Commodities And Equities: Think Before You Link

Consider the following exchange from the 1967 classic *Cool Hand Luke* when Paul Newman's character gets locked in a detention box following his mother's death:

> BOSS KEAN (to Luke) "Ah'm jus' doin' mah job, Luke. You gotta appreciate that."
> LUKE "Boss, when you do somethin' to me you better do it because you got to or want to... but not because it's your damn job."

Have the world's fund managers become the equivalent of the chain gang guard, so mindlessly caught up in the fashion of the moment they forget that somewhere in their distant past lay a shred of humanity? Let's answer this rhetorical question with a strong, "Yes," at least when it comes to the inanity of using investors' money to trade commodity-linked equities as the substitute for the underlying commodities themselves. The tactic of attempting to duplicate the instantaneous market-clearing price of an inert asset with the discounted cash flows from a long-term corporate operation is so ungrounded in financial theory it should get the Wolfgang Pauli Lifetime Achievement Award after the late physicist's putdown, "It's not even wrong!"

The assertion was made and demonstrated here last January that the inflow of funds into everything related to commodities had distorted the relationship between commodity-linked equities as measured by the Goldman Sachs Resource index and commodity prices as measured by the Goldman Sachs Commodity index. What had been random prior to the Federal Reserve's so-far successful war on deflation launched on May 6, 2003 had now become linear. If you are keeping score at home, the total return on GSCI year-to-date has been -13.54%. Nice bull market, guys.

Case Studies

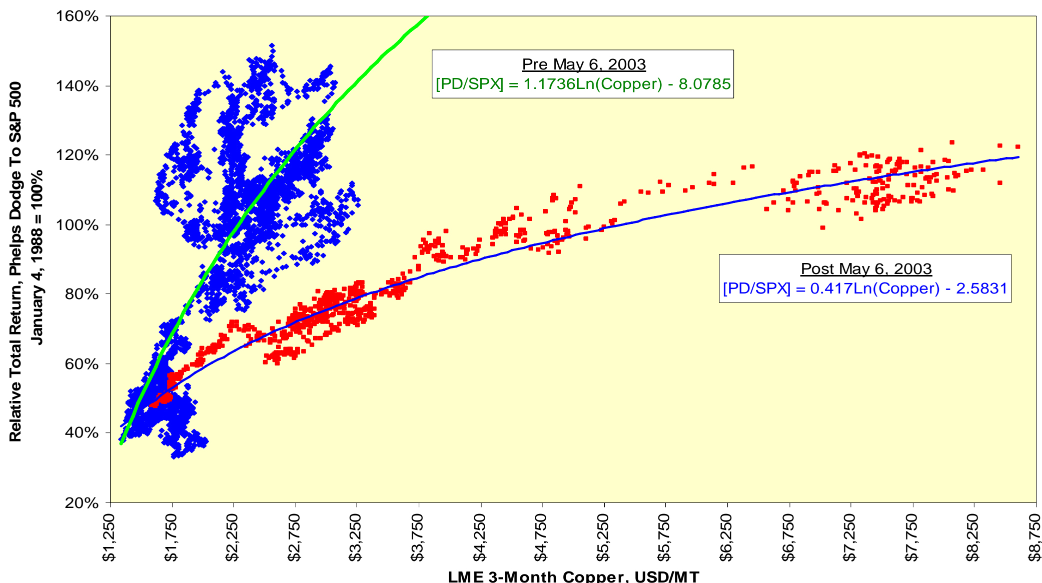
But as we have stressed since May 2004, there is really no such thing as "commodities," merely a collection of unrelated markets linked by virtue of being both tangible and exchange-traded. It is a market of commodities, not a commodities market. Let's use the occasion of Phelps Dodge's impending disappearance as an independent firm to run a set of case studies of the relative performance of various commodity producers to the broad market as a function of their underlying commodity price.

In each instance, the methodology will be the same. The total return of the stock, adjusted for various corporate actions will be compared to the total return of the S&P 500 over two different periods. The first period will extend from the earliest possible startdate of the analysis to May 5, 2003; the second will extend from May 6, 2003 onwards. The objective is to ascertain whether a position in the given commodity producer captured the price increase in the underlying commodity incremental to what could have been garnered by simple ownership of the S&P 500 itself.

A disclaimer is in order. In no case can we attribute 100 percent of the firm's revenue to sales of a single commodity. Public corporations long ago recognized investors needed either vertical integration or a wide-ranging portfolio of commodities to dampen the volatility of single-commodity production. The four corporations examined below, Phelps Dodge, Inco, Newmont Mining and Anadarko Petroleum all have multiple commodity exposure. In addition, all four corporations have been quite active in the merger, acquisition and divestiture market. These distortions are unavoidable.

Phelps Dodge And Copper

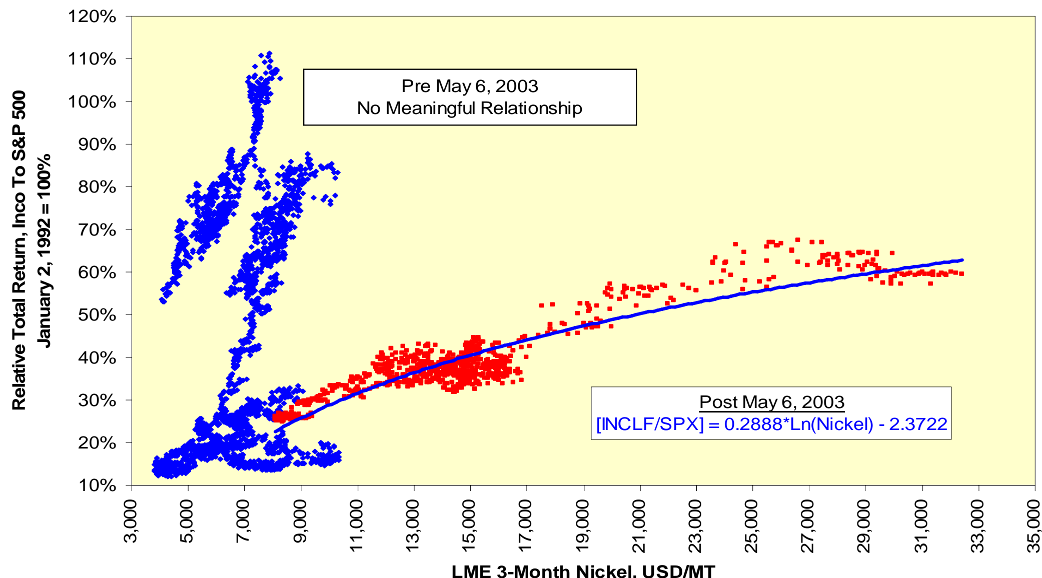
Prior to May 2003, the incremental return on Phelps Dodge more than captured the increase in copper prices as evidenced by its 1.1736 beta to the logarithm of copper prices. After May 2003, the relationship deteriorated badly; the beta fell to .417.



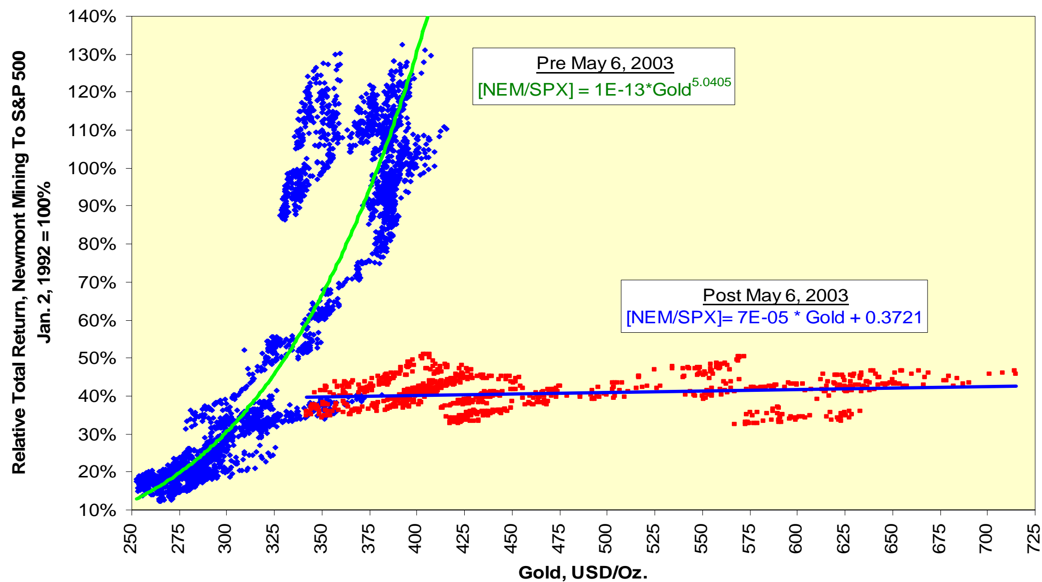
Why would this be the case? During the early phases of a commodity rally, producers get to sell existing low-cost production for a higher price. Then they are faced with the costs of adding capacity at a time when their competitors are scrambling for the same resources in terms of specialized equipment, skilled labor, etc. The net effect is the trend curve (blue curve above) starts to look like the profit profile of a short put option on copper prices. And that is precisely the case: The profit profile of any long asset can be replicated by a long call option plus a short put option; if investors start acting as if something – in this case higher costs of production – is claiming that long call option on copper, only the short put option is left. And as any option trader knows, the profit potential of a short put option is limited to the premium received. Investors would have been better off simply owning copper plus an S&P 500 index fund as opposed to Phelps Dodge.

Inco

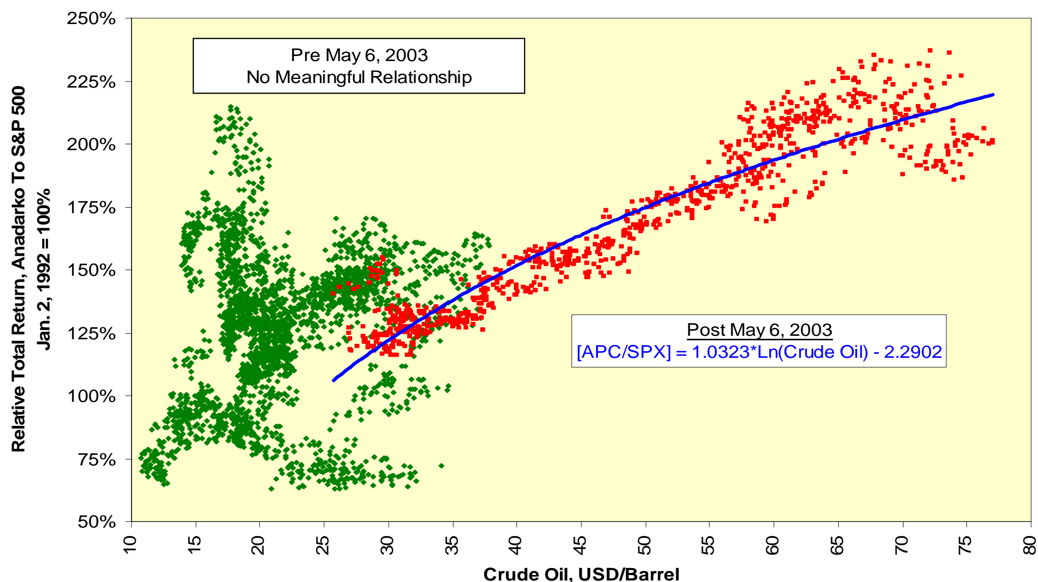
The pattern for Inco is different. Prior to May 2003, the relative performance of Inco as a function of nickel prices was meaningless. After May 2003, the stock's relative performance also acted as if production costs were claiming the long call option on nickel.



Newmont Mining
Newmont's performance story is fascinating. Prior to May 2003, its relative performance to the S&P 500 as a function of gold prices increased exponentially; it is as if the owners of Newmont got an additional call option on gold tossed in for good measure. This makes sense; the production costs for gold barely increased while prices received increased by more than 50 percent during this period. After May 2003, the relationship changed entirely: There is none.



Anadarko Petroleum
Anadarko is an exception to the despair espoused above. Like Inco, it had no meaningful relationship to its principal underlying commodity prior to May 2003. However, the logarithmic beta of its relative performance as a function of crude oil is 1.0323, meaning it captured slightly more than the gain in crude oil prices seen over this period. Even though production costs in the petroleum industry have risen, they have yet to rise as quickly as prices have, and that has made this stock an efficient way of playing the underlying commodity.



The principle remains clear: With limited exceptions such as Anadarko, if you want to capture the commodity, trade the commodity, not the stock. And if the agent you hire to trade commodities wanders off the chain gang and starts trading stocks as a substitute, well, you had a failure to communicate.