Using Options To Trade Index Spreads

Bet you didn't think I knew how to rock 'n' roll,
Oh, I got the boogie-woogie right down in my very soul
There ain't no need for me to be a wallflower
'Cause now I'm living on blues power.

– Eric Clapton and Leon Russell

When a squid gets in trouble, it squirts out ink, which dissipates quickly in the ocean's vastness. We writers also squirt ink under similar circumstances, but thanks to the Internet it never really disappears. Imagine my surprise when I got an e-mail last week from Guatemala inquiring about an article published elsewhere in October 1998, wherein I described the option embedded in the spread between the Dow Jones Industrial Average and the S&P 500.

For reference, an embedded option is created by an asymmetric distribution of returns; typically, the return is bounded at one price extreme and unbounded on the other. For example, the refining margin or "crack spread" between heating oil and crude oil contains an embedded call option: The margin can rise very quickly to high values, but has a natural floor defined by refining economics below which it does not trade. Embedded options often are found in trades between any two assets with different volatilities.

The ancient passage circulating amongst Guatemala's Mayan ruins was:

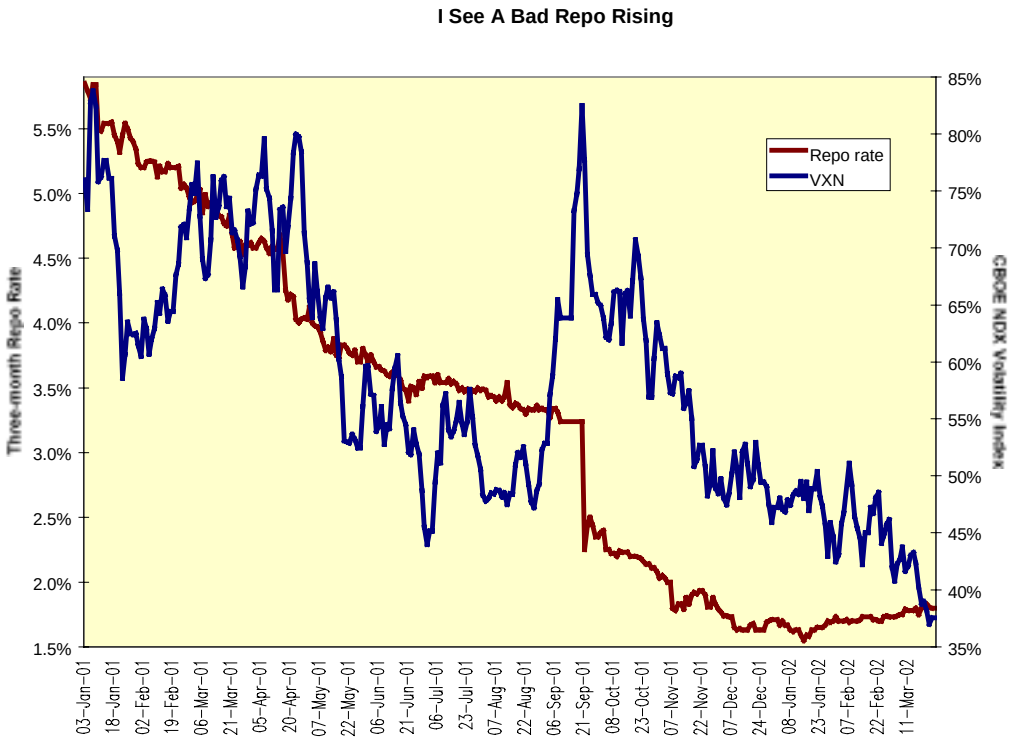
> A more efficient capture of the optionality embedded in the spread between the two indices can be effected, unsurprisingly, by using options. Using data from the close of business on August 5, 1998, when the September S&P 500 and DJIA futures settled at 1088.50 and 8605, respectively, the following trade is suggested:
>
> **Sell 1 Sep. S&P 500 1090 straddle at $60.2 for a credit of $1,505**
> **Buy 3 Sep. DJIA 8500 / 8700 strangles at $50.75 for a total debit of $1,523**

The positions, including the strikes and the trading ratio, were calculated by my Dynamic Option Selection System (DOSS). This tool, the legacy of my wild-and-crazy days as a trader referenced above in opening stanza of "Blues Power," creates a position with the maximum expected return for a given level of cost and risk.

It's A Market Of Volatilities...

While volatility in the stock market generally has declined since September 2001, the descent has not been even across major indices. The simplistic interpretation of this is that we're cruising for a bruising, that the lack of fear signaled by low volatility is somehow an affront to the gods of investing. While this may turn out to be true eventually, two far simpler interpretations, neither of which risks a thunderbolt from Zeus' hand to your kiester, are suggested. First, let's just accept that the market does not now nor ever does owe us a trend, and that the overall trading range prevailing from November 2001 onwards has frustrated those who have tried to break out of it in either direction.

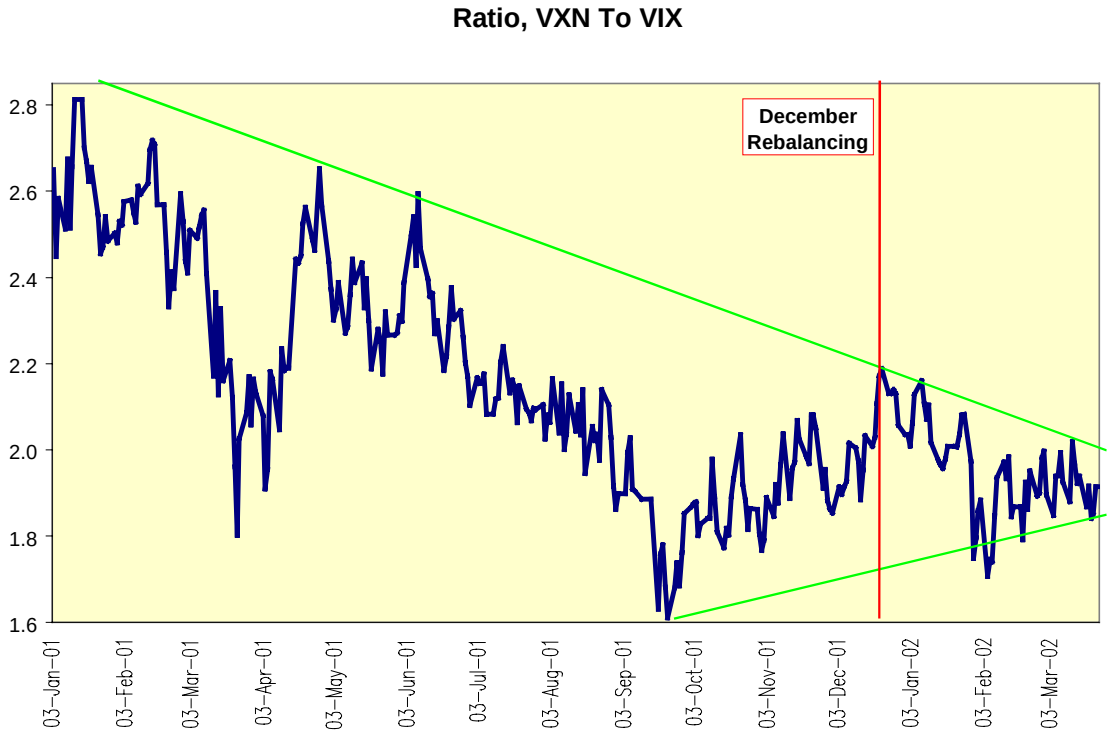
The second reason for the lower volatility is more subtle. Option prices represent a loan; they are the difference between the amount invested in an asset and the amount borrowed. The three components of option time premium, time itself, the risk-free rate and volatility, interact strongly with each other. The four-decade low in short-term interest rates contributes to low option premium values, and it would have taken some extraordinary market movements to offset this effect.



Both the risk-free rate, represented here by the three-month repo rate, and volatility, represented here by the Chicago Board Options Exchange's Nasdaq 100 Volatility Index (VXN) were heading lower into last September. Once the market shock dissipated, the downward trend resumed for the VXN, but repo rates have been ticking higher since the end of January. This suggests that we should be long volatility in at least one index.

...Not A Volatility Market

The long decline of the tech and telecommunications sectors led to a substantial rebalancing of this index in December 2001. Casualties included XO Communications, Ariba, BroadVision, CMGI, CNET Networks, 3Com, Inktomi, Level 3 Communications, Novell, Palm, Parametric Technology and RealNetworks. This isn't your father's NDX anymore; worse, it's not your kid brother's NDX anymore. Going forward, the VXN's premium to the CBOE's S&P 100 Volatility Index, or VIX, may be lower just as a matter of course. That certainly has been the case since December 2001.



Long The VIX, Short The VXN

If the NDX is declining in relative volatility and its volatility is still higher, can we take advantage of this situation? Would I ask if we couldn't? The following delta-neutral, gamma-positive DOSS trade is suggested from the close of business on Friday, March 22:

Sell 1 April NDX 1475 straddle at $9,480
Buy 4 April SPX 1125 / 1175 strangles at $8,680

For those unfamiliar with the terminology above, this is selling both the NDX 1475 call and put for the "straddle" and buying both the 1125 put and the 1175 call for the "strangle." The dollar figures derive from selling the bid and buying the offer, gross of commission.

This trade expires April 20, 2002; I'll report the results afterward. And, as the first quarter of 2002 draws to a close, let me report on three predictions made in my New Year's article, that stocks would outperform bonds, that commodity prices would rise, and that the dollar would weaken. As of March 22, the Wilshire 5000 has risen .646% while the Lehman Brothers Long Treasury index has fallen 1.746%, the Bridge/CRB has risen 6.79%, and the trade-weighted dollar index has risen 1.11% for the only loser.

That's why they pay attention in Guatemala.