

## Convexity Propelling Bond Bull

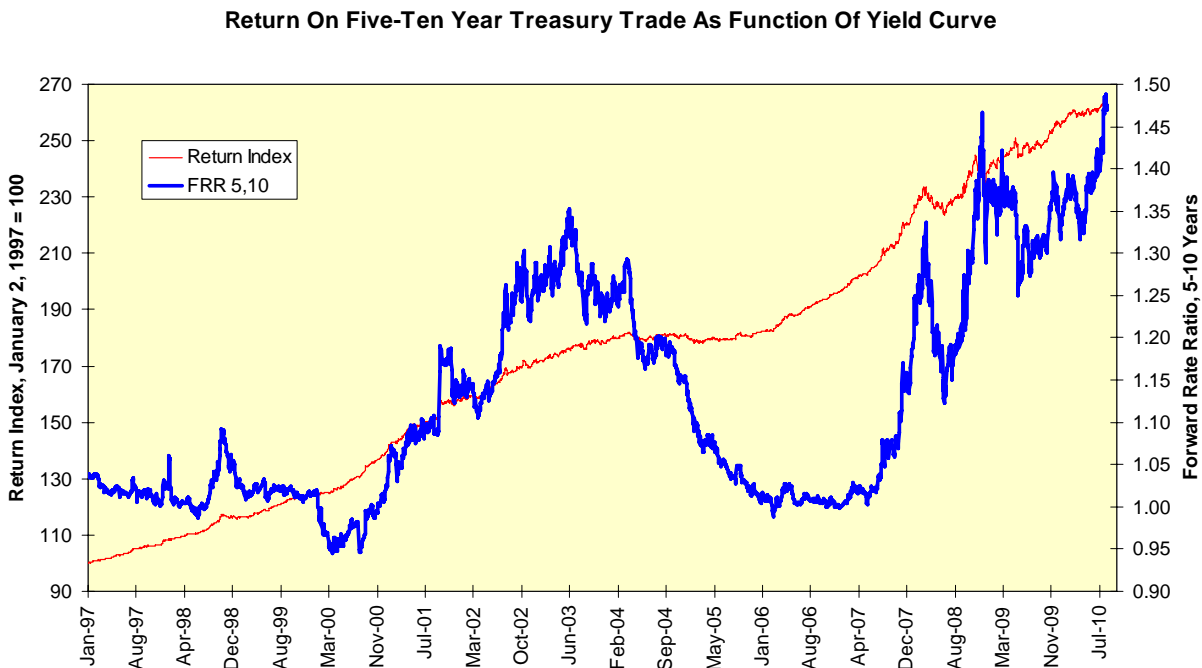
After discussing **abnormal bond volatility** and rising **U.S. sovereign credit risk** earlier this week and potentially sounding as if I am calling a top in the bond market, let me throw you a bullish curveball, if one of those even exists: So long as there are convexity gains to be made in duration-neutral yield curve flatteners, long-term yields can continue to fall.

Whoa, that is a mouthful. But it is not all that complex once we dissect it from back to front for a 5-10 year Treasury trade. The flattening trade is borrowing a shorter maturity, here the five-year, and lending at a longer-maturity, here the ten-year. The duration-neutral aspect is simply a hedge ratio to neutral overall interest rate exposure; we would need to trade about 1.8 five-years for every ten-year at last count.

Convexity is the rate at which duration, the sensitivity of bonds to interest rates, changes as a function of yields. Convexity is valuable: The higher it is, the more the bond gains as rates fall and the less the bond loses as rates rise. For those of you comfortable with option Greeks, think of duration and convexity as you might delta and gamma.

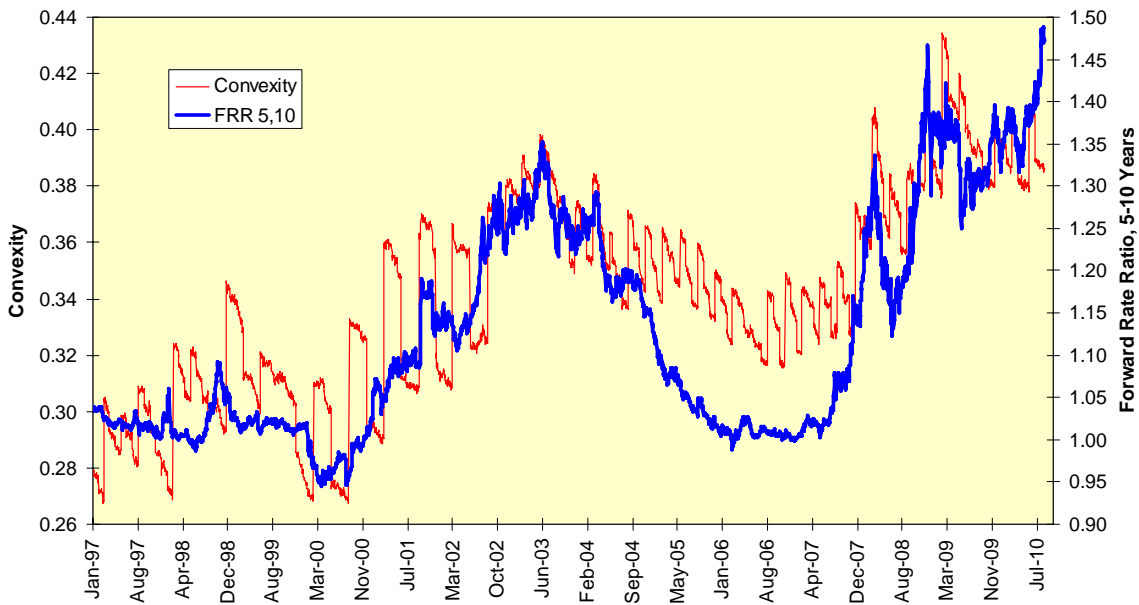
### The Trade Over Time

The chart below depicts the indexed return on our short five-year / long-ten-year Treasury trade going back to 1997 along with the forward rate ratio between five and ten years ( $FRR_{5,10}$ ). This is the rate at which we can lock in borrowing for five years starting five years from now, divided by the ten-year rate itself. This segment of the yield curve is presently at record steepness.



Now let's take a look at the net convexity gain of this trade mapped against the  $FRR_{5,10}$ . Over time, convexity rose as the yield curve steepened, but that started to run into some resistance at the end of June. The net convexity gain for the trade is no higher now than it was in February 2008, but everyone should remember how bonds traded between March and December 2008.

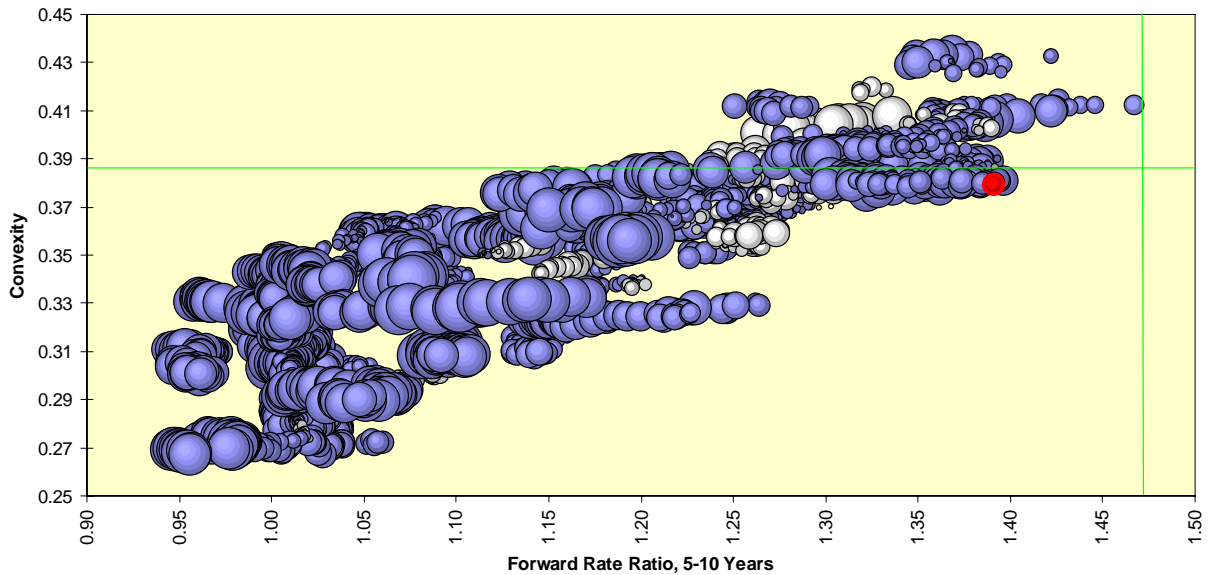
### Convexity Of Five-Ten Year Treasury Trade Versus Yield Curve



### Prospective Return

As this is a business of “what have you done for me lately?” let’s map the three month-ahead returns on the bullish flattening trade as a function of convexity and the yield curve. The blue bubbles depict positive returns; the white bubbles negative. The last datum used is highlighted in red, and the current market environment is marked with a green bombsight.

### Three Month-Ahead Return On Five-Ten Year Trade As Function Of Yield Curve And Convexity



We would need to see a combination of a sudden yield curve flattening and of a drop in the trade’s net convexity gain to put us in a region of prospective negative returns on the flattening trade. It could happen, but it does not seem very likely at the moment. The best bet is for the yield curve to continue its bullish flattening from shorter maturities on up to the long bonds.

