



Where are Long Bond Yields Heading? The Bond Value Ratio as a Predictor of Future Yields

By Georg Vrba, P.E.
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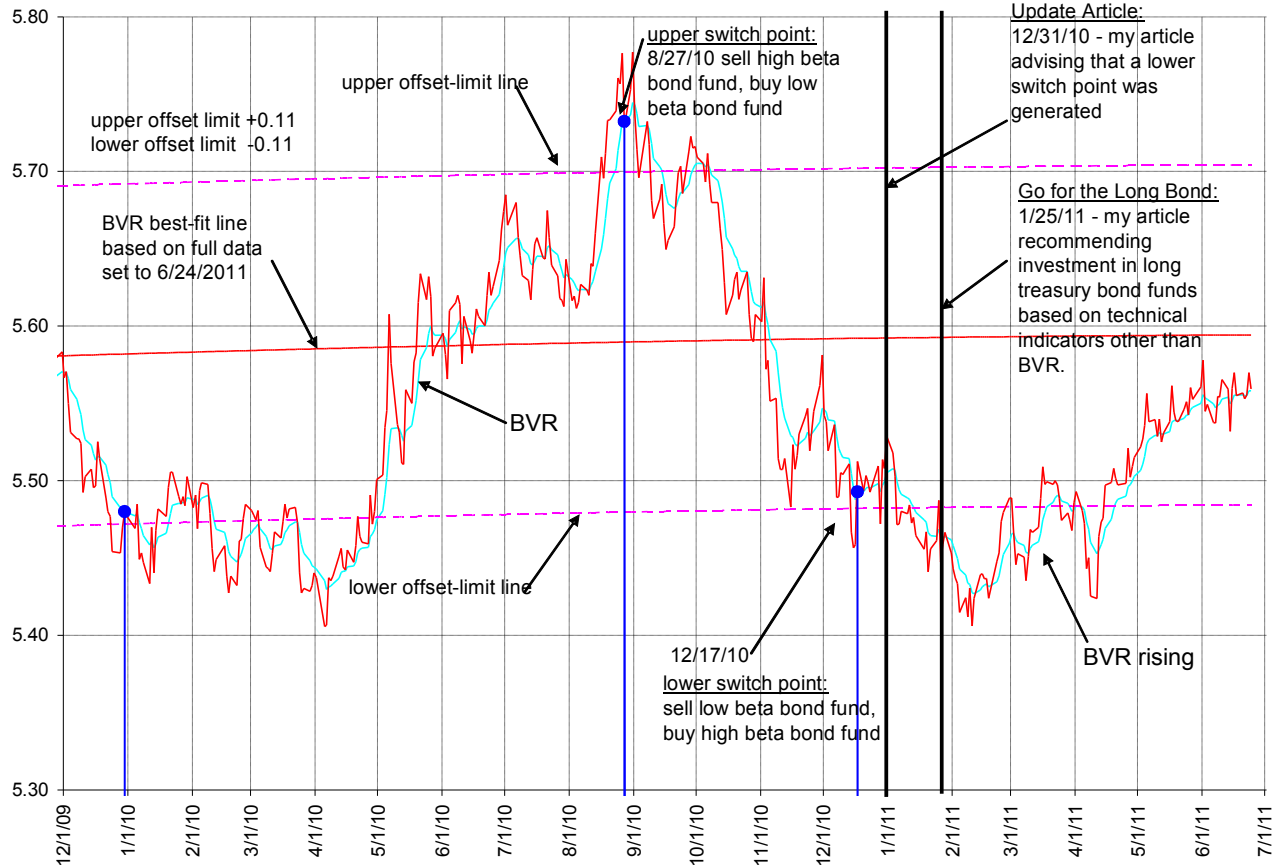
Are long-maturity bond funds still a good investment? My analysis shows that there is currently a maximum potential appreciation of only about 10% for long-bond values. The 30-year bull market for bonds will be ending soon and the risk-reward ratio is too high to warrant buying long-bond funds now.

In my article, [Seeking Beta in the Bond Market: A Math-driven Investment Strategy for Higher Returns](#), published on November 23, 2010, I showed that the bond value ratio (BVR) can identify turning points in the bond market. Using this indicator, one can then invest in high-beta funds during up markets and low-beta funds during down markets. In January 2011 I wrote that it was then a good time to buy long-maturity bond funds. The two articles were [Seeking Beta in the Bond Market: Update December 31, 2010](#) and [Go for the Long Bond: Technical Indicators are Positive](#). Long-maturity bond funds have appreciated considerably in value since then and may continue to do so for a while.

Figure 1 shows the BVR for the period December 2009 to June 2011 with the dates of the January articles superimposed. The rising BVR presently signifies an up market for bonds and is now almost at the best-fit line. The best-fit line represents the mean-market direction referred to in Farrell's rule one - markets tend to return to the mean over time. When the BVR reaches this line then this would imply that long-maturity bond funds are fairly valued. Since directional excesses from the mean are common market behavior, the BVR could continue rising to and above the upper offset-limit line, which would result in further gains for long-maturity bond funds.

Figure 1: Bond Value Ratio (BVR) from 2009 to 2011

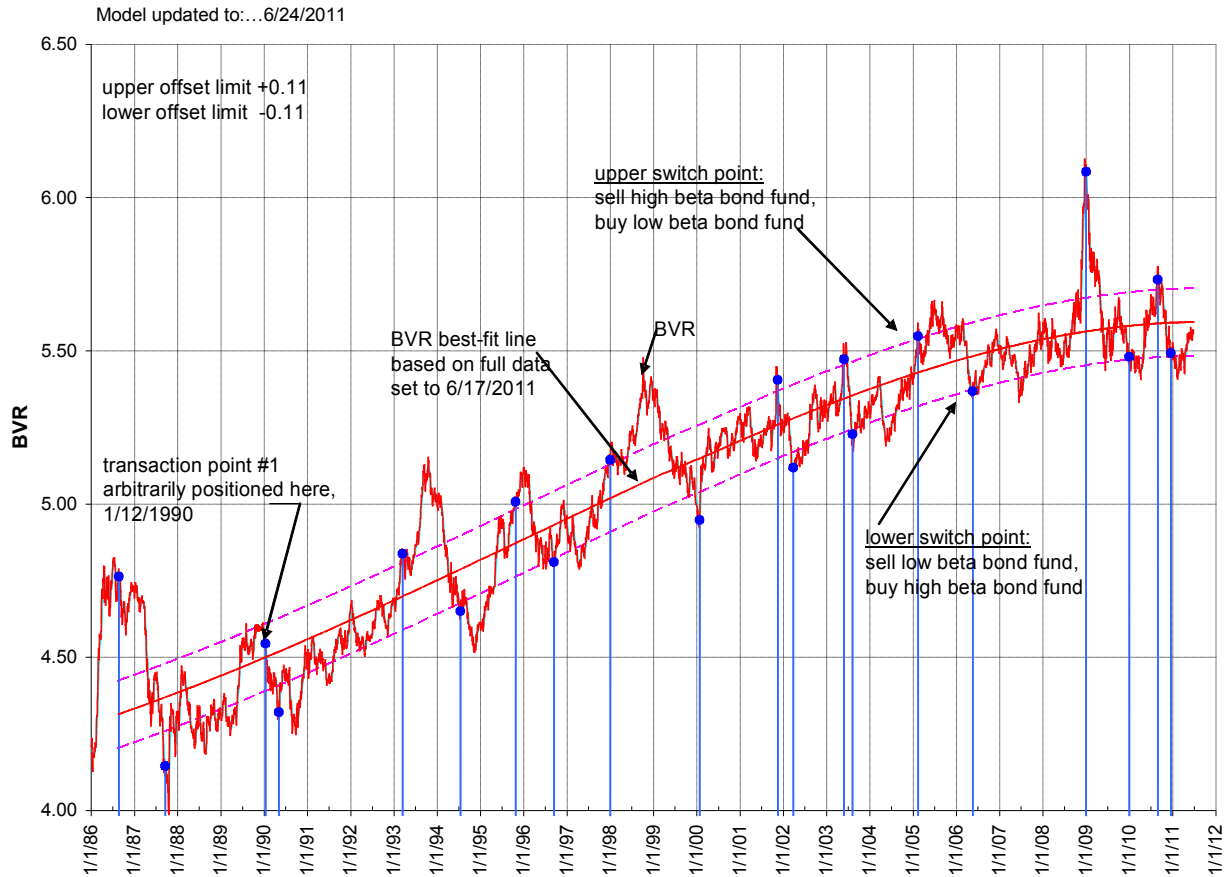
Model updated to: ...6/24/2011



The long-term trend

The trend of the BVR from 1986 to 2011 is shown in figure 2 below. The slope of the best-fit line of the BVR is positive (pointing upward) over its entire length, indicating a secular up market for bonds (and declining bond yields) over this period.

Figure 2: Bond Value Ratio (BVR) 1986 - 2011



Interest rates (bond yields) cannot decline forever and the present trend, once reversed, will result in a secular down market for bonds.

The BVR is inversely related to interest rates. Thus, the BVR increases as rates fall and vice versa. The slope of the best-fit line over the last few years has begun to flatten. When the slope is zero, the best-fit line will have reached a maximum value, which will also signify the low point of the current secular interest rate trend.

The date when the low point will be reached is not too far ahead. I estimated this date and the maximum value of the best-fit line's BVR mathematically. Under the assumption that the current trend continues, i.e. the equation of the best-fit line does not change, then the best-fit line's BVR will reach a maximum value of about 5.60 near the end of 2011. Although mathematically derived, the date it is only an estimate because the best-fit line's slope is already almost flat and a small variation of the slope would make a big difference in the date. However, the maximum BVR of the best-fit line is reasonably accurate.



Present conditions

As can be seen from figures 1 and 2, the upper offset-limit line is 0.11 higher than the best-fit line of the BVR. Thus an upper switch point (signifying selling high beta bond funds) could be generated in the future when the BVR turns lower from above this offset line. Assuming that in a few months the best-fit line of the BVR is indeed at 5.60 then the upper offset-limit line would be at a BVR of $5.60+0.11= 5.71$.

Since the BVR is a function of the yields of the 30-year Treasury bond (i30) and the 10-year note (i10), one can calculate the simultaneous values of i10 and i30 which would produce a BVR of 5.71 which are shown below:

i10	i30	BVR
4.50	4.22	5.71
4.00	4.09	5.71
3.50	3.96	5.71
3.00	3.83	5.71
2.50	3.70	5.71
2.00	3.57	5.71
1.50	3.44	5.71

At this time, the 10-year note yield is about 3.00% and 30-year Treasury bond yield is about 4.20%. Assuming the spread between the yields remains at 1.20% (as was the case in 2010 and 2009 when i10 was at 2.50%), then for the BVR to reach the upper offset-limit line the 10-year note yield will have to drop to 2.50% and the 30-year Treasury bond yield would then be 3.70%.

The trend of the BVR as shown in figure 1 indicates that high-beta bonds may still provide positive returns for a while. The long bond price could gain a maximum of about 10% due to the possible yield decline of about 0.50% if the BVR reaches the upper offset-limit line.

Investors must weigh the potential risks to long-bond values due to higher inflation and the imminent end of the great 30-year bull market for bonds versus the limited potential gains that could still be achieved by investing in long-maturity bond funds.

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