

Base Metal Werewolves In London

With apologies to U2...

*I have bought the highest tech stock / I have run through my funds
Only to lose a few / Only to lose a few*

*I have bought, I have held / All the stocks that have smelled
That have smelled / Only to lose a few*

*But I still haven't found / What I'm trading for
But I still haven't found / What I'm trading for*

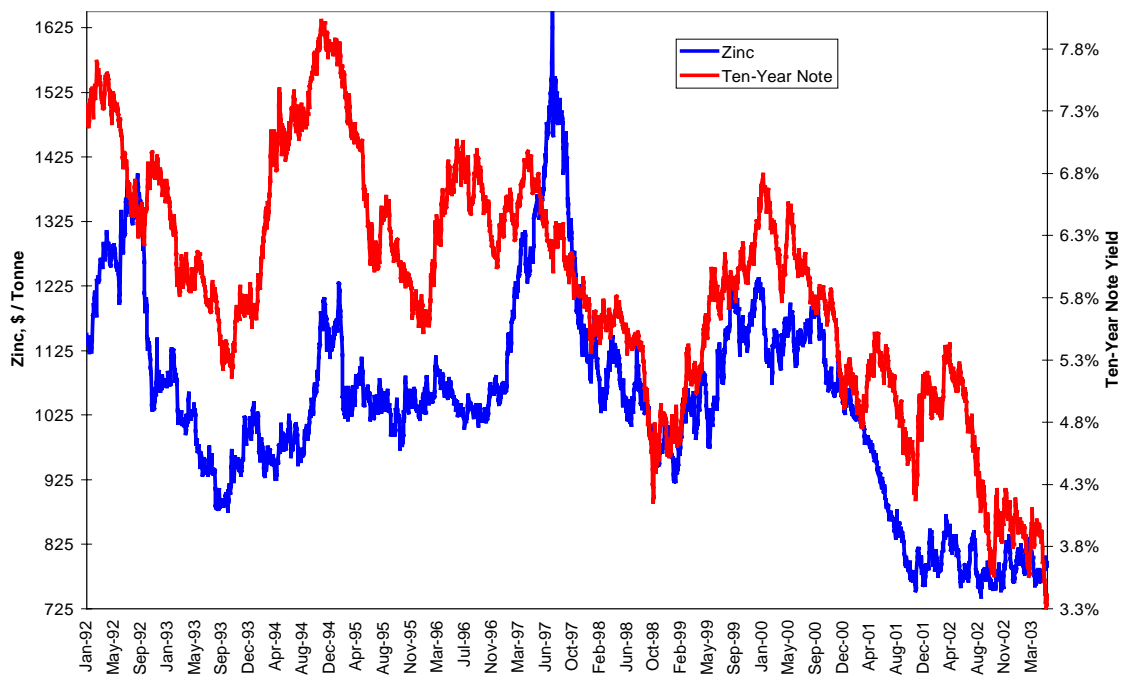
The base metals complex on the London Metals Exchange (LME) – copper, aluminum, nickel, zinc, tin and lead – is sort of like the ugly stepsister in all those Grimm brothers fairy tales. Gold and silver get all of the glamour and attention, and the platinum group metals get the exotic assignments, while things are said to sound tinny and lead is the subject of the occasional rude exhortation.

But Cinderella ultimately bagged the prince, and those amongst us who read the interplay between the global manufacturing economy and futures markets value the base metals markets for their low speculative content. Who is going to stash a few ingots of zinc away in the vault just to see what happens? Base metals buyers buy what they need when they need it, and that makes their prices sensitive short-term leading and coincident indicators of manufacturing activity.

Galvanized Into Action

As a result, a no-nonsense metal like zinc, used for making brass and galvanizing steel, leads key financial market indicators such as ten-year note yields reasonably well. Only once during the 1990s, during the run-up to the Asian financial crisis of 1997-1998, did zinc get it wrong. Once the stock market bubble burst in 2000, zinc refused to take the bait of false economic hope. Stocks, supposedly a forward-looking market reflecting the judgment of millions of investors worldwide, suffered a string of failed bear market rallies while zinc held a low price.

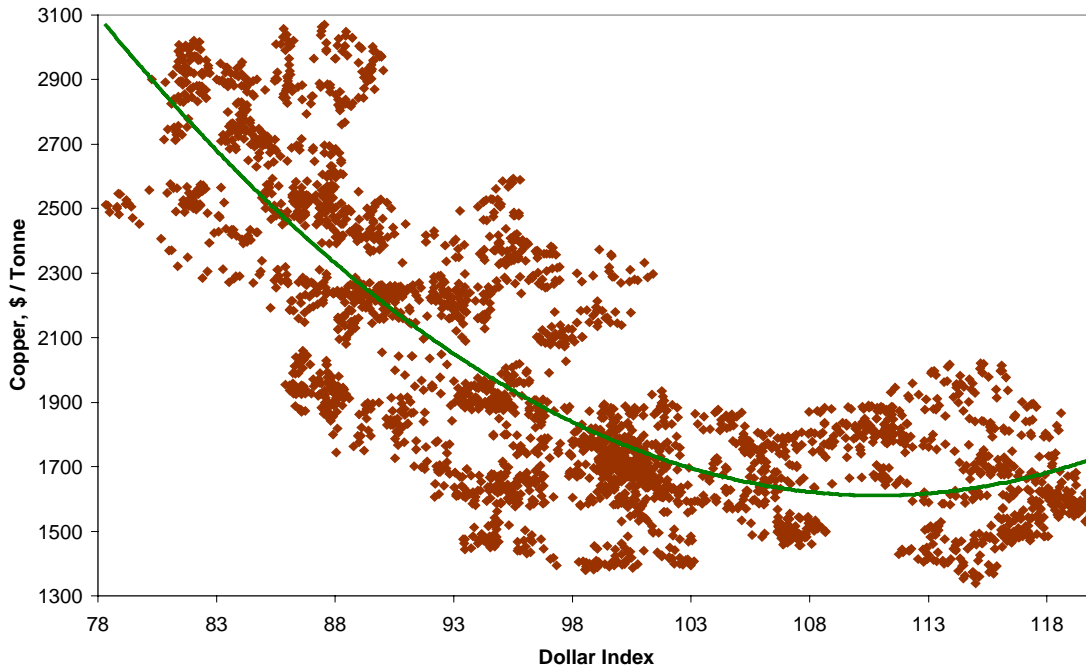
Note Yields Link To Zinc



Zinc's alloy substrate in brass, copper, is an equally sensitive economic barometer. Even though it has substitutes such as aluminum and glass fiber in the electrical and telecommunications businesses, respectively, copper demand rises and falls in synch with global construction and manufacturing activity. It is ironic that even wireless communications equipment uses a lot of copper wire all through the cycle of data transmission.

Nearly all of the demand growth in copper in the 1990s occurred in the non-Japan markets of Asia. Like petroleum, all of the base metals are priced in dollars worldwide, so a stronger dollar tends to depress demand outside of the dollar bloc. A weaker dollar appears to accelerate demand for copper so that a long position in copper subsumes a put option on the dollar.

Copper Costs More Pennies When Dollar Weakens



A Miner Problem

We should not expect all metals prices simply to mirror the economy. Far from it: Base metals suffer from the same boom and bust economic cycles affecting all primary commodities (see "Next Civilization, No Commodities!" *Futures*, July 2001). As demand rises, price does as well. This both stimulates the search for new supply and encourages substitution.

Nickel, used primarily in the making of stainless steel and in batteries and magnets, has the most neatly defined of these price cycles. Three times in the past decade the market has more than doubled in price, and each time the trough-to-peak move occurred in 16 months. The fact that much of the world's nickel comes from the Norilsk mining complex in Siberia and thus is subject to, um, various export enhancement procedures by the Russians helps exacerbate some of these sharp swings higher.

Trading Nickel? Only The Steel Remains Stainless

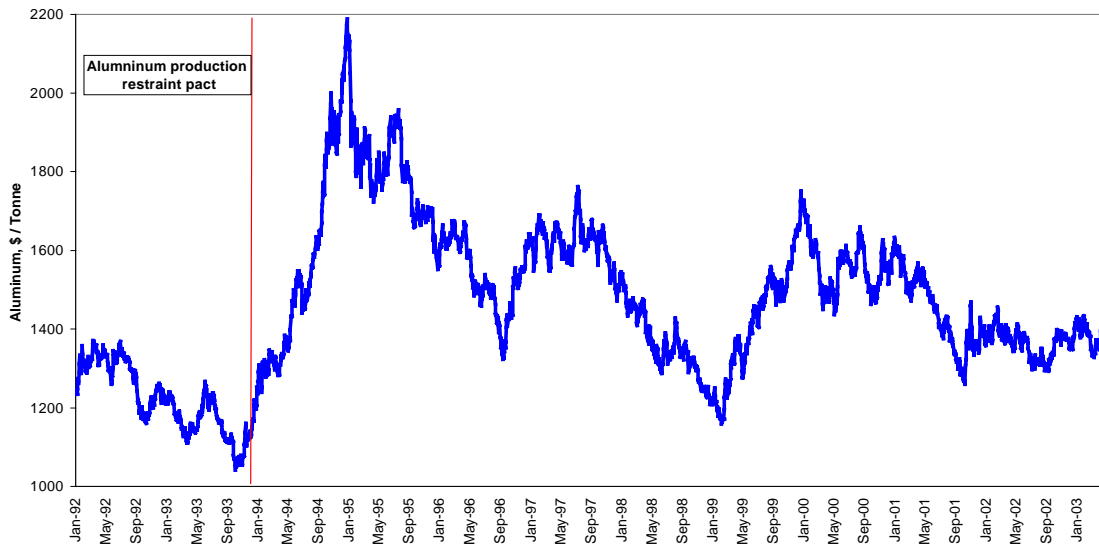


From Russia With Love

The Russian influence is felt in nearly every metal market, as we will discuss next month in the platinum group metals. One of the more dramatic examples of the Russian connection came in the aftermath of the fall of the Soviet Union. The Soviet military had large stockpiles of aluminum for usage in aircraft, and they dumped these supplies onto the world market in an effort to raise hard currency.

Prices fell, of course, and a worldwide aluminum pact was concluded in early 1994 between Canada, Russia, the European Community, the U.S., Australia, Canada and Norway. Paul O'Neill of Alcoa and erstwhile Secretary of the Treasury and traveling partner of U2's Bono helped bring this agreement to fruition. Prices doubled in a year, but since have reentered the characteristic long-term downtrend punctuated by price spikes of primary commodities. Aluminum has bobbed between \$1300 and \$1800 per tonne ever since 1995.

Capitalists Go To Bat For Aluminum



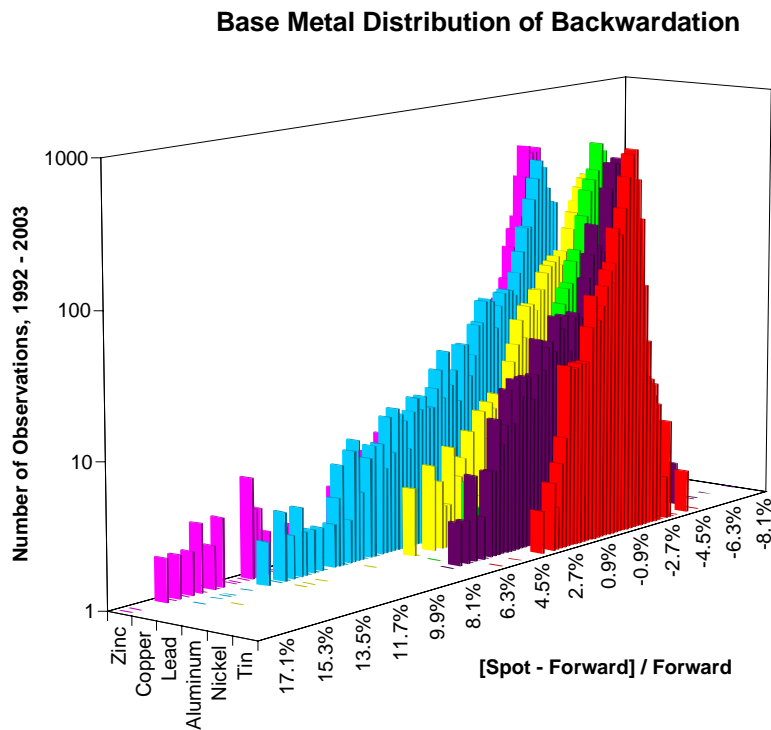
Keep It In The Ground

The structure of the LME contracts, a lightly traded spot market and an actively traded three-month forward market, creates a natural barometer for measuring market anxieties in the backwardation, or spread between spot and

forward, for each metal. The metals markets are natural candidates for backwardation for several reasons. First and foremost, the markets are production and transportation capacity-constrained all the way from the mine mouth to the final user. If demand surges, the ability for new supply to reach the market is limited physically. This will cause the spot price to rise relative to that of the three-month forward.

Second, backwardation occurs when the buyer is unwilling or unable to pay for the costs of storage. As metal ores have been lying about in the earth's crust for hundreds of millions of years, another couple of weeks will not matter. The seller incurs an opportunity cost equivalent to the future value of the production over the gap in time between when the consumer could have bought and finally did buy. The buyer has an avoided inventory cost over the same period.

However, this avoided inventory cost comes at a price to buyers who think they have discovered the free lunch. The premium of the spot month to the forward can surge if and when any supply disruption or demand spike occurs, and this jump in the spot price can negate all previous inventory finance savings rather quickly. The distribution of backwardation assumes the profile of a call option for each of the base metals.

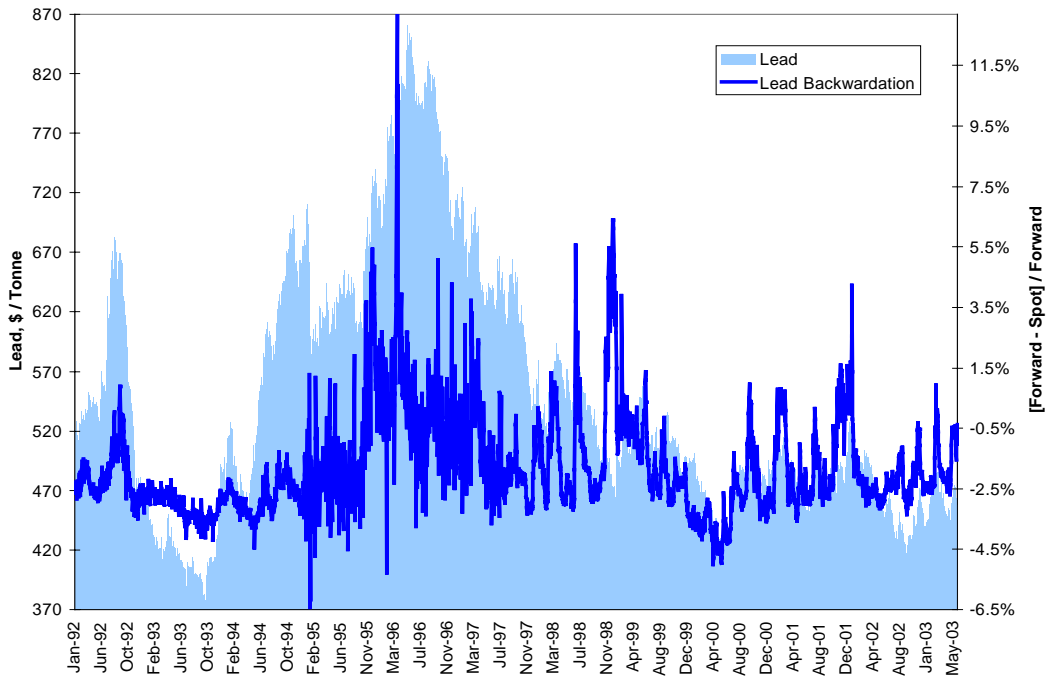


The distribution of backwardation is skewed heavily toward positive values for each of the metals, with the most pronounced call option profile existing for zinc. Copper, too, is strongly backwardated, but this must be discounted somewhat by Sumitomo's attempt to withhold copper supplies from the market during the first half of the 1990s.

Backwardation always serves as a leading indicator of price. A period of high backwardation, which usually exists during a price surge, reflects negative price expectations on the part of buyer and seller alike. They buyers are maintaining a variation of just-in-time inventory management, while the sellers are hedging themselves against price declines in the forward months.

Lead is one of the more pedestrian markets going, by any stretch of the imagination. Even here, however, backwardation surges such as those of March 1996, December 1998 and January 2002 predicted imminent price declines correctly. The relationship is sufficiently symmetric to have contango discounts precede price increases in January 1995 and April 2000.

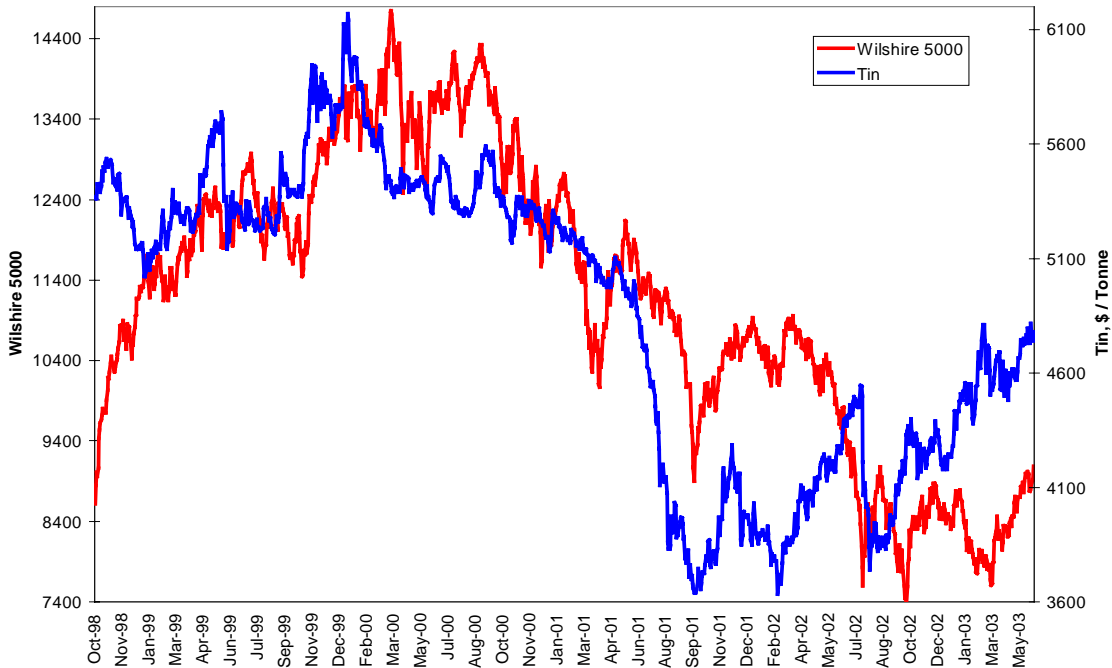
Lead Spread Leads Lead



Tin To Win

One of the side benefits of data analysis is stumbling upon the little gems of spurious correlation and being able to recognize them as such (see any January issue of *Futures* from 1997 onwards). The U.S. stock market humbled many during its late 1990s bubble and subsequent collapse. This pain could have been avoided had people paid more attention to the tin market.

Stocks In The Can



Stocks hit their all-time high as measured by the Wilshire 5000 on March 24, 2000. Tin, of course, peaked in early January 2000, giving any and all plenty of time to exit. The metal, used in plating cans and making bronze, never really looked back, and despite stocks' bear market rallies just kept going lower until September 2001, a low tested successfully in February 2002.

Did you need a long-term buy signal? Tin bottomed in August 2002, two months prior to stocks' low. It kept going higher in the face of a weak economy throughout the first half of 2003. Tin: It is cheaper and more reliable than most market analysts, and it can be recycled.