

Who Is Squeezed By Yield Curve?

Will it be long before business-oriented television programs start displaying the yield curve in the lower right-hand corner of their screens? There is so much else to hyperventilate over these days, what with gold back over \$500, energy prices still troublesome, many stock indices behaving in a bullish manner and real estate either bubbling or de-bubbling depending on the day the question is posed.

But as a [Columnist Conversation](#) last week confirmed, the yield curve is important in terms of access to capital. It was discussed again in this space just [two weeks ago](#) in the context of which industry groups were affected most. We have every reason to ask why a yield curve flattening, as defined by the spread between the ten-year and two-year Treasury notes, from almost 275 basis points on August 13, 2003 to less than 8 last week has not produced significant damage to the leveraged sectors of the economy. The answer is swap rates have not risen to a damaging level; that and not the yield curve is critical.

Swap Rates

For all of the attention paid to the Federal Reserve's next move, an attention that should [not be as necessary as it is](#), monetary policy does not directly affect the long end of the yield curve. This was always the case, but prior to the growth of financial derivatives, the Federal Reserve could choke off the supply of fixed-rate credit by raising short-term rates over banks' and savings & loans' interest rate ceilings.

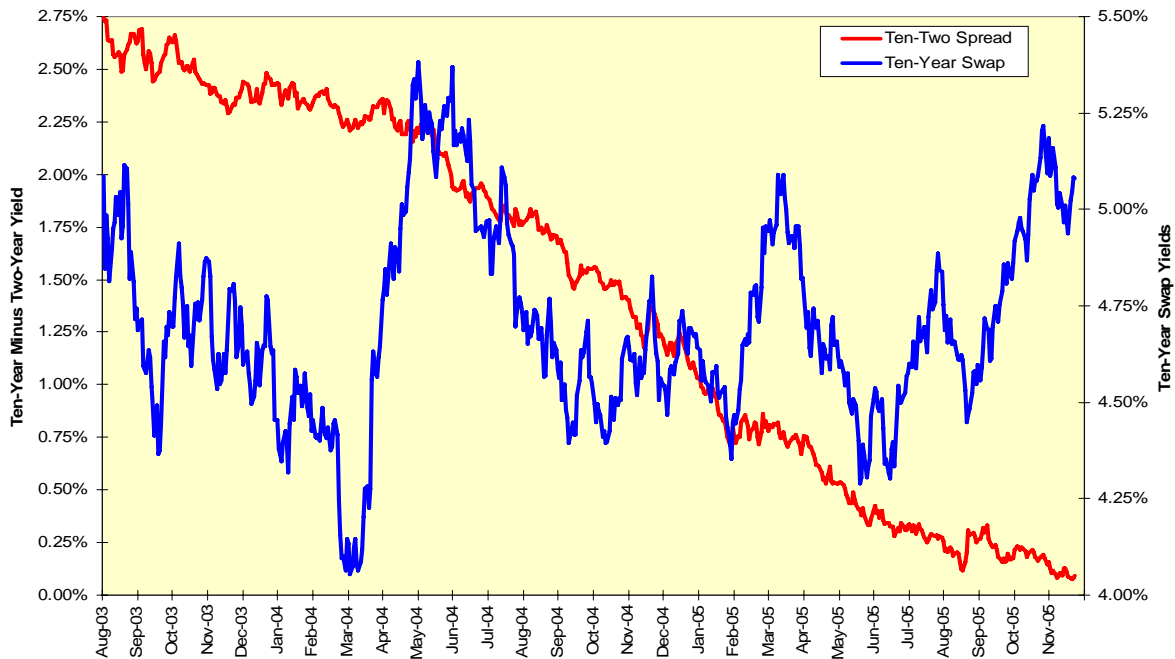
Just as millions of American homeowners have discovered for better or worse in the mortgage market, derivatives allow credit to flow from willing lenders to willing borrowers. We can argue whether the surge in housing prices enabled by such innovations as interest-only or option adjustable-rate mortgages ultimately will be seen as a good thing or not, but the fact remains no one was forced to participate in the mortgage market.

Corporate finance used to be dominated by such relative antiquities as bank loans and fixed-rate bonds. This has been shifting for years to floating-rate debt set against the swap rate. The fixed-rate in the swap market is set by the present value of the yield curve. Both borrowers and lenders price and hedge their swaps by buying and selling strips of three-month Eurodollar futures on the Chicago Mercantile Exchange. If you buy the strip, you are lending at the strip's implied fixed rate; if you sell the strip, you are borrowing at the strip's implied fixed rate.

If you are looking for one of the reasons behind the tenfold increase in the CME's stock price over the past three years, the 9.6 million contract open interest in Eurodollar futures might be a good place to start.

How have these swap rates moved since August 2003? At first, they fell on the order of 100 basis points going into March 2004. Then they shot higher by 140 basis points in just two months. That surge defined the trading range we have been in since May 2003.

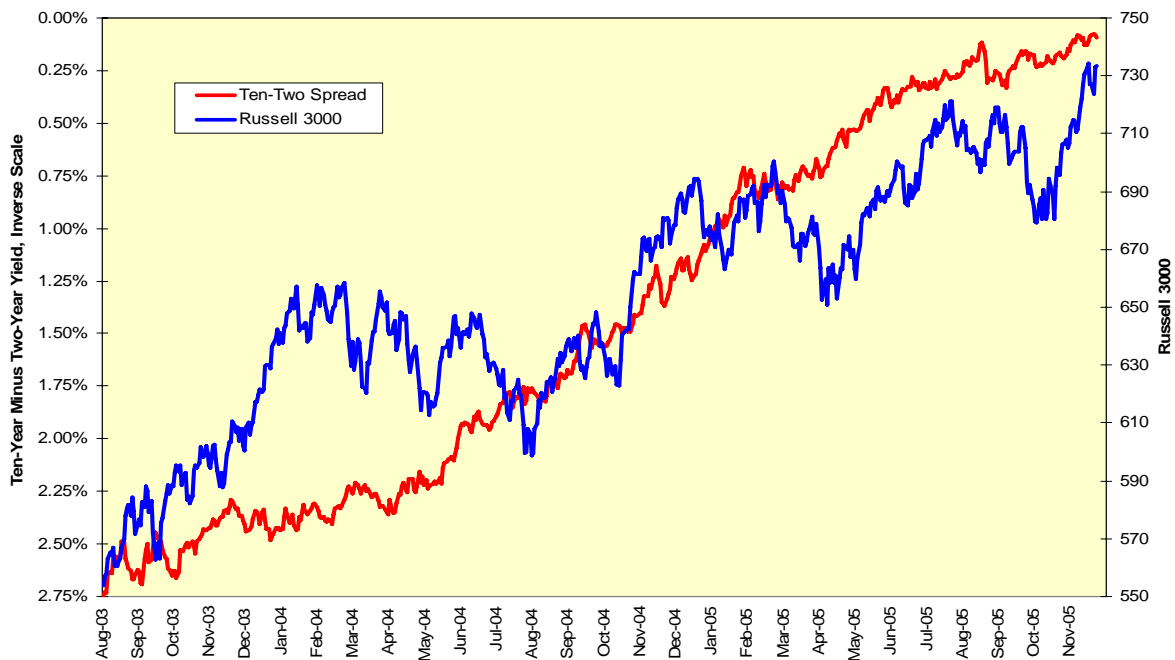
The Yield Curve And Swap Rates



The Curve And Stocks

If long-term swap rates define the cost of capital and have remained in a trading range, then stock prices should benefit to the extent earnings grow and risk-aversion declines. If we map the yield curve spread plotted inversely against the Russell 3000, we see this to be the case.

The Yield Curve And Stock Prices



It would be difficult to argue from the chart above that the flattening yield curve has hindered stocks' ability to advance steadily against a number of other well-known headwinds. The Russell 3000's average annual total return of 14.61% over this period compares very favorably to the average annual total return of -11.66% during the September 2000 – August 2003 period in which the yield curve steepened. Does anyone remember the absolute euphoria associated with the first rate cuts in 2001, especially the unexpected intermediate cuts in January and April? They were greeted as if the cavalry just rode into town, weren't they?

Clues You Can Use

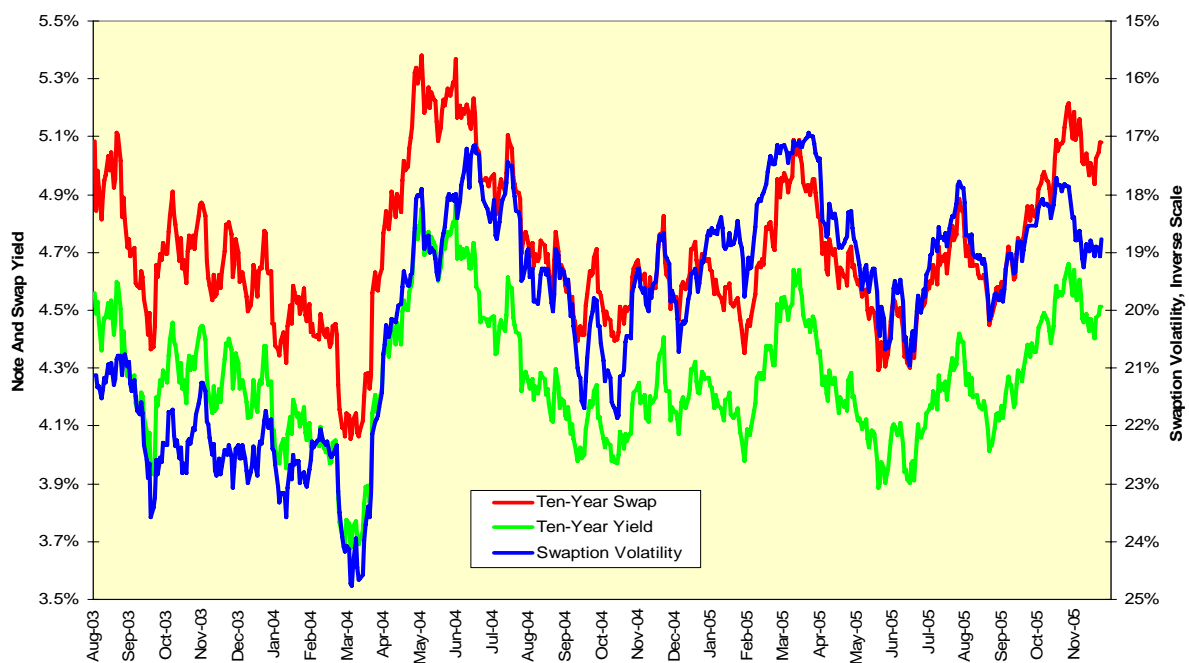
But as that most famous representative of the U.S. Cavalry, George Armstrong Custer, found out the hard way, the attitude of “so far, so good” can produce unwelcome surprises in financial markets. If the Federal Reserve continues to raise rates at the pace implied in the federal funds futures market, a full 4.75% by mid-2006, the very mechanics of swaps mandates higher rates. The present value of the curve will have to rise to accommodate the higher rates at the short end. The only way this will not happen is if the curve goes into a really deep inversion, 50-75 basis points or so.

These higher swap rates will raise the cost of capital, provide yet another headwind for financial assets and increase the incentive to move back to old-fashioned fixed-rate borrowing. Already the spread between ten-year swaps and ten-year Treasuries is expanding.

Does the over-the-counter option market on swaps, or swaptions, market provide us with any clues as to where actual yield levels are headed? A swaption is the right but not the obligation to enter into a swap at some point in the future. A call swaption gives the buyer the right to receive the swap’s fixed rate of interest and pay the floating rate of interest. This is a bullish position in bonds as you profit if rates fall in the future. A put swaption buyer has the right to receive the floating rate and pay the fixed rate; this is a bearish position in bonds as you profit if rates rise in the future.

Swaption volatilities, plotted inversely, have been moving closely with swap rates since the yield curve began to flatten. And the pattern has been for yields to have bottomed at high swaption volatilities and for yield to have peaked at low swaption volatilities. Swaption volatility has not fallen as rapidly as we might have expected since late October, which suggests that either they are too high or swap rates are too high. The most probable convergence given the widening spread between swaps and Treasuries is a downturn in swaption volatility at higher swap rates.

Is Swaption Volatility Too High?



If swaption volatility rises rapidly in a rising rate environment and then turns, then we can start speculating whether the Federal Reserve’s rate-hike campaign is over and whether the yield curve will stop flattening. Until then, the risk is for higher rates and that, and not any particular level of the yield curve, should be the focus of our attention.