Go for the Long Bond: Technical Indicators are Positive

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My article, Seeking Beta in the Bond Market: Update December 31, 2010, showed that my Bond Value Ratio (BVR) model indicated the beginning of an up-market for high-beta bond funds on 12/17/10. I present a further indicator here which reinforces this signal.

Figure 1 shows a measure of the steepness of the yield curve. It is a graph of Δi30, which is the 30-year Treasury yield (i30) less the three-month Treasury yield (i0.25), i.e. Δi30 = i30 – i0.25. It is evident that, for the period of this study (1965 to 2011), Δi30 has never exceeded 4.5%.

Figure 1: 30yr yield less 3mo yield (Δi30 = i30 - i0.25)
and annual change of CPI vs. i0.25

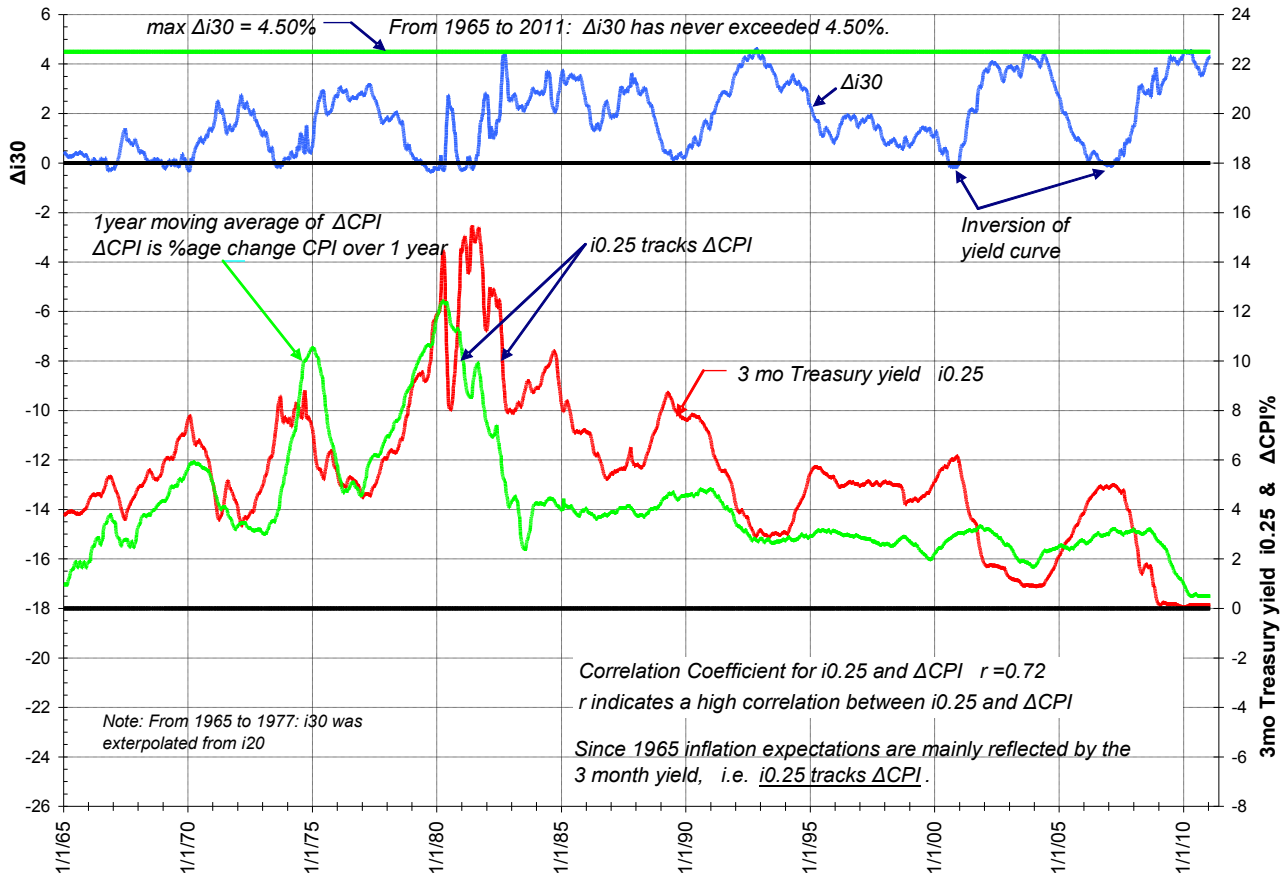
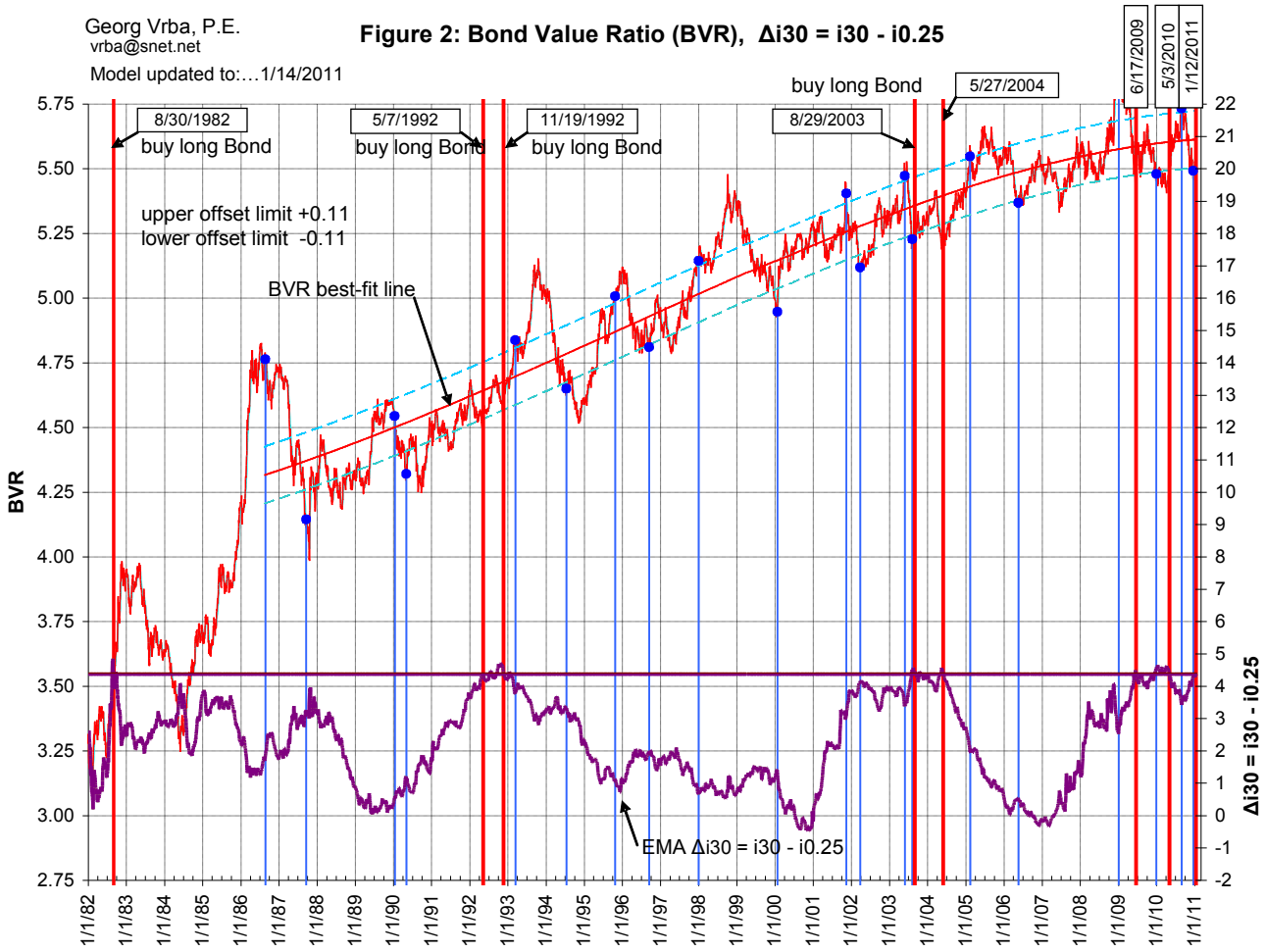


Figure 1 also shows ΔCPI, the one-year moving average of the annual percentage change of the Consumer Price Index (CPI), plotted together with i0.25. There is a high correlation between ΔCPI and i0.25, indicated by a correlation coefficient r = 0.72. The values of ΔCPI and i0.25 are also not far apart. This means that inflation expectations are mainly reflected in the three-month Treasury yield and not in Δi30.

Investors in 30-year Treasury bonds seem to be content with a maximum yield of i30max = i0.25 + 4.50%.

Figure 2 shows a graph of the BVR with the upper- and lower-switch points, indicating bond market direction. For an explanation of BVR see my article, Seeking Beta in the Bond Market: A Math-driven Investment Strategy for Higher Returns.

The exponential moving average (EMA) of Δi30 with a smoothing factor of 0.40 is plotted together with an upper limit line of 4.40% in figure 2.



A buy signal for a long-bond fund is obtained when the following simultaneously apply:

- 4.40 > EMA Δi30 > 4.35
- EMA Δi30 four days ago - EMA Δi30 now > 0

Since 1982, there were eight such signals, shown by the red vertical lines in figure 2. The total returns for various long bond funds for the four months following the signal date are shown in table 1. Table 2 lists returns for shorter duration bond funds.

After every one of the signal dates, the BVR has an upward slope for a few months, indicating up-markets for the long-bond funds after the signal dates.

Table 1:
Returns for investments in various long bond market funds (buy signals from EMA Δi30)

%-return after 82 trading days (4 months) - including dividends if applicable							
buy date	**sell date (82 trading days later)**	**VWESX**	**VUSTX**	**BTTRX**	**EDV**	**average return for all funds**	**weight**
8/30/82	12/28/82	11.05%	N.A.	N.A.	N.A.	11.05%	1
5/7/92	9/2/92	9.07%	8.85%	N.A.	N.A.	8.96%	2
11/19/92	3/18/93	8.81%	9.63%	N.A.	N.A.	9.22%	2
8/29/03	12/24/03	5.37%	4.31%	8.44%	N.A.	6.04%	3
5/27/04	9/22/04	8.28%	7.69%	14.87%	N.A.	10.28%	3
6/17/09	10/13/09	12.17%	5.88%	8.79%	8.56%	8.85%	4
5/3/10	8/27/10	8.72%	13.55%	18.97%	24.26%	16.38%	4
avg. return for each fund =		9.07%	8.32%	12.77%	16.41%		
					weighted average return after 4 months =	**10.38%**	

Table 2:
Returns for investments in intermediate bond market funds (buy signals from EMA Δi30)

%-return after 82 trading days (4 months) - including dividends if applicable				
buy date	**sell date (82 trading days later)**	**VBIIX**	**VBMFX**	**CREF Bond Market**
8/30/1982	12/28/1982	N.A.	N.A.	N.A.
5/7/1992	9/2/1992	5.49%	5.97%	6.96%
11/19/1992	3/18/1993	4.22%	5.73%	6.63%
8/29/2003	12/24/2003	3.90%	2.69%	3.17%
5/27/2004	9/22/2004	5.54%	4.07%	3.88%
6/17/2009	10/13/2009	6.81%	4.64%	5.15%
5/3/2010	8/27/2010	6.93%	4.23%	4.27%
avg. return for each fund =		5.48%	4.55%	5.01%

The most recent buy signal based on EMA Δi30 was generated on 1/12/11, which supports the signal obtained on 12/17/10 from my BVR model.

The odds are good for a return of approximately 10% from a temporary investment in long-bond funds or about 5% for an investment in intermediate-bond funds. The investment period should be no longer than four months.

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