

Trade A Sympathetic Market, And All You'll Get Is Sympathy

*It was six men of Indostan
To learning much inclined,
Who went to see the elephant, though all of them were blind,
That each by observation, might satisfy his mind...*

Market analysis is rather like the problem faced by the blind men in the oft-repeated parable: The giant beast we face each day is impossible to observe simultaneously in all its facets. At best we have to select several markets out of the dozens linked together by some combination of economic factors, and most of us have learned the hard way to focus only on one or two simple trading systems.

The technical trading systems and methods most of us choose for any individual market, while not 100% reliable, at least have the virtue of consistency. It is not a law, for example, that a double top or bottom whose swing point is violated or a channel whose bounds have been broken will produce a chart move of a certain magnitude, but that is the way to bet. Intermarket analysis, unfortunately, lacks even this virtue of consistency.

This lack of predictability in intermarket relationships is, or should be, disturbing. Let's take two simple formulae, the dividend discount model from finance and the law of gravitational acceleration from physics. As the names suggest, we must hold these two formulae to different standards. Gravity is a law, and we fully expect it to work in a predictable manner. The dividend discount model is merely a suggestion as to how reality will proceed given a set of observations.

- Stock price = dividend payout / (discount rate - dividend growth rate)
- $G = 9.8 \text{ meters/second}^2$

Not even the most bombastic Wall Street analyst, the type who would stamp a "strong buy" on grocery list items, would suggest stock prices are predictable given all of the information above. The future paths of dividends and interest rates are highly uncertain, and even if these were known, investor appetite for risk is unpredictable.

It Used To Work

John Murphy posited the following relationships, among others, in his 1991 *Intermarket Technical Analysis*:

1. The inverse relationship between commodities and bonds;
2. The positive relationship between bonds and the stock market; and
3. The inverse relationship between the U.S. dollar and the various commodity markets, in particular the gold market

By extension, or even the transitive property of equality long lost in your distant memory, the third relationship implies a direct relationship between the dollar and bonds: If the dollar weakens, commodities rise, and that should push both bond prices and then stock prices lower.

The logic in all of these is impeccable and fit the observable data of the late 1970s through the 1980s quite well. After all, higher inflation is the mortal enemy of fixed income instruments, and higher commodity prices are one manifestation of inflation. Lower interest rates, as seen in the dividend discount model, should be good for stocks in general and growth stocks in particular as they increase the present value of future earnings. Finally, if the exchange value of the USD weakens, it should take more pieces of paper to buy the same amount of physical commodities.

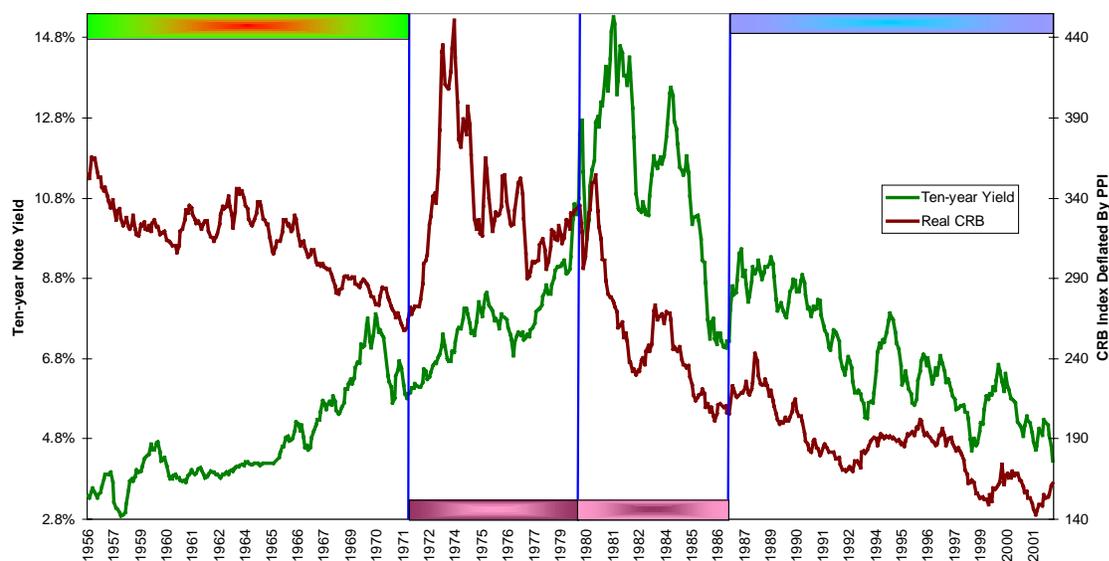
We can see whether these relationships have remained stable over long periods of time by using the very long data histories contained on the CRB/Infotech CD-ROM. This will help us determine whether the logical rules of intermarket analysis are applicable or whether - as is suspected - each situation is as different as each blind man's sense of the elephant.

Commodities And Interest Rates

While reasonable observers may disagree, the relationship between commodity prices as represented by the CRB index deflated by the producer price index and ten-year note rates appears to have at least four distinct regimes:

1. Sep. 1956 - Sep. 1971: The continuation of the post World War II Bretton Woods fixed exchange rate regime. Here the increasing overvaluation of the U.S. dollar and vast new technological efficiencies in production allowed for declining real commodity prices even as note yields rose;
2. Oct. 1971 - Mar. 1980: The collapse of Bretton Woods and the initiation of a floating exchange rate regime that no one knew how to manage despite their best pretensions; think of Lucy and Ethel running the central banking machine. The explosion of global liquidity led to the one prolonged period of commodity price increases on record, and interest rates soaring into double digits;
3. Apr. 1981 - Feb. 1987: The return of monetary discipline under Paul Volcker and fiscal stimulus under Ronald Reagan. Here both interest rates and commodities declined fairly sharply as the inflationary psychology of the 1970s was broken; and
4. Mar. 1987 - Present: Sir Alan's global concerto. The ability of central banks to modulate the excesses of the floating exchange rate regime and the emphasis on maintaining global growth in the face of assorted crises has produced gradual but very erratic declines in both yields and real commodity prices. In this period, it is not unusual to find periods such as the summer of 2002 with both rising commodity prices and falling interest rates.

Commodities And Interest Rates: A Variable Relationship

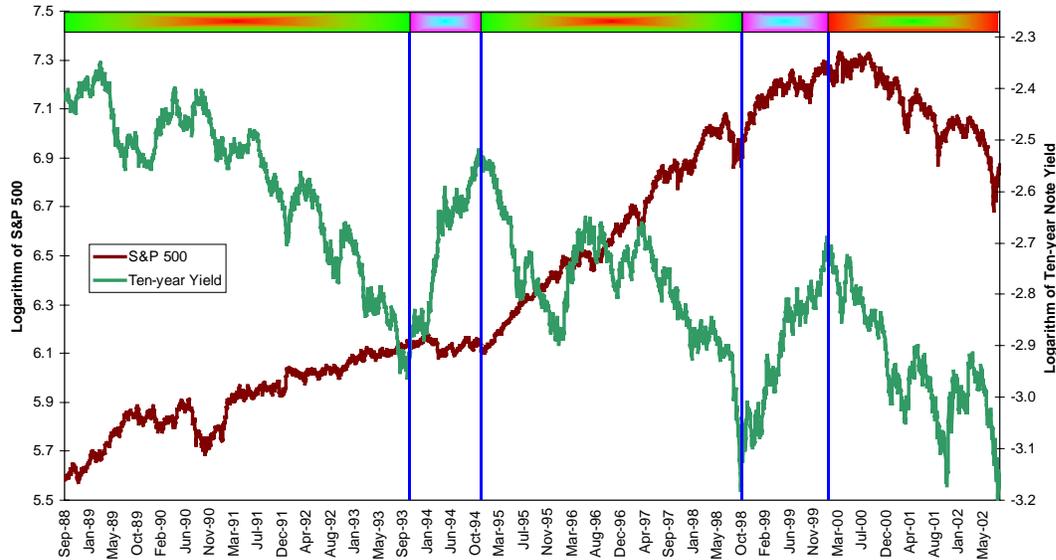


Stocks And Bonds

If there was a single intermarket relationship that fell into the category of a no-brainer by the 1987 crash, it was that stocks rose when interest rates fell. The bull market in stocks began with a bond rally in August 1982, and well into 1986 long bonds actually returned more than stocks; this sort of thing is possible when you are coming down from 16% bond yields. But bond yields started to rise in March 1987, and while the stock market continued to soar into August 1987, it came crashing down in October as bond yields continued higher and the dollar started to come unglued under the weight of the massive U.S. trade deficit.

The intermarket experience during the Greenspan era has been far more mixed; indeed, the Fed's performance since the December 1994 collapse of the Mexican peso recalls the old joke, "Don't vote: It only encourages politicians." The era can be divided into five periods. Two of these, the one ending in October 1993 and the one between December 1994 and October 1998, exhibit the expected combination of lower yields supporting higher stock prices. Another two periods, those corresponding to the Fed's rate hikes in 1994 and 1999-2000, exhibit the counterintuitive pattern of rising interest rates either coinciding with the flat stock market of 1994 – the one known example in human history of a central bank actually engineering something called a "soft landing" – or the final flowering of the stock market bubble in 1999-2000. The fifth period, the present combination of lower interest rates coinciding with significantly lower equity prices, also is counter to the relationship cited by Murphy.

Are Low Yields Good or Bad For Stocks? Yes.



The presence of three counterintuitive periods out of five inside of a decade ought to be a strong argument against allowing central bankers to play with matches. This isn't to say that lower interest rates are bad for stocks or that Fed rate hikes are good for the market – both statements are nonsensical – but rather that the numerator of the dividend discount model, earnings growth, cannot be ignored. It doesn't matter if the discount rate is low if the earnings are non-existent. Moreover, if deflationary pressures start to creep into the system, as they have in Japan, we cannot delude ourselves into confusing low nominal interest rates with a low cost of capital.

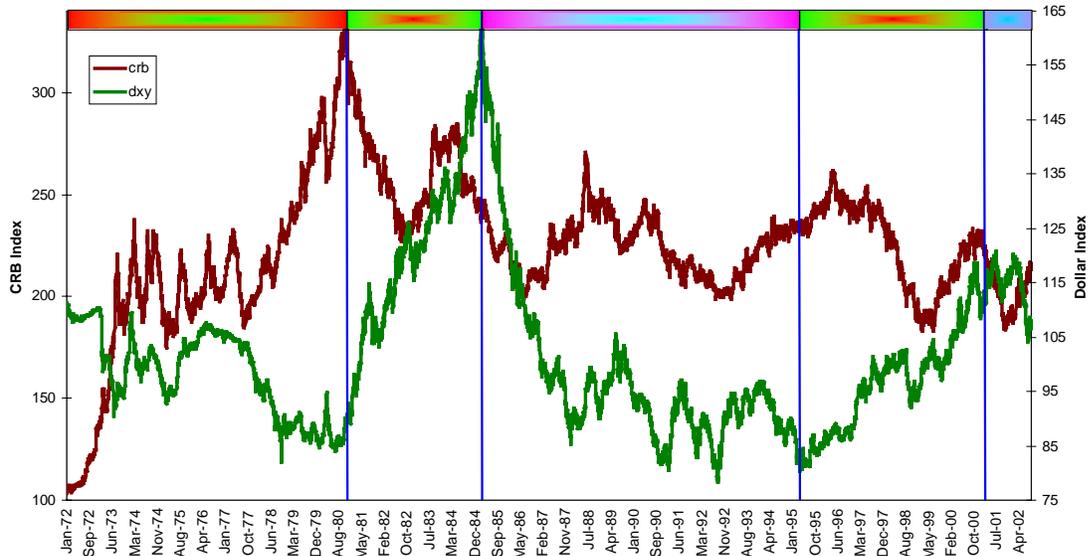
As the nature of the economy changes, so too does the influence of interest rates. It used to be that housing and automobiles, two very high-multiplier industries, controlled the course of the economy. So long as the Fed could control consumer credit flowing from its member banks, it could control marginal demand in these sectors. Now, however, mortgage lenders employ interest rate derivatives to offset the Fed's depredations and funding for housing comes more from government-sponsored enterprises like Fannie Mae and Freddie Mac, who in turn securitized the loans and sell them to investors, than from depository institutions. A similar process operates in automobiles, where the auto manufacturers have taken over lending and also both hedge their rates and securitized their loans.

In addition, neither technology nor services are particularly interest rate sensitive sectors. If the returns are there on servers and routers, no interest rate short of bizarre will squelch demand, and the opposite holds true if demand is slack.

The Dollar And Commodities

The trade-weighted U.S. dollar has passed through five broad regimes in the past thirty years. The first, which ended with the Reagan-Volcker combination of contractionary monetary policy and expansive fiscal policy, saw surging commodity prices as the dollar fell. This pattern reversed into 1985 as the dollar surged. The third dollar regime, which ended with the Clinton-Greenspan combination of contractionary fiscal policy and expansive monetary policy, saw a combination of a weakening dollar and nearly flat commodity prices. The fourth regime, which ended with the Bush II-Greenspan combination of stimulative monetary policy and stimulative fiscal policy, saw a combination of a strengthening dollar and weakening commodity prices; this period coincided with the series of global financial crises and the advent of the euro that left little alternative to the greenback as a global currency. The final and present regime, which has deflationary overtones within a weak economy, has seen commodity prices and the dollar oscillate about within opposite directions.

Soft Paper And Hard Assets

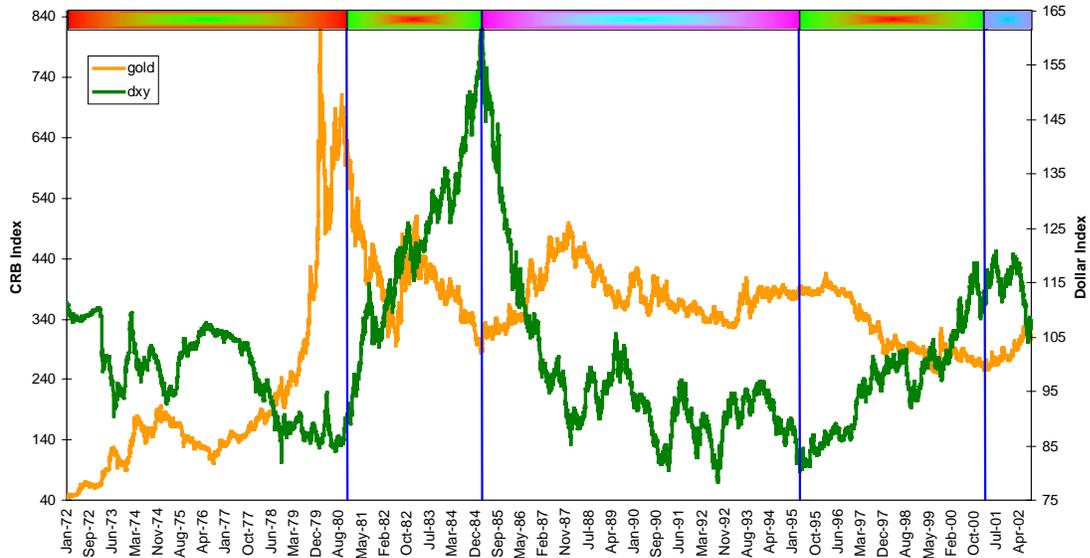


The history of the post-Bretton Woods floating exchange rate regime confirms 1999 Nobel Laureate Robert Mundell's thesis that the course of the dollar is more of a function of economic policy mix than anything such as the current account balance or even interest rate differentials. Indeed, the U.S. has not experience a single month of trade surplus since April 1976, and its strength against the euro increased in the face of negative interest rate differentials well into 2001.

The inconsistent relationship between the dollar and commodity prices can be explained in terms of inflationary expectations and incentives for production. The third dollar regime noted, between 1985 and 1995, saw stable commodity prices even as the dollar lost nearly half of its value as inflationary expectations fell and as pro-market policies enjoyed a global ascendancy.

Would the same conclusions apply if we restricted the commodity part of this relationship to gold, as was Murphy's original emphasis? After all, gold is not subject to weather factors, as are grains, or to cartel economics, as is crude oil. The dollar-gold relationship is somewhat more predictably inverse, but not significantly so. In other words, there's just not as much special about gold as its devotees would like to proclaim.

The Golden Constant

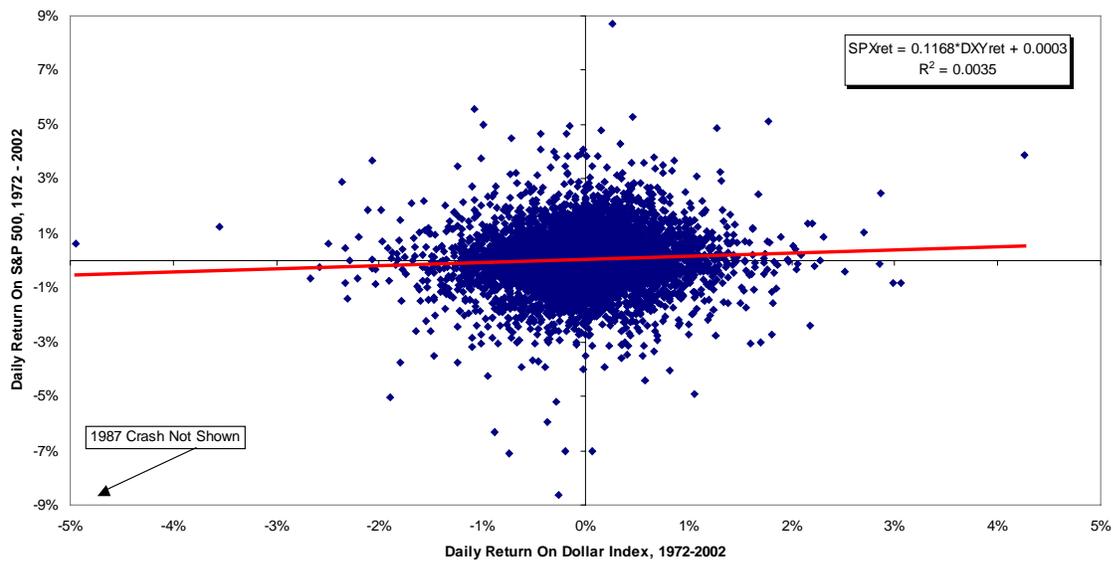


The Dollar And Financials

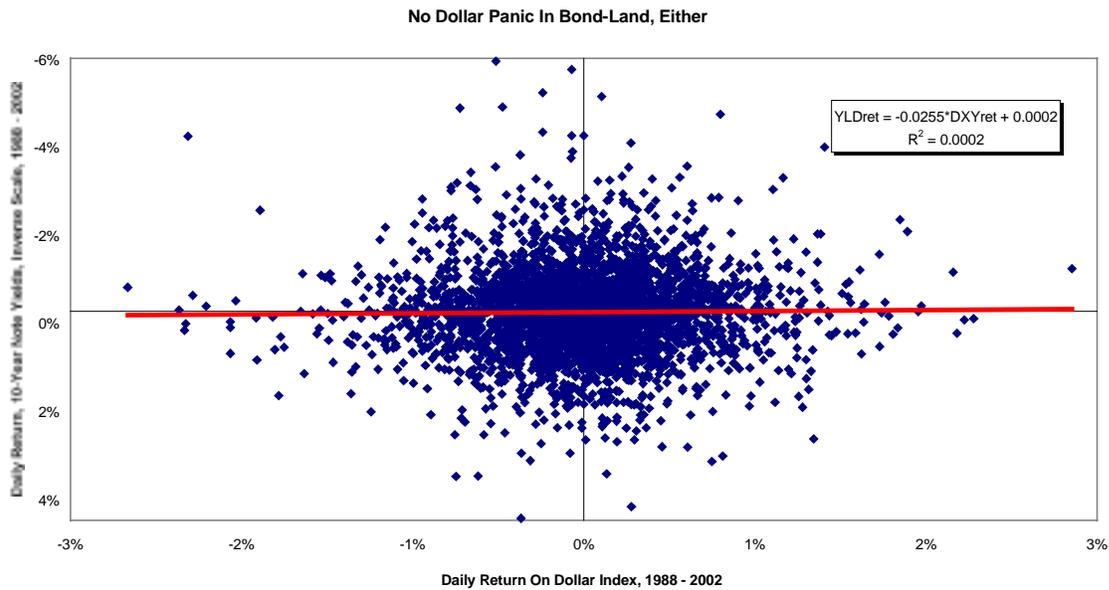
Over the years financial pundits have expressed dire concern over the relationship between the dollar and, depending on the topic du jour, either the stock or bond market. Such fulminations constituted prima facie evidence of either ignorance of economics or an unwillingness to conduct even the most basic statistical research. Why? Let's take the old worry about the Japanese selling our Treasury bonds whenever the yen strengthened against the dollar: If we restate the U.S. current account deficit as the U.S. capital account surplus, which is an accounting identity, we can see that a repatriation of funds to Japan would lead to a cessation of exports by that export-dependent country. That simply would not be allowed – and given the Japanese one-party state, “allowed” is the correct word – to happen.

Now let's add some statistical evidence. Over the 31-year period from 1972-2002, inclusive, and blending over all of the various policy regimes noted above, can we find a significant relationship between the daily returns on the S&P 500 and the daily returns on the dollar index?

Where's The Deterministic Relationship?



Not really: There is a positive coefficient between the two variables, but with an r^2 of only .0035, we cannot conclude anything. Can we find a relationship of significance between the dollar and daily changes in interest rates? No, the relationship over the shorter 1988 – 2002 period is statistically insignificant here as well.



It's Different Each Time

Intermarket analysis, like religious study, should convince its practitioners that the more you learn the less you can state with certainty. Our mythical blind men, given time, would have been able to grasp the elephant's size and shape, and in a significant departure from our modern-day commentators who should speak with less certainty and work with greater diligence, they would have learned where and where not to step.

Every day and every market is different; simply citing historic parallels ("don't worry, Mrs. Johnson, the market hasn't had three down years since 1941...") may give you a start, but it is far more important in this game where you finish.