

Short-Term Rate Expectations And Market Returns

In keeping with the principle the golden age is never the present one, we should disabuse ourselves of the notion investing ever had a golden age of fundamental analysis. Once central bankers turned themselves into central planners, a condition prevalent since the inflationary 1970s, financial markets have been giant guessing games as to their next moves. The financial crisis of 2008-2009 and the response by multiple central banks to push short-term interest rates toward zero percent and to flood their banking systems and monetize their national debts with printed money, a campaign known as quantitative easing, raised the expectations game to a new and celestial level.

This phenomenon has reached a new and perverse level with negative sovereign debt yields, competitive currency devaluations and the fracturing of currency pegs such as the Swiss franc ceiling against the euro. You really have to wonder whether modern central bankers might think if taking two aspirin is good for a headache then taking twenty aspirin must be better.

What was ironic in all of these efforts is central banks claimed to use these market measures to assess how their policies were being received; that they were reading the effects of their own actions often seemed lost upon them. Traders learned how to use federal funds futures to measure expected changes in the effective federal funds rate, but that tool was neutered unceremoniously after the December 2008 adoption of zero percent interest rates. The forward curve of Eurodollar futures retained some value but was plagued by both its links to LIBOR and to its de facto anchoring at the very short end by monetary policies. The Treasury yield curve itself was distorted at both ends by both the zero percent federal funds rate and, after August 2011, by deliberate attempts to suppress long-term interest rates in "Operation Twist." The Federal Reserve dominated the market for both conventional and inflation-protected securities all through the QE era and then they studied the spread they themselves had created for clues on inflationary expectations.

Central bankers had to stare at the mirror, mirror on the wall and ask who was the fairest banker of them all. Moreover, markets had no choice but to price in the desired outcome of all these interventions. After all, sitting down to a poker game with someone who brings a deck full of aces and a printing press is a dicey venture.

All of this makes a quantitative measure for reading a market's expectations increasingly valuable.

Swaptions To The Rescue

Let's stipulate no interest rate market has been able to remain free of these distortions, including the two-year interest rate swaps discussed below. These swap rates often are priced and hedged with Eurodollar futures and therefore are subject to artificially low rates for these "white" and "red" contracts produced by deliberately accommodative monetary policies. The implied yield of these Eurodollar strips is the fixed leg of the swap; receiving the fixed-rate is a long or lending position in the two-year segment and paying the fixed-rate is a short or borrowing position. If someone is borrowing at a floating-rate and fears higher interest rates, a bearish outlook, they might want to fix their payments by paying a premium, the swap spread, to do so. This could be accomplished either in the cash market or by taking a short position in the futures market. A rising swap spread indicates rising bearishness or fear of rising interest rates.

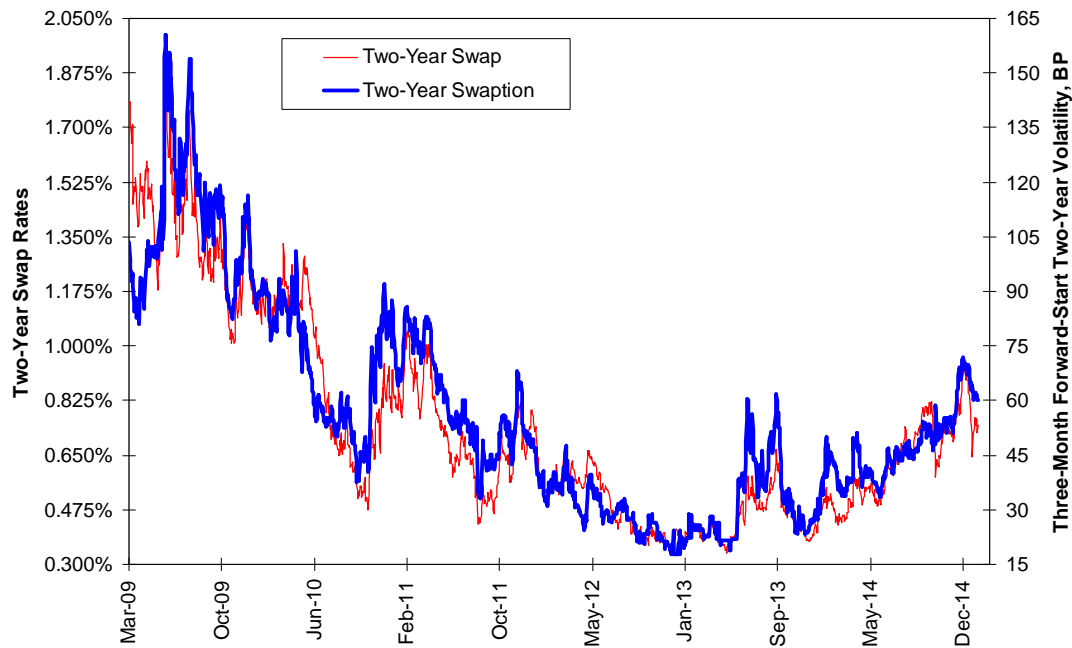
However, just as in the case of all markets supporting options, the pattern of volatility changes often is a more sensitive indicator of relative anxiety. So it is with interest rate swaps. The volatility of an option to enter into the fixed leg of a swap rises as traders buy insurance against rising rates. These swaptions, a clever portmanteau if there ever was one, are a pure and relatively low-cost bet on directional interest rate risk and therefore can be used as a measure of interest rate expectations.

Wall Street's financial engineers have created different forward-starting dates, functionally equivalent to an option's expiration and exercise date for these swaptions along with a different set of tenors, or length of time over which the swap will be operative. Let's focus on at-the-money three-month forward-start swaptions with two-year tenors to match this most expectational segment of the yield curve.

Post-QE History

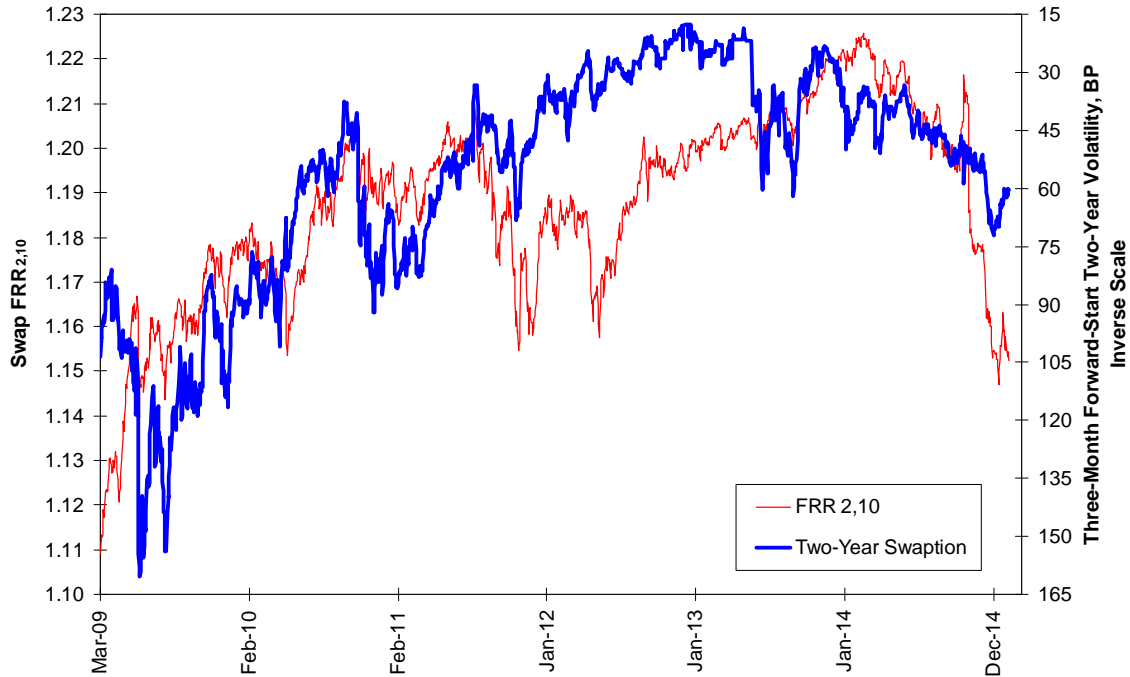
If we map two-year swap rates against the swaption volatilities since the March 2009 launch of QE1, we see a remarkable confluence of behavior. In a classic case of “now-casting,” as rates rise or fall, so do swaption volatilities. The swaption volatility may appear to lead the swap rate itself, and this certainly would make for a nice story if it did, but neither market leads the other statistically. What we can say is lower yields bred complacency during this period and higher yields bred fear. This is pro-cyclical behavior or herding at its worst; the best time to buy an umbrella is on a sunny day, not a rainy one, but the swap market is enamored of the principle of lending low and borrowing high.

Two-Year Swap Rates And Three-Month Forward-Start Two-Year Swaption Volatility From QE1 Onwards



While the swaption market chases swap rates around dutifully, it manages to ignore the hiccups in the swap yield curve as measured by the forward rate ratio between two- and ten-year swaps ($FRR_{2,10}$). This is the forward rate between two and ten year swaps divided by the ten-year swap rate itself; the more the ratio exceeds 1.00, the steeper the yield curve is. As the post-QE1 yield curve has been anchored at the short end, nearly all of the variance in the $FRR_{2,10}$ has been caused by movements in ten-year swap yields. While the era has witnessed a few flattenings or declines in the $FRR_{2,10}$, the picture generally has been one of a steeper yield curve and declining swaption volatilities. The large jump in the $FRR_{2,10}$ in October 2014 represented a sudden decline in two-year Treasury rates as the market began to unwind expectations of a mid-2015 increase in short-term interest rates. The market discovered the error of its ways and pushed the $FRR_{2,10}$ down sharply into January 2015.

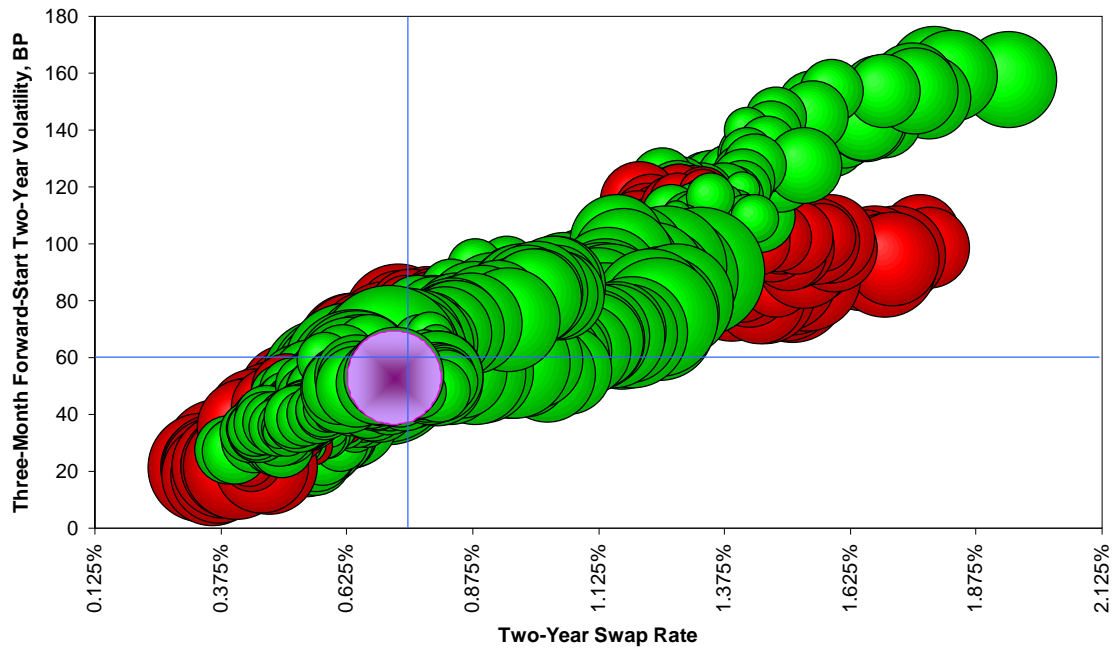
Swap Yield Curve And Swaption Volatility Post-QE1



Prospective Returns

While the market has done a good job of convincing itself bond market health is a function of low rates and expectations for more low rates, the data say otherwise. Let's map three month-ahead returns on 7-10 year Treasuries as a function of two-year swap yields and swaption volatility. Positive prospective returns are marked with green bubbles, negative with red bubbles; the diameter of the bubble corresponds to the absolute magnitude of the return. The end-January 2015 environment is marked with a bombsight and the last datum used, from early November 2014, is highlighted.

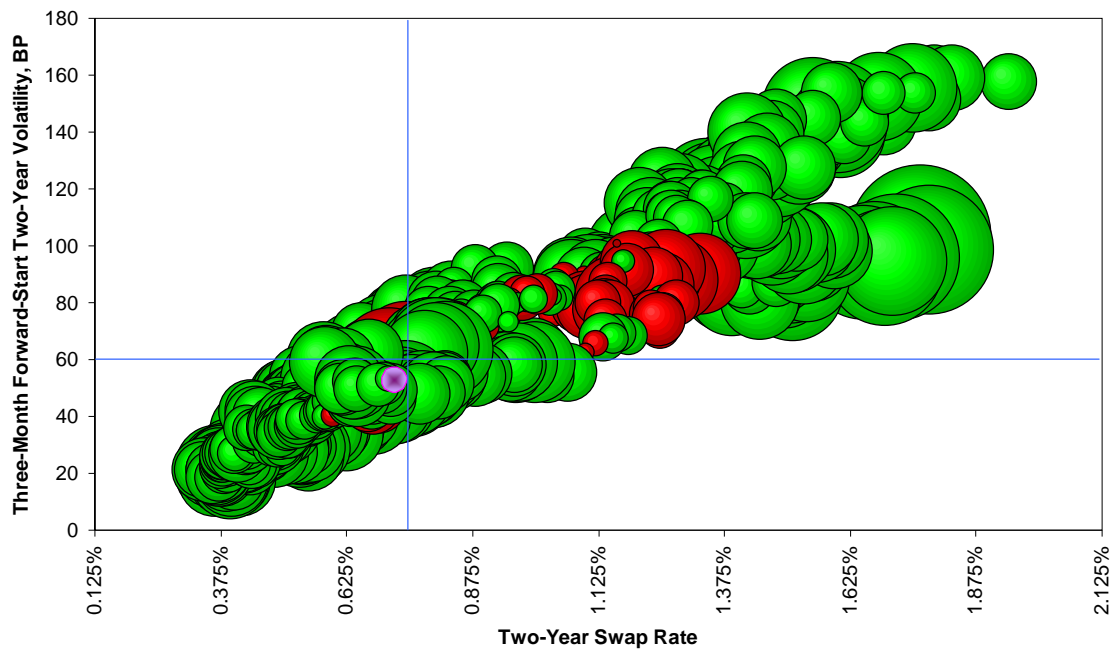
Prospective 7-10 Year Treasury Returns As Function Of Two-Year Swap/Swaption Market



We see a marked pattern of very low two-year swap rates and volatilities leading to negative returns for 7-10 year Treasuries. Restated, if you do not expect short-term rates to rise and are willing to lend for two years at less than 50 basis points, you will lose on long-term Treasuries. As noted above, the principle of lend high and borrow low is honored in the breach by the bond market's self-admitted masters of the universe.

What about U.S. equities? Here the post-QE1 experience has been low short-term rates and expectations for low short-term rates have led to positive prospective returns. The Federal Reserve's easy-money policies did an excellent job of shifting returns to shareholders from bondholders. Whether this was intentional or accidental is immaterial; it is irrefutable.

Prospective Russell 3000 Returns As Function Of Two-Year Swap/Swaption Market



Much of the post-QE1 era was managed as if creating artificially low rates was some sort of victimless crime. It was not. In addition to rewarding investors in risky assets, it transferred wealth from lenders to borrowers, encouraged excessive government and corporate borrowing, allowed marginal business to stay in operation by virtue of low capital costs and rewarded holders of existing capital assets relative to prospective buyers of capital assets. The homeowner's gain was the homebuyer's loss. Each bout of lower rates created the expectation for more of the same even though nominal swap rates had a zero percent lower bound.

If the post-QE1 experience is a guide to future behavior, the eventual and continuously promised rising-rate cycle will be accompanied by expectations of still-higher rates. Go back and read market pundits from the late 1970s and see how they competed with each other to predict the highest levels of future interest rates and inflation.

Wall Street caricatures itself with bulls and bears. Maybe pigs and sheep should get their day.