

Convertibles: You Can Run, But You Can't Hide

With apologies to the Rolling Stones...

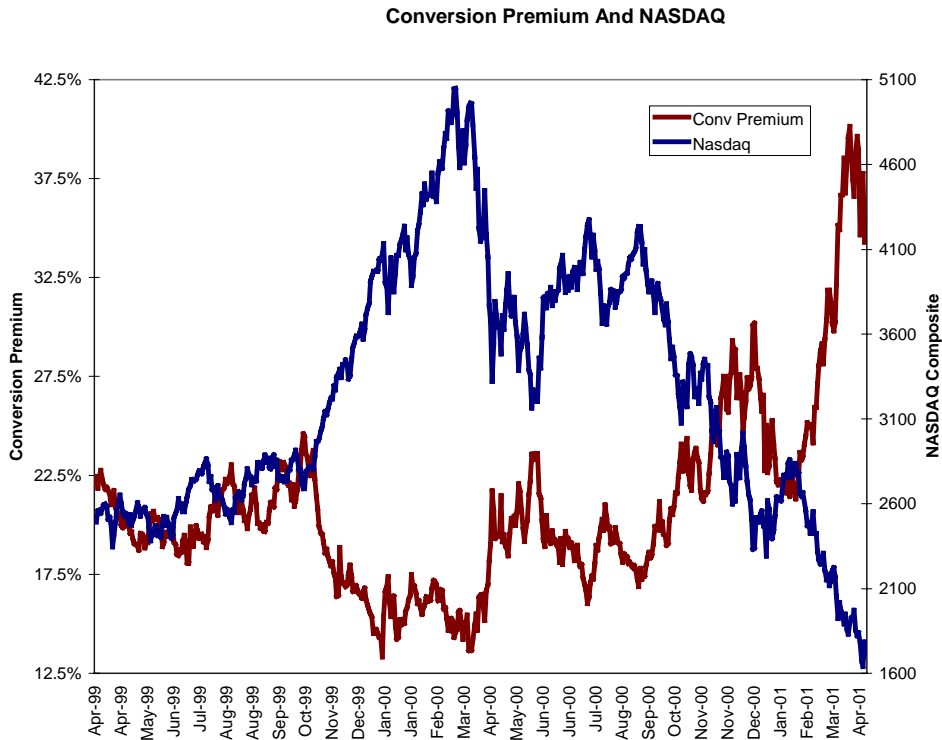
Ooh, the bear is threatening all my stocks today
If I don't get some shelter, oh yeah I'm going to fade away
Crashes, losses, they're just a trade away, they're just a trade away!
Crashes, losses, they're just a trade away, they're just a trade away!

Mmm, recession's threatening, our very jobs today
Gimme, gimme shelter, I want to work today!
Crashes, losses, they're just a trade away, they're just a trade away!
Crashes, losses, they're just a trade away, they're just a trade away!

I said, bonds, sister, they're just a buy away, they're just a buy away!
Options, sister, they're just a buy away, they're just a buy away, yeah!

Maybe there's no such thing as a free lunch, but we'll never stop trying to get one. Convertible bonds always have been sold as a fundamentally defensive instrument, one that won't give you the upside of their underlying equities. The implicit promise of downside protection is proffered, but this is a mirage: Convertibles are corporate securities, issued by rather mortal legal "persons."

As outlined last month, (see "Convert To The Cause," *Futures*, May 2001) a convertible bond can be regarded as a combination of a bond and a long-dated call option, or warrant. As the stock rises to the conversion price, the convertible bond starts to act more and more like the stock. If, however, the stock falls, the convertible will trade more like a bond plus an out-of-the-money call option. The value of the convertible can be maintained to a certain extent by higher volatility, which normally accompanies stock declines, but this game is limited. Should the conversion premium, the conversion price less the price of the underlying common stock, rise much past 45%, the convertible is called "busted."



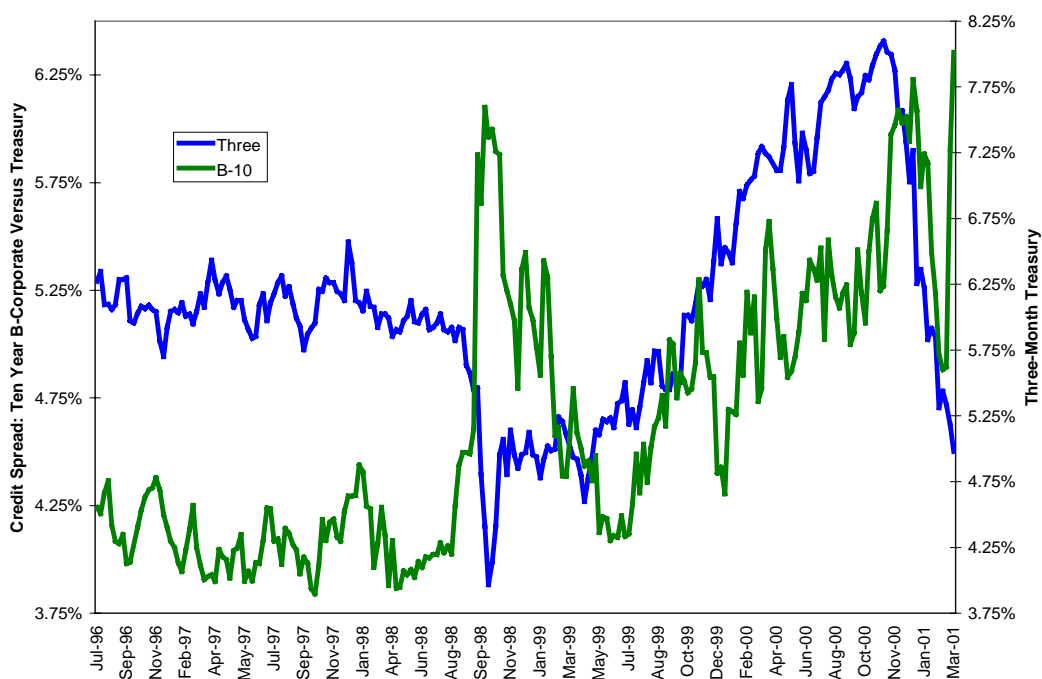
Conversion premium data for the Goldman Sachs/Bloomberg 100 U.S. convertible index (GSCNV), which are available back to April 1999, indicate an inverse relationship to the NASDAQ Composite. This is similar to the relationship between the CBOE's volatility index (VIX) and large-capitalization stocks (see "Crying Over Spilled

Milk," *Futures*, February 2001, or "Nothing To Fear," *Futures*, May 1999). Once the NASDAQ began its ascent in October 1999, the conversion premium began a near-perfect inverse relationship to the index. By March 2001, the entire GSCNV was approaching busted levels.

It's dangerous to interpret the large conversion premium on the GSCNV as the sign of a market bottom for two reasons. The first is the convertibles are trading near their downside protection limits, their value as bonds, plus high-volatility out-of-the-money call options. Any further deterioration in the stock market will expand the conversion premium automatically and without a defined limit, so the more hopeless a stock becomes, the more attractive its convertible would appear by this naive measure.

The second reason to ignore conversion premium as an indicator is these instruments' status as corporate securities carrying the credit risk of the issuer. In times of recession or financial crisis, the yield spread between lower-grade corporate bonds and Treasury securities can expand even as the Fed drives interest rates lower, as seen in "Flight To Quality." Indeed, one impetus for the Fed cutting rates in the fall of 1998 was these wide credit spreads.

Flight To Quality



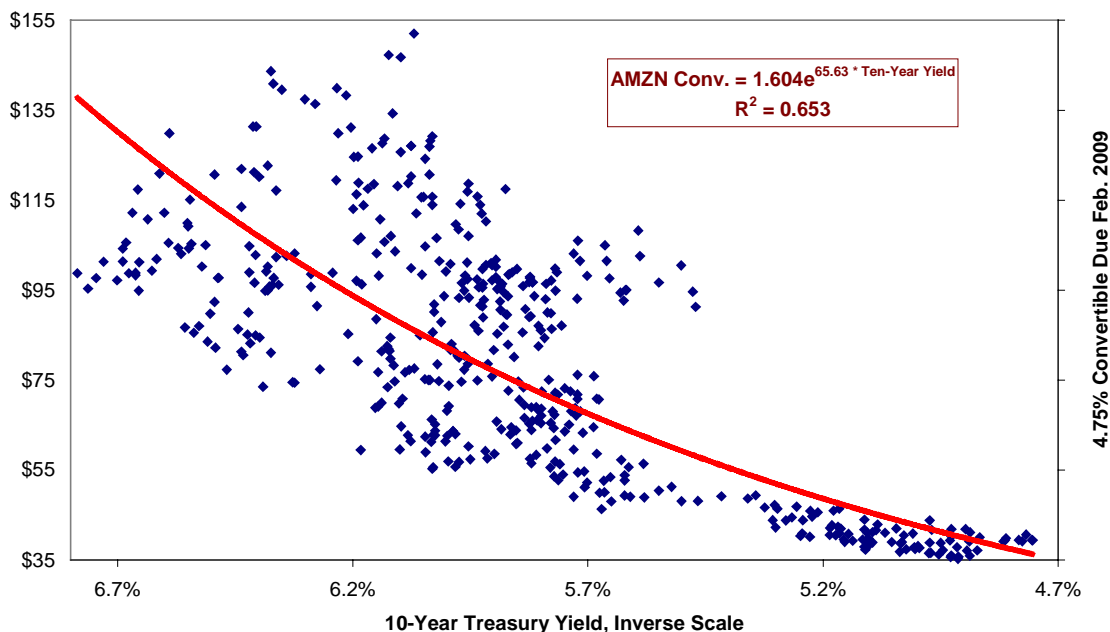
Corporates, Convertibles, And Futures

Sir Nathan Rothschild declared the time to buy is when there's blood in the streets. Someone else's, not yours. While the purchase of low-grade corporate bonds during times of financial stress can be a winning strategy, it's hardly one for the timid. Not only is it subject to default risk for the underlying issue or issues, it's subject to the macroeconomic risks of the financial stress not getting worse and to the interest rate risk of money flowing out of bonds once fear subsides.

The yield spreads between corporate and Treasury bonds, or credit spreads, are spreads are between related instruments. This means they can trend for long periods of time, have neither an embedded option nor a mean reversion process (see "Think Before You Spread," *Futures*, April 2001). Worse, the interest component of convertible issues often is unhedgeable by conventional means. All past attempts at corporate bond futures have failed miserably, and Treasury bond and note futures are a poor substitute. In addition to the basis risks injected by corporate specifics and duration mismatch to the Treasury contracts, the volatilities of corporate and Treasury bonds are mismatched as well. Regression-based hedges depend on explaining the variance in the dependent variable with the variance in the independent variable. However, Treasury volatility tends to rise as yields fall, while the opposite is true for corporates and convertibles.

As a result, potential exchange traded hedges of convertible bonds collapse into nonlinear relationships with non-uniform variance (heteroscedasticity, for you statistics buffs). We can illustrate this by plotting the price history of an Amazon.com 4.75% convertible bond due February 15, 2009, and convertible into 12.816 shares against the yield on 10-year Treasury bonds. Yield is used instead of price because of the change in futures contract specifications starting with the March 2000 contract. At the time of this writing, the issue was rated Caa3 by Moody's and CCC+ by S&P, and it carries a whopping 150.6% conversion premium.

A Non-Hedge: Amazon.com Convertible Against 10-Year Treasury Yield



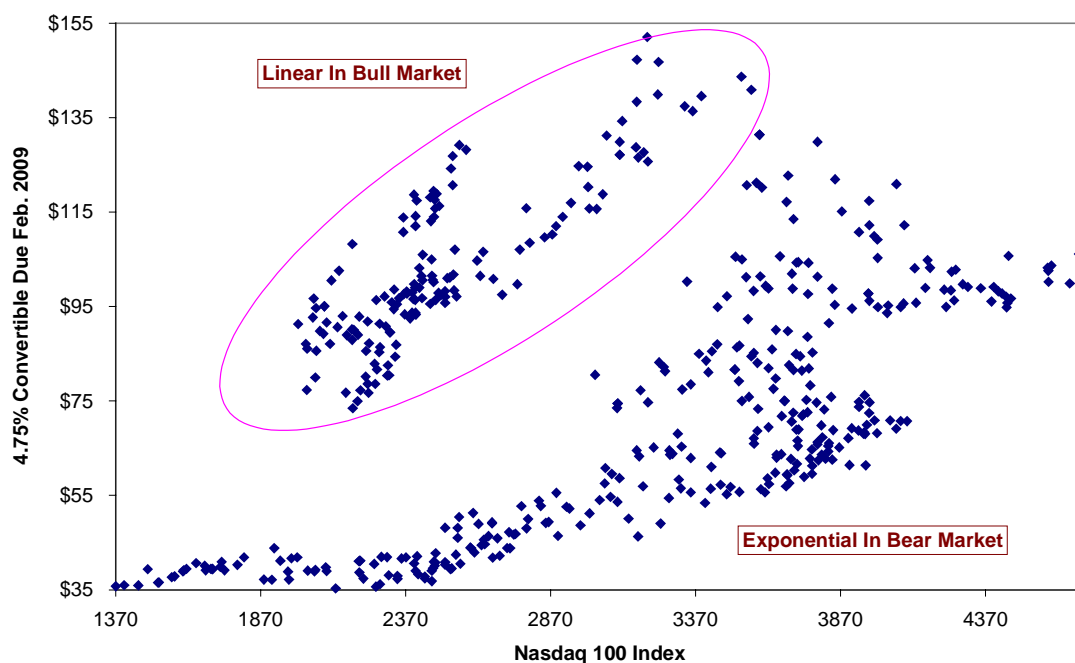
A normal hedge would depict a positively sloped and linear relationship between the convertible bond and the Treasury yield plotted on an inverse scale. A sale of 10-year futures against a purchase of the Amazon convertible would have been wrong on both sides of the trade over the past year: The convertible lost money as Amazon stock slid lower, and the short future lost money as Treasury yields fell.

Convertibles And Index Futures

The experience of the Amazon convertible, and many others like it during the 2000-2001 bear market, indicates that the downside protection afforded by the bond, while present at \$35, does not make the convertible rise in price as interest rates fall. Nor can an increase in volatility by itself support the convertible price in the face of a significant drop in the stock's price.

Should we look to stock index futures, the Nasdaq 100 (NDX) in the case of Amazon, to provide a hedge? Let's decompose this risk into separate pieces. A short stock index future can be restated synthetically as a short call option plus a long put option. Subject to basis risk – and the correlation between Amazon and the NDX seldom exceeded .86 even over short periods – this hedge combination will exhibit trend-dependent behavior, as illustrated in "Separate Markets, Separate Hedges." Both a short sale of the stock or a single-stock future, if and when they arrive on the scene, will make the basis risk to index futures disappear as a concern.

Separate Markets, Separate Hedges



While both Amazon, a poster child for the Internet bubble, and the NDX were rising in tandem, and the conversion premium on the issue was low, the relationship was reasonably linear. This is the downside of hedging: The hedge instrument's losses offset the underlying assets gains. Once the party was over, both the NDX and Amazon came unglued together, but the convertible held its value during the NDX's most pronounced declines in late 2000 and early 2001. This is a bonus situation: The short NDX / long convertible turned into a put option.

Some major words of caution are in order. First, the ascent and descent of the technology sector from October 1998 to April 2001 was a once-in-a-lifetime situation. While we're never supposed to guarantee anything in this business, no one reading this will see the likes of what we've just experienced again. This short future / long convertible bond position may not come across your radar screen until the start of the next major bear market, and who knows what the world will look like at that point?

Second, consider what will happen to the long convertible / short NDX position should the market reverse suddenly. The NDX futures will lose one-for-one with the rise in the index, but the convertible bond will trade like an out-of-the-money call with declining volatility. This net loss could be offset by selling put options on the NDX, but please don't do this: There are lots of ways to lose money in a hurry in this business, and writing puts on stock index futures is one of the best. Just buy the short NDX future back, at a loss if necessary, and take advantage of the convertible's limited loss qualities.

Undercover Writers

If exchange-traded stock index and bond futures do not provide stable and risk-reducing hedges against convertible bonds, do these complex and feature-laden instruments still have a place in our portfolios? Absolutely; investing first and foremost is the attempt to maximize return for a given level of risk. At the end of every market downturn, investors realize, or should realize, their real prize was or should have been the call option embedded in every stock. Buying calls and investing the rest in T-bills or bonds, in whatever form the exercise takes (see "Real Men Don't Index," *Futures*, April 1996 special issue) is a difficult and expensive program to manage.

Convertibles wrap the bond and call option together. Once volatility surges, the urge to sell it becomes extreme; in the case of the Amazon, the implied volatility for the underlying stock is 118% at the time of this writing. Small wonder many professional convertible bond traders sell short-term call options on these bonds in the over-the-counter market. A long busted convertible plus a short call option leaves us with a short put option on a bond trading near its downside protection level. This covered write trade is nothing more than the market paying you a

high and rapidly-decaying premium on your bet the underlying company won't disappear in the meantime. There are worse trades out there, and most of us have participated in a few.