Currency-Commodity Correlations: Round Two

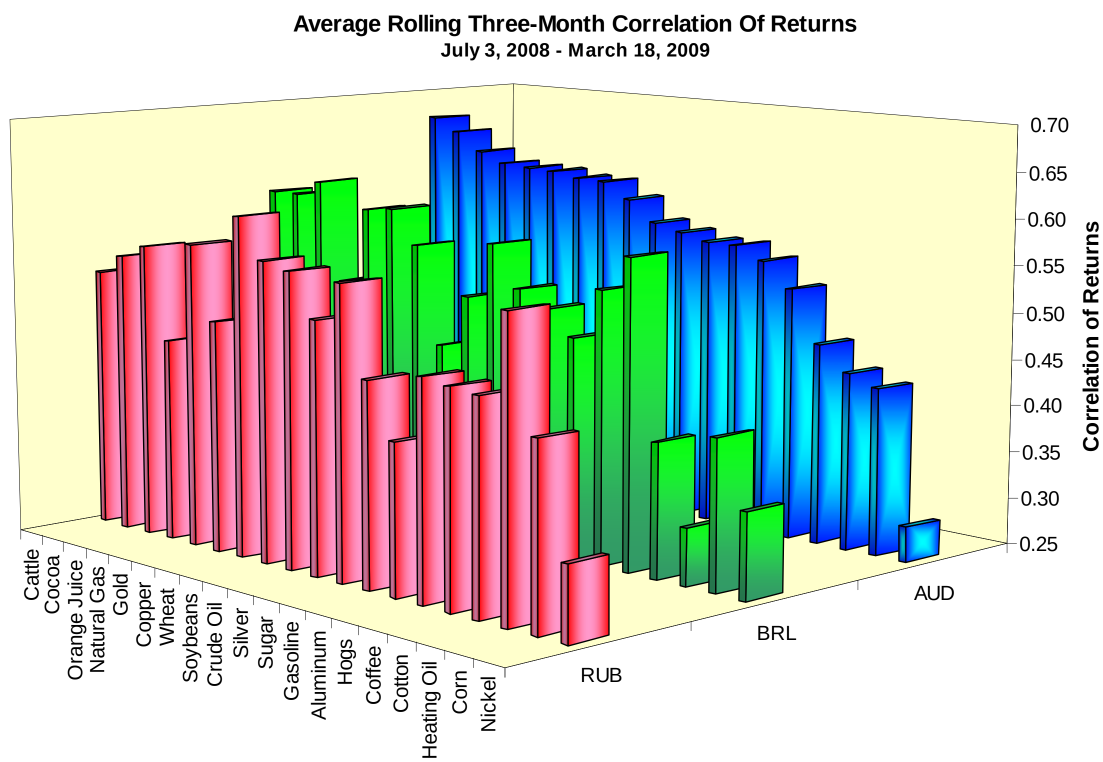
I took a look [last week] at the correlation of returns between the euro, Japanese yen and Canadian dollar against a set of nineteen different commodities to illustrate a favorite point of mine over the years, that there is no such thing as "commodities" or for that matter, "the dollar."

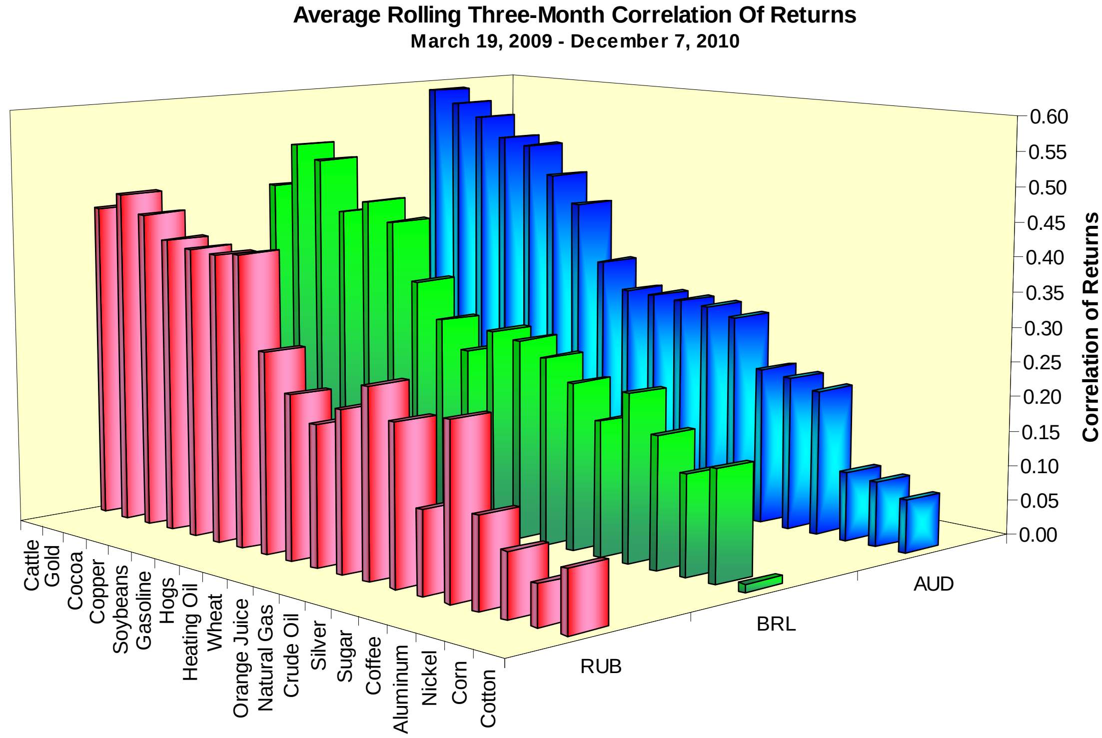
One Minyan commenter on that article requested I expand the analysis to other currencies with a commodity linkage such as the Brazilian real and the Australian dollar. I added the Russian ruble into the mix as the ruble has a linkage to the price of Russia's benchmark Urals Blend crude oil.

As we might expect, this group of currencies has a much higher set of correlation of returns against the set of commodities used previously. This is especially true for the Australian dollar; so much of Australia's growth and prosperity are linked to exports of various minerals to East Asian markets, China especially. The linkages are stronger here than they are for the Brazilian real, which is striking given Brazil's prominence in soybeans, orange juice, coffee, sugar and cattle.

As an important aside, all three of the countries discussed here are major producers of both coal and iron ore, neither of which are included in the commodity set. Coal tends to be sold on long-term contracts with various escalator clauses and iron ore is just beginning to enter, grudgingly, the world of exchange-traded futures.

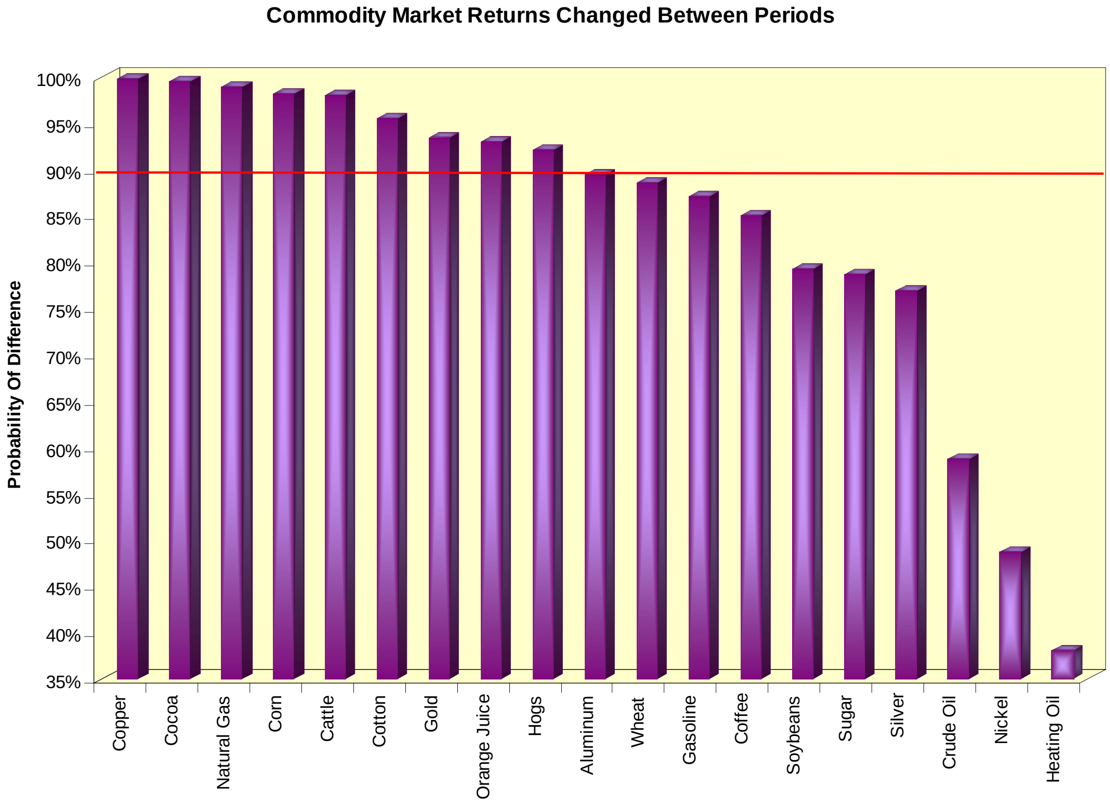
The two charts below represent the average rolling three-month correlation of returns over the same two time periods used before. The first extends from the July 3, 2008 peak in the Dow Jones-AIG commodity index to the start of quantitative easing in the U.S.; the second goes from QE1 through December 7, 2010. Both charts are sorted in descending order along the Australian dollar.





It's Different This Time

Visual inspection does not reveal significant differences between the two data sets, and that is the story. Let's remember the July 2008 – March 2009 period was an unhappy one for most commodity markets, and the post-QE1 money-fest has put many physical commodities either back into bull markets or at new all-time nominal highs. If we test to see if these periods had different returns, the answer is striking: Nine of the 19 markets are different at a 90% confidence level or greater, and the number for a tenth, aluminum, is 89.5%.



For the correlations of returns across the commodity and currency sets to be that similar when the commodity markets themselves shifted from bearish to bullish tells us the currency markets also had to change. This confirms what many of you may have suspected, commodity-linked currencies do in fact exist.