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Hymns for the non-believer

A sceptics view of the commodity boom

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I can recommend the Kisschasy album, and the title serves as a more than apt summary of my views on the current commodities boom, however, the single "Opinions won't keep you warm at night" is a salutary reminder that the daily moves in the stockmarket are hardly reinforcing the case for the sceptics at present.

The case for the resource believers is reinforced constantly, as the chorus of bullish sentiment from the media, stockbrokers and resource company executives provides more than enough material for writing the tracklist of "Hymns for the Believer". Competition for superlatives remains intense as "stronger for longer" is superceded by South Australian Premier, Mike Rann's "100 year boom" and Oxiana chief executive Owen Hegarty's, "stronger forever". However, bowing to popular choices, the opening tracks would undoubtedly include:

1. Stronger for Longer, and
2. It's Different this Time

The gist of the "believers" arguments is similar, but the central tenet is a demand led argument. Confidence in this demand argument stems from a number of re-inforcing factors:

- Chinese Economic Growth. After an extended period of extremely strong GDP growth (having not fallen below 7% since 1991), growth momentum has increased the confidence amongst most of the financial community and the general public, that growth will continue unabated. The primary reason for expecting continued growth appears to be extrapolation, however, the scale of ongoing capital investment and the expectation that the current era is the "once in a lifetime" industrialisation of the world's largest population base are associated explanations.
- Decoupling. As the slowdown in western economies, particularly the United States, has challenged the traditional commodity price response (i.e. declines), the term "decoupling" has been coined. Met with rapid acceptance, this assumption centres around emerging market growth (particularly Chinese), being no longer dependent on developed market demand.
- India. With the large population base of China being a major driver behind the story, the potential for India's similarly large population to act as further stimulus for the demand story is logical.

On the supply side, similarly emotive arguments add further fuel for the Believers:

- Inability to secure new supply. Whilst arguments on "peak oil" have been around for decades (and yet to be realised), the inability to add supply quickly in many commodities due to infrastructure and labour supply bottlenecks has fuelled concerns over the ability to add supply in the longer term.

The ability for these arguments to elicit an enthusiastic reaction amongst a large number of investors is obvious. Like all "booms" and potential "bubbles", the arguments are easily understood and embraced. The opposing case for sceptics is perhaps more complex.

The case for the sceptics

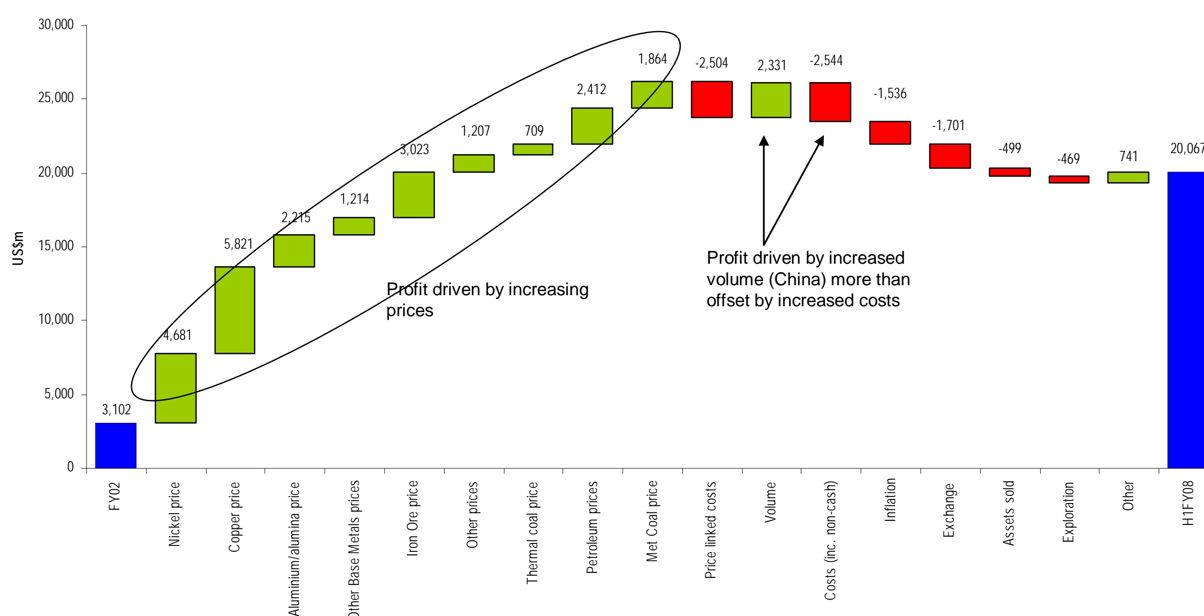
Calling into question the structural elements of the commodities boom may be somewhat heretical at present. However, with the confidence that "burning at the stake" has been abandoned as punishment (or at least substituted by "virtual" burning), I'll try and make the case for why I believe the boom to be cyclical rather than structural, and prices of resource stocks, in most cases, to be unsustainably high.

Separating the impact of price and volume

The lack of investment in mining and associated infrastructure over an extended period has been a critical factor in laying the foundations for the current supply demand imbalance in many commodities. The process of exploration, resource delineation, mine and associated infrastructure development through actual production, can be an extended one, and in combination with even marginally greater than expected growth in demand, can deliver that most desirable of outcomes (from a producer's perspective), a supply/demand imbalance. Whilst not wanting to delve into the basics of supply and demand, I refer to Adam Smith's "Wealth of Nations" in which he describes the process as "When the quantity of any commodity which is brought to market falls short of the effectual demand, all those who are willing to pay... cannot be supplied with the quantity which they want... Some of them will be willing to give more. A competition will begin among them, and the market price will rise".

The important factor in relation to the above imbalance relates to the 'price' element. Why? Exceptional growth in profit, cashflow and return on capital, are almost always driven by price, as this requires no further investment. This phase occurs when demand begins to exceed supply, and will continue for as long as the imbalance occurs. The complication in forecasting relates to the ability to determine the price at which additional supply will be encouraged, the price at which demand will be destroyed, and how long prices will take to return to equilibrium. What is beyond doubt, is the fact that commodity producers have been enjoying that most gratifying phase of profitability, in which supply has been increasingly squeezed in a broad range of commodities. Chart 1 below shows a breakdown of the influences on the profit of BHP Billiton in recent years makes the case starkly.

Chart 1
BHP Billiton – Drivers of EBIT change: FY02- FY07 (actual)



This is illustrative only and does not represent Schroders' recommendation of this stock
Source: Merrill Lynch 31 December 2007

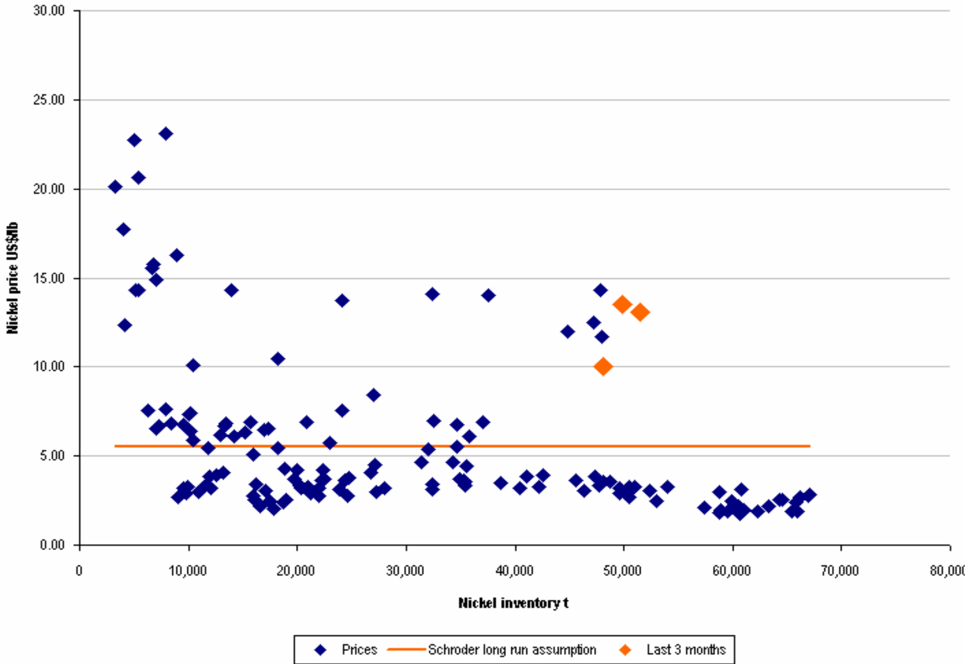
Colleagues have often accused me of curmudgeonly tendencies, to which I will plead guilty. However, I am adamant that it is commonsense, rather than an unnatural tendency to stubbornness, which drives my belief that the current supply demand equation is almost certainly not an equilibrium point. Charts 2, 3, 4 and 5 below are intended to support the case that current pricing is unsustainable. However, it is the examples of commodities such as zinc and

nickel (where supply has met demand, and price has fallen significantly), that offer perhaps the most persuasive evidence. Whilst even these prices remain somewhat elevated by historic standards, they are evidence that the laws of supply and demand have not been re-written.

Perversely, it is the belief in demand and price persistence which will ensure the continuation of traditional supply and demand cycles and the eventual return to equilibrium, albeit likely to involve significant amplitude around this point in both directions!

Chart 2

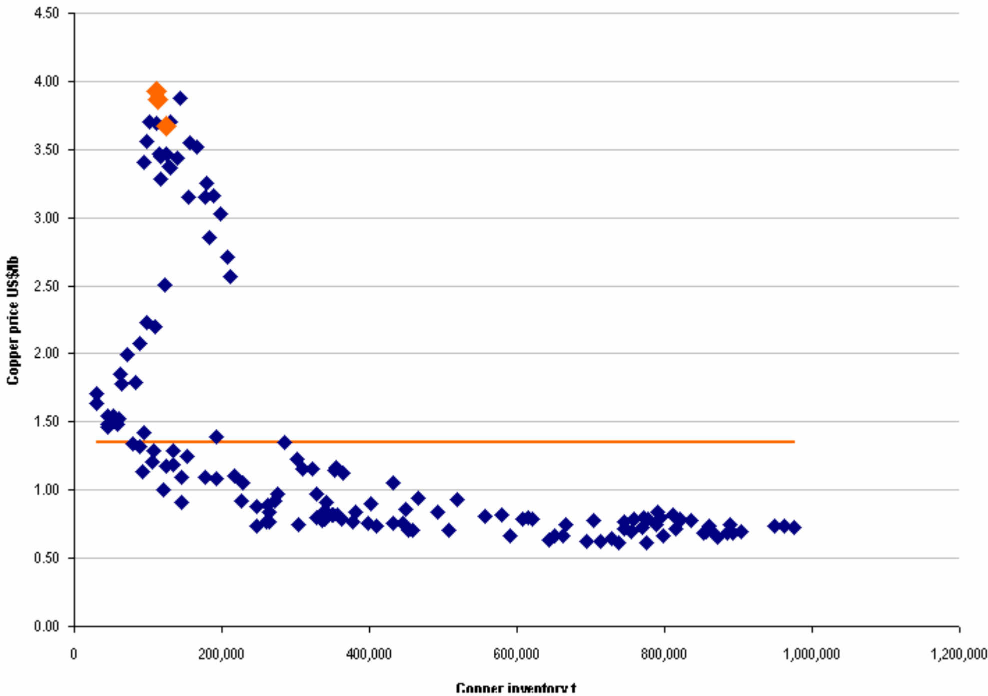
Nickel prices: Jan 1996- May 2008



Source: Citigroup

Chart 3

Copper prices: Jan 1996- May 2008



Source: Citigroup

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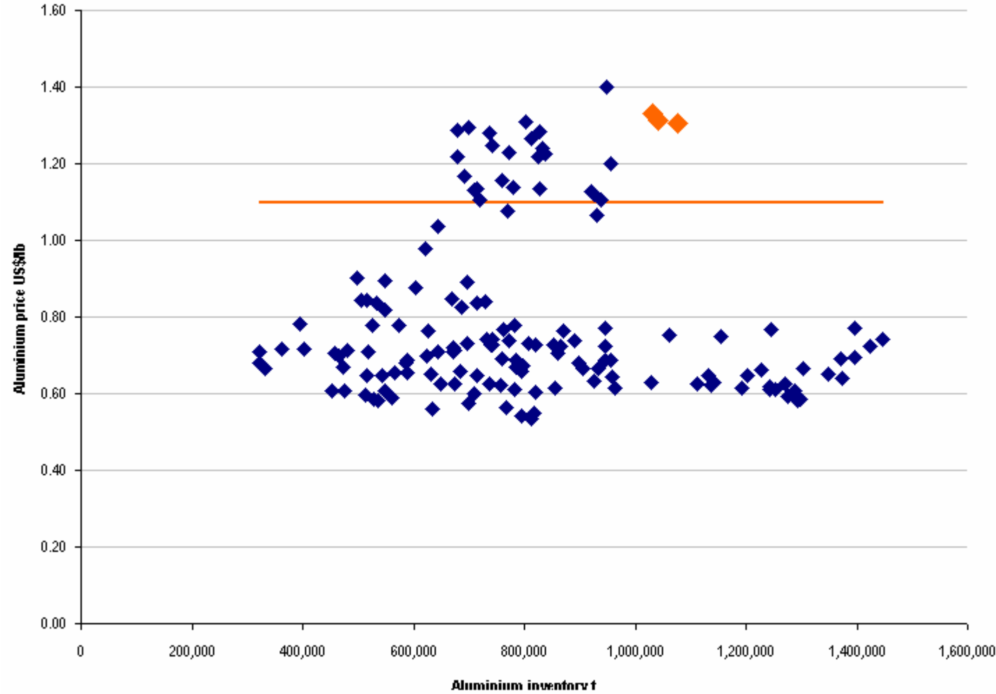
Chart 4

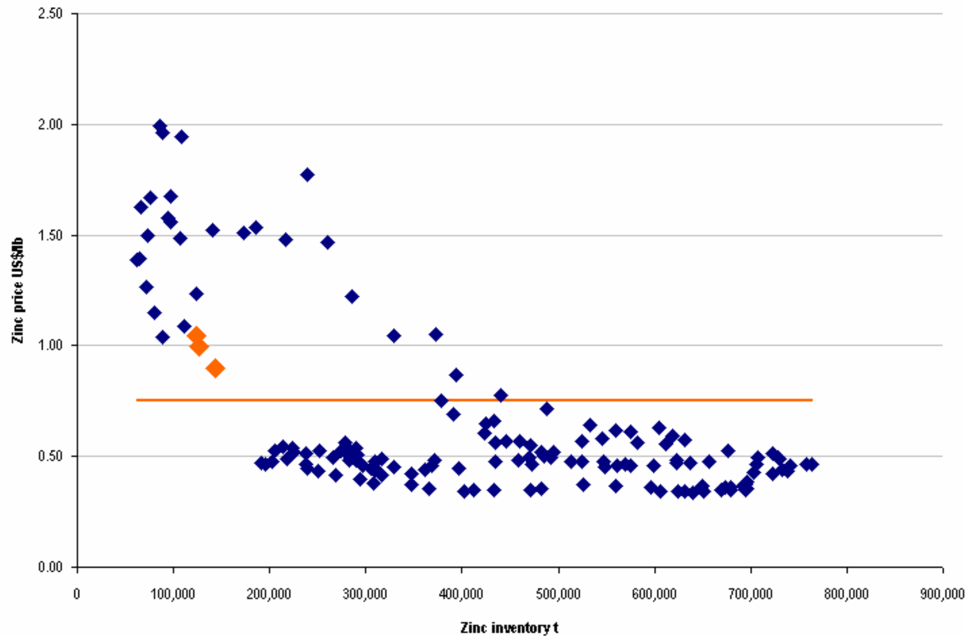
Aluminium prices: Jan 1996- May 2008



Source: Citigroup

Chart 5

Zinc prices: Jan 1996- May 2008



Source: Citigroup

GDP growth – its impact and importance

"Growth" seems to be a particularly alluring term for both investors and companies. However, it also seems to be particularly poorly understood. The lack of understanding seems evident almost daily, as even professional investors continue to struggle with the concept that "growth" is an input to the "value" of any business, rather than an attribute which should be sought out regardless of value. This misunderstanding is not a recent phenomenon. However, the allure of growth seems to aggravate its misuse in periods of speculative frenzy.

By way of example, in a recent article in the UK's Financial Times, reference was made to an investor who proposed an argument that the Chinese stockmarket may be reasonable value at a PE ratio (price –earnings) of 100, or an earnings yield of 1%, on the basis that when GDP growth of 10% was added to this return, a total figure of 11% was more than acceptable, particularly relative to the returns available for alternative Chinese investments. The observation that returns on many Chinese investments may be pathetic is quite probably true, however, the assertion that the earnings yield of a business can be added to the GDP growth of the country to arrive at a total return expectation is ludicrous. The earnings yield of the market represents the return an investor will achieve if the return on capital of the business remains around current levels. The GDP growth a country will accrue to both existing and new competitors and has little to do with the returns an investor will earn, as it gives no insight into how much additional capital will be required to generate this growth. Here's a simple example:

Let's say an investor commits $1m in a company and expects a 10% return on capital from his investment. To meet this objective the company needs to generate $100,000 in profit. Assume the company achieves this by generating $1m of sales at a 10% margin. The result will be an investor that is happy with his return. However, if the investor wants to grow the value of this $1m significantly, things will need to change. To meet these requirements the company has a number of options:

1. The company could aim to generate profits of greater than $100K without asking the investor for additional capital. If margins can be expanded to 20%, a new investor might be willing to purchase the business for $2m, as this will still leave him with his desired return of 10%.
2. If debt finance is available at say 8%, the investor could grow the value of his equity investment through leverage. Let's say the business can cope with 50% gearing. Employing $500K of debt will require $40K of the earnings to be deployed in interest payments, leaving $60K of residual income on a capital base which is now only $500K, increasing the pre-tax return to 12%. This will allow the investor to grow the value of his equity investment by 20% (assuming a new investor will accept the 10% return and is willing to accept the additional risk that the debt holders will have first claim on the earnings of the business.

Most importantly from an investor's perspective, if GDP growth of 10% allows the business to grow revenues at 10%, but the returns are unchanged, the investor will not be any better off, as every 10% revenue growth will require the investor to commit further capital to achieve the growth. It is exactly this predicament which makes economic value relatively difficult to create (at least on an enduring basis), and why share price gains in the 100's and 1000's of percent are rarely enduring.

Corporate activity – justification or capitulation?

The flood of Chinese capital targeting Australian mining company stakes has further fuelled the current frenzy and may be seen by some as a justification of current valuations. As a fund manager whose success is measured by performance versus a benchmark over relatively short periods (where recent experience has been painful), I confess to being concerned that this buying frenzy will provide further ammunition to the arguments of the resource bulls, as the actions of supposedly informed investors such as other mining companies and sovereign wealth funds are often used to create new valuation benchmarks. Offsetting this concern is the knowledge that the capitulation of supposedly informed investors is almost a prerequisite for the boom to end. Whether it be the mergers of AOL and Time Warner or Vodafone and Mannesman at the peak of the tech boom or the absurd valuations (in retrospect) accorded to Japanese and Gold Coast property at the peak of the Japanese 'miracle', such transactions have occurred in most 'bubbles'. My university experience would also cause me to observe that the severity of the hangover is usually proportional to the quality of the party. This one has been going for a while, and the attendees are both numerous and enthusiastic. I'm not sure if there is a 'Berocca' for aggrieved resource investors, but I'm confident there will be some demand if one is uncovered.

As Jeremy Grantham of GMO points out in his most recent quarterly newsletter, rather than looking through current buoyant market conditions and pricing some reversion in margins for those companies currently earning

above normal margins, investors are currently paying premium PE multiples for those companies earning above average margins.

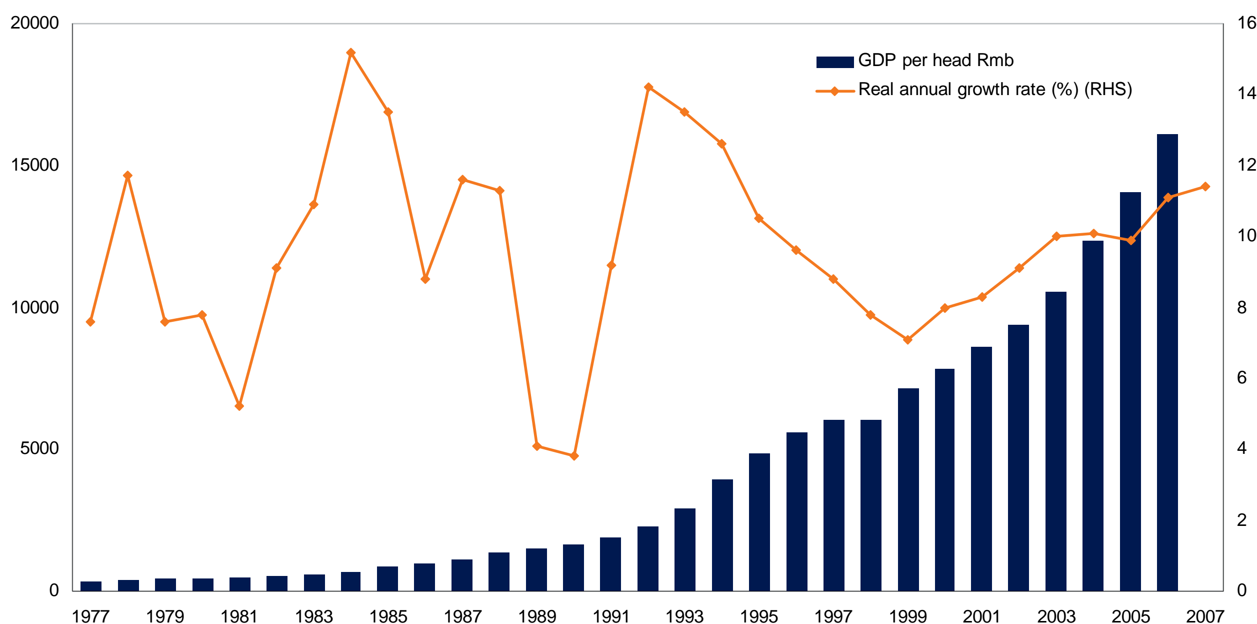
So, how do we develop confidence that valuations have moved to extremes? The real answer is that we rarely identify when "booms" morph into "bubbles", and that valuations of businesses exposed to the boom may range from reasonable to totally unreasonable, with many in between. The logic which we apply to business valuation is based on the economics outlined in the "growth" example above, but to apply it in practice, let's apply the logic to one of the current resource boom darlings, Fortescue Metals.

Taking nothing away from Mr Forrest and his employees, who have undoubtedly accomplished an amazing feat in developing the business in such a compressed time frame, I wish to focus solely on the investment merit at current prices. Developing the mine and infrastructure has seen capital investment of around $3bn, all of which has been invested in very recent times. In total enterprise value (debt + equity), the stockmarket now values this business at more than $30bn. Returning to our original maths, investors buying the stock today who desire an acceptable return (of say 10%, a rough average split between debt and equity investors), will need pre-interest and tax earnings of around $3bn to deliver this return. They will require this annually in perpetuity. As the capital invested was only $3bn, this assumption dictates that the original capital employed would therefore earn a return on capital employed of 100% in perpetuity. Whilst the probability of this outcome is not zero, it is exceedingly low based on all historic evidence and the fundamental laws of economics. Normally, if such stratospheric returns are available (or even perceived to be available), capital will flow relatively quickly to compete away these returns. If one stands back and looks at the activity in the iron ore sector (significant capacity expansions from major players such as BHP and Rio Tinto and the emergence of a host of prospective new entrants), it would appear that capital is behaving precisely this way.

Assuming the above analysis is horribly wrong and 100% returns on capital are sustainable, Fortescue will still only offer investors a 10% prospective return at the current price unless returns move above this level sustainably. It is the basic tenets outlined in the opening section (Chinese growth, an assumption of "stronger for longer"), which combine with the "madness of crowds" to convince a very large pool of investors that the above return on capital equation could constitute an equilibrium, or a sustainable position.

Whilst not wanting to confirm my curmudgeonly nature, I am struggling to suppress my cynicism on these tenets, as the chorus of Believers in the "stronger for longer" theory grows to a cacophony. The ancient art of extrapolation has seen ever increasing confidence that the process of industrialisation, moving people from rural areas to cities and building cities the size of New York every six months, will continue unabated. Those with a more developed knowledge of probabilities would acknowledge that the prospect of another year of 10% GDP growth in a country with very little population growth does not increase as each one passes. "Stronger for longer" may be a nice catchphrase and conjure prospects of a never ending stream of growing share prices, but it is not an investment discipline, nor a means by which to ascertain when a business becomes overvalued. I will not even touch on my concerns that an economy with very limited population growth may be targeting rates of growth which run the risk of delivering extreme levels of overcapacity in the future, as much of the growth to date has been driven through high levels of capital investment, much of which is in industries where China does not have any sustainable advantage. The Chinese GDP growth chart below is impressive to say the least, however, I don't believe it disproves the existence of economic cycles.

Chart 6
Chinese GDP growth: 1977 - 2007



Source: Chinability

Factors exacerbating commodity prices

Supply and demand imbalances alone would normally be insufficient to plant the seeds for a "bubble". However, the equation is being aided by a number of coincident developments in the financial industry.

The propensity for participants in the investment industry to invent new investment methods and products and to complicate what should be simple, never ceases to astound. The litany of repackaged and restructured assets designed to lure investors with the promise of attractive or better yet, uncorrelated returns, is never ending. Even as the aftermath of the toxic wasteland of investment known as sub-prime plays out, the financial industry is more concerned with identifying the next hot product than embarking on the process of reform. The question of why something constitutes an asset and why it will deliver investors a return is likely to remain overlooked. Commodities are a case in point. Superannuation funds, sovereign wealth funds and a raft of other investors have become convinced that the diversification properties of commodities warrant their inclusion as a new asset class. Their lack of cashflow, valuation metrics or any other traditional metrics have proven no barrier.

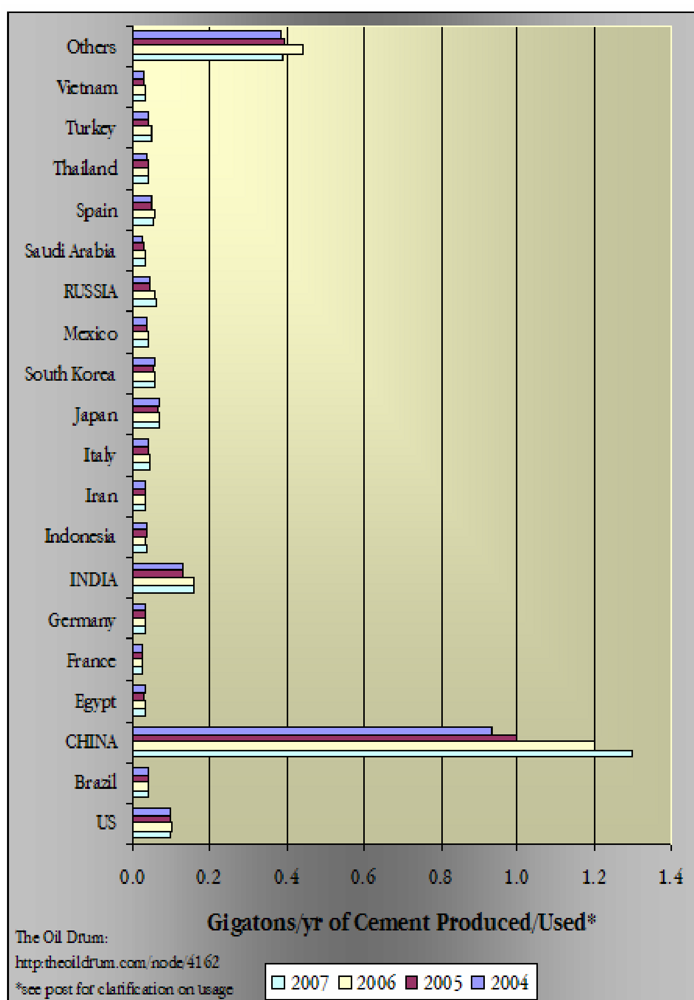
The debate on whether trading in commodities has an important impact on pricing is becoming a hot issue. This is primarily due to the spread in pricing impact from commodities such as copper and nickel (which whilst important, only constitute relatively small markets in dollar value terms), to the extremely large energy market, and most importantly, oil.

From my perspective, there is absolutely no doubt that the entry of long-only investment capital is impacting price in almost all commodity and energy markets, the only question is how much. The influence of investors such as hedge funds, supposedly providing "efficiency capital" to markets, is less clear, however, it is likely that these participants will at the very least, amplify volatility in each direction. Assertions by publications such as the Economist, which claimed that the purchases of oil by long-only funds were only "paper barrels", and would therefore have no impact, are misplaced. Even if such allocations are purchased in futures markets, these contracts will need to be "rolled" at regular intervals, and require an opposing investor to take the other side of the transaction. The only natural sellers of commodities are producers, and these producers obviously have a natural limit to their desire to sell forward future production. If, as is most often the case, trades are executed through investment banks (conveniently included under the definition of "commercial investors" by bodies such as the CFTC (Commodities Futures Trading Commission)), and there is no natural seller, investment banks or other intermediaries will need to hedge the other side of the transaction by eventually accumulating physical product. Every paper commodity investment must eventually be backed by product. The same propensity to create

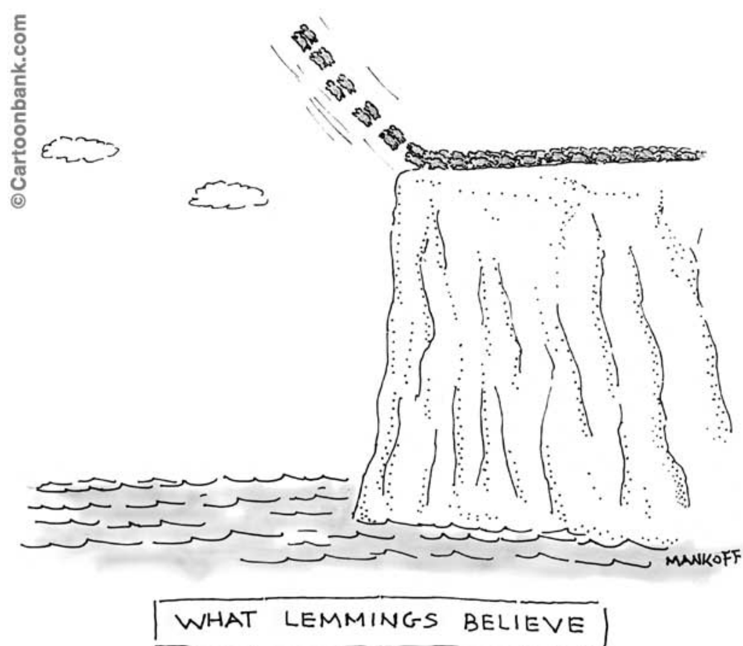
mortgage backed securities to satiate the appetite of hungry investors led to the grossly excessive funding to the US sub-prime housing market.

Whilst the impact of such investment is undoubted (at least from my perspective), the extent of the impact on prices is less clear. Statistics on the size of the commodity investment market are available, however, they are opaque at best. What is transparent is the relatively small size of most commodity markets relative to the extremely large size of equity markets, superannuation funds and sovereign wealth funds. Allocations of apparently small percentages of total investment can have large impact, particularly when there is little fundamental basis on which to come up with a suggested allocation. Fragmentation of a large pool of investment capital into a large number of “asset classes” with pre-determined weightings, is in my view, far more likely to distort valuations than allowing this capital to move freely amongst assets based on valuation.

The other contentious issue in explaining the inexorable rise in commodity prices is the contribution of overly easy monetary policy to the equation. Recent years have seen an almost unprecedented period of coincident growth in global economies, fuelled significantly by extremely strong credit growth. The “goldilocks” economic conditions of strong growth and benign inflation induced a boom period for asset prices globally. Importantly, central banks are almost always focused on consumer price inflation as the measure of inflationary pressure in the economy rather than a holistic picture which includes asset prices. I have always been a little confused as to why rising prices of all the components of a house (bricks, cement, steel etc) and all the goods inside it (plasma TV’s, computers etc) are considered a negative when it comes to monetary policy, yet growth in the price of houses as a whole is considered a positive. This line between the (positive) asset price inflation and (negative) consumer price inflation, is in my view a blurred line, rather than stark line which many portray. If the rate of asset price growth and consumer price growth were combined, it would be evident that interest rates have been significantly negative in many markets for some time. In markets such as the US, real rates have been eased further and are still struggling to combat the imbalance between the impact of falling asset prices and rising consumer prices. As one would expect, no-one was keen to upset the party as consumers binged, assets rose and growth improved. To my university party analogy earlier, Mr Greenspan certainly ensured the partygoers were well supplied with booze. This booming period of credit growth (which in markets like Australia has been running at more than twice nominal GDP for more than a decade), has facilitated a boom in both consumption and investment. Depending on the economy, the balance between consumption and investment has varied. Economies such as China have been powered almost solely by an explosion in fixed investment, the US has consumed, whilst economies such as Australia have been somewhere in between. Whilst I would argue that credit has been overly loose for an extended period, and that the period of excess will necessarily be curbed by a period of abstinence, it is the changing circumstances which are relevant for the direction of commodity prices. Just as the binge has fuelled demand strength everywhere, either via consumption of (often Chinese produced) goods or through fixed investment, the impact of a more constrained credit environment should not be ignored. The masters of extrapolation are assuming Chinese fixed investment will continue unabated. In my view, economics will eventually apply to this investment. Erecting buildings, steel mills, aluminium smelters and endless other infrastructure projects is only sensible to the extent that end demand ensures these projects earn a sensible return on capital. Just as these economics apply to a company, they apply to a country. Charts such as the one below on cement usage, I find truly scary. On rough maths, China is using more than 10 times the cement of the US, despite having only 3 times the population. Assuming that markets such as the US represent a benchmark for where usage stabilises per head of population, it is fair to say China will have one almighty overcapacity problem at some stage in the future.



The above arguments are not intended to represent the rantings of an aggrieved investor who happens to be on the wrong side of a pool of investments subject to powerful momentum, although I will be the first to confess to frustration. They are intended to lend some weight to the case for investors to consider the possibility that the commodities boom may be cyclical, and that assets in the area may currently be substantially overvalued. The forces of momentum are powerful and the impact on human behaviour equally powerful, however, it is these factors that should ensure fund managers apply even more rigorous analysis to the allocation of capital to companies in times such as these, rather than succumbing to the path of least resistance. Just as the hard decisions (taken by people such as Paul Volcker in controlling the US stagflation crisis of the late 70's and early 80's) are often unpalatable and painful, they also create the greatest long term benefit. Just as Greenspan might win the popularity contest for throwing the party, the guy running the rehabilitation clinic might not be quite as renowned. I for one, don't subscribe to the lemming theory of commodity prices, nor do believe that investors will be well served ploughing funds into mining investment on the expectation of ever increasing returns after a period of share price returns that already dwarfs the tech boom. In the meantime, I'll try and remain sane and as the Kisschasy lyrics say, "Sometimes, days I'd like to say I don't agree with what you see, but I will never let the bitter things you say ever get to me".



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