

MDP TAA Newsletter

Stock and Bond Models in the Fourth Quarter and 2009

The discussions, tables, and graphs talk about stocks, bonds, and cash. When specific data are needed to calculate returns and for the graphs, the following are used:

► **Stocks:** Vanguard Index 500 Fund (ticker symbol VFINX), which closely tracks the S&P 500 Index with dividends less very small expense fees. All mutual fund dividends and distributions are assumed to be reinvested. Since the stock model has the S&P 500 as one of its inputs and the historical testing and development of the model were based on that index, VFINX, which is one of the largest mutual funds that own only stocks, is a suitable proxy for stocks.

► **Bonds:** Vanguard Long-Term Treasury Fund (ticker symbol VUSTX). Like VFINX, all mutual fund dividends and distributions are assumed to be reinvested. The model for bonds has as an input the interest rate on the 10-year Treasury bond, and its development was based on a theoretical fund that owned only that bond.

► **Cash:** Current T-Bill rates less 0.25%, but no lower than 0%. This will be close to yield of the better money market funds.

Important Notes: The use of Vanguard funds and example target allocations are for illustrative purposes only and should *not* be taken as recommendations of those or any other Vanguard funds or any particular portfolio allocations. Other fund families have funds that are just as suitable as these two. MDP Associates managed accounts in the TAA program may use mutual funds from Vanguard, other fund companies, or exchange traded funds (ETFs).

As always, past performance is not necessarily indicative of future results. You should not assume that any particular rate of return shown here will be achieved in the future. It is possible that the models and managed accounts based on them will lose money, so there can be no assurances that profits will be obtained.

The returns for the example portfolios shown below may be hypothetical and might not be the results of actual trading. There are several reasons why hypothetical results may not have been obtained in a real account. In particular, trading restrictions or redemption charges imposed by Vanguard, other mutual fund companies, or brokers could make the application of the models using only the funds in the illustrations impossible or impractical.

The risk reduction models for stocks and bonds are designed to identify those periods when the risks of owning those asset classes are the highest and the prospects of higher prices are relatively low. They are not designed or expected to pick high and low points. Most often the buy signals will come after the asset class has made a bottom and the sell signals will be after a peak has occurred. Signals are computed weekly based on Friday (or the last trading day of the week) closing data for execution on the following Monday (or first trading day of the week). The trades and data shown on the following pages incorporate this procedure.

We start with a table on the next page of the signals and results of the two models for 2009.

TRADE HISTORIES FOR 2009					
STOCKS			BONDS		
Buy	Sell	Result	Buy	Sell	Result
6/1/09	7/27/09	4.5%	11/10/08	1/26/09	10.0%
8/31/09	12/31/09*	10.0%	3/23/09	4/6/09	-0.8%
			7/13/09	7/20/09	-3.0%
			8/3/09	8/10/09	-1.3%
			8/17/09	11/9/09	0.4%
			11/23/09	12/31/09*	-3.8%
* Trade still open at the end of the quarter					

be seen from the table. The model has not been effective for most of the year.

Next we will look at graphs of the two funds and the signals over the last twelve months in order to see how the signals fit into the movements of the stock and bond markets. The graph for VFINX is at the

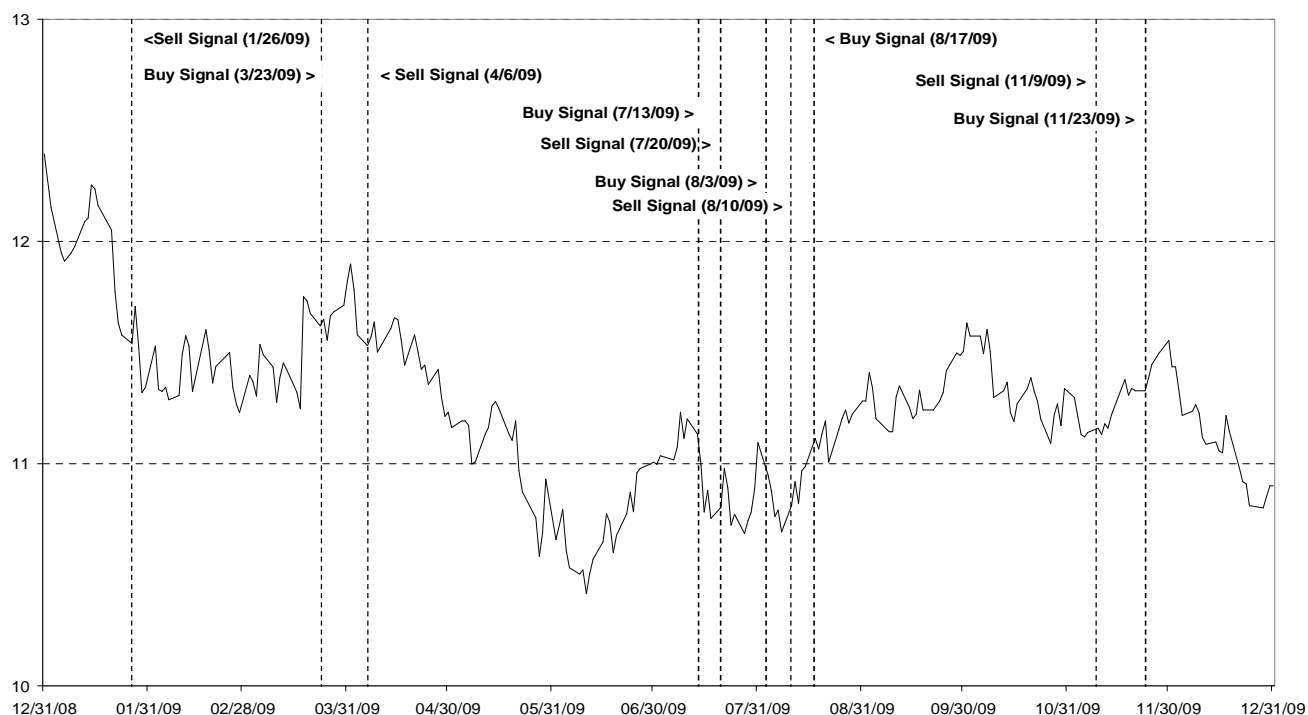
Except for a one-week whipsaw trade resulting in a small loss in May of 2008, the stock model had been out of the market since December 2007 until this past June. The first trade this year lasted not quite two months and produced a nice profit. The model was on a sell signal for virtually all of August due to unfavorable trends in Treasury interest rates at that point. The current open trade is well ahead at the end of the year. It is not uncommon for the bond model to generate fairly frequent short-lived trades when the trends in Treasury rates are not clear. That happened three times in 2009 as can

bottom of this page and shows that stock model was out of the market until it had moved up considerably from the March lows. After the severe declines in 2008 and early 2009, the model required a substantial move up before saying that the intermediate trend had become positive, which is an inherent part of its ability to control risk levels. Consequently, the buy signal in early June was well above the March low. The model got fooled by the action in Treasury yields and missed the rise in August, but it has captured most of the gains in the second half of the year.

STOCKS (VANGUARD INDEX 500 FUND)



BONDS (VANGUARD LONG-TERM TREASURY FUND)



The bond market story is far more complex as can be seen in the graph. Longer term Treasury rates, and hence the bond fund, traded in a fairly narrow range, and the model did not react well to the movements. It did sidestep the worst drop by being out from early April until July. About the only period of sustained rising prices

was in August and September, and the model caught most of it but gave back just about all of the trade's gains by the time it issued a sell signal in November. The trade open at the end of the year has not worked well so far.

Example Portfolios Performance

We can put everything together by looking at how the models would have worked with some example portfolios. To keep things relatively simple, the examples shown own only stocks, bonds, and cash. An investor may want to add additional asset classes, but these simple portfolios and the risk reduction models are sufficient for most retirement type and long-term investment accounts. Although there is nothing wrong with having all of one's stock holdings in a broad based index fund, some investors will want to divide the stocks among several types of equity holdings. Also, the bond portion may also be diversified by holding two or more types of funds.

There are three target asset class allocation examples. The most aggressive one, which might be appropriate for those with a longer investment horizon or who are not very risk-averse, has targets of 75% in stocks, 25% in bonds, and 0% in cash. That does not mean cash will never be held. When one or both models are on sell signals, cash will be part or all of the holdings. A more moderate, middle of the road, set of allocations would be 50% in stocks, 40% in bonds, and 10% in cash. The cash target means the portfolio will always have some cash holdings. A more conservative allocation, perhaps of interest to those near or in retirement, is the third example of 35% each in stocks and bonds and 30% in cash.

BASIC MODEL APPLICATION (Stocks/Bonds/Cash)

	75%/25%/0%	50%/40%/10%	35%/35%/30%
2005	5.3%	4.2%	3.4%
2006	8.7%	6.9%	5.1%
2007	-4.0%	-0.4%	2.0%
2008	1.9%	4.3%	4.1%
2009-Q1	-1.4%	-2.2%	-1.9%
2009-Q2	-2.3%	-2.1%	-1.6%
2009-Q3	8.3%	5.3%	3.7%
2009-Q4	4.7%	3.1%	2.2%
2009	9.2%	3.9%	2.2%
2005-09	22.5%	20.2%	17.8%
Annualized	4.1%	3.7%	3.3%

The above table shows the returns for the example portfolios using the *basic application* of the models. That means the portion of a portfolio targeted for stocks and the portion for bonds are either in the particular asset class or in cash depending on the status of the corresponding model, so the stock portion was in cash from 7/27/09 until 8/31/09, and the entire portfolio was in cash August 10-17.

Next we turn to the *aggressive application* of the two models, whose table is to the right. With this approach, if one of the models is on a buy signal and the other is on a sell signal, the targeted allocation for the asset class with a sell signal is not put into cash, but is instead put into the asset class with a buy signal. For example, when the bond model bought on August 17, the portion allocated to stocks would have been used to buy the bond fund. On August 31, that portion would have been moved from the bond fund to the stock fund.

The expected relationships are for higher returns, but more volatility, with a greater percentage in stocks and using the aggressive application. Usually that is how things work out, but not always, as the tables show.

Moving out of cash according to the target percentages should reduce or almost eliminate the need to rebalance. If necessary, rebalancing these example portfolios occurs at the end of

any quarter when the percentage in any asset class is more than 3% above or below its target. The need to do so has been infrequent with at most two for each of the cases over the five years shown in the tables. There is nothing “magic” or special about the 3% trigger. It was chosen as a reasonable level, but others are also appropriate and should work effectively.

The overall returns for the five years shown in the tables are quite good considering the poor stock markets returns and show the value of the models’ ability to control investment risks by avoiding severe down periods. Even after the strong stock market of the past ten months, VFINX is up less than two percent for the period shown in the tables. In contrast VUSTX gained 27.7%, which is a 5.0% annual return. Overall, the models are working quite well because their primary purpose is risk reduction by keeping us out of markets that suffer large drops such as the plunge in the S&P index to less than half of its high in 2007. While being out of a rising market can be frustrating, it hurts much more and can be devastating to one’s

AGGRESSIVE MODEL APPLICATION (Stocks/Bonds/Cash)

	75%/25%/0%	50%/40%/10%	35%/35%/30%
2005	8.4%	7.3%	5.8%
2006	9.0%	7.0%	5.4%
2007	-1.3%	2.0%	3.2%
2008	11.6%	10.8%	8.7%
2009-Q1	-5.2%	-4.8%	-3.8%
2009-Q2	-4.7%	-4.2%	-3.3%
2009-Q3	8.6%	6.0%	4.3%
2009-Q4	4.9%	3.6%	2.7%
2009	2.9%	0.2%	-0.3%
2005-09	33.9%	29.9%	24.7%
Annualized	6.0%	5.4%	4.5%

investments to be caught in a market that is in the midst of a severe decline. The models are designed to avoid the latter bad outcome, and sometimes experiencing the former “problem” is part of the price paid for the benefits the models provide. Moreover, as 2008 shows, healthy profits can be earned in some years with the aggressive model application if one is willing to accept higher risk levels.