

There's Bond Volatility, Too

Mention the word “volatility” to most traders, and the VIX comes to mind. This word association then turns to the level of the VIX and to any rudimentary trading rules they have may picked up along the way. As discussed here just [two weeks ago](#), volatility is an important determinant of relative stock returns regardless of its level.

Other markets have volatility too, as I was reminded while being on the receiving end of a reporter's query as to why bond volatility was low. Her timing was excellent, as it came just days before the surprise announcement by the People's Bank of China that it was going to peg the yuan to something yet-to-be-determined. Call it a limited managed modified floating peg if that helps you to understand what they did last Thursday morning.

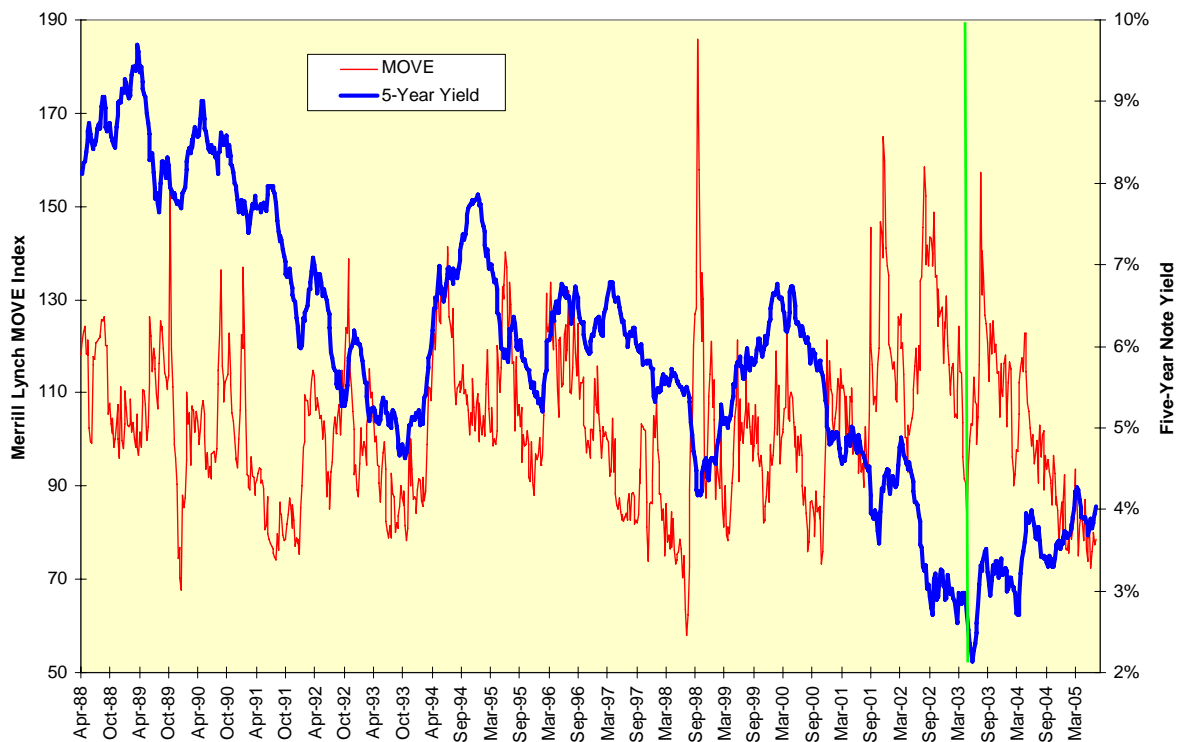
Where Have We Been?

Bond volatility is a different animal than stock volatility. A stock, no matter how much we like to pretend otherwise, is a piece of paper with someone's picture on it. It never matures (I'll resist the cheap joke readily available), it has no par value and it can go to zero. Its volatility and the cumulative volatility of the market as a whole as represented by an index, must reflect these realities. Even here, the volatility of an index, such as the VIX representing the S&P 500, is different from the volatility of a single stock.

Bonds, especially Treasury bonds, have a different distribution of returns. They, unlike bond traders, do mature (what, I was going to lay off that cheap joke twice?) and do have a par value at maturity. Treasuries do not go to zero, and they cannot leap multiples in price. All of the other differences will be left unenumerated at the moment.

Let's compare one measure of Treasury bond volatility, Merrill Lynch's [MOVE](#) index, which is a yield-curve weighted average of the normalized implied volatility of one-month Treasury options expressed in basis points, to yield on the five-year Treasury note itself. The MOVE has been trending downward and significantly so since five-year yields bottomed in the summer of 2003. The lower-MOVE / higher-yield relationship is anything but a rule; the MOVE fell between 1995 and 1998 as bond yields fell. But as this is the present relationship, it deserves a little more attention.

Bond Volatility And Yield



Mortgages

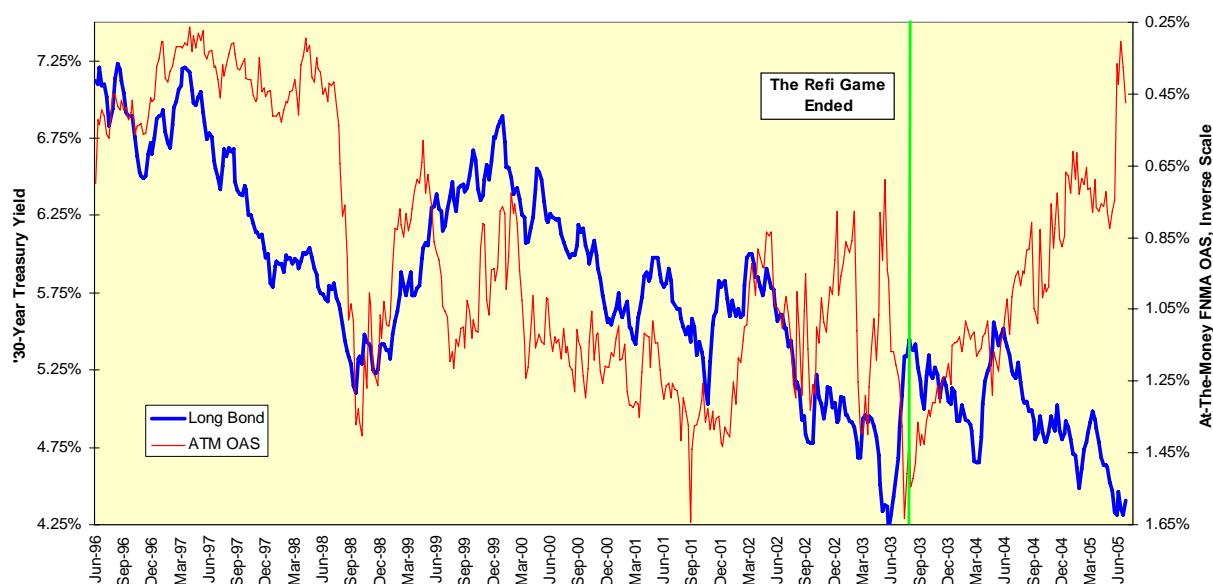
Let's revisit a topic addressed here in [March 2003](#), the role of mortgage prepayment risk in driving the Treasury market. A conventional mortgage can be called away from the lender via prepayment. There is always a background rate of prepayment for reasons such as people moving or homeowners dying, but the principal variable driver behind prepayments is lower interest rates. As rates fall, homeowners exercise this call option.

The optionality of mortgages makes the so-called option adjusted spread (OAS) the standard measure of prepayment risk. It reflects the additional compensation in basis points demanded by lenders for assuming prepayment risk. The greater the OAS, the greater the prepayment risk.

Lenders actually go out and buy bond call options in one form or another to hedge their positions. These can be in the form of exchange-traded options, in non-callable Treasury bonds themselves or in the large mortgage derivative market. It stands to reason that lower prepayment risk leads to lower call option buying and therefore to lower option implied volatility.

Mortgage OAS levels, depicted inversely against bond yields, have fallen precipitously since the summer of 2003. This period of time corresponded not only to the Federal Reserve's pledge to fight deflation no matter what the cost, but to the last pool of conventional mortgages for which it made sense to refinance. The recent drive toward those low bond yields saw OAS levels continue to fall. As more and more adjustable-rate, interest-only and other non-conventional mortgages were issued in 2003-2005, fewer conventional mortgages were there to be refinanced. The refinancing game is over unless we move to significantly lower yields at some future date.

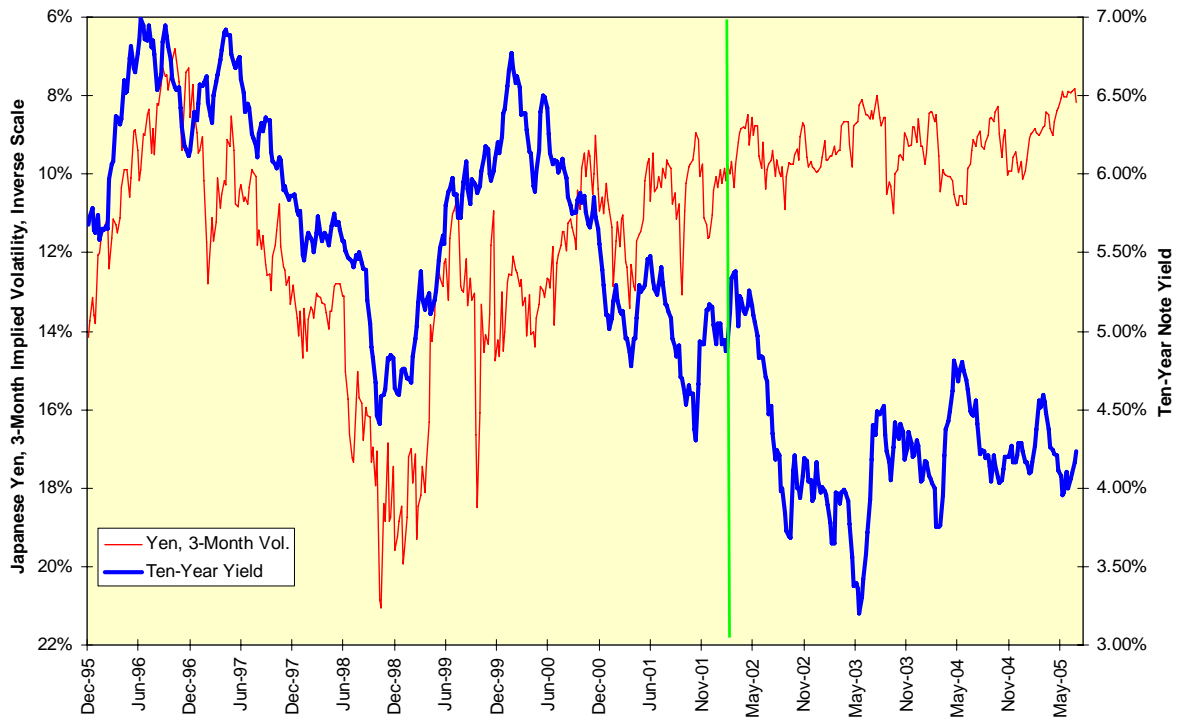
Disappearing Prepayment Risk



Currency Effect

Another cause of low bond volatility has been the quiet nature of the Japanese yen since mid-2002, the time when the euro began its ascent against the dollar. While it has been China grabbing the headlines over currency manipulation and its massive current account surplus with the U.S., it is the Bank of Japan and its willingness to scoop up excess dollars worldwide and buy Treasuries therewith that has been doing the real heavy lifting. Their massive Treasury purchases kept the yen in a tight range and simultaneously helped drive long-term Treasury yields lower.

Low Volatility Made In Japan



If the yen starts to trade more violently as the yuan does whatever it is going to do, the consequences for U.S. yields will not necessarily be negative. The drive toward greater yen volatility between 1996 and 1998 preceded a downturn in ten-year note yields.

Overall, the low level of volatility is justifiable given not only the lack of mortgage prepayment risk and low yen volatility, but also given the move back toward what are considered more normal interest rate levels and a highly predictable Federal Reserve.

Should you care about the level of bond volatility? Yes: The greater the volatility, the greater the risk of lending and the more compensation lenders must demand in response. If you regard lower long-term rates as a good thing economically – which, assuming you do not have some sort of weird “conundrum” hang-up, you probably do – then keep on cheering for low volatility.