

Stocks Float On A Sea Of Bonds

Mention the word “bonds” to any futures trader and you will get an immediate word association. The only change in this reflexive response over the past quarter-century has been a shift of attention away from the long Treasury bond futures contract and toward the ten-year Treasury note contract.

Now ask these same traders, yourself even, what is the effect of these bonds on the fortunes of stock indices? If anyone can provide you with a swift and single answer applicable across all times and all market environments, be suspicious. After all, many traders remember the ancient days of the 1980s. In that long-ago epoch, bond futures rallied when crude oil prices fell and the biggest end-of-day rallies in the S&P futures occurred when bond futures closed on their highs. Quite the opposite has occurred in 2004-2005.

But stock *indices* are not individual stocks, or economic sectors and industry groups within the stock market. Yes, on any given day all manner of stocks can rise and fall quite rapidly as program trades sweep through the market, but over longer periods of time it is the fortunes of individual stocks, sectors and groups that determine where the indices are headed. As the wags might say, it is a market of stocks, not a stock market.

The bonds most important to stock traders are not Treasuries but the corporation’s own bonds and the spread to which they trade against Treasuries. If we understand what drives these corporate spreads and the rapidly growing market of credit derivatives, we can understand one of the fundamental drivers of stock prices much better. Metaphorically, stocks float on a sea of corporate bonds.

If a corporation’s bonds are in trouble, the stock will suffer until and unless it is rescued by a merger or a leveraged buyout. The opposite is not true: If a corporation’s stock is falling, the bonds can continue to do fine just so long as the market believes the corporation will be able to repay its debt. So let’s find out what factors external to the corporation drive corporate bonds.

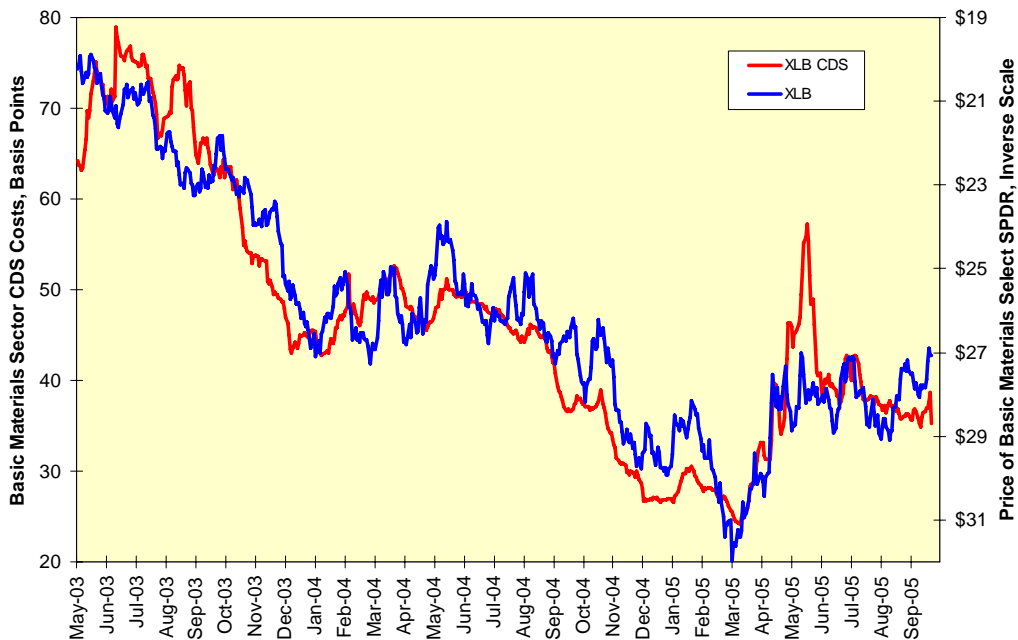
Default, Dear Brutus, Lies In Our Bonds

Every now and then a market arises in which the tail wags the dog. The market for convertible bonds, bonds which can convert into stock under certain conditions, is one example of this phenomenon; it is estimated more than 85% of the convertible bonds issued are bought and traded by hedge funds. They demanded a plaything and Wall Street heeded the call, pun intended fully: A convertible bond can be decomposed into a corporate bond plus a call warrant on the issuer’s stock.

The corporate bond market is in the process of becoming the wagged dog, an image most of us could do without. The tail is an ingenious instrument called the credit default swap, or CDS. This is nothing more than an insurance contract issued by a writer to pay the investor the full or “par” value of the bond in the event of default. It serves the same basic purpose as a put option on the bond. CDS prices are quoted in basis points, or .01% units of the dollar amount being insured, usually a minimum of \$10 million. And this market is getting big, perhaps too big: Some estimates of its notional value are \$2 trillion, and if we have learned anything in the history of financial engineering and fancy-pants trading it is the smarter you think you are, the bigger your mistakes will be.

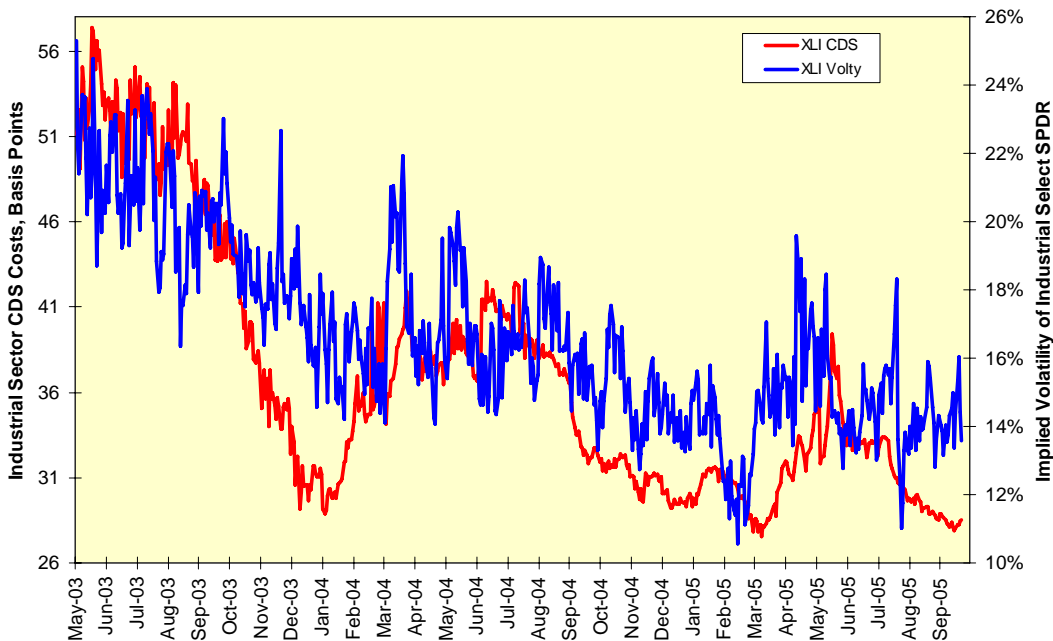
How well do these CDS costs lead changes in stock prices? Let’s take one step up down from the entire S&P 500 to an industry sector, Basic Materials, for an illustration. This sector, which includes such household names as Dow Chemical, Du Pont, Alcoa and Phelps Dodge should be near and dear to the hearts of commodity traders. These firms either produce the physical commodities we know and are alleged to love, are big consumers of commodities in their processes or both. An exchange-traded fund, the S&P Basic Materials Select SPDR, trades under the ticker XLB. If we aggregate the five-year CDS costs for firms in this sector into a capitalization-weighted index, we see how lower CDS costs lead price increases on the XLB, and vice-versa.

Chart 1: Price & CDS Comparisons For S&P 500 Basic Materials Sector



Given that CDS represent insurance costs on a corporation's bonds and options represent an insurance cost on the corporation's stock, we should expect to see a general correlation between the two. Let's use the S&P Industrial Select SPDR, which trades under the ticker XLI, for this comparison. The option volatility series is irretrievably noisier than the CDS series – options expire on monthly cycles while the CDS contracts used run for five years – but the relationship is still visible.

Chart 2: CDS And Option Volatility For S&P 500 Industrial Sector



External Drivers Of CDS

Now let's return to the analytic format introduced last month (see "Tracking Market Factors' Impact On Stocks," October 2005). If we can explain stock price movements down to the industry group level with a set of market

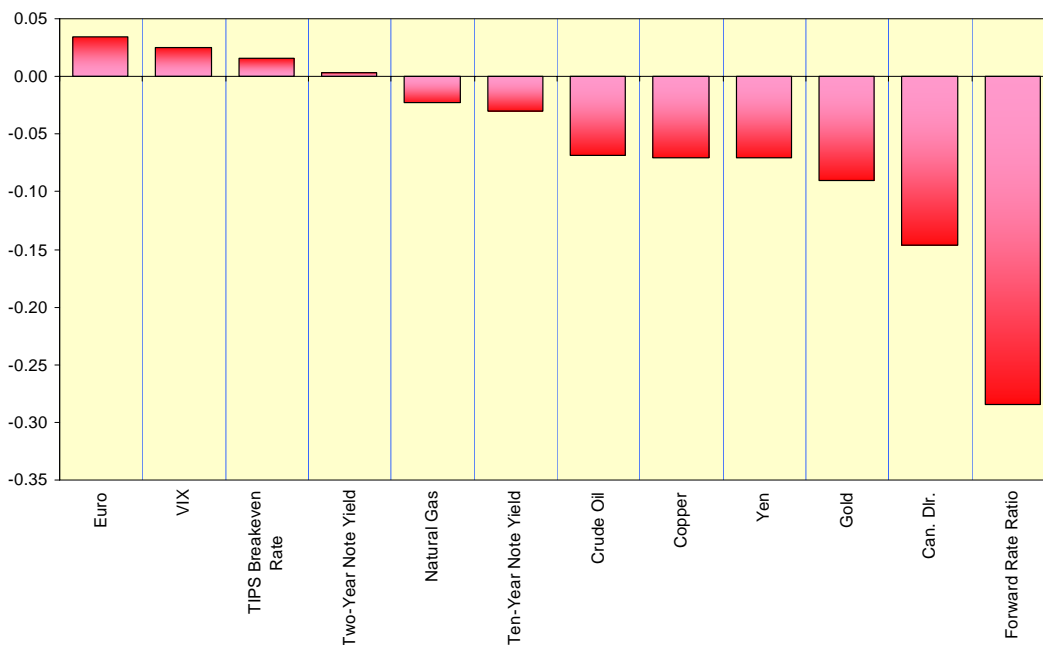
factors, and if CDS levels can explain sector price movements, it should stand to reason these same market factors can drive CDS costs.

Once again, the commodity-linked Basic Materials sector can provide the best illustration. If we regress the XLB's CDS levels against each one of the 12 market factors listed in Chart 3, we can extract a beta, or relative relationship between the CDS and each factor. A negative beta means that as the factor rises, the cost of insuring that sector's corporate bonds falls. In the case of the XLB, we should expect to see negative betas for factors such as natural gas, crude oil, gold and copper, and we do. Only a handful of factors, such as the euro, the VIX, inflation expectations as measured by the TIPS market and two-year note yields produce greater financial stress on the XLB's members.

What is the biggest single negative beta in the set? The shape of the yield curve, as measured by the ratio of the forward rate between two- and ten-year note yields divided by the ten-year rate itself. As the yield curve gets steeper, meaning long-term interest rates are either falling more slowly or increasing less rapidly than short-term interest rates, CDS costs in this sector fall. But as the yield curve gets flatter, something that has been going on since early 2004, financial stress in the Basic Materials sector rises.

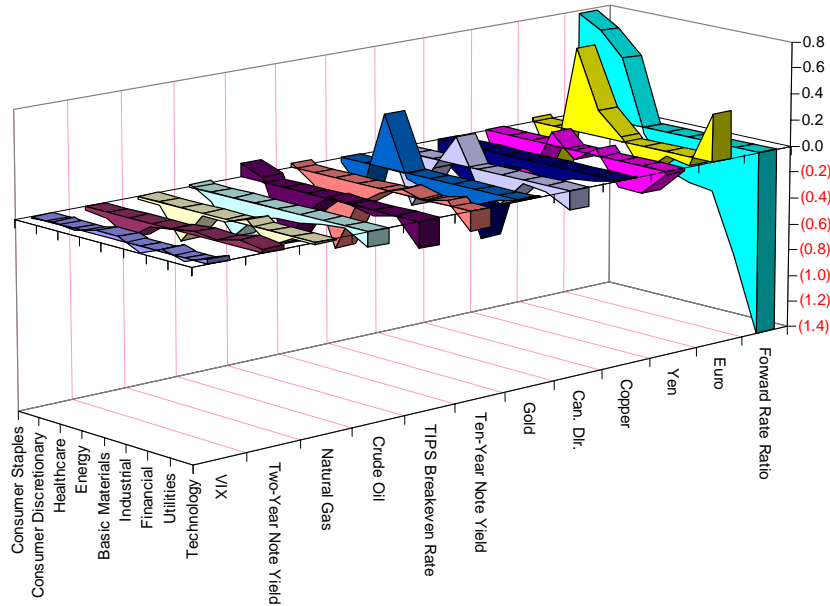
Number-crunching always yields surprises. While everyone is obsessing about the impact of rising energy costs on stock prices, it turns out the yield curve, something influenced by our good friends at the Federal Reserve, has the greatest proportional impact on Basic Materials.

Chart 3: Beta of Basic Materials CDS To Selected Factors



Is the Basic Materials sector an isolated example? The only way to find out is to run a regression analysis of all the Select SPDRs against all 12 of the market factors. The results are presented in Chart 4 sorted by which factors have the greatest influence on sector CDS costs, and are a little bit surprising. Some factors we might expect to be linked to higher levels of financial stress, such as the VIX, or to higher operating costs, such as natural gas and crude oil, scarcely are important.

Chart 4: Importance Of Market Factors To CDS Levels



It is the financial factors on the right-hand side of the chart, such as the yen, euro and the forward-rate ratio, that are critical. The beta values for these three factors are listed below for clarity. Once again, a negative value means that as the factor rises in price, CDS levels fall.

	Yen	Euro	FRR
Consumer Staples	(0.016)	0.030	0.779
Consumer Discretionary	(0.453)	(0.342)	0.680
Healthcare	(0.319)	0.647	0.502
Energy	0.104	0.203	(0.050)
Basic Materials	(0.071)	0.034	(0.285)
Industrial	0.052	(0.193)	(0.352)
Financial	(0.204)	(0.036)	(0.373)
Utilities	(0.203)	(0.071)	(0.824)
Technology	(0.025)	0.360	(1.390)

A stronger yen is associated with higher CDS costs and therefore greater option volatility and lower stock prices for just two sectors, Energy and Industrial. Every other sector appears to benefit from a higher yen. The euro is different: A stronger euro is a negative for Consumer Staples, Healthcare, Energy, Basic Materials and Technology.

But it is the forward-rate ratio, depicted in Chart 5 that really swings the corporate bond market around. The sectors hurt by the flatter yield curve are the two Consumer sectors and the Healthcare sector. With the exception of Energy, that is pretty much everything you buy on a day-to-day basis. Sectors whose companies can pass costs on well, such as Utilities and Technology, have not been hurt by the Federal Reserve's tightening.

Chart 5: The Forward Rate Ratio



Film directors are fond of the technique called “misdirection.” Remember all those pie-throwing scenes in *The Three Stooges*? The victims were told the pie was coming from the left when it was in fact coming from the right; there was no other way to get the look of surprise. Financial markets have been involved in a similar misdirection. For all of the worry about energy prices and how they will affect the consumer, it is the shape of the yield curve that really affects the stress levels of corporate bonds. And unless those bonds behave themselves, neither will the stocks.