

Bonds And The First Rule of Trading

Throw a rock down LaSalle Street, Wall Street or any other thoroughfare infested with trading types, and chances are you will hit a trading system designer. And won't that feel good? The chances are equally high that very same systems designer at some point in his life preached the virtues of multiple-timeframe analysis: Working your way down from a monthly view to a weekly view to a daily view and then onto various intraday segments.

The premise behind multiple timeframe analysis is simple: You have to know whether you are in a bull or a bear market. That is the first rule of trading, and it goes beyond the dictum that in a bull market you have to be long, bull-spread or out. At the risk of inflaming the more doctrinaire technicians, not only are the internal dynamics of bull and bear markets different, they differ across the commodities traded.

Bonds

This brings us to the market at hand, ten-year Treasury notes. There was little doubt between 1981 and 2003 they were in a bull market, spectacular intermediate-term retracements in 1987, 1994 and 1999 notwithstanding. The broad channel for yields, highlighted in magenta, was lower. And, critically, the market continued to make lower highs all the way into June 2007.

The Long-Term Trend In Ten-Year Note Yields



Now let's come to 2003 and its aftermath. Here we can draw a rising channel in turquoise. With the prominent exception of June 2007, the highs were higher. All of the lows have been higher, too.

That lower high in June 2007 muddies the waters as to whether we are in a bull or a bear market. Let's abandon the long-term chart analysis and shift to a pair of fundamental indicators we can read technically, swaption volatility and the term structure of inflation expectations.

Swaptions

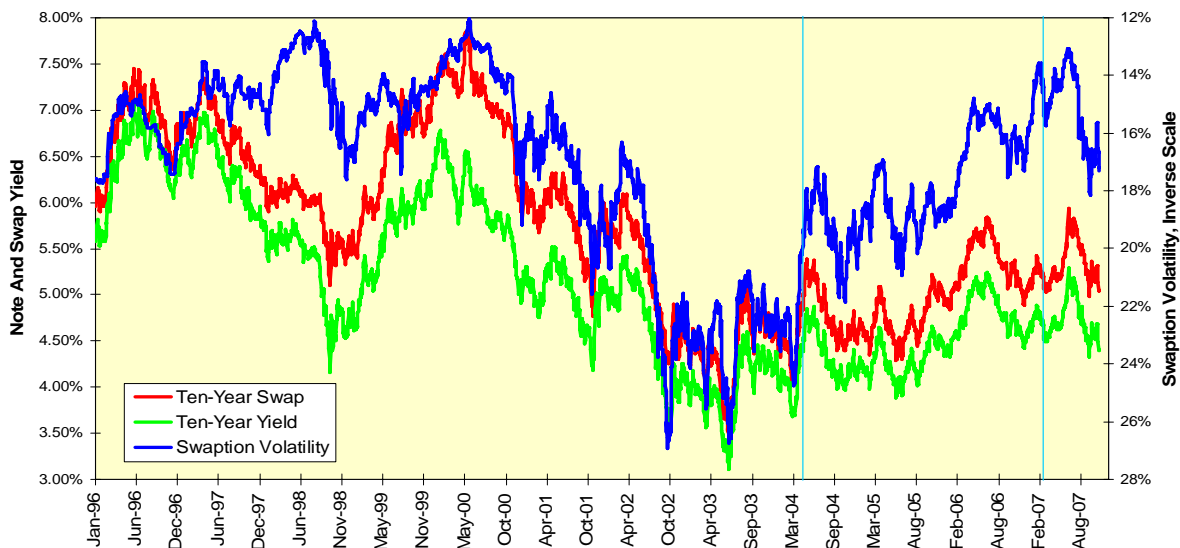
While futures traders think the world reflects active futures markets, this is a view as parochial as the famous Saul Steinberg *New Yorker* cover summarizing the *New Yorker's* view of the world west of the Hudson River. The single-point maturity of a ten-year note future is nice, but most corporate financing terms are set from the ten-year swap rate. This swap rate is the present value of the yield curve out to ten years. Those who are bullish on the bond market elect to pay the floating rate and receive the fixed rate around this swap level, and those who are bearish the bond market elect to pay the fixed rate and receive the floating rate around this swap level.

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.

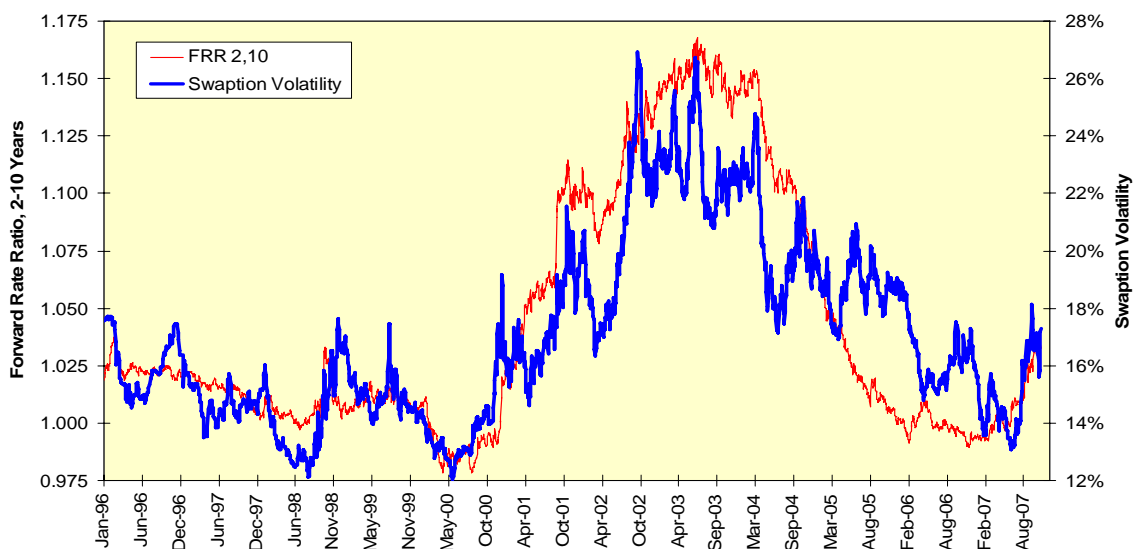
A major divergence occurred between the two turquoise vertical lines. Swaption volatility plunged while both Treasury and swap rates stayed relatively low. This was the period where the yield curve was flattening and inverting under the seventeen consecutive quarter-point rate increases by the Federal Reserve.

Swaption Volatility Fell During Flat Yield Curve Era



We can highlight the strong relationship between the shape of the yield curve and swaption volatility. The yield curve is measured by the forward rate ratio (FRR) between two and ten years; this is the rate at which you can lock in borrowing for eight years starting two years from now, divided by the ten-year rate itself. The more this FRR exceeds one, the steeper the yield curve.

The Yield Curve And Volatility Are Linked



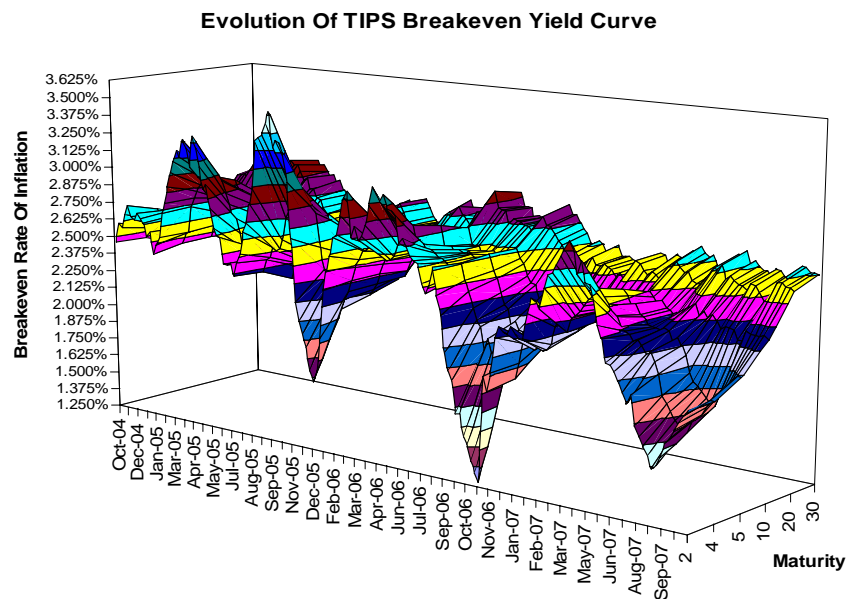
Higher volatility contributes to a steeper yield curve as it widens the range of possible interest rate outcomes and forces bond buyers to demand a higher yield as compensation. This relationship is so strong that any increase in swaption volatility will push the long end of the yield curve higher and lead to higher bond yields – lower prices for futures traders used to thinking in these terms – as a result.

Inflation Expectations

The other determinant of the yield curve capable of forcing the long end higher is expected inflation. This was known for years in theory but was difficult to prove until the Treasury began issuing TIPS, or inflation-protected, bonds in January 1997.

The difference between Treasury yields and TIPS yields is called the breakeven rate of inflation. This measure is surprisingly impure. First, the Treasury rate can plunge quickly in a financial panic as we saw in February, August and October 2007, amongst many other “flight-to-quality” episodes. Second, TIPS yields are buffeted by many embedded options, including the tax rate on the accrual of their principal and your own belief whether the government does a good (honest?) job in reporting inflation. But these breakevens are the best we have to work with, so work we shall.

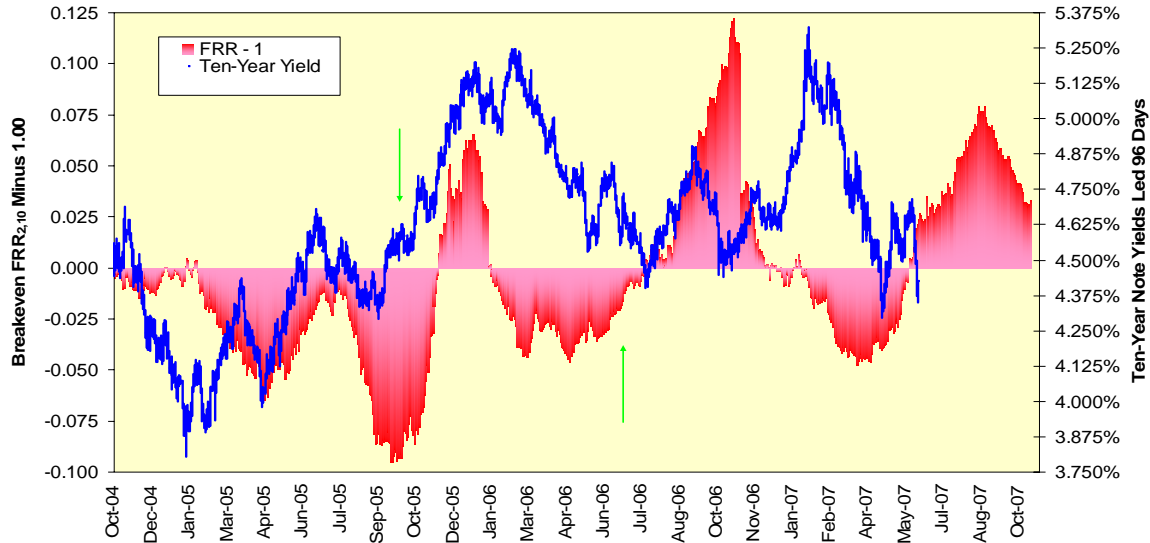
Let’s construct a forward curve of TIPS breakevens. Over the past three years, the term structure of TIPS breakevens has oscillated between an inverted curve, implying declining future rates of inflation, and a positively sloped curve, implying rising future rates of inflation. For most of 2007, this curve has been strongly positively sloping.



If we isolate one segment of this surface, that between two and ten years, we can construct a FRR of inflation breakevens parallel to the FRR for the Treasury yield curve itself. If we display the FRR as itself minus one and map it against ten-year Treasury yields, we see a striking pattern emerge: The FRR of expected inflation leads the ten-year Treasury rate by 96 days on average.

Previous episodes of rising FRR levels, marked with green arrows, have led to increases in ten-year Treasury yields. The configuration as observed in late October 2007 points to a similar episode of rising yields, and this is exactly what we should expect. Rising inflation expectations should lead to a steeper yield curve, and unless this steepness is offset by lower short-term rates, they are bearish for bonds.

The Forward Curve Of Inflation Expectations And Long-Term Yields



Resolving The Conundrum

The American economy has been importing disinflation from China for the better part of this decade. Regardless of any of the macroeconomic causes normally associated with rising inflation flashing red, cheap imports made possible in part by a wildly undervalued Chinese yuan, have held back inflationary pressures in the U.S.

Moreover, the continued huge capital inflows from foreign investors mandated by the large and growing current account deficit have had the odd effect of keeping the yield curve flatter than it would have been otherwise. At some point, however, foreign bond buyers are going to start to demand compensation against rising inflation expectations, rising interest rate volatility and a weaker dollar. All three of those factors will combine to push the long end of the yield curve higher for any level of short-term interest rates.

The question whether we stand at the end of a quarter century-long bull market in bonds or four years into a new bear market in bonds should be resolved in favor of the bear. All short-term trading strategies in bonds and in markets affected by long-term interest rates will need to be adjusted to accommodate this new reality. Violate the first rule of trading and rules 2 through N will not matter.