

Value Concepts from the ML Trading Desk

Case Closed: The Yield Curve "Conundrum" Explained !!

In June, 2004, with the Treasury Ten Year Rate balancing near 4.75%, the US Federal Reserve Bank (the FED) executed the first of seventeen consecutive rate increases that elevated the FED Funds Rate from 1.00% to 5.25%. Two and one half years later, shortly after the final hike, the 10yr Rate was still hovering near 4.75%. (See below) Much ink has been spilled trying to explain this phenomenon, curiously dubbed by Alan Greenspan: "The Conundrum".



A bevy of highly compensated Wall Street economists has joined hands with many sophisticated money managers to explain The Conundrum as the byproduct of a massive recycling of the US trade deficit by the manufactured goods and energy exporting countries. To steal a clever phrase, a global "Vendor Finance" system some have called "Bretton Woods II".

As you might suspect from the title of this RateLab, we have other ideas.

The attorney for *Conventional Wisdom* presents his case:

The core concept that does NOT sit well with us as per The Conundrum is the return of the phrase: "It's different this time". The theory is that the massive growth of the exporting nations and their desire to maintain local economic stability requires them to buy US Treasuries with their trade surplus dollars at nearly any price. It is this buying that has kept long-term rates nearly unchanged despite a 425bp increase in the FED Funds rate. Proof of The Conundrum is cited by the stability of longer-term securities even when they became negative carry investments.

The defense rises to the podium:

We do not believe it is different this time. Although *there must certainly be more buyers than sellers to levitate prices*, we believe there are fundamental and rational forces driving market activity as opposed to a theory of international intrigue orchestrated by the Trilateral Commission.

The US MBS market is the greatest slice of the largest global bond market. As detailed in our May 23, 2007 RateLab, "The Elephant in the Corner: Who will buy MBS Duration", we highlighted the fact that even as early as late 2002, the Fixed-to ARMs refinancing was starting to remove (buy) Duration from the market. The –Blue line- below shows that the difference between net 30yr Fixed-rate issuance and net 3:1 and 5:1 ARMs issuance reached a nadir of negative \$20bn a month in late 2003. This difference remained negative until late 2005. This means that the US homeowner, via the mechanics of refinancing, was buying a tremendous amount of duration for much of the FED's initial tightening process.



An even more powerful "buyer" of Duration has been the yield curve. Since a MBS is philosophically nothing more than a "covered call" transaction, a broad stroke analysis will capture most of the risk.

The core non-callable amortizing cashflow of a MBS has a DV01 of about 6.50. When the curve is steep, distant forward rates are much higher than spot rates so an analytical OAS process might calculate the "delta" of this OTM refinance option at 20%. That would create a "net" risk (OADuration) of about 5.1. As the Yield Curve flattens, the distant forward rates accelerate lower (simple bond math) until they approach spot rates. This might now create a delta of roughly 45% on the refinance option. This would lead to a "net" risk of about 3.40. This is precisely what has occurred over the past few years. Notice the OADuration of a par 30yr MBS –the blue line- ranges around 5.0 while the Yield Curve –the red line- is steep but quickly declines as the Curve slope diminishes.



Since Asset::Liability managers (ALM) such as Pensions, Insurance Cos, and Banks desire to maintain balance sheet stability, if the MBS universe shortens in duration, these managers will slowly purchase duration in other markets to keep in balance. As such, it is likely that ALM traders exerted slow but significant "buying pressure" on the back end of the market. Because this process took place over three years, the magnitude of the impact has been ignored. More important, the huge decline in Volatility muted the recognition of how much instability was being introduced into the markets

The Implications:

While there has certainly been huge buying by the Foreign Central Banks (FCBs) of the exporting countries, **we believe that the true** *marginal buyer* has **been the MBS market**. Similarly, we believe the re-steepening of the Yield Curve will return a massive amount of Duration to the market. Without opining on the probability of higher rates, it is certainly clear that a bear steepener will create extraordinary instability as the pure mathematics of a steeper Curve create sell pressure into a declining market. Those who advance the theory of a FCBs induced Conundrum implicitly believe that a volatile rate increase is unlikely since the FCBs will at some point step in to purchase securities and cap the market. We propose that the same ALMs that purchased the extra marginal duration will return it to the market as their models dictate.

The Trades:

Macro

Buy the Merrill Lynch Implied Volatility Swap/Note (See RateLab: April 10, 2007)

Buy mid-dated OTM payers on longer-dated tails

Micro

Sell TY and US contracts versus Cash instruments (Buy the Basis)

Sell current coupon MBS (FN 6s and 6.5s) versus Buy lower coupon MBS (FN 5s)

ML US Rates Strategy June 26, 2007

This information does not constitute an offer, recommendation, general solicitation or official confirmation of terms. ML does not guarantee this information is accurate or complete. This information does not constitute advice or an expression as to whether a particular security or financial instrument is appropriate for you and meets your financial objectives. ML will not be liable for any investment decision based in whole or in part on this material; you are required to make your own investment decisions, using as necessary the advice of independent advisors or consultants. All prices/availability/quotations are indicative only and subject to change without notice. Indicated returns not guaranteed. Past performance is no guarantee of future results. Assumptions may materially impact returns.

RateLab is prepared by the U.S. Rates trading desk; RateLab is not a product of Merrill Lynch ("ML") Research. RateLab is not prepared, reviewed or approved by ML Research. Any views expressed are as of the date and time of transmission. ML undertakes no obligation to update this information. Views expressed may differ from the views of other ML trading desks and the views of ML Research. The U.S. Rates trading desk, other ML trading desks, or any ML affiliates may trade as principal in securities or related derivatives mentioned herein, may have a long or short position in these securities or related derivatives, and may have accumulated a position in these securities or related derivatives on the basis of these views prior to this transmission.