

Commodity Markets: A paradigm shift or a cyclical upturn?

Neil Buxton, January 13, 2005

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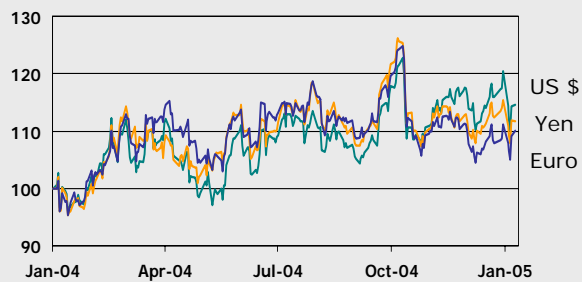


How did we get here?

- Economy – fastest global growth for 30 years
- Base metal demand:
metal intensive growth in Asian economies
cyclical upswing in the US and Japan
- Supply – under-investment leads to structural raw
material shortages
- Inventories – at critical levels
- Investment funds - a one way street so far



Base metals index, Jan '04 – Jan '05



* Index is equally weighted between the six base metals

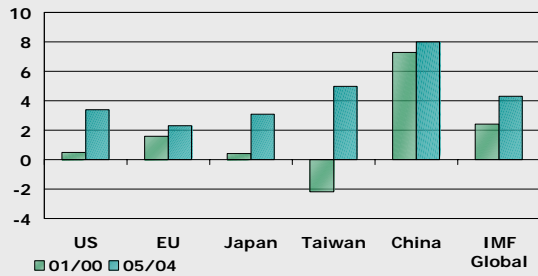


Base Metals – a paradigm shift?

- Economy
- Base metal demand
- Supply
- Inventories
- Investment funds
- Prices



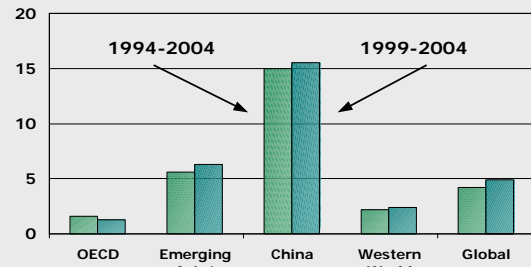
Economics - not from boom to bust this time, % changes in GDP growth, 2001 vs 2005



Source: OECD, IMF



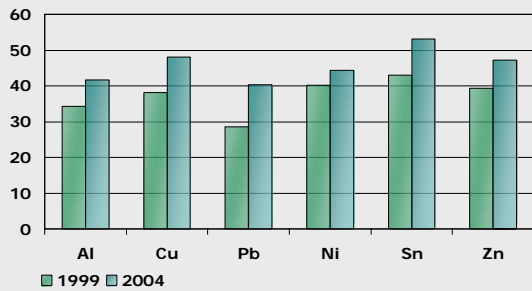
Global aluminium consumption trends, average annual growth rates



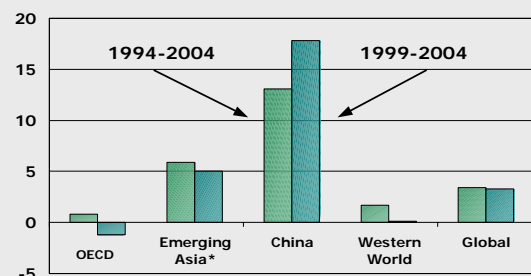
* Excluding China & Japan



Asia's growing share of base metals consumption 1999 vs 2004



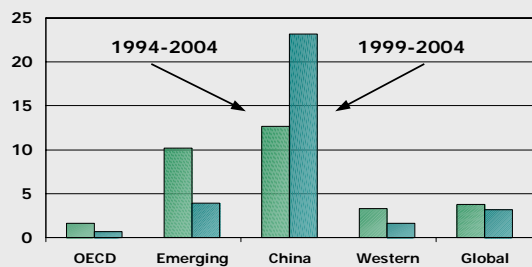
Global copper consumption trends, average annual growth rates



* Excluding China & Japan



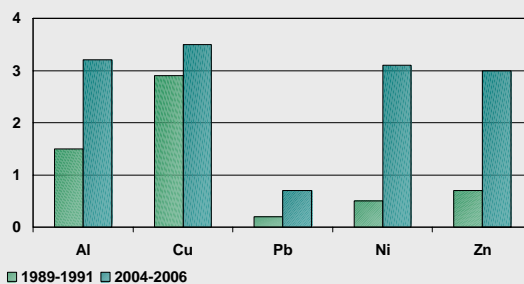
Global nickel consumption trends, average annual growth rates



* Excluding China & Japan



Western World base metal demand, average growth rates, 1989-1991 vs 2004-2006



Legend: 1989-1991 (light blue), 2004-2006 (dark blue)



Western World base metal demand, 1989-1991, 2004-2006

	Al	Cu	Pb	Ni	Zn
1989	+2.1	+5.1	+3.0	0.0	-1.6
1990	+2.2	+1.6	-1.8	+1.6	+0.5
1991	+0.1	+2.1	-0.5	0.0	+3.3
Av	+1.5	+2.9	+0.2	+0.5	+0.7
2004	+4.4	+5.2	+0.1	+2.5	+4.3
2005	+3.1	+3.1	+0.8	+3.7	+2.8
2006	+2.0	+2.2	+1.2	+3.1	+2.0
Av	+3.2	+3.5	+0.7	+3.1	+3.0

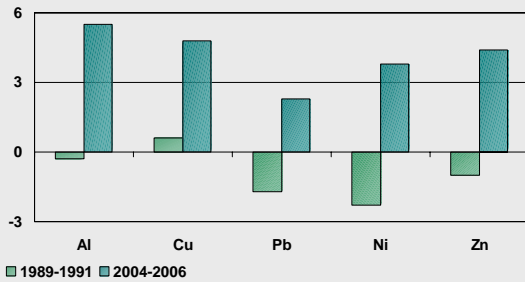


Global base metal demand, 1989-1991, 2004-2006

	Al	Cu	Pb	Ni	Zn
1989	+2.0	+4.2	+0.6	-1.1	-1.9
1990	-0.5	-1.7	-2.9	-0.6	-1.4
1991	-2.5	-0.8	-2.7	-5.2	+0.3
Av	-0.3	+0.6	-1.7	-2.3	-1.0
2004	+7.1	+6.7	+2.3	+2.7	+5.4
2005	+5.4	+4.2	+2.2	+4.7	+4.3
2006	+4.1	+3.5	+2.4	+4.0	+3.5
Av	+5.5	+4.8	+2.3	+3.8	+4.4



Global base metal demand, average growth rates, 1989-1991 vs 2004-2006

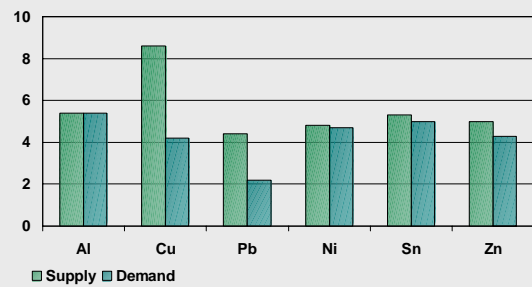


Inventories and prices

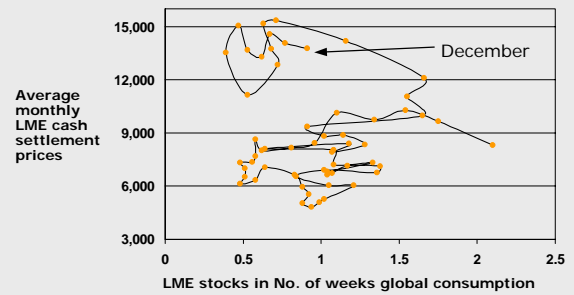
- Inverse relationship doesn't always hold up
- 2005 conundrum, lower inventories and lower prices
- Supply – under-investment leads to structural raw material shortages
- Investment funds a zero sum game
- 2005 – when will prices turn



Supply is catching up – slowly % change to global supply vs global demand 2005



Relationship between nickel stocks and prices, January 2000 – December 2004



Investment funds – for every action there is a reaction

- already seen example of bearish impact
- risk reward premium less attractive
- trend following funds don't care about the direction
- on balance funds to be a bearish influence in 2005?



Winners and losers

Aluminium

- tight alumina supply
- continued inventory draw down
- fund interest given 2004 underperformance

Tin

- strong demand growth from IT and electronics sectors
- substitution pressures not a huge factor
- structural supply shortage yet to be overcome (outside of China)
- prices remaining close to 2004 levels

Zinc

- low spot TCs highlight continued tightness at the concentrate stage
- china's move from large net exporter to an importer is the most important market dynamic
- fund interest given 2004 underperformance



Winners – average prices higher in 2005 than in 2004

- Aluminium
- Tin
- Zinc

Losers – average price lower in 2005 than in 2004

- Copper
- Lead
- Nickel



Losers (a relative term)

Copper

- spot TC/RCS point to higher production
- robust US and Japanese growth to ease in 2005
- fund influence to turn bearish

Lead

- the first rise in Western World mine production for four years in 2005
- Chinese mine production growing sharply
- demand growth to remain lacklustre

Nickel

- substitution pressure is having a serious impact on demand
- scrap supply confounds expectations and continues to increase
- supply is increasing despite "capacity" constraints



Price Outlook, 2004-2006

	AL	Cu	Pb	Ni	Sn	Zn
2004	1717	2868	888	13850	8513	1048
y-o-y % Ch.	19.9	61.1	72.3	43.7	73.9	26.5
2005	1875	2550	860	12000	9000	1250
y-o-y % Ch.	9.2	-11.1	-3.2	-13.4	5.7	19.3
2006	1850	2200	725	9000	7500	1175
y-o-y % Ch.	-1.3	-13.7	-15.7	-25.0	-16.7	-6.0