

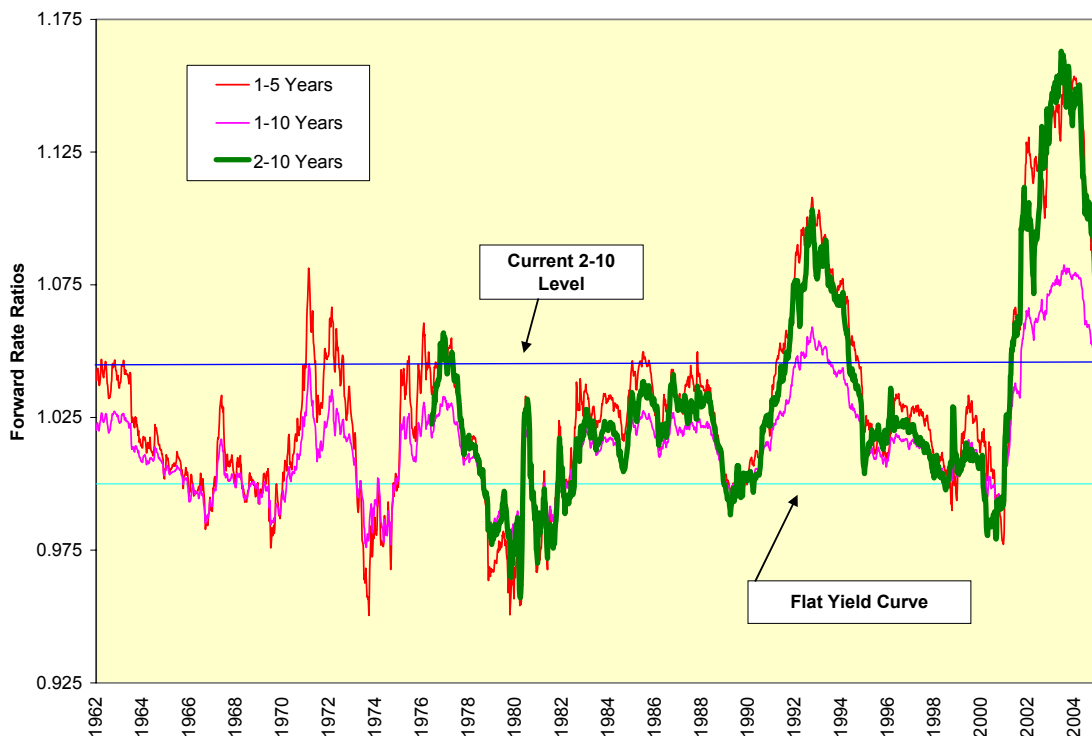
Flat Yield Curve Is Not Flat Earth

Children are told “what goes up must come down,” a triumph of the mean-reversion thinking that, apparently, has infiltrated our education system to who-knows-what ends. An alternative thought process, one that might have to content itself with bumper stickers and textbook inserts for the time being, would glorify Isaac Newton’s Law of Inertia: Matter in motion tends to stay in motion; matter at rest tends to stay at rest.

Who knows? The battle between the trend-followers and the regression-to-the-mean crowd could be the warm-up act at Armageddon. Maybe they will tag-team with representatives of technical and fundamental analysis.

This is all by way of introducing the present flattening of the yield curve, a trend underway in earnest for nearly a year, one that shows no signs of stopping and is nowhere near any sort of historic extreme, but one that will hit a limit at some point. All of this is visible in the long-term history of the yield curve as defined by the forward rate ratios between various maturities. The forward rate ratio for the 2-10 segment of the yield curve is the rate at which we can lock in borrowing for eight years starting two years from now divided by the ten-year rate itself. The more this number exceeds 1.00, the steeper the yield curve; a forward rate ratio less than 1.00 indicates an inverted yield curve.

Selected Yield Curve Shapes Over Time



The present situation drive back toward a flatter curve is unusual in two respects. The first is its starting point: The Federal Reserve’s grand experiment from 2001-2003 produced the steepest yield curve since the start of the Federal Reserve’s H15 weekly series in 1962. The results of the aggressive monetary stimulus in 1991-1992 are dwarfed in comparison.

The second difference is the speed at which the flattening has occurred. The Federal Reserve has raised the overnight federal funds rate six times since June 2004, and the federal funds futures market is pricing in another three rate hikes by the end of this summer. These increases are reflected in the short end of the curve, represented above by both the 1-year and the 2-year notes.

They are not, however, reflected in the 10-year note’s yield. As a result, the forward rate ratio between two and ten years has undergone a rapid bullish flattening with the yields on its respective legs moving in opposite directions.

What is more, the present steepness of the 2-10 curve's slope, marked on the chart above, is still greater than it has been at any time since the mid-1970s with the exception of the previous easing cycle in the early 1990s. Viewed from this perspective, we have plenty of room left to flatten further.

Role of Predictability

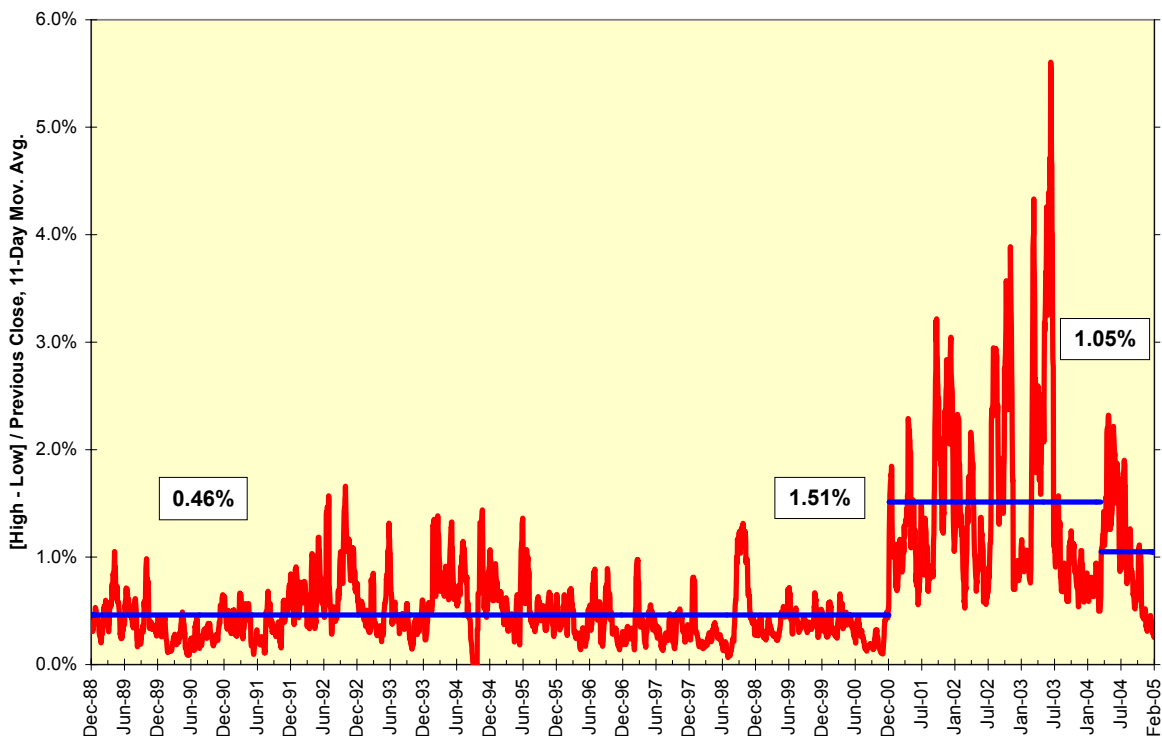
Dozens of reasons, some of which could have merit, have been offered to explain the ten-year note's stability. After all, if someone had told you at the start of 2004 that the Federal Reserve would have raised rates six times, that crude oil would have gone to \$55 a barrel, that the dollar would have endured a beating on world market's, that a solid economic recovery would be underway, that the federal deficit would still be expanding and that ten-year note yields would fall, you would have taken the bet.

An additional reason to explain the behavior of the ten-year note, both in its stubbornly high yields in 2001 and its recently stubbornly low yields is the predictability or lack thereof of the Federal Reserve itself. One of the theories of the yield curve is called the liquidity premium; it is described commonly as investors seeking higher yields at longer maturities to compensate for inflation risk. Fair enough, but it also needs to compensate for reinvestment risk. The coupons you receive on a bond need to be reinvested, and any measure of uncertainty regarding the reinvestment rate will show up in the liquidity premium: Uncertainty has a price.

We can illustrate just how much uncertainty the Federal Reserve itself injected into the market by examining the normalized range of the second month of federal funds futures. If we take the daily high-low range of this contract expressed in yield terms as a percentage of the previous day's closing implied yield we can get a measure of intraday uncertainty. This is then smoothed over an 11-day period to dampen the noise. Prior to the surprise rate cut of January 2001, the average of this measure was 0.46%.

Once the Federal Reserve started to engage in surprise rate cuts and public debates about whether they should do 50 basis points or 75 basis points as they did in March-April 2001, they injected profound uncertainty into the market. Throw in some idle chatter about "unconventional measures" and the dangers of deflation, and you get the peaks seen in the chart below for 2003. Between January 2001 and the strong employment report released in April 2004 the range measure tripled to 1.51%. It is now declining back to normal levels; since April 2004, the average is 1.05%.

Normalized Range of Federal Funds Futures



Once the Federal Reserve removes the absolute certainty about their course of action - they are down to changing one word in their post-meeting FOMC statements, and federal funds futures trade unchanged on the days of these announcements, so there really is only one way for the market to go - we can expect to see volatility restored to the liquidity premium in the bond market. Given the fixed nature of the short end, the long end of the curve will have to absorb the full brunt of the injected uncertainty, and rates will have to rise for the ten-year note.

The present state of certainty has endured for more than six months, and one thing trend followers and mean-reversion buffs ought to be able to agree upon is absolute certainty, like absolute zero, is a limit. We live in an uncertain world; indeed, without uncertainty we would not need either markets or (shudder) market commentators. The re-pricing of uncertainty back into the market could recall Newton's Third Law: Every action has an equal and opposite reaction.