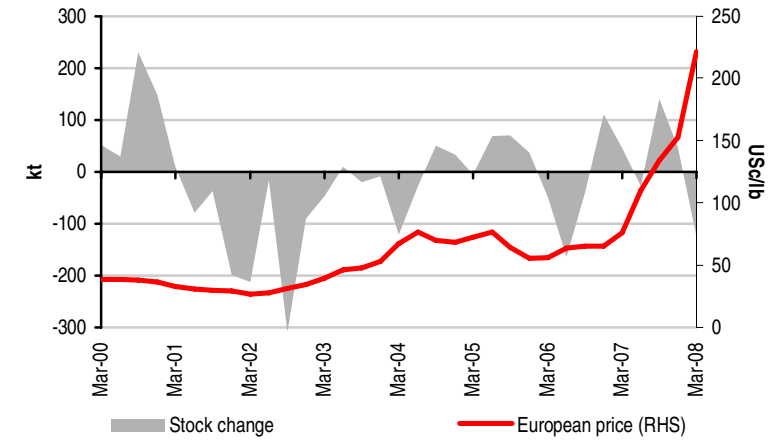
Ferrochrome stocks and prices

Western world stocks



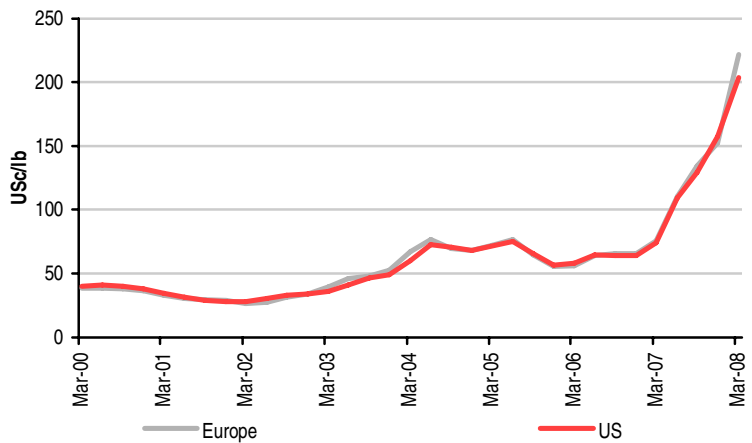
Source: CRU, HSBC

Western world stock change



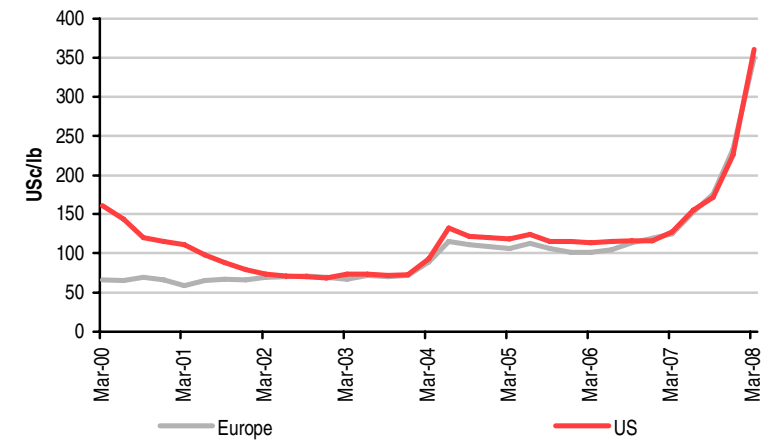
Source: CRU, HSBC

High-carbon ferrochrome prices



Source: CRU, HSBC

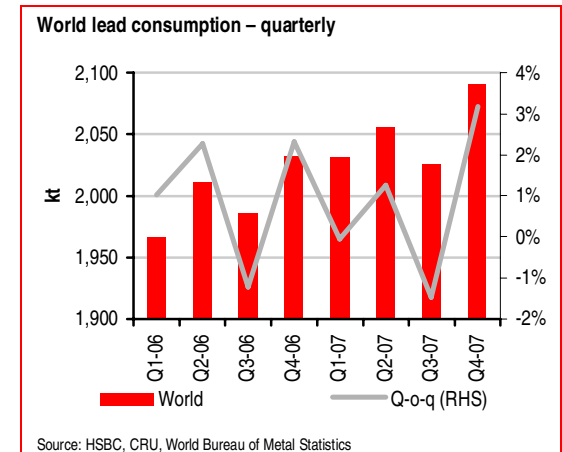
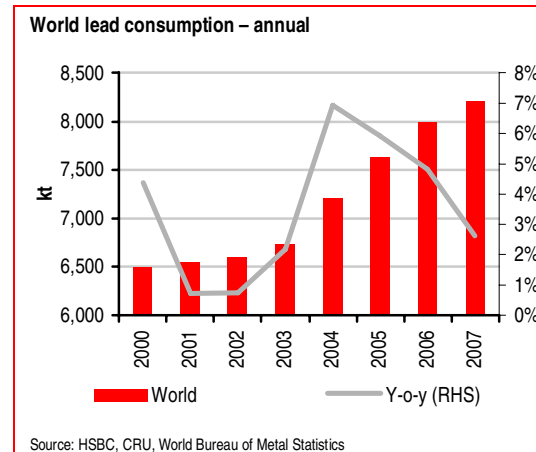
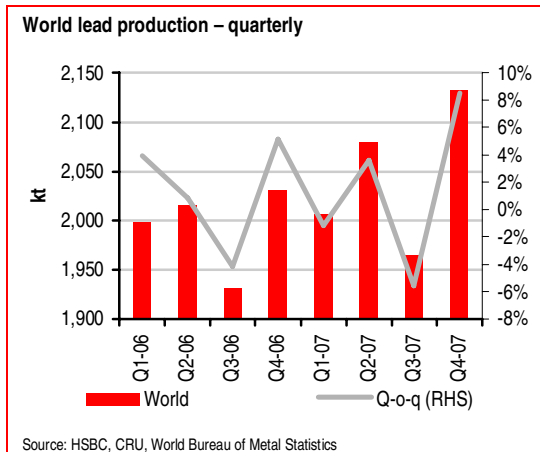
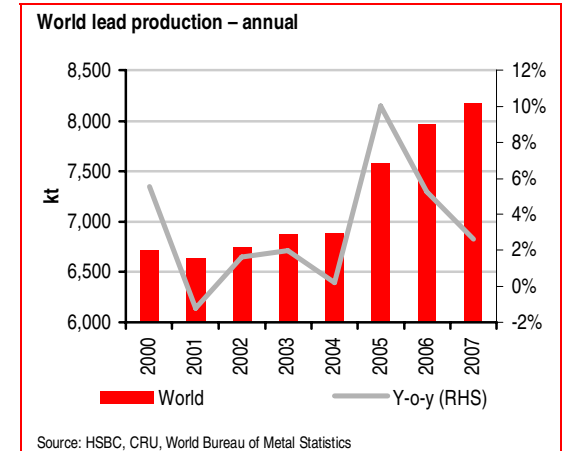
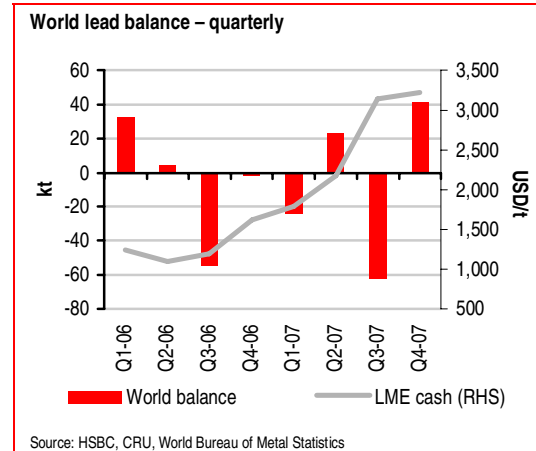
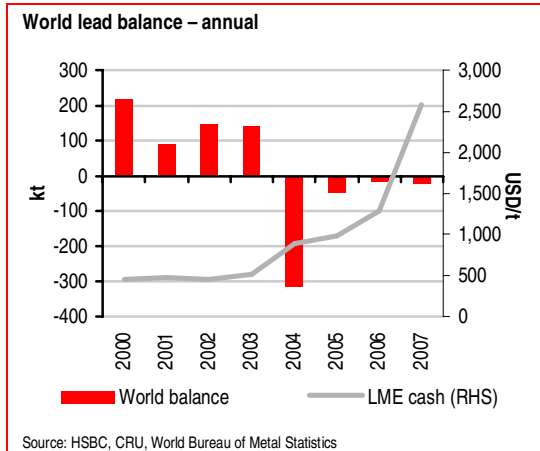
Low-carbon ferrochrome prices



Source: CRU, HSBC

Lead

Lead balance, production and consumption



Lead refined and mine production by region

World lead refined production by region (kt)

	Annual												Quarterly													
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q2-06	Q-o-q	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q
Japan	283	-6%	295	4%	283	-4%	275	-3%	286	4%	279	-2%	71	0%	72	1%	70	-3%	68	-3%	74	8%	72	-2%	65	-10%
W Europe	1,517	-6%	1,342	-12%	1,272	-5%	1,373	8%	1,332	-3%	1,383	4%	339	-5%	304	-10%	331	9%	356	7%	343	-4%	322	-6%	361	12%
US	1,370	-1%	1,389	1%	1,274	-8%	1,299	2%	1,350	4%	1,361	1%	342	2%	334	-2%	340	2%	335	-1%	338	1%	325	-4%	362	12%
Canada	252	9%	223	-11%	241	8%	230	-5%	245	6%	243	-1%	62	-7%	48	-22%	69	43%	65	-5%	67	2%	47	-29%	64	36%
Australia	307	11%	313	2%	275	-12%	272	-1%	242	-11%	254	5%	72	4%	32	-56%	69	116%	59	-14%	70	18%	58	-17%	67	16%
Other Western	1,205	5%	1,237	3%	1,222	-1%	1,304	7%	1,395	7%	1,361	-2%	348	-1%	352	1%	343	-3%	328	-5%	343	5%	340	-1%	350	3%
FEW	1,807	8%	2,076	15%	2,322	12%	2,826	22%	3,125	11%	3,301	6%	781	5%	789	1%	808	2%	795	-2%	844	6%	800	-5%	862	8%
World	6,741	2%	6,874	2%	6,888	0%	7,579	10%	7,975	5%	8,182	3%	2,015	1%	1,931	-4%	2,030	5%	2,007	-1%	2,080	4%	1,964	-6%	2,132	9%

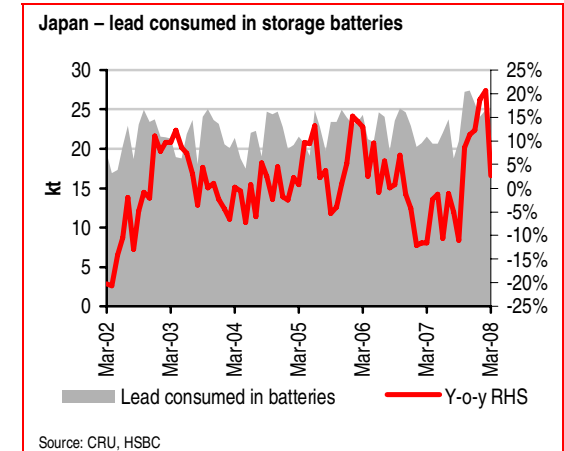
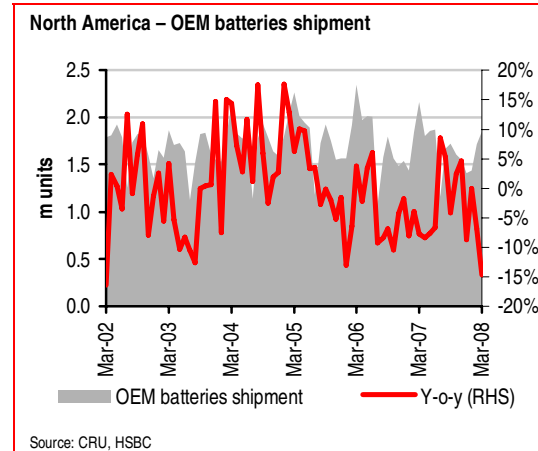
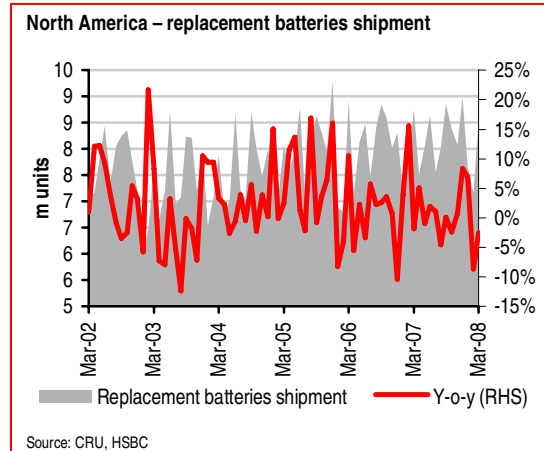
Source: HSBC, CRU, World Bureau of Metal Statistics

World lead mine production by region (kt)

	Annual												Quarterly													
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q2-06	Q-o-q	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q
Canada	97	-37%	81	-16%	77	-5%	79	3%	84	7%	82	-3%	21	0%	22	5%	22	0%	21	-3%	19	-10%	20	5%	22	11%
US	450	1%	459	2%	442	-4%	436	-1%	448	3%	424	-5%	108	-4%	113	5%	114	1%	114	-1%	105	-8%	105	0%	101	-4%
Mexico	139	2%	135	-3%	119	-12%	135	14%	138	2%	137	-1%	36	6%	34	-6%	34	0%	31	-9%	36	16%	36	0%	34	-6%
Peru	298	3%	308	3%	306	-1%	319	4%	322	1%	328	2%	79	7%	81	3%	88	8%	83	-6%	77	-7%	85	10%	83	-2%
Other Americas	42	4%	43	3%	46	7%	50	9%	53	6%	67	28%	11	-15%	13	18%	14	8%	14	-6%	13	-4%	15	15%	26	72%
Australia	696	-8%	689	-1%	678	-2%	767	13%	690	-10%	644	-7%	175	-5%	173	-1%	158	-9%	168	6%	154	-8%	160	4%	162	1%
W Europe	128	-42%	110	-14%	121	9%	128	6%	143	12%	181	27%	32	-9%	37	16%	39	6%	47	20%	43	-9%	42	-2%	49	17%
E Europe	100	12%	95	-5%	88	-7%	80	-9%	75	-6%	83	10%	19	0%	19	0%	20	6%	19	-5%	18	-3%	20	11%	26	31%
China	745	4%	955	28%	992	4%	1,268	28%	1,349	6%	1,629	21%	355	28%	355	0%	361	1%	406	13%	345	-15%	400	16%	477	19%
Other Asia	88	-1%	92	4%	98	7%	108	9%	103	-4%	128	24%	26	4%	25	-4%	28	13%	33	19%	30	-9%	27	-10%	38	40%
CIS	63	16%	65	3%	70	7%	81	17%	103	27%	94	-9%	26	4%	26	0%	27	4%	23	-14%	25	9%	25	0%	21	-16%
Africa	131	-11%	101	-23%	101	0%	119	18%	138	16%	115	-17%	34	6%	36	6%	36	0%	32	-11%	28	-13%	25	-11%	30	20%
World	2,977	-5%	3,133	5%	3,137	0%	3,571	14%	3,647	2%	3,912	7%	922	8%	934	1%	939	1%	989	5%	893	-10%	960	8%	1,070	11%

Source: HSBC, CRU, World Bureau of Metal Statistics

Lead consumption by region and consumption indicators



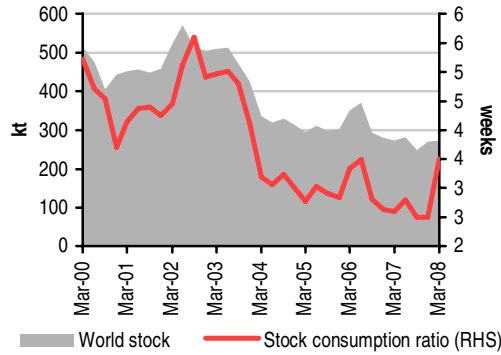
World refined Lead consumption by region (kt)

	Annual												Quarterly													
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q2-06	Q-o-q	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q
China	929	25%	1,149	24%	1,419	24%	1,883	33%	2,169	15%	2,460	13%	544	6%	549	1%	562	2%	559	0%	601	7%	635	6%	665	5%
Other Asia	1,491	7%	1,560	5%	1,619	4%	1,550	-4%	1,653	7%	1,543	-7%	413	2%	414	0%	421	2%	399	-5%	399	0%	386	-3%	359	-7%
W Europe	1,725	-2%	1,630	-5%	1,688	4%	1,644	-3%	1,595	-3%	1,603	1%	402	1%	385	-4%	412	7%	422	3%	405	-4%	375	-7%	401	7%
Central & Eastern Europe	190	1%	174	-8%	213	22%	234	10%	240	2%	226	-6%	59	-2%	57	-3%	63	11%	60	-5%	67	11%	52	-22%	47	-10%
North America	1,815	-10%	1,763	-3%	1,811	3%	1,840	2%	1,864	1%	1,895	2%	474	1%	463	-2%	456	-1%	470	3%	469	0%	455	-3%	502	10%
South & Central America	202	-3%	209	3%	233	12%	233	0%	237	1%	239	1%	59	0%	59	0%	59	0%	61	3%	58	-5%	61	6%	60	-2%
CIS	137	-1%	134	-2%	105	-22%	129	23%	114	-11%	128	12%	29	0%	29	0%	29	0%	30	4%	29	-2%	32	9%	37	16%
Africa	103	2%	114	11%	113	-2%	112	0%	122	9%	109	-11%	31	0%	31	0%	31	0%	30	-3%	29	-2%	30	2%	19	-35%
World	6,591	1%	6,734	2%	7,201	7%	7,627	6%	7,994	5%	8,204	3%	2,010	2%	1,986	-1%	2,032	2%	2,031	0%	2,056	1%	2,026	-1%	2,090	3%

Source: HSBC, CRU, World Bureau of Metal Statistics

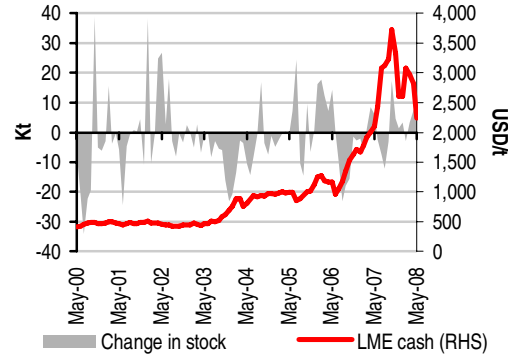
Lead stocks and prices

World stocks



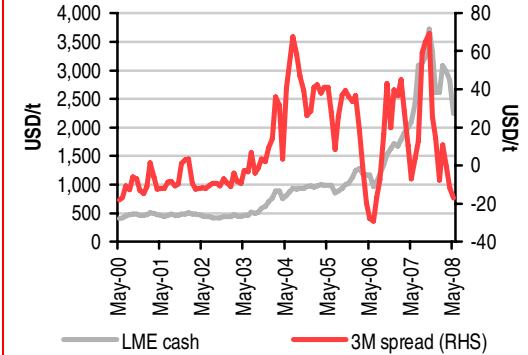
Source: WBMS, CRU, HSBC

LME stock change



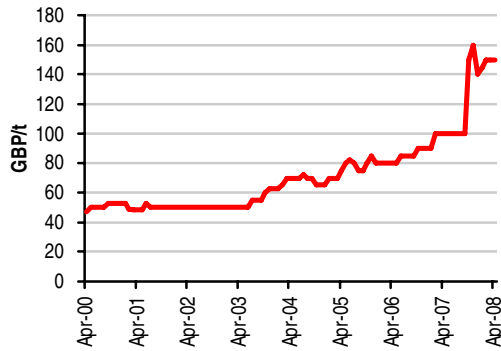
Source: Thompson Financial Datastream, HSBC

LME cash price and three-month spread



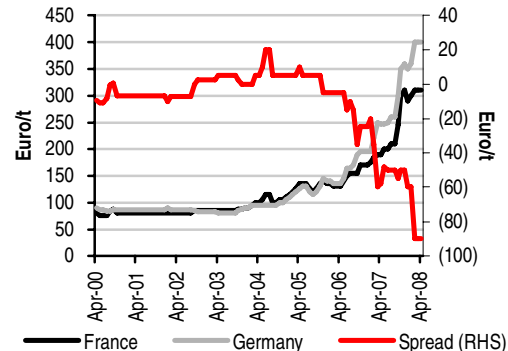
Source: Thompson Financial Datastream, HSBC

UK battery scrap prices



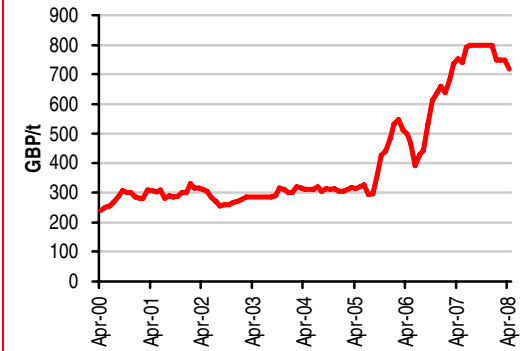
Source: CRU, HSBC

France and Germany battery scrap prices



Source: CRU, HSBC

UK soft scrap prices

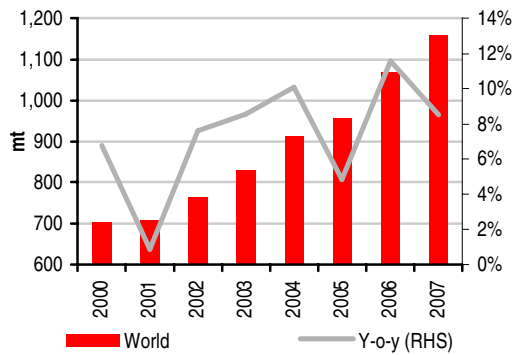


Source: CRU, HSBC

Steel

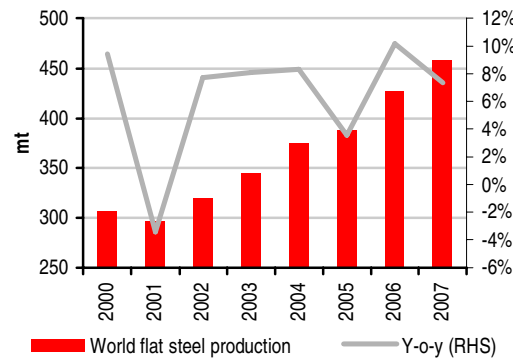
Steel volumes

World finished steel production – annual



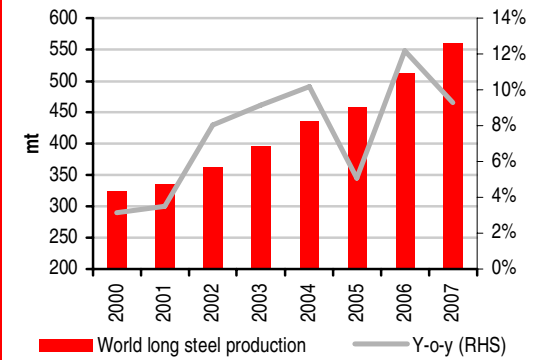
Source: CRU, HSBC

World flat steel production – annual



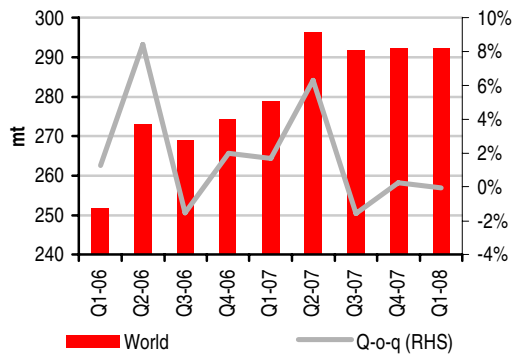
Source: CRU, HSBC

World long steel production – annual



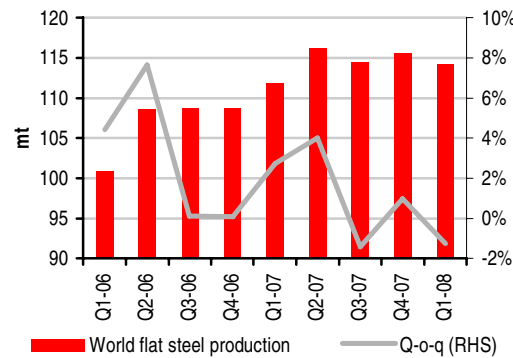
Source: CRU, HSBC

World finished steel production – quarterly



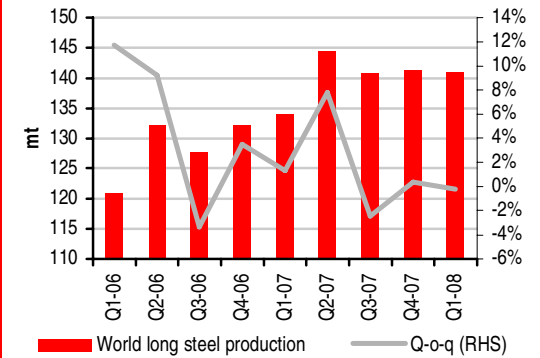
Source: CRU, HSBC

World flat steel production – quarterly



Source: CRU, HSBC

World long steel production – quarterly



Source: CRU, HSBC

Regional production, apparent consumption and net trade of finished steel

World finished steel production by region (mt)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	103	-8%	104	1%	108	5%	116	7%	106	-9%	110	4%	111	1%	28	-3%	25	-11%	28	10%	29	3%	28	-2%	27	-3%	29	8%
Europe	157	-4%	160	2%	164	3%	175	7%	169	-3%	183	8%	187	2%	44	-9%	46	5%	48	5%	49	0%	44	-10%	47	7%	48	3%
Other Asia	162	-3%	173	7%	178	3%	185	4%	180	-2%	188	5%	196	4%	48	3%	49	1%	48	-1%	50	4%	49	-2%	49	0%	49	1%
China	134	21%	164	23%	200	22%	247	23%	309	25%	383	24%	447	17%	96	-1%	104	8%	102	-2%	115	13%	116	1%	114	-2%	110	-4%
CIS	55	1%	58	6%	63	8%	66	5%	66	0%	69	5%	75	8%	18	2%	17	-8%	18	9%	19	5%	18	-4%	19	1%	19	3%
Brazil	18	7%	17	-4%	21	20%	23	12%	22	-4%	22	2%	18	-19%	6	12%	6	-6%	4	-26%	5	7%	5	3%	5	2%	5	0%
Rest of world	82	0%	87	7%	96	10%	103	7%	106	3%	113	7%	125	11%	28	-1%	28	0%	30	7%	30	0%	32	5%	32	0%	32	-1%
World	710	1%	764	8%	829	9%	913	10%	958	5%	1,068	12%	1,160	9%	269	-2%	274	2%	279	2%	296	6%	292	-2%	292	0%	292	0%

Source: CRU, HSBC

World finished steel apparent consumption by region (mt)

	Annual														Quarterly													
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	117	-12%	119	2%	117	-2%	134	14%	119	-11%	133	12%	122	-8%	34	-2%	30	-13%	31	3%	32	3%	31	-3%	29	-6%	32	10%
Europe	154	-1%	155	1%	157	2%	168	7%	161	-4%	185	15%	194	5%	45	-8%	47	6%	49	4%	51	3%	47	-6%	47	-2%	49	6%
Other Asia	144	-5%	155	8%	159	3%	170	7%	168	-1%	176	5%	184	4%	45	2%	46	2%	46	1%	47	2%	45	-5%	46	2%	46	-1%
China	144	22%	179	25%	226	26%	259	14%	314	21%	363	16%	413	14%	91	-2%	96	5%	94	-2%	103	9%	108	4%	107	0%	105	-2%
CIS	31	9%	31	1%	37	19%	40	7%	40	0%	45	11%	51	15%	12	8%	11	-7%	11	2%	13	17%	14	6%	12	-12%	12	-6%
Brazil	16	12%	14	-11%	16	9%	19	19%	17	-10%	17	2%	10	-39%	5	8%	4	-11%	2	-46%	3	19%	3	-10%	3	10%	3	4%
Rest of world	104	0%	110	6%	117	6%	123	6%	139	12%	149	8%	185	24%	37	1%	40	7%	45	12%	48	7%	44	-7%	48	9%	46	-5%
World	710	1%	764	8%	829	9%	913	10%	958	5%	1,068	12%	1,160	9%	269	-2%	274	2%	279	2%	296	6%	292	-2%	292	0%	292	0%

Source: CRU, HSBC

World finished steel implied net exports/ (imports) by region (mt)

	2001	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
North America	-14	-15	-8	-18	-13	-23	-11	-6	-5	-3	-3	-3	-2	-2
Europe	3	5	7	7	9	-2	-7	-1	-1	-1	-2	-4	0	-1
Other Asia	19	18	19	15	11	12	11	3	3	2	3	4	3	3
China	-10	-15	-26	-12	-5	19	35	5	8	7	12	9	7	5
CIS	24	27	25	26	26	24	23	6	6	7	6	4	6	7
Brazil	2	3	5	4	5	5	8	1	1	2	2	2	2	2
Rest of world	-23	-23	-21	-21	-33	-36	-60	-9	-11	-14	-17	-12	-16	-14

Source: CRU, HSBC

Regional production, apparent consumption and net trade of flat steel

World flat steel production by region (mt)

	Annual											Quarterly														
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	59	3%	63	6%	66	5%	60	-10%	60	1%	60	-1%	15	-5%	13	-12%	15	10%	15	3%	15	-4%	15	0%	15	2%
Latin America	11	1%	14	27%	15	7%	15	3%	15	0%	16	7%	4	7%	4	-4%	4	2%	4	4%	4	4%	4	1%	4	-6%
Europe	83	4%	84	1%	90	7%	87	-3%	93	6%	90	-3%	23	-7%	23	1%	23	-1%	23	1%	22	-6%	23	6%	23	3%
CIS	27	8%	30	12%	30	2%	30	-1%	31	3%	32	3%	8	-3%	7	-18%	8	17%	8	4%	8	3%	8	-11%	9	13%
Asia	110	15%	122	11%	137	13%	156	14%	185	18%	214	16%	48	5%	51	6%	51	0%	55	8%	55	0%	54	-1%	51	-5%
Rest of world	30	6%	33	9%	36	9%	39	8%	43	11%	46	7%	11	0%	11	5%	12	5%	11	-7%	11	0%	12	13%	12	-2%
World	320	8%	345	8%	374	8%	388	4%	427	10%	458	7%	109	0%	109	0%	112	3%	116	4%	115	-1%	116	1%	114	-1%

Source: CRU, HSBC

World flat steel apparent consumption by region (mt)

	Annual											Quarterly														
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	66	4%	66	-1%	75	14%	66	-12%	71	8%	64	-9%	18	-4%	16	-13%	16	2%	17	3%	16	-5%	16	-2%	16	4%
Latin America	9	-12%	11	26%	13	15%	13	1%	13	1%	16	24%	4	6%	3	-12%	3	8%	4	10%	4	10%	5	11%	4	-14%
Europe	81	0%	81	0%	89	10%	86	-3%	96	12%	98	2%	23	-8%	24	5%	24	0%	25	4%	24	-5%	25	1%	25	2%
CIS	12	-3%	17	43%	17	1%	17	1%	20	17%	22	13%	5	5%	5	-14%	5	10%	6	22%	6	2%	5	-22%	6	14%
Asia	106	18%	126	19%	133	5%	154	16%	169	10%	194	15%	43	4%	46	6%	46	1%	49	6%	49	0%	49	0%	47	-4%
Rest of world	46	13%	45	-3%	48	7%	52	8%	58	11%	63	9%	15	4%	15	0%	16	10%	15	-7%	15	-2%	17	14%	16	-3%
World	320	8%	345	8%	374	8%	388	4%	427	10%	458	7%	109	0%	109	0%	112	3%	116	4%	115	-1%	116	1%	114	-1%

Source: CRU, HSBC

World flat steel implied net exports/ (imports) by region (mt)

	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
North America	-7	-3	-9	-6	-11	-5	-3	-3	-1	-1	-1	-1	-1
Latin America	2	3	2	2	2	0	0	1	0	0	0	0	0
Europe	2	3	1	1	-3	-9	-1	-1	-2	-2	-3	-2	-2
CIS	15	13	14	13	11	10	3	2	3	2	2	3	3
Asia	4	-4	4	2	16	20	4	5	4	6	6	5	4
Rest of world	-16	-12	-12	-13	-15	-17	-4	-3	-4	-4	-4	-4	-4

Source: CRU, HSBC

Regional production, apparent consumption and net trade of long steel

World long steel production by region (mt)

	Annual												Quarterly													
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	33	0%	35	5%	37	6%	35	-5%	36	3%	39	9%	9	-1%	8	-8%	10	14%	10	5%	10	-2%	9	-7%	10	6%
Europe	65	1%	66	1%	70	6%	66	-4%	73	11%	75	2%	17	-11%	19	11%	19	2%	20	3%	17	-14%	19	8%	20	8%
Asia	185	14%	209	13%	238	14%	266	12%	308	16%	341	11%	77	-4%	81	5%	80	-1%	87	9%	87	0%	88	1%	85	-3%
CIS	21	1%	22	5%	24	6%	24	0%	25	6%	26	4%	7	9%	7	1%	6	-7%	7	12%	6	-6%	6	-2%	6	-1%
Rest of world	57	6%	64	11%	68	7%	66	-2%	71	6%	79	12%	18	2%	17	-4%	19	9%	21	7%	20	-1%	19	-4%	20	4%
World	362	8%	395	9%	435	10%	457	5%	513	12%	561	9%	128	-3%	132	4%	134	1%	144	8%	141	-2%	141	0%	141	0%

Source: CRU, HSBC

World long steel apparent consumption by region (mt)

	Annual												Quarterly													
	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q	Q1-08	Q-o-q
North America	40	-1%	39	-1%	44	12%	41	-8%	44	9%	42	-6%	12	1%	10	-12%	10	1%	11	8%	11	-2%	10	-10%	10	8%
Europe	62	1%	64	3%	66	4%	62	-6%	74	18%	74	1%	18	-8%	19	6%	20	3%	20	1%	17	-15%	18	6%	20	9%
Asia	185	16%	209	13%	236	13%	262	11%	298	13%	329	10%	74	-4%	77	3%	77	0%	83	8%	84	1%	85	1%	82	-3%
CIS	14	2%	15	8%	17	9%	17	0%	18	9%	23	28%	5	13%	5	1%	5	5%	6	22%	6	-3%	6	-10%	6	1%
Rest of world	61	2%	67	11%	72	7%	75	5%	79	5%	93	17%	19	-3%	21	11%	22	2%	24	9%	23	-3%	24	1%	23	-1%
World	362	8%	395	9%	435	10%	457	5%	513	12%	561	9%	128	-3%	132	4%	134	1%	144	8%	141	-2%	141	0%	141	0%

Source: CRU, HSBC

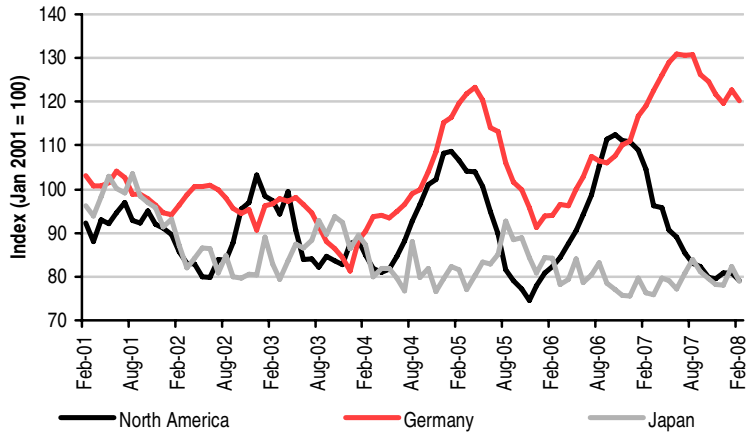
World long steel implied net exports/ (imports) by region (mt)

	2002	2003	2004	2005	2006	2007	Q3-06	Q4-06	Q1-07	Q2-07	Q3-07	Q4-07	Q1-08
North America	-7	-5	-8	-6	-8	-2	-2	-2	0	-1	-1	0	-1
Europe	3	2	3	4	0	1	-1	0	0	0	0	1	1
Asia	0	0	1	4	10	12	2	4	3	4	3	3	2
CIS	7	7	7	7	7	3	2	2	1	1	0	1	1
Rest of world	-3	-4	-4	-9	-8	-13	-1	-4	-3	-3	-3	-4	-3
World trade	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: CRU, HSBC

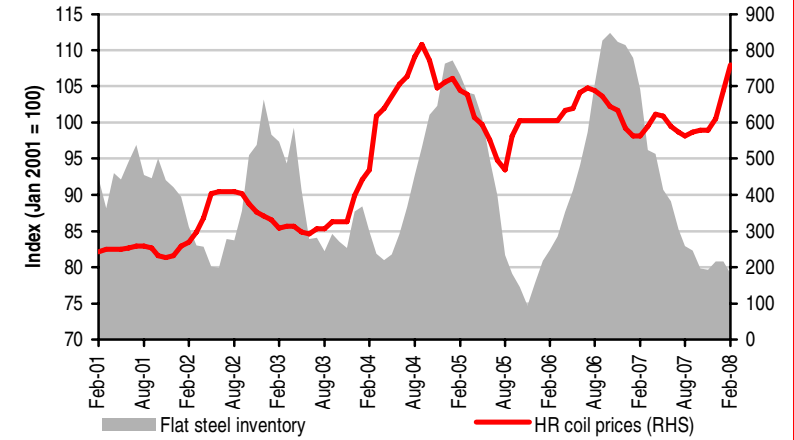
Flat steel inventories

CRU flat steel inventory index



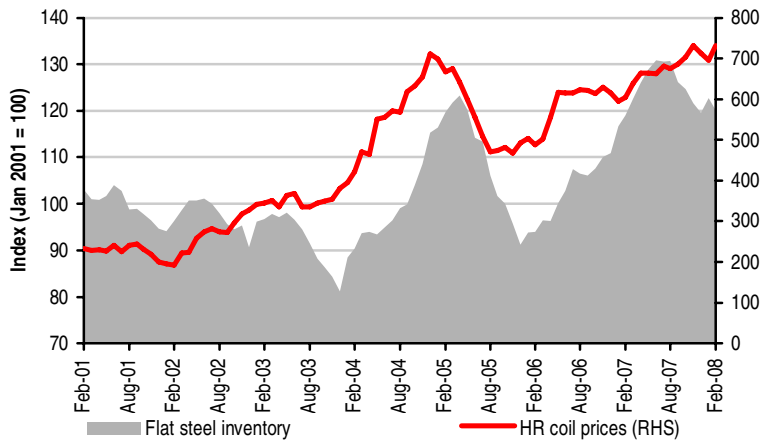
Source: CRU, HSBC

CRU flat steel inventory index versus HR coil price – North America



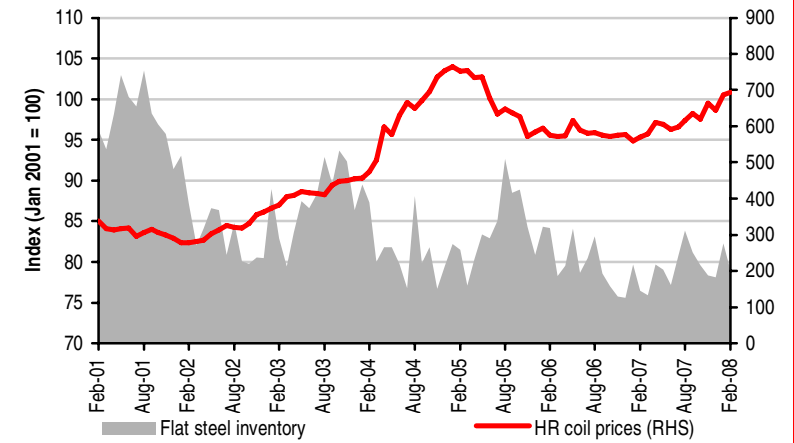
Source: CRU, HSBC

CRU flat steel inventory index versus HR coil price – Germany



Source: CRU, HSBC

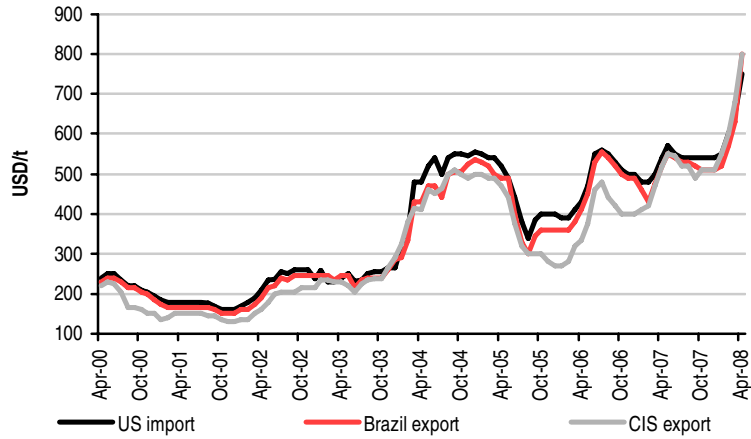
CRU flat steel inventory index versus HR coil price – Japan



Source: CRU, HSBC

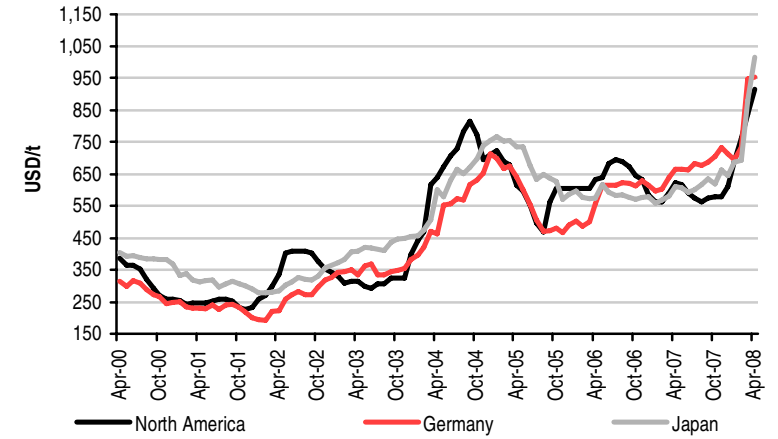
Flat steel prices and premiums

Steel slab prices



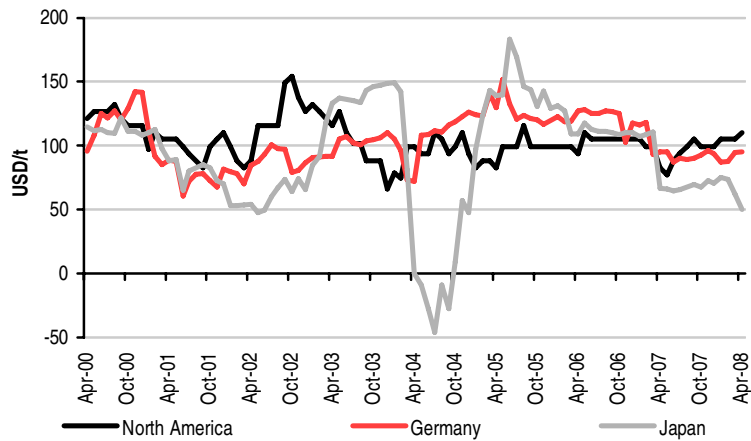
Source: CRU, HSBC

HR coil prices



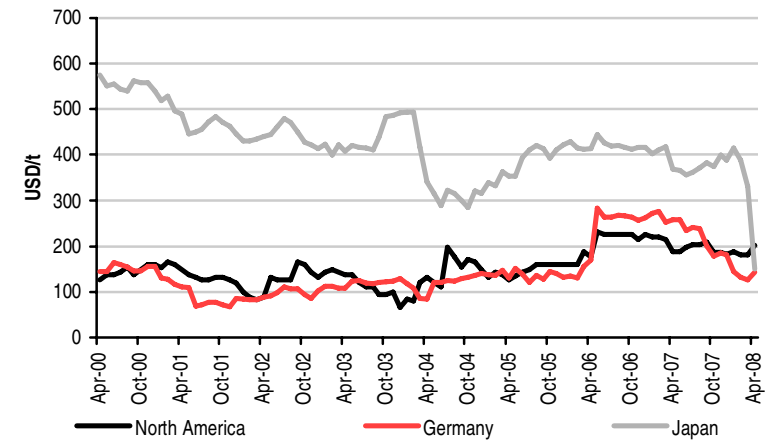
Source: CRU, HSBC

CR coil premium over HR coil (CR-HR)



Source: CRU, HSBC

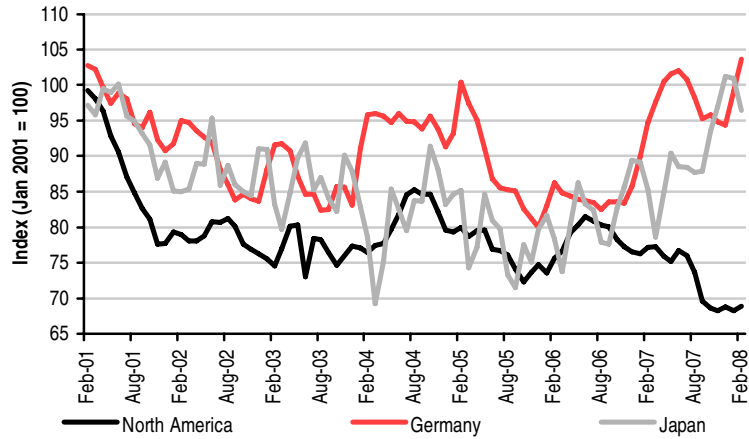
HDG sheet premium over HR coil (HDG-HR)



Source: CRU, HSBC

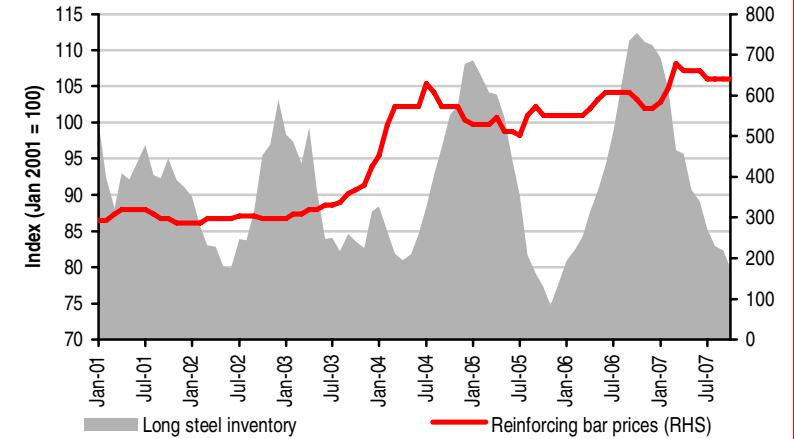
Long steel inventories

CRU long steel inventory index



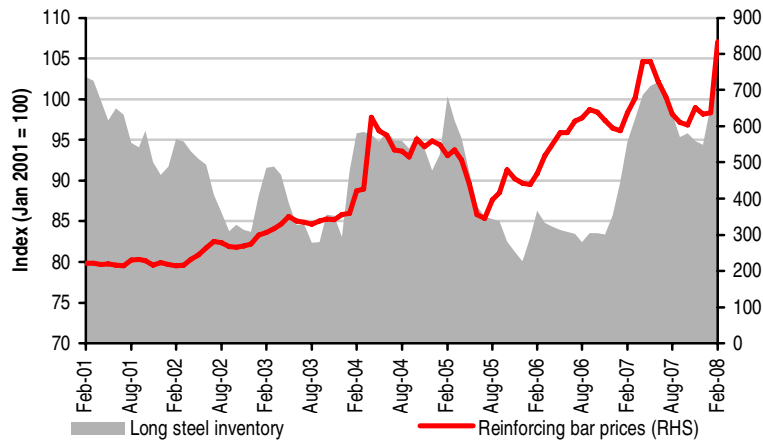
Source: CRU, HSBC

CRU long steel inventory index versus reinforcing bar price – North America



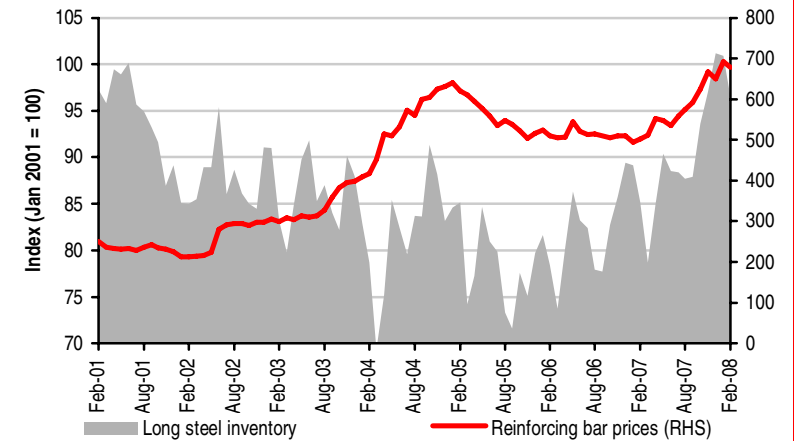
Source: CRU, HSBC

CRU long steel inventory index versus reinforcing bar price – Germany



Source: CRU, HSBC

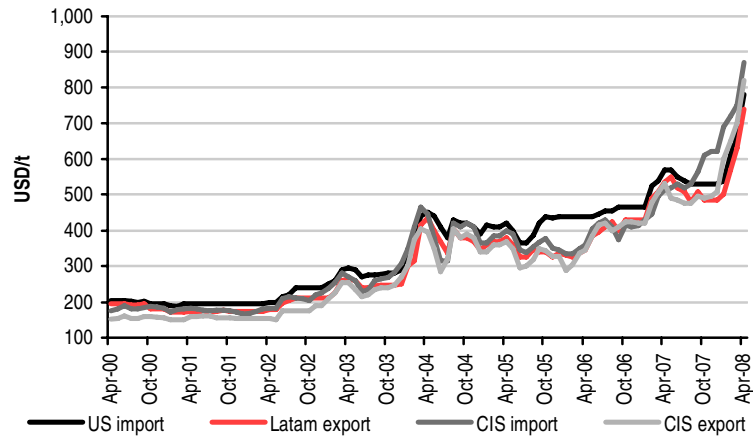
CRU long steel inventory index versus reinforcing bar price – Japan



Source: CRU, HSBC

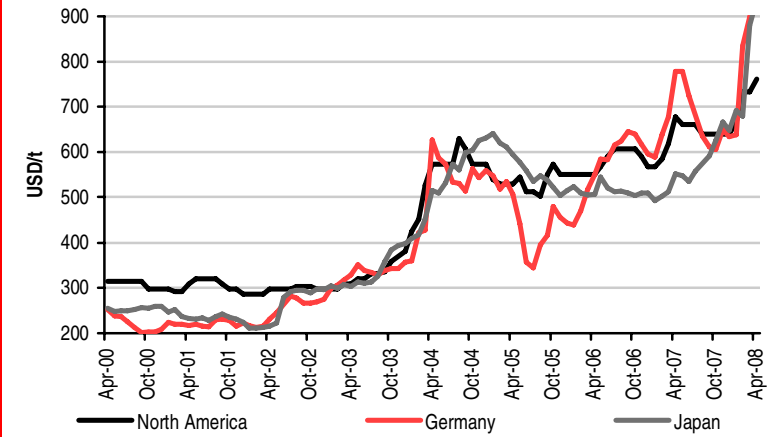
Long steel benchmark prices

Steel billets prices



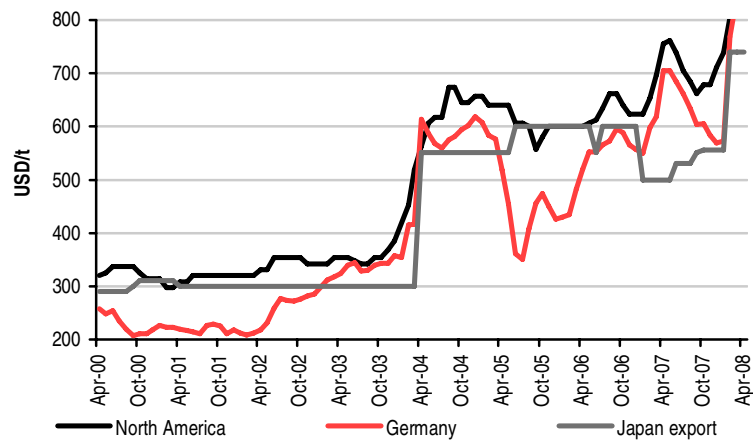
Source: CRU, HSBC

Reinforcing bar prices



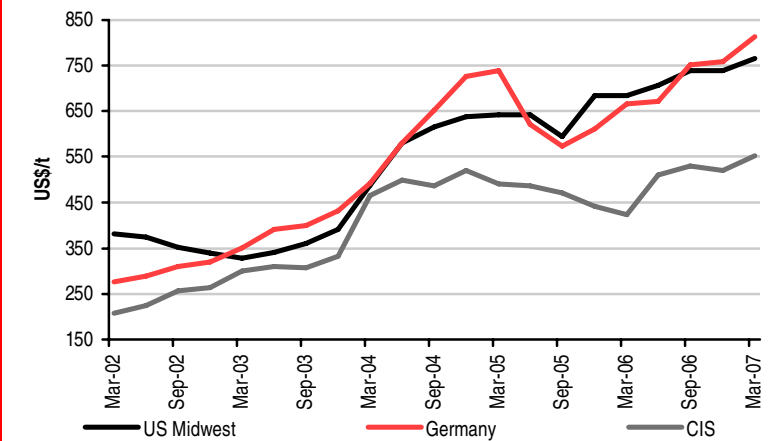
Source: CRU, HSBC

Wire rod prices



Source: CRU, HSBC

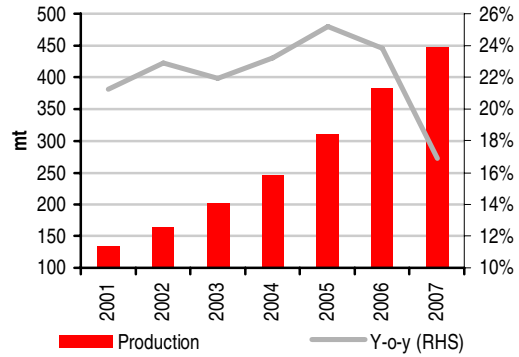
Structural prices



Source: CRU, HSBC

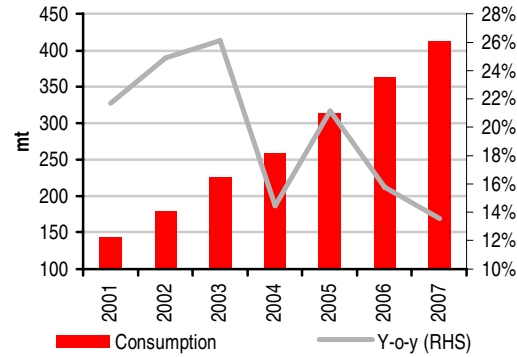
China summary

China finished steel production – annual



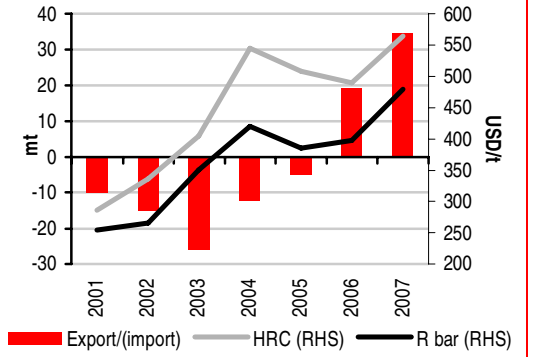
Source: CRU, HSBC

China finished steel consumption – annual



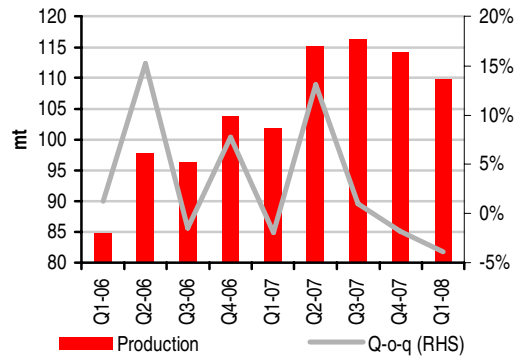
Source: CRU, HSBC

China finished steel implied exports/ (imports) – annual



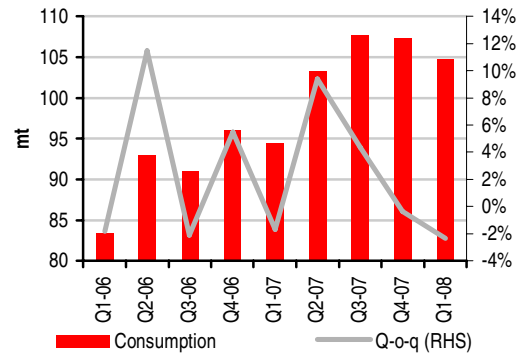
Source: CRU, HSBC

China finished steel production – quarterly



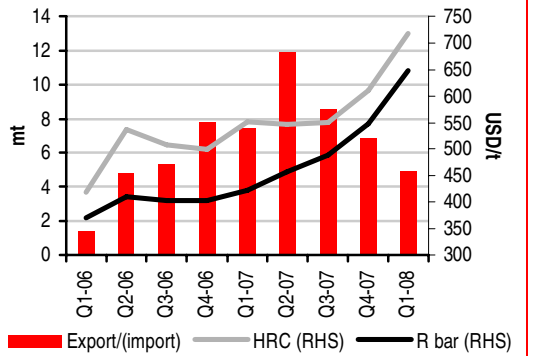
Source: CRU, HSBC

China finished steel consumption – quarterly



Source: CRU, HSBC

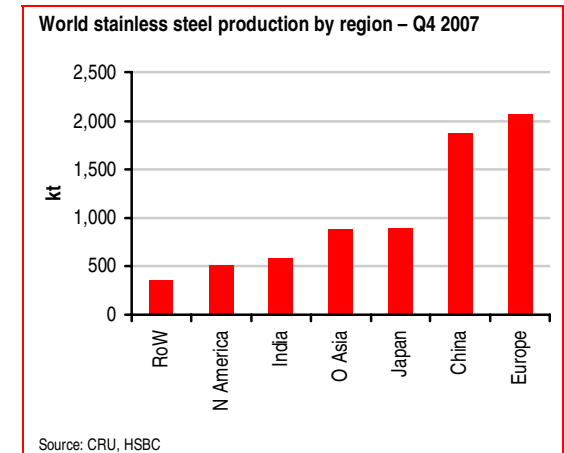
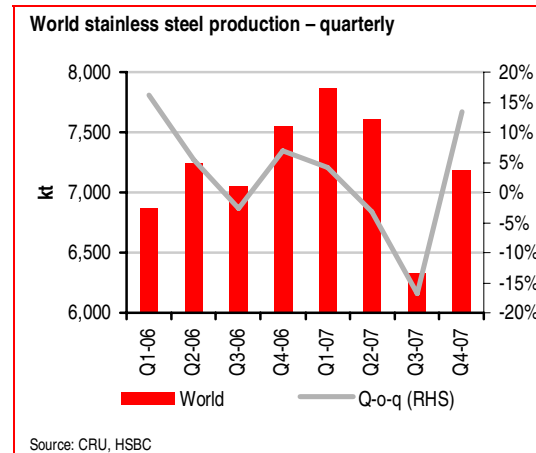
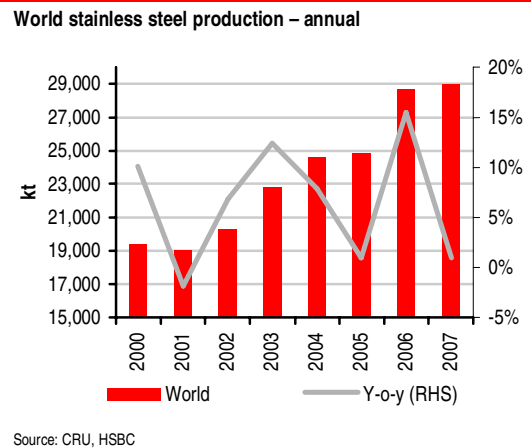
China finished steel implied exports/ (imports) – quarterly



Source: CRU, HSBC

Stainless steel

Stainless steel production



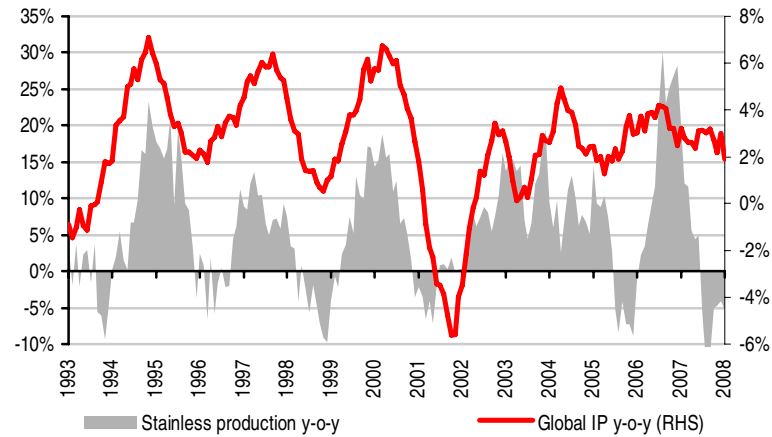
World stainless steel production by region (kt)

	Annual												Quarterly															
	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y	Q2-06	Q-o-q	Q3-06	Q-o-q	Q4-06	Q-o-q	Q1-07	Q-o-q	Q2-07	Q-o-q	Q3-07	Q-o-q	Q4-07	Q-o-q
N America	1,965	-17%	2,348	20%	2,335	-1%	2,382	2%	2,231	-6%	2,498	12%	2,171	-13%	667	5%	629	-6%	565	-10%	619	10%	609	-2%	426	-30%	517	21%
Europe	7,771	-2%	8,151	5%	8,484	4%	8,795	4%	8,304	-6%	9,328	12%	8,128	-13%	2,465	7%	2,172	-12%	2,381	10%	2,372	0%	2,201	-7%	1,488	-32%	2,067	39%
Japan	3,866	1%	3,835	-1%	4,113	7%	4,194	2%	3,983	-5%	4,072	2%	3,880	-5%	982	0%	1,063	8%	1,050	-1%	1,064	1%	995	-6%	927	-7%	894	-4%
China	795	49%	915	15%	1,777	94%	2,350	32%	3,572	52%	5,300	48%	7,528	42%	1,250	5%	1,286	3%	1,572	22%	1,848	18%	1,922	4%	1,883	-2%	1,875	0%
India	830	-2%	981	18%	1,256	28%	1,518	21%	1,753	16%	1,993	14%	2,271	14%	485	4%	491	1%	553	13%	566	2%	543	-4%	581	7%	581	0%
Other Asia	2,758	-3%	2,953	7%	3,492	18%	3,958	13%	3,805	-4%	4,040	6%	3,613	-11%	1,023	4%	1,007	-1%	1,028	2%	994	-3%	980	-1%	751	-23%	888	18%
RoW	1,026	3%	1,128	10%	1,373	22%	1,432	4%	1,212	-15%	1,485	23%	1,393	-6%	374	20%	405	8%	395	-2%	398	1%	359	-10%	275	-23%	361	31%
World	19,011	-2%	20,311	7%	22,830	12%	24,629	8%	24,861	1%	28,717	16%	28,984	1%	7,246	5%	7,054	-3%	7,545	7%	7,861	4%	7,609	-3%	6,331	-17%	7,183	13%

Source: CRU, HSBC

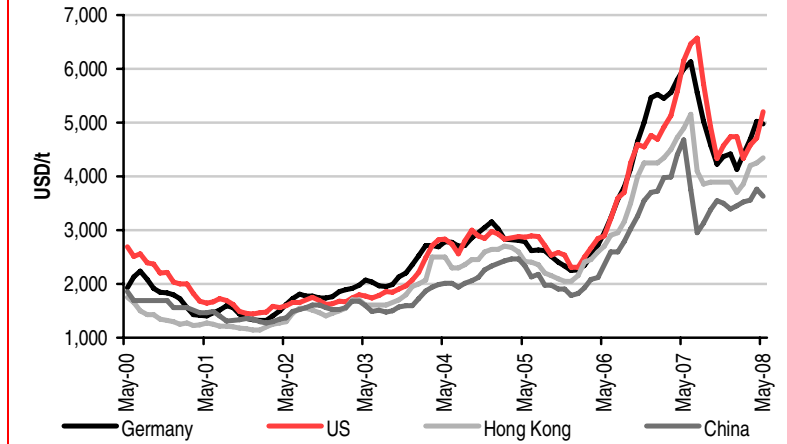
Stainless steel prices

Stainless steel production versus global industrial production



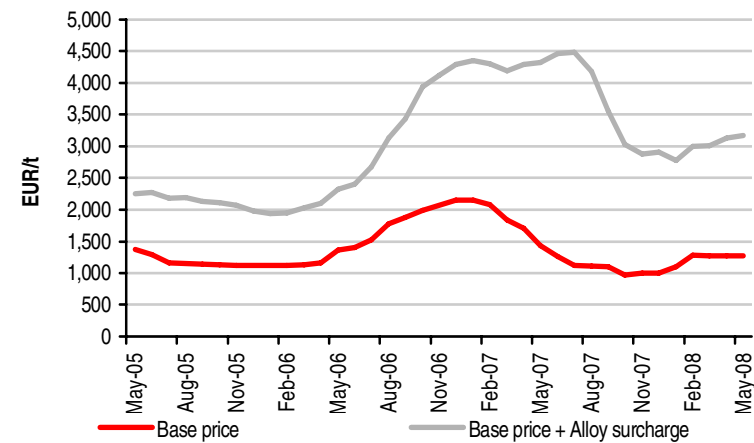
Source: Thomson Financial Datastream, CRU, HSBC

Stainless steel prices (cold-rolled stainless steel sheet grade 3042MM)



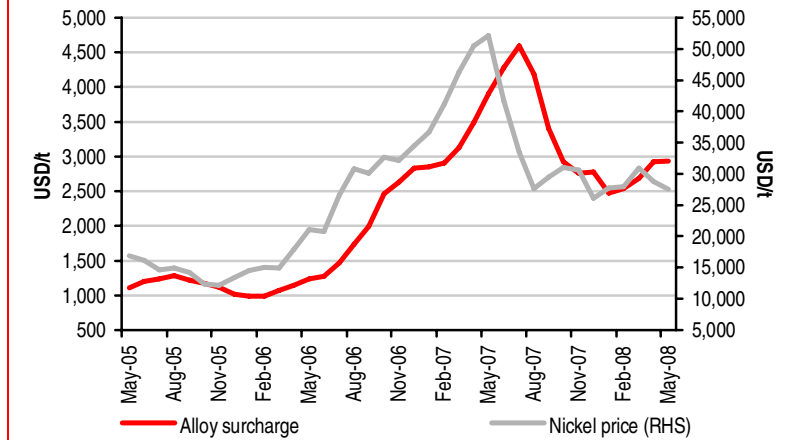
Source: CRU, HSBC

European stainless steel prices



Source: Thomson Financial Datastream, HSBC

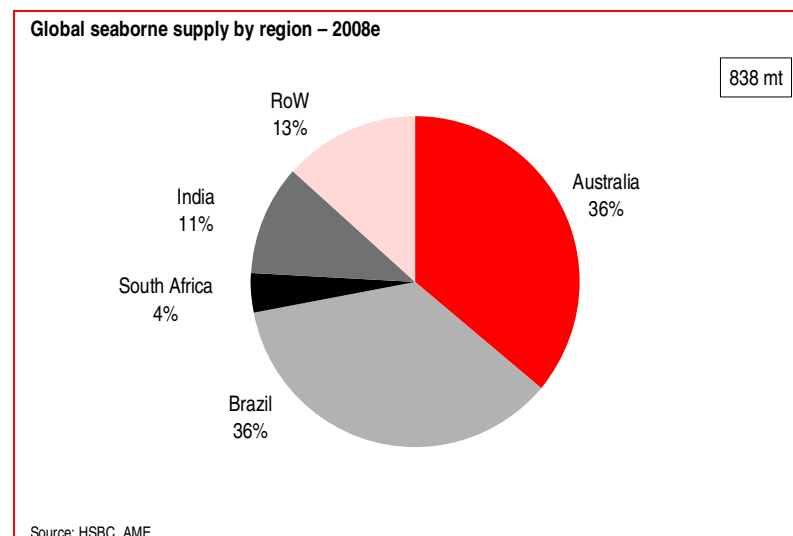
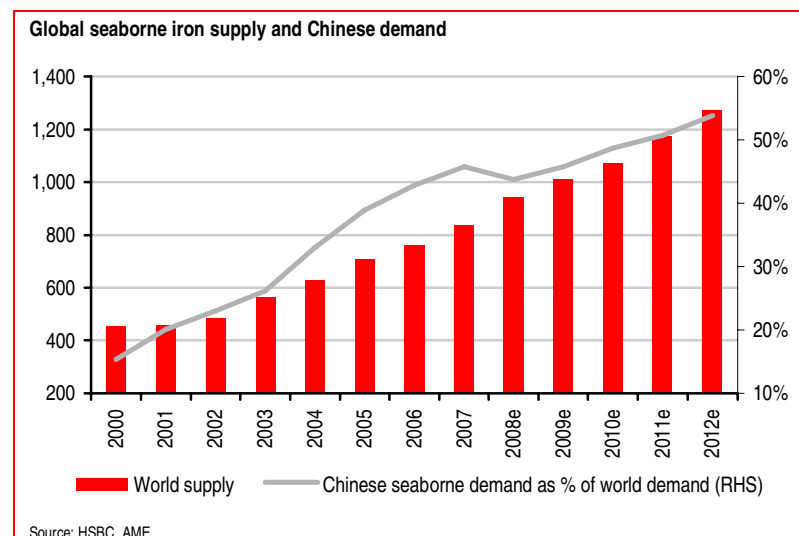
Stainless steel alloy surcharge versus nickel price



Source: Thomson Financial Datastream, HSBC

Bulk commodities

Iron ore seaborne demand and supply



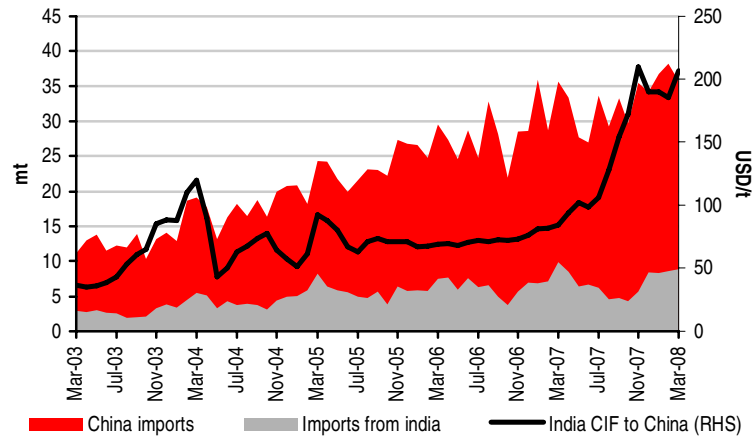
Global seaborne supply and demand by region

	2000	Y-o-y	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y	2007	Y-o-y
China	70	27%	92	32%	112	21%	148	33%	208	40%	275	32%	326	18%	384	18%
World ex China	385	8%	367	-5%	372	1%	418	12%	421	1%	433	3%	470	8%	490	4%
World Demand	455	11%	460	1%	484	5%	566	17%	629	11%	708	13%	796	12%	873	10%
Australia	161.0	15%	170.0	6%	175.0	3%	201.3	15%	223.7	11%	250.0	12%	276.7	11%	303.1	10%
Brazil	160.1	14%	155.7	-3%	170.0	9%	192.0	13%	215.4	12%	238.0	10%	260.3	9%	299.7	15%
South Africa	21.5	1%	24.0	12%	24.5	2%	27.3	12%	28.5	4%	28.8	1%	30.3	5%	32.1	6%
India	34.9	12%	34.9	0%	35.0	0%	56.1	60%	75.6	35%	96.1	27%	86.3	-10%	90.2	5%
RoW	78	0%	75	-3%	79	6%	89	13%	86	-4%	96	11%	108	13%	113	5%
World supply	455	11%	460	1%	484	5%	566	17%	629	11%	708	13%	762	7%	838	10%

Source: HSBC, AME

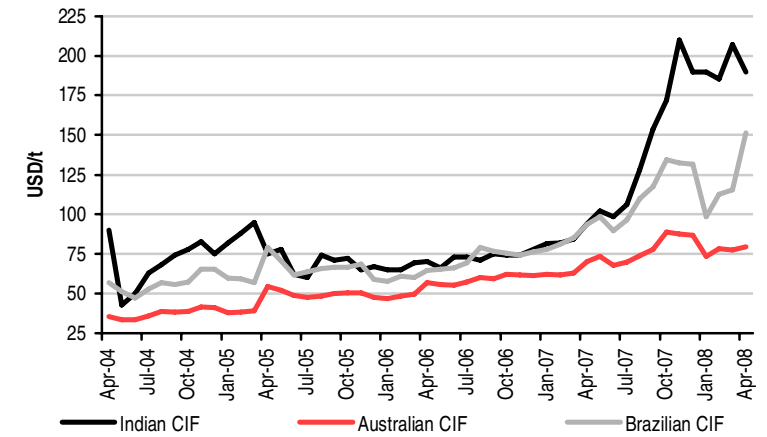
Chinese imports and iron ore prices

China iron ore imports and India spot price for iron ore



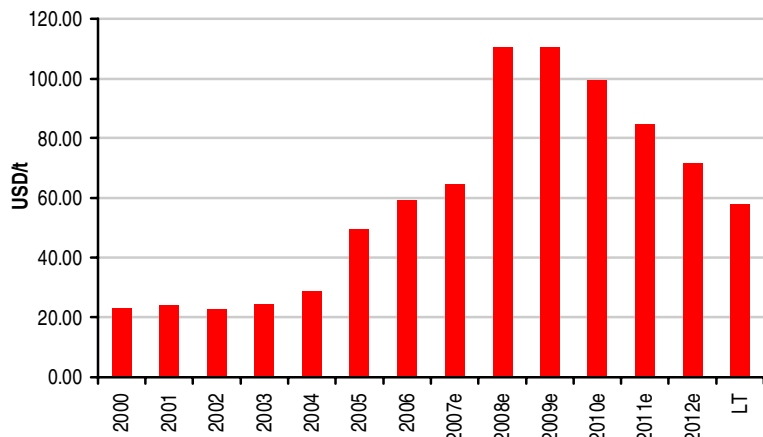
Source: Bloomberg, CRU, HSBC

India, Australia and Brazil for landed ore in china



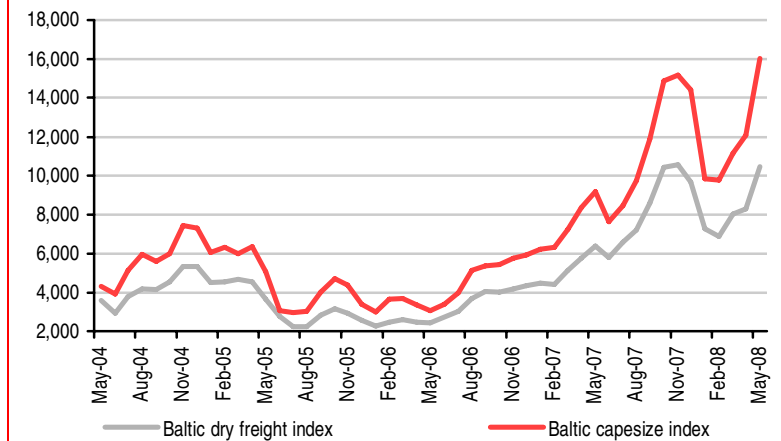
Source: CRU, HSBC

Lump iron ore prices



Source: HSBC

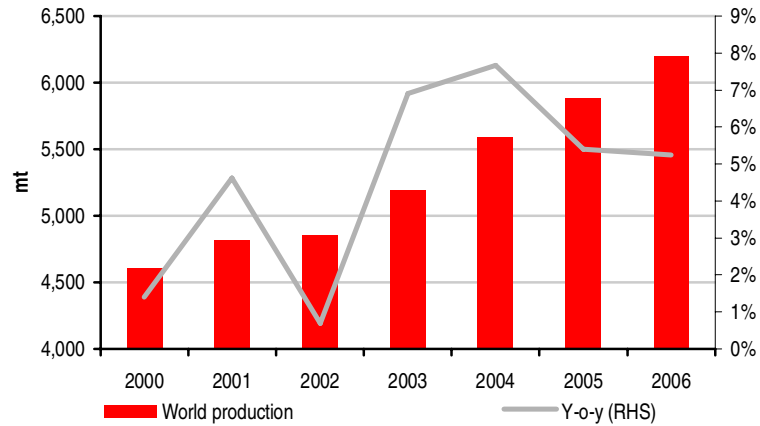
Baltic freight indices



Source: Thomson Financial Datastream, HSBC

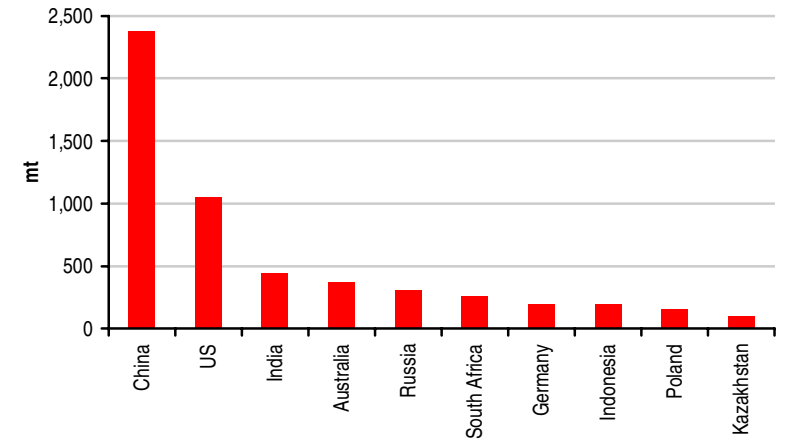
World coal production and trade

World coal production*



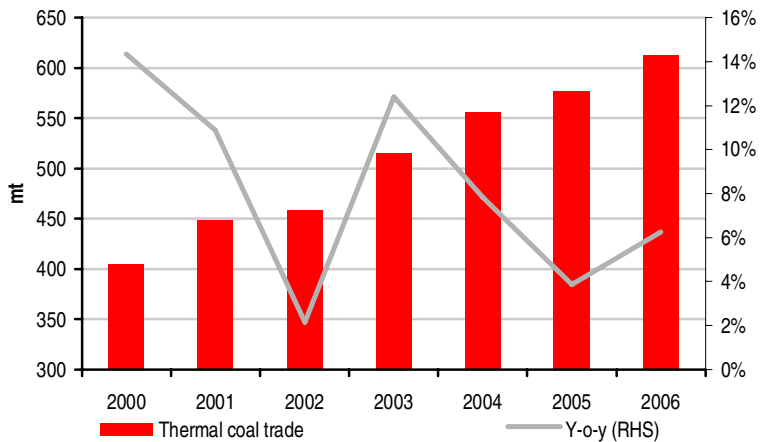
Note: * = commercial solid fuels only, ie bituminous coal, anthracite, lignite and brown (sub-bituminous) coal
Source: BP, HSBC

Top 10 coal producers – 2006



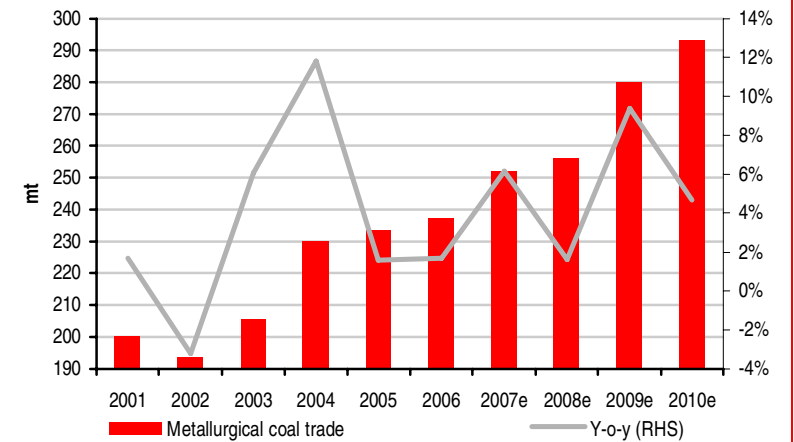
Note: * = commercial solid fuels only, ie bituminous coal, anthracite, lignite and brown (sub-bituminous) coal
Source: BP, HSBC

International trade in thermal coal



Source: AME, HSBC

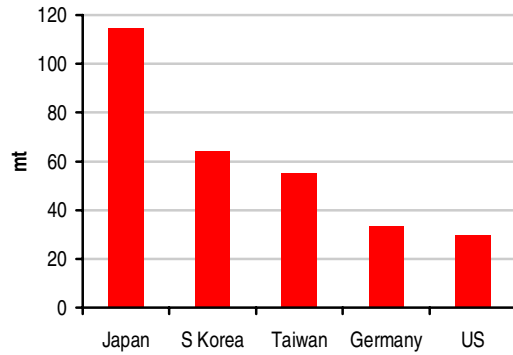
International trade in metallurgical coal



Source: AME, HSBC

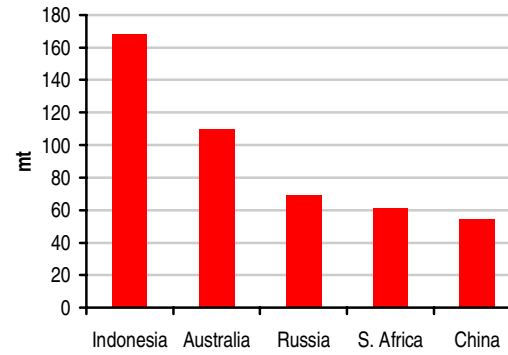
Coal imports, exports and prices

Top five thermal coal importers – 2006



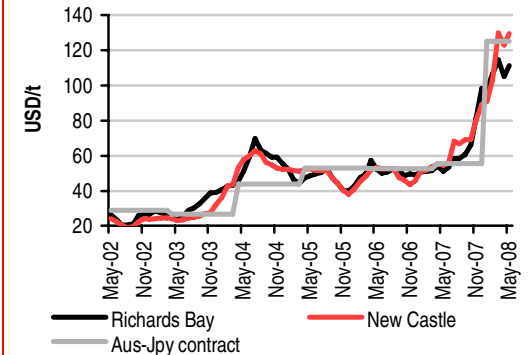
Source: AME, HSBC

Top five thermal coal exporters – 2006



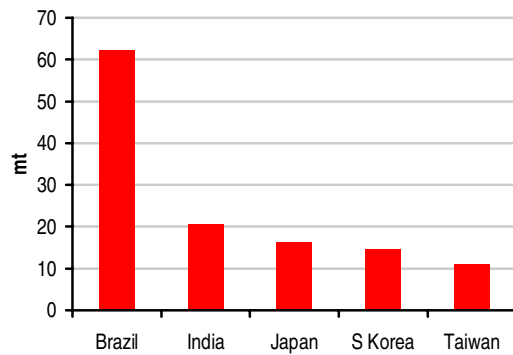
Source: AME, HSBC

Thermal coal spot versus contract prices (fob)



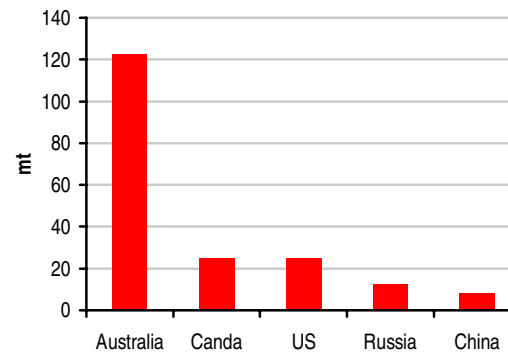
Source: Tex Report, McCloskey, HSBC

Top five metallurgical coal importers – 2006



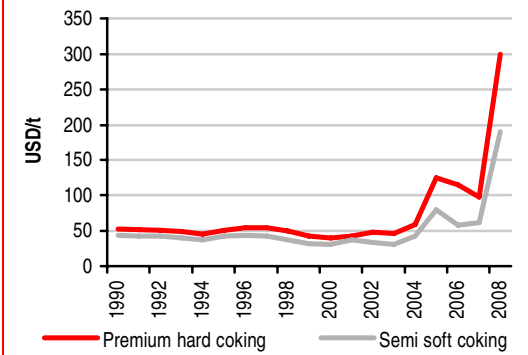
Source: AME, HSBC

Top five metallurgical coal exporters – 2006



Source: AME, HSBC

Australia-Japan contract prices (fob) for metallurgical coal



Source: Tex Report, HSBC

Internationally traded coal supply and demand by region

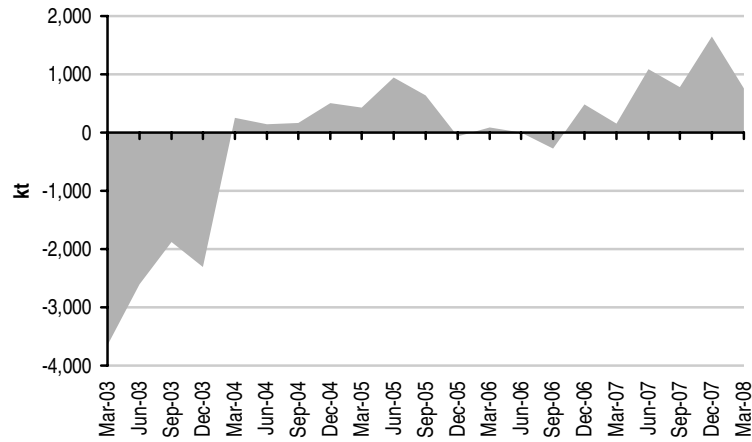
Thermal coal supply and demand

	2000	Y-o-y	2001	Y-o-y	2002	Y-o-y	2003	Y-o-y	2004	Y-o-y	2005	Y-o-y	2006	Y-o-y
Thermal coal demand														
Africa	4	-10%	5	28%	4	-15%	4	5%	4	-2%	5	20%	4	-8%
North America	7	16%	7	-1%	8	8%	7	-9%	7	3%	8	11%	7	-9%
Latin America	15	5%	15	2%	16	1%	15	-1%	17	9%	16	-2%	17	2%
Asia	103	6%	106	3%	105	0%	111	6%	119	7%	119	0%	115	-4%
Europe	69	3%	67	-2%	64	-5%	65	1%	74	14%	75	1%	74	-1%
Met coal demand	197	5%	200	1%	196	-2%	202	3%	221	9%	223	1%	217	-3%
Africa	4	6%	4	3%	4	0%	4	22%	4	-7%	4	2%	5	12%
North America	25	25%	35	36%	32	-8%	43	35%	41	-6%	43	7%	49	12%
Latin America	6	-6%	5	-19%	4	-17%	4	-8%	6	75%	6	-8%	6	-5%
Asia	212	11%	234	11%	251	7%	274	9%	308	13%	328	7%	350	7%
Europe	158	19%	172	8%	168	-2%	190	13%	196	3%	195	-1%	204	4%
Oceania	0	0%	0	100%	0	-50%	0	0%	0	0%	0	0%	0	0%
Thermal coal demand	405	14%	449	11%	459	2%	515	12%	556	8%	577	4%	613	6%
Africa	7	-3%	8	15%	8	-9%	9	13%	8	-5%	9	11%	9	1%
North America	33	23%	42	28%	40	-5%	50	27%	48	-5%	51	7%	56	9%
Latin America	21	1%	20	-4%	19	-3%	19	-3%	23	22%	22	-4%	22	0%
Asia	314	9%	340	8%	356	5%	385	8%	427	11%	448	5%	465	4%
Europe	227	14%	239	5%	232	-3%	255	10%	270	6%	270	0%	278	3%
Oceania	0	0%	0	100%	0	-50%	0	0%	0	0%	0	0%	0	0%
Total coal demand	602	11%	649	8%	655	1%	718	10%	776	8%	800	3%	830	4%
Africa	4	6%	4	5%	3	-21%	4	16%	4	19%	3	-40%	2	-15%
North America	58	0%	50	-14%	43	-15%	44	3%	48	10%	52	8%	50	-5%
Latin America	3	6%	4	18%	4	5%	4	-12%	5	25%	4	-11%	5	13%
Asia	14	12%	17	25%	20	19%	17	-14%	19	8%	16	-15%	15	-3%
Europe	16	-8%	17	6%	20	17%	20	0%	26	30%	22	-19%	20	-7%
Oceania	102	9%	108	6%	106	-2%	114	7%	119	4%	127	7%	125	-2%
Met coal supply	197	5%	200	1%	196	-2%	202	3%	221	9%	223	1%	217	-3%
Africa	67	6%	66	-1%	67	1%	67	-1%	64	-5%	73	14%	61	-16%
North America	27	-5%	24	-13%	18	-22%	20	9%	21	4%	21	-2%	19	-5%
Latin America	38	15%	41	8%	40	-3%	50	24%	56	14%	59	5%	59	0%
Asia	138	33%	177	28%	172	-3%	204	19%	220	8%	230	4%	275	20%
Europe	48	3%	52	8%	61	17%	70	15%	86	23%	85	-1%	88	3%
Oceania	86	9%	88	2%	100	14%	104	5%	108	4%	109	1%	110	1%
Thermal coal supply	405	14%	449	11%	459	2%	515	12%	555	8%	577	4%	613	6%
Africa	71	6%	70	0%	70	0%	70	0%	68	-4%	75	11%	63	-16%
North America	86	-1%	74	-14%	61	-17%	64	5%	69	8%	73	5%	69	-5%
Latin America	41	14%	45	9%	44	-2%	53	21%	61	14%	63	4%	64	1%
Asia	152	31%	194	28%	192	-1%	222	15%	239	8%	246	3%	291	18%
Europe	65	0%	70	7%	81	17%	90	11%	112	24%	107	-5%	108	1%
Oceania	188	9%	196	4%	206	5%	218	6%	227	4%	236	4%	235	-1%
Total coal supply	602	11%	649	8%	655	1%	718	10%	776	8%	800	3%	830	4%

Source: AME, HSBC

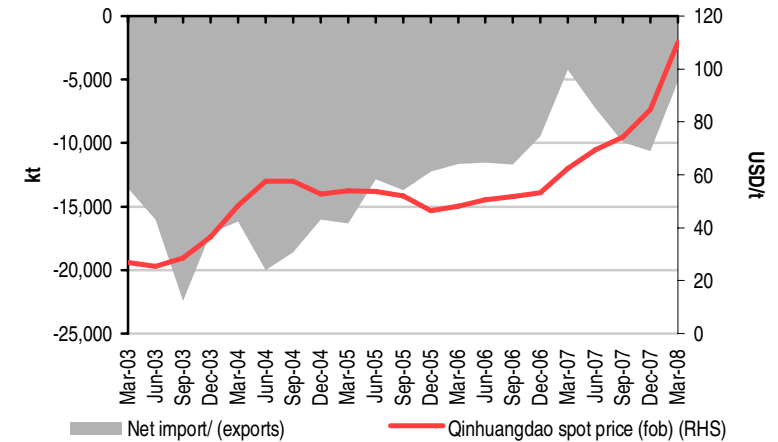
China summary

China net import/ (export) of thermal coal



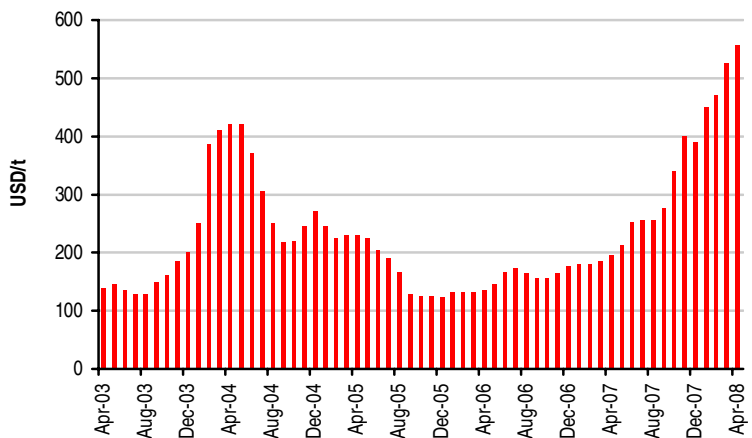
Source: China Coal Research, HSBC

China net import/ (export) of metallurgical coal



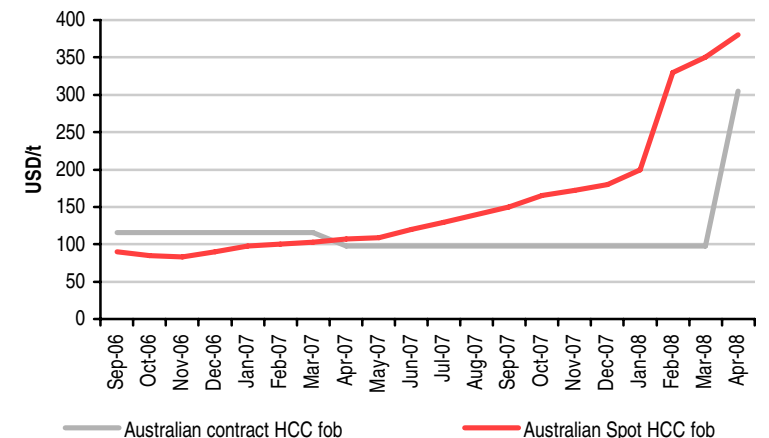
Source: China Coal Research, HSBC

Chinese coke (12.5% ash) export prices (fob)



Source: CRU, HSBC

Chinese hard coking coal spot vs contract prices, fob Australia

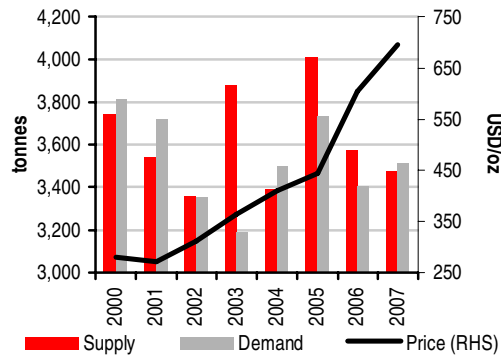


Source: CRU, HSBC

Gold

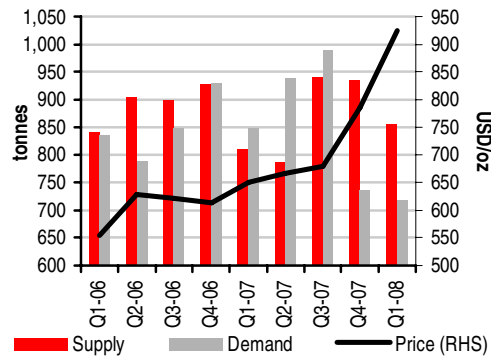
Gold demand and supply

World gold demand and supply – annual



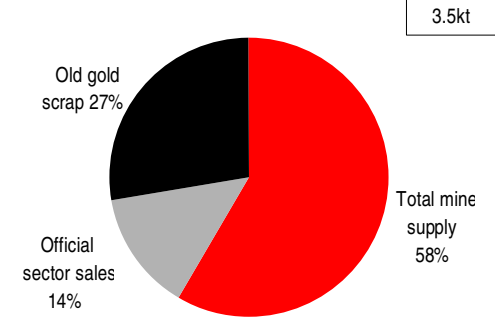
Source: World Gold Council, Virtual Metals, HSBC

World gold demand and supply – quarterly



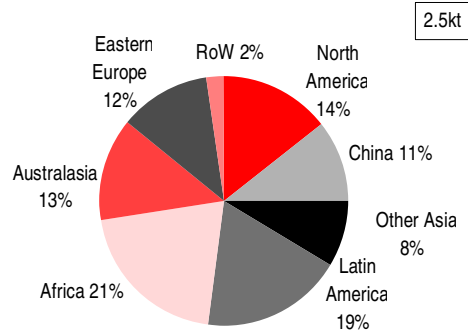
Source: World Gold Council, Virtual Metals, HSBC

World gold supply by various sources – 2007



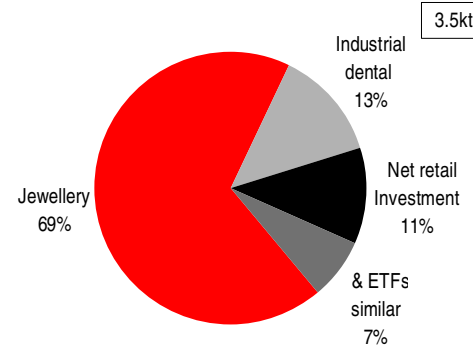
Source: World Gold Council, Virtual Metals, HSBC

Gold mine supply (excluding hedge impact) by region 2007



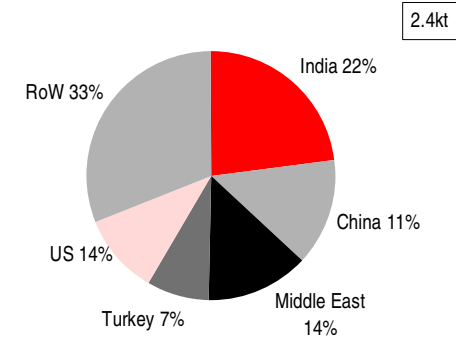
Source: World Gold Council, Virtual Metals, HSBC

Gold demand by source – 2007



Source: World Gold Council, Virtual Metals, HSBC

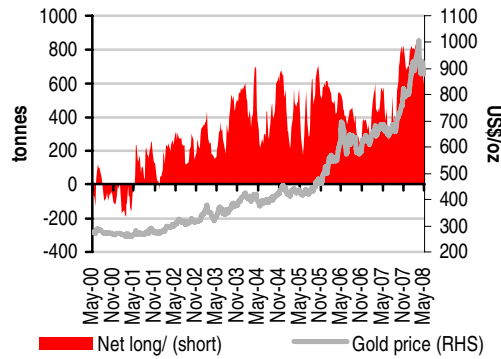
Jewellery consumption demand by region – 2007



Source: World Gold Council, Virtual Metals, HSBC

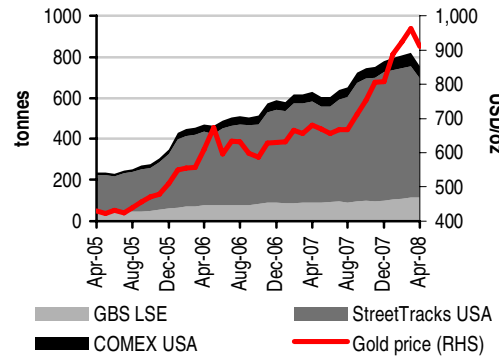
Gold prices and indicators

Comex gold net speculative position



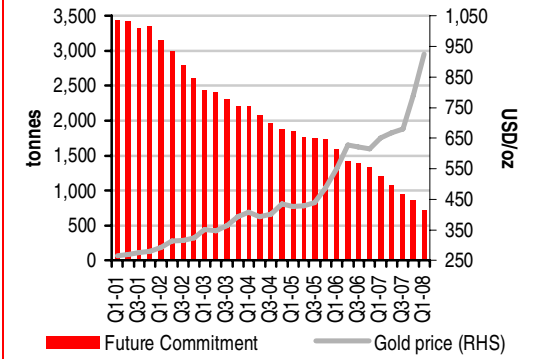
Source: CFTC Commitment of Traders report, HSBC

Gold holding by various exchanges versus price (RHS)



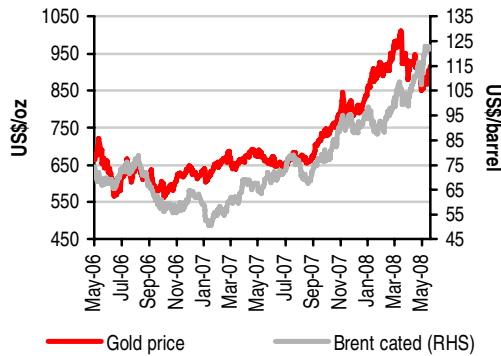
Source: Thomson Financial Datastream, CRU, HSBC

World gold hedge book versus gold price (RHS)



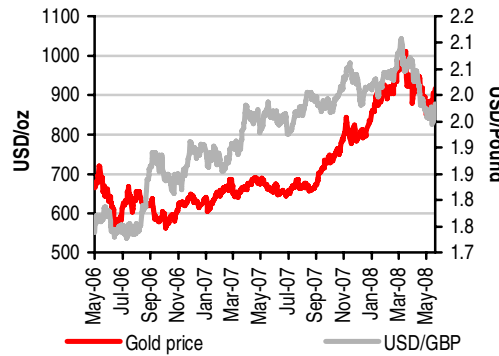
Source: World Gold Council, Virtual Metals, HSBC

Gold and Brent price relationship



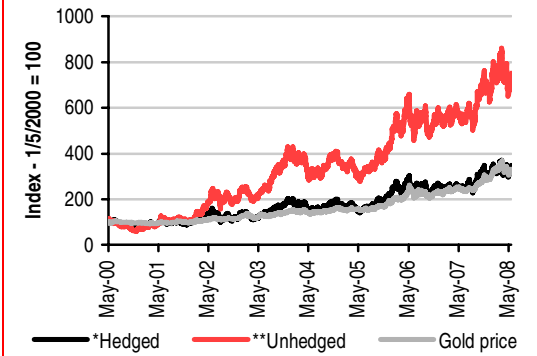
Source: Thomson Financial Datastream, HSBC

Gold and USD exchange rate relationship



Source: Thomson Financial Datastream, HSBC

Gold and equities price performance

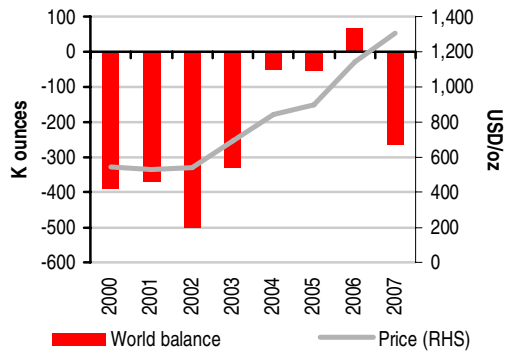


Note: * = Philadelphia SE Gold/ Silver index; ** = AMX Gold Bug index
 Source: Thomson Financial Datastream, HSBC

PGMs

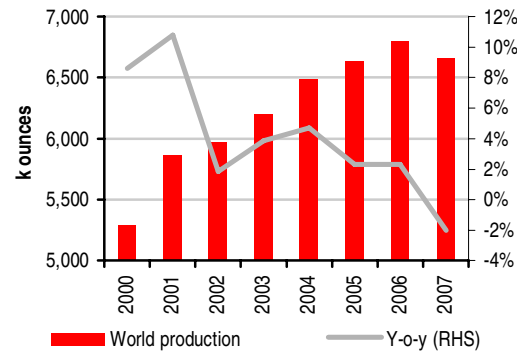
Platinum balance, production and consumption

World platinum balance



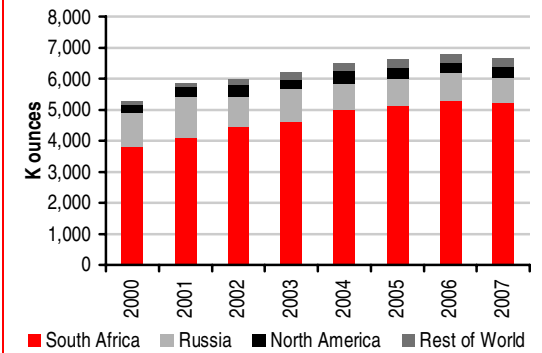
Source: Johnson Matthey, HSBC

World platinum production



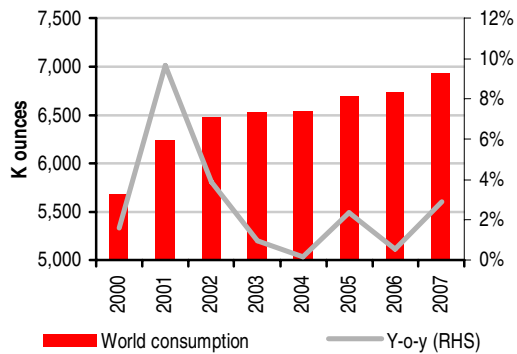
Source: Johnson Matthey, HSBC

World platinum production by region



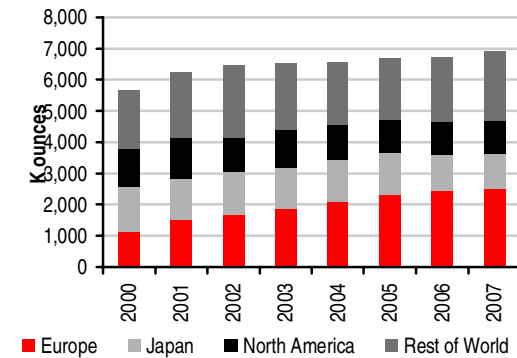
Source: Johnson Matthey, HSBC

World platinum consumption



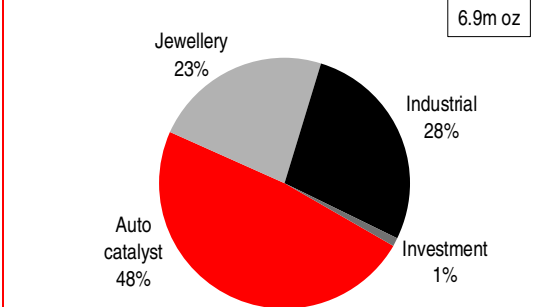
Source: Johnson Matthey, HSBC

World platinum consumption by region



Source: Johnson Matthey, HSBC

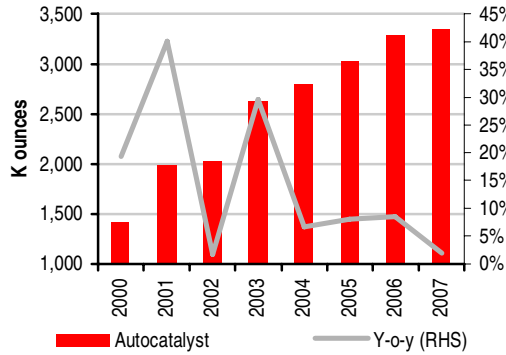
World platinum consumption by end-use – 2007



Source: Johnson Matthey, HSBC

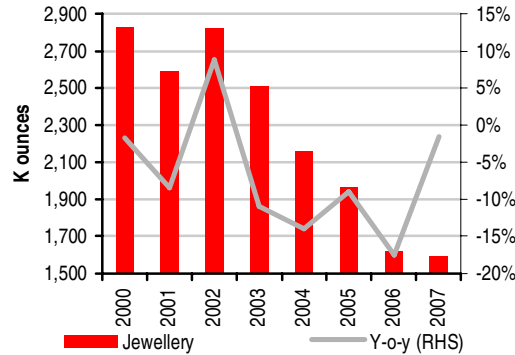
Platinum consumption trends by end-use and price

Platinum consumption in auto catalysts



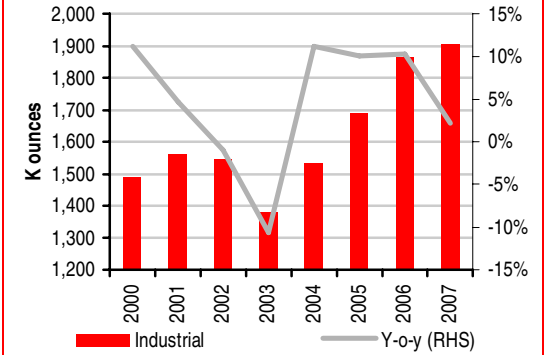
Source: Johnson Matthey, HSBC

Platinum consumption in jewellery



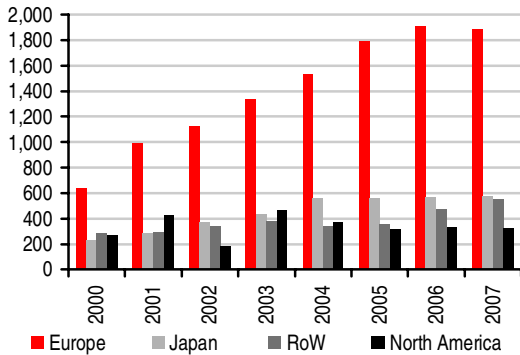
Source: Johnson Matthey, HSBC

Platinum consumption in industrial usage



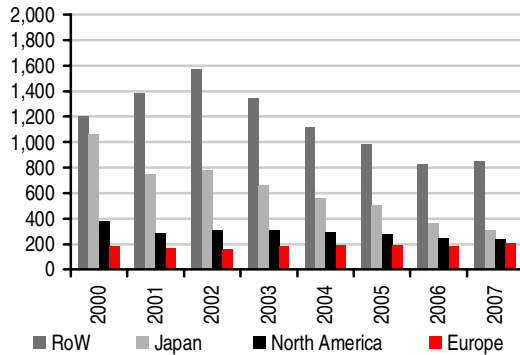
Source: Johnson Matthey, HSBC

Platinum consumption in auto catalysts by region



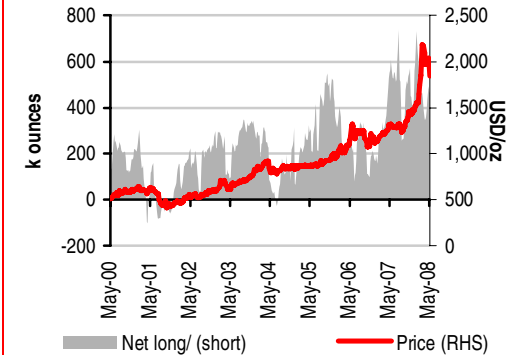
Source: Johnson Matthey, HSBC

Platinum consumption in jewellery by region



Source: Johnson Matthey, HSBC

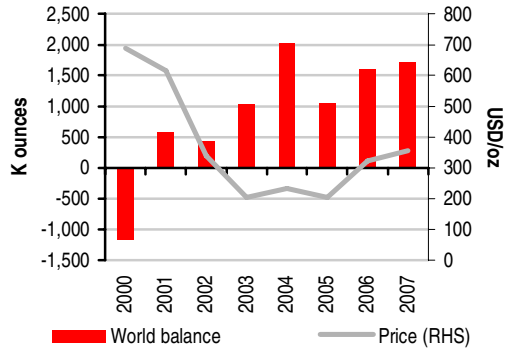
Nymex platinum speculative position



Source: CFTC Commitment of Traders report, Thomson Financial Datastream, HSBC

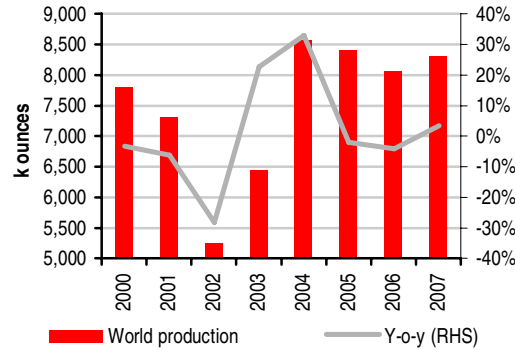
Palladium balance, production and consumption

World palladium balance



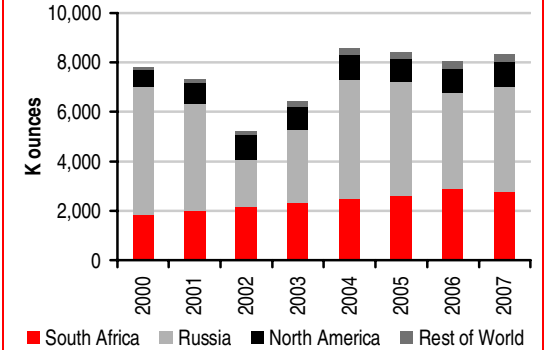
Source: Johnson Matthey, HSBC

World palladium production



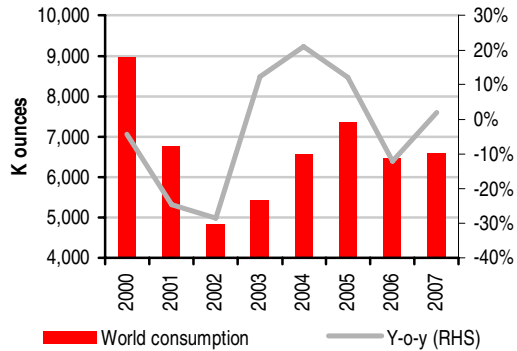
Source: Johnson Matthey, HSBC

World palladium production by region



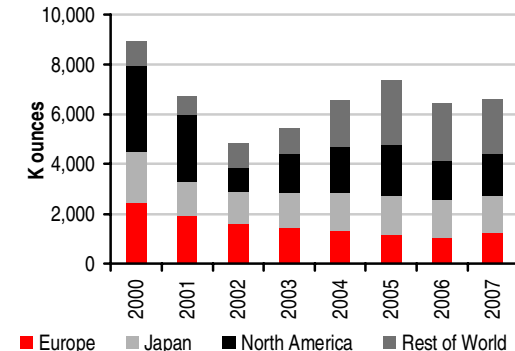
Source: Johnson Matthey, HSBC

World palladium consumption versus growth (RHS)



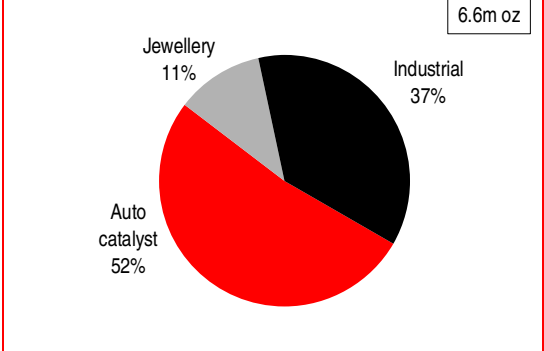
Source: Johnson Matthey, HSBC

World palladium consumption by region



Source: Johnson Matthey, HSBC

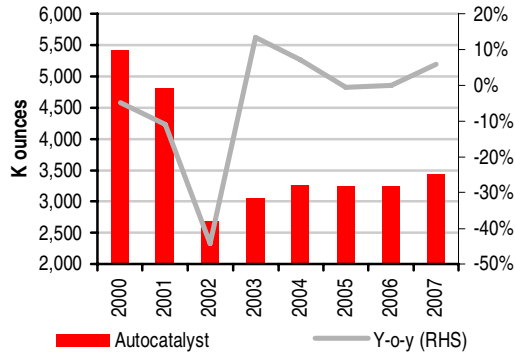
World palladium consumption by end-use – 2007



Source: Johnson Matthey, HSBC

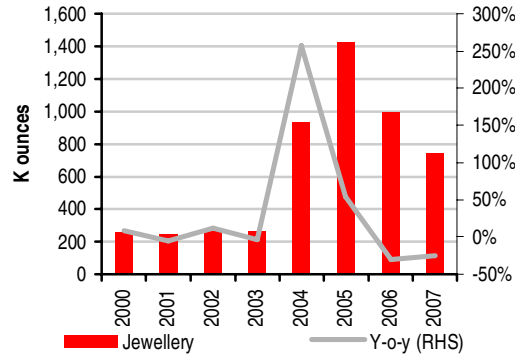
Palladium consumption trends by end-use and price

Palladium consumption in auto catalysts



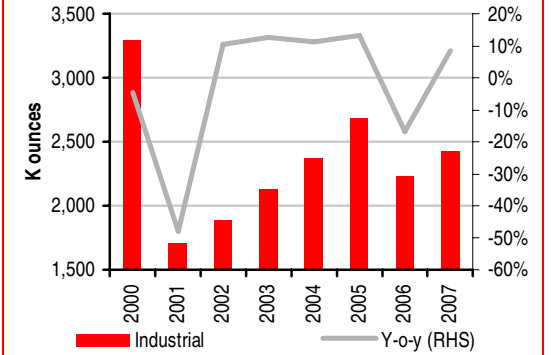
Source: Johnson Matthey, HSBC

Palladium consumption in jewellery



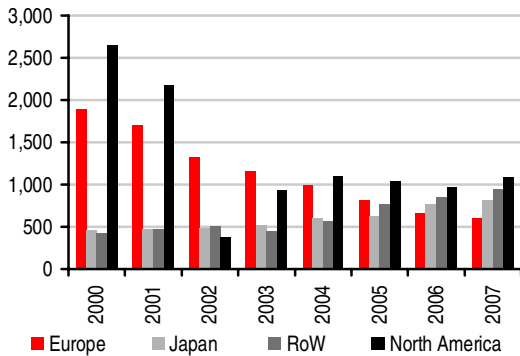
Source: Johnson Matthey, HSBC

Palladium consumption in industry usage



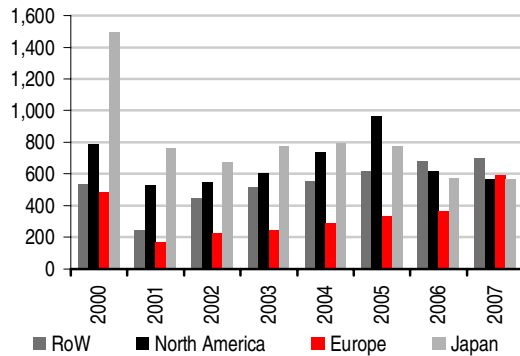
Source: Johnson Matthey, HSBC

Palladium consumption in auto catalysts by region



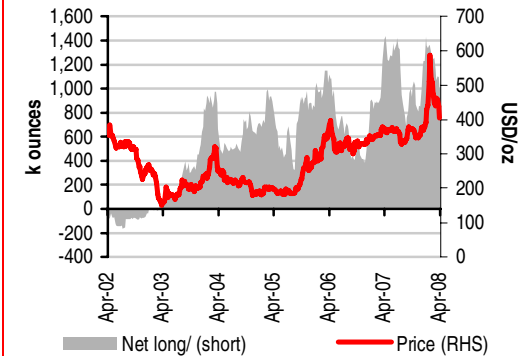
Source: Johnson Matthey, HSBC

Palladium consumption for industrial usage by region



Source: Johnson Matthey, HSBC

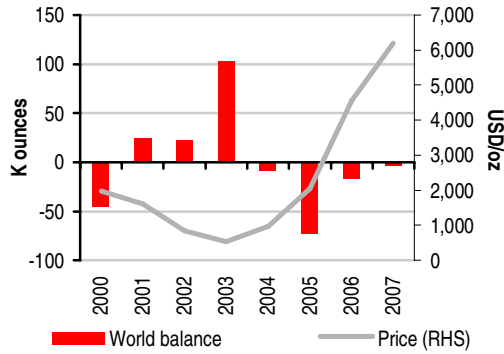
Nymex palladium speculative positions



Source: CFTC Commitment of Traders report, Thomson Financial Datastream, HSBC

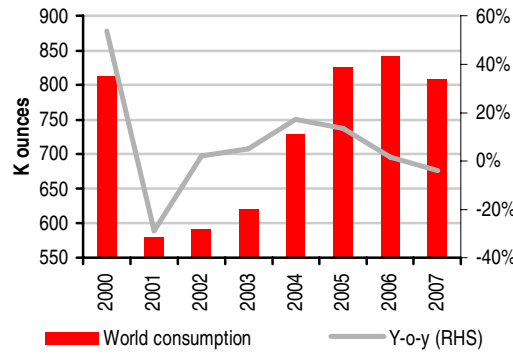
Rhodium balance, production, consumption and price

World annual rhodium balance versus price (RHS)



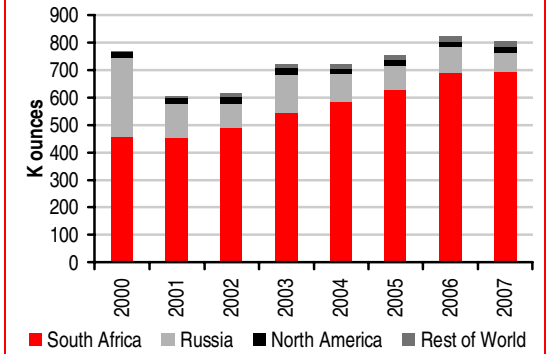
Source: Johnson Matthey, HSBC

World annual rhodium production



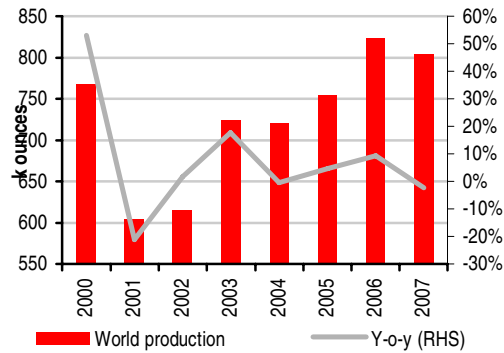
Source: Johnson Matthey, HSBC

World annual rhodium production by region



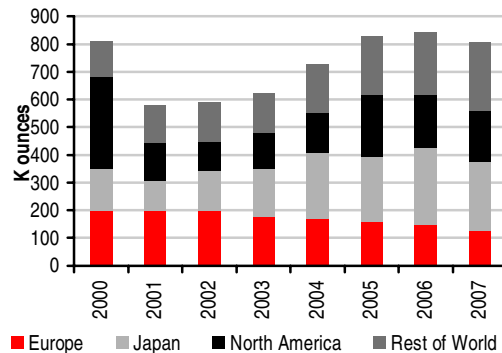
Source: Johnson Matthey, HSBC

World annual rhodium consumption



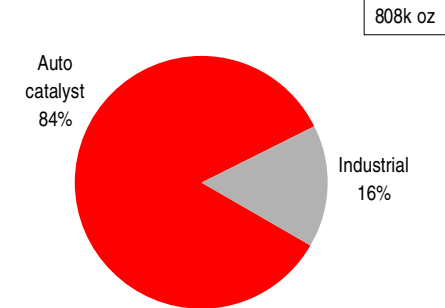
Source: Johnson Matthey, HSBC

World annual rhodium consumption by region



Source: Johnson Matthey, HSBC

World annual rhodium consumption by end-use – 2007



Source: Johnson Matthey, HSBC

Economic forecasts

HSBC economic forecasts

	GDP growth		CPI, average		Current account balance % GDP		_3M interbank rate, average_		FX rate vs USD	
	2007	2008e	2007	2008e	2007	2008e	2007	2008e	2007	2008e
World	3.5	2.6	2.8	3.6	na	na	na	na	na	na
North America	2.2	1.5	2.8	3.3	-4.9	-5.0	na	na	na	na
Canada	2.7	1.3	2.1	1.3	0.9	0.3	4.6	3.0	0.99	1.05
US	2.2	1.5	2.9	3.5	-5.4	-5.4	5.1	2.1	1.00	1.00
Latin America	5.3	4.6	5.1	5.3	0.5	-0.4	na	na	na	na
Argentina	8.6	7.3	9.2	9.1	2.5	1.7	6.2	na	3.15	3.25
Mexico	3.3	2.2	4.0	4.5	-0.8	-1.6	8.3	na	10.92	11.10
Brazil	5.4	5.2	3.6	5.3	0.3	-1.7	13.8	na	1.78	1.80
Chile	5.1	4.2	4.4	7.3	4.4	1.9	6.1	na	499.00	460.00
Western Europe	2.7	1.5	2.1	2.7	na	na	na	na	na	na
Euro-13	2.6	1.4	2.1	2.7	0.1	0.0	4.4	4.0	1.46	1.35
Germany	2.6	1.4	2.3	2.1	7.6	6.9	4.4	4.0	na	na
France	1.9	1.6	1.6	2.6	-1.3	-1.8	4.4	4.0	na	na
UK	3.0	1.2	2.3	2.4	-4.8	-3.5	5.9	5.0	1.99	1.79
Emerging Europe	6.8	6.0	9.2	10.4	0.4	-1.4	na	na	na	na
Russian Federation	8.1	7.8	9.0	14.6	6.1	4.3	5.8	na	24.55	25.59
Asia / Pacific	5.5	4.5	3.8	5.1	5.4	4.5	na	na	na	na
Japan	2.1	1.2	-0.0	1.0	4.9	4.9	0.8	0.3	111.72	115.00
Australia	3.9	3.6	2.3	3.2	-6.2	-5.9	6.8	7.8	0.88	0.80
Asia Ex-Japan	9.4	7.9	4.7	6.1	6.1	4.9	na	na	na	na
China	11.9	9.7	4.8	6.8	11.3	8.8	2.4	3.5	7.30	6.86
Asia Ex-Japan & China	7.3	6.0	4.6	5.8	2.5	0.7	na	na	na	na
HK SAR	6.3	5.0	2.0	3.9	10.6	9.9	4.3	1.6	7.80	7.80
India	9.0	7.5	6.3	6.2	-1.2	-3.0	9.2	8.5	39.40	42.50
S Africa	4.9	4.6	6.3	6.2	-6.6	-5.1	7.6	na	6.75	7.50
UAE	7.6	8.2	10.0	13.0	15.6	14.5	na	na	3.67	3.67

Note: Data as at 11 June 2008
Source: HSBC

Disclosure appendix

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The following analyst(s), who is(are) primarily responsible for this report, certifies(y) that the opinion(s) on the subject security(ies) or issuer(s) and any other views or forecasts expressed herein accurately reflect their personal view(s) and that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or views contained in this research report: Daniel Kang, Thorsten Zimmermann, Jordi Dominguez, Alan Coats, Sarah Mak and Veronika Lyssogorskaya

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Our ratings are re-calibrated against these bands at the time of any 'material change' (initiation of coverage, change of volatility status or change in price target). Notwithstanding this, and although ratings are subject to ongoing management review, expected returns will be permitted to move outside the bands as a result of normal share price fluctuations without necessarily triggering a rating change.

*A stock will be classified as volatile if its historical volatility has exceeded 40%, if the stock has been listed for less than 12 months (unless it is in an industry or sector where volatility is low) or if the analyst expects significant volatility. However, stocks which we do not consider volatile may in fact also behave in such a way. Historical volatility is defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility has to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

Prior to this, from 7 June 2005 HSBC applied a ratings structure which ranked the stocks according to their notional target price vs current market price and then categorised (approximately) the top 40% as Overweight, the next 40% as Neutral and the last 20% as Underweight. The performance horizon is 2 years. The notional target price was defined as the mid-point of the analysts' valuation for a stock.

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