OnTheMark Investing Base Investment Dashboard

This document describes a conservative method of investing that uses index ETF
funds, broad diversification, and a minor element of timing to ensure a optimized proportion of
allocation across groups with market momentum.

It results in an investment strategy that should be, over time, less volatile than either stocks or bonds, and
achieve a relatively consistent return.

The system requires a weekly review to make sure that proportions have not changed. Many weekends there
will be nothing to do.

Also included in this document is a backtested view of how this scheme performs over a variety of
market conditions, and a snapshot of current market investments.

Investment Vehicles

The target investment vehicles need to be inexpensive and easy to get into and out of. They need to be diversified so as to eliminate the risk associated with any individual stock holding.
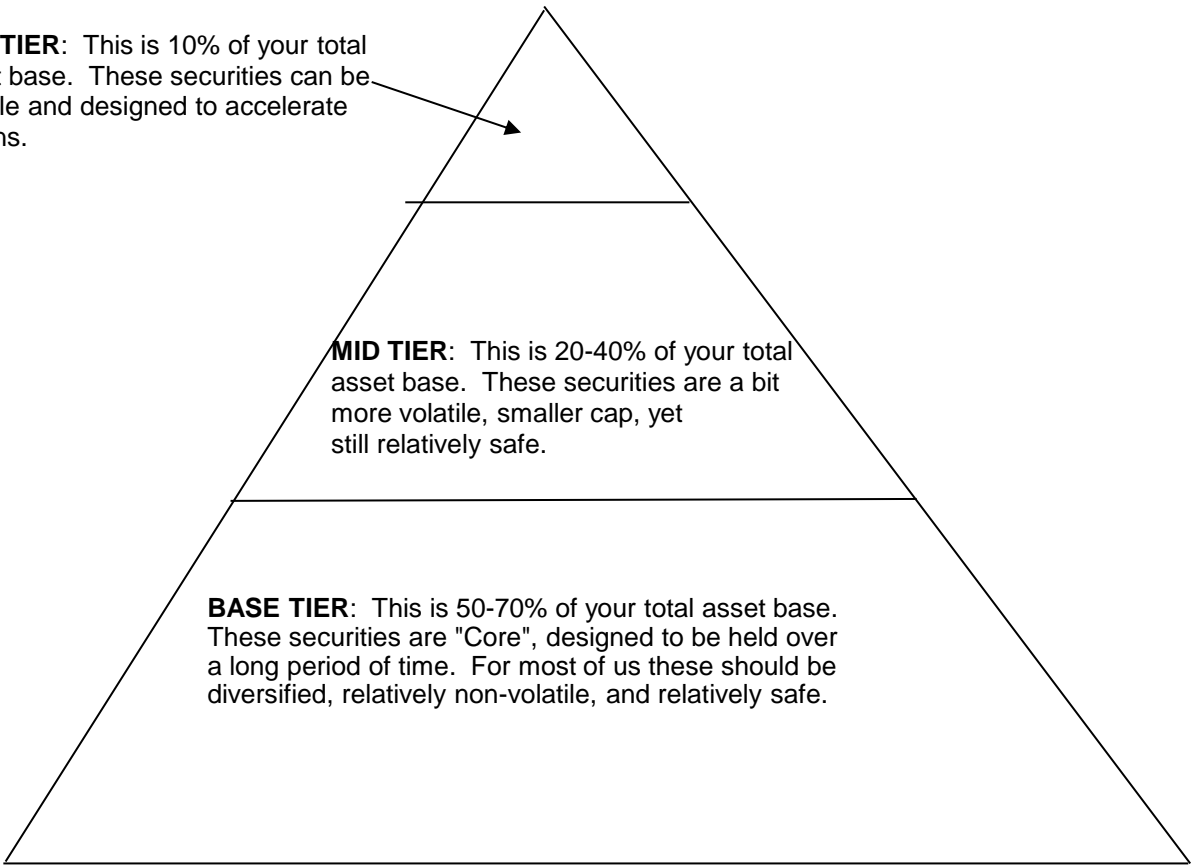
This strategy uses Exchange Traded Funds, or ETFs. These are traded the same as stocks, and can be bought and sold using Charles Schwab, TD Ameritrade, E*Trade, Scottrade, or any other online broker. Each ETF uses a unique ticker symbol and is bought and sold using that symbol. An overview of the ETFs used within this strategy follows:

Ticker	Name	Description
SPY	**SPDR S&P 500**	Equity Index ETF that tracks S&P500

SPY trades over 144,000,000 shares daily, so it is very liquid. Total shares outstanding equal a market cap of over $145 billion dollars, which makes this ETF as large as a large publicly traded company. The net annual expense ratio is only 0.09%. And while 99% of its holdings are large cap stocks, the largest holding (Apple) is only 2.88% of the total. So this is large, diversified, inexpensive, and managed by a trusted entity (State Street) since its inception on January 22, 1993.

VEU	**Vanguard All-World ex-US**	Equity Index ETF that tracks World index excl. US

VEU trades over 1,000,000 shares daily, so it is very liquid. Total shares outstanding equal a market cap of over $18 billion dollars, which makes this ETF as large as a large publicly traded company. The net annual expense ratio is only 0.15%. The top 10 holdings (Nestle SA is highest) are only 9.8% of the total. So this is large, diversified, inexpensive, and managed by a trusted entity (Vanguard) since its inception on March 2, 2007.

BSV	**Vanguard Short-Term Bor**	Bond Index ETF that tracks Barclays US 1-5yr Govt Index

BSV trades over 900,000 shares daily, so it is very liquid. Total shares outstanding equal a market cap of over $33 billion dollars, which makes this ETF as large as a large publicly traded company. The net annual expense ratio is only 0.10%. And while 75% of its holdings are AAA US Government Bonds, the largest holding is only 1.62% of the total. So this is large, diversified, inexpensive, and managed by a trusted entity (Vanguard) since its inception April 10, 2007.

TLT	**iShares 20+ Yr Treasury B**	Bond Index ETF that tracks Barclays US 20+ Govt Bond

BSV trades over 8,500,000 shares daily, so it is very liquid. Total shares outstanding equal a market cap of over $4 billion dollars, which makes this ETF as large as a mid-cap publicly traded company. The net annual expense ratio is only 0.15%. All of its holdings are US Treasury Bonds. So this is large, inexpensive, and managed by a trusted entity (Blackrock) since its inception June 22, 2002.

VCSH	**Vanguard Short-Term Bor**	Bond Index ETF tracks Barclays 1-5yr Corp Bond Index

VCSH trades over 500,000 shares daily, so it is very liquid. Total shares outstanding equal a market cap of over $7 billion dollars, which makes this ETF as large as a mid-cap publicly traded company. The net annual expense ratio is only 0.12%. All of its holdings are Corporate Bonds. 12% are AA rated. 51% are A rated. amd 35% are BBB rated. The largest single holding (Merrill Lynch 6.875% yield) is only 0.46% of the total assets. So this is large, inexpensive, and managed by a trusted entity (Vanguard) since its inception

VCLT	**Vanguard Long-Term Bon**	Bond Index ETF tracks Barclays 10+yr Corp Bond Index

VCSH trades over 100,000 shares daily, so it is very liquid. Total shares outstanding equal a market cap of over $500 million dollars, which makes this ETF as large as a mid-cap publicly traded company. The net annual expense ratio is only 0.12%. All of its holdings are Corporate Bonds. 6% are AA rated. 43% are A rated. amd 48% are BBB rated. There are 1182 bonds held by this ETF, with an average maturity of 24 years and an average coupon of 6.0%. So this is large, inexpensive, and managed by a trusted entity (Vanguard)

Allocating Assets to the Investment Vehicles - Base/Mid/Top Tiers

After the securities have been picked, the next consideration is allocation of monies to those securities. Allocation percentages will be based upon personal factors like age, time to retirement, size of equity, and risk tolerance. But the following strategy can be applied to most situations.

TOP TIER: This is 10% of your total asset base. These securities can be volatile and designed to accelerate returns.

MID TIER: This is 20-40% of your total asset base. These securities are a bit more volatile, smaller cap, yet still relatively safe.

BASE TIER: This is 50-70% of your total asset base. These securities are "Core", designed to be held over a long period of time. For most of us these should be diversified, relatively non-volatile, and relatively safe.
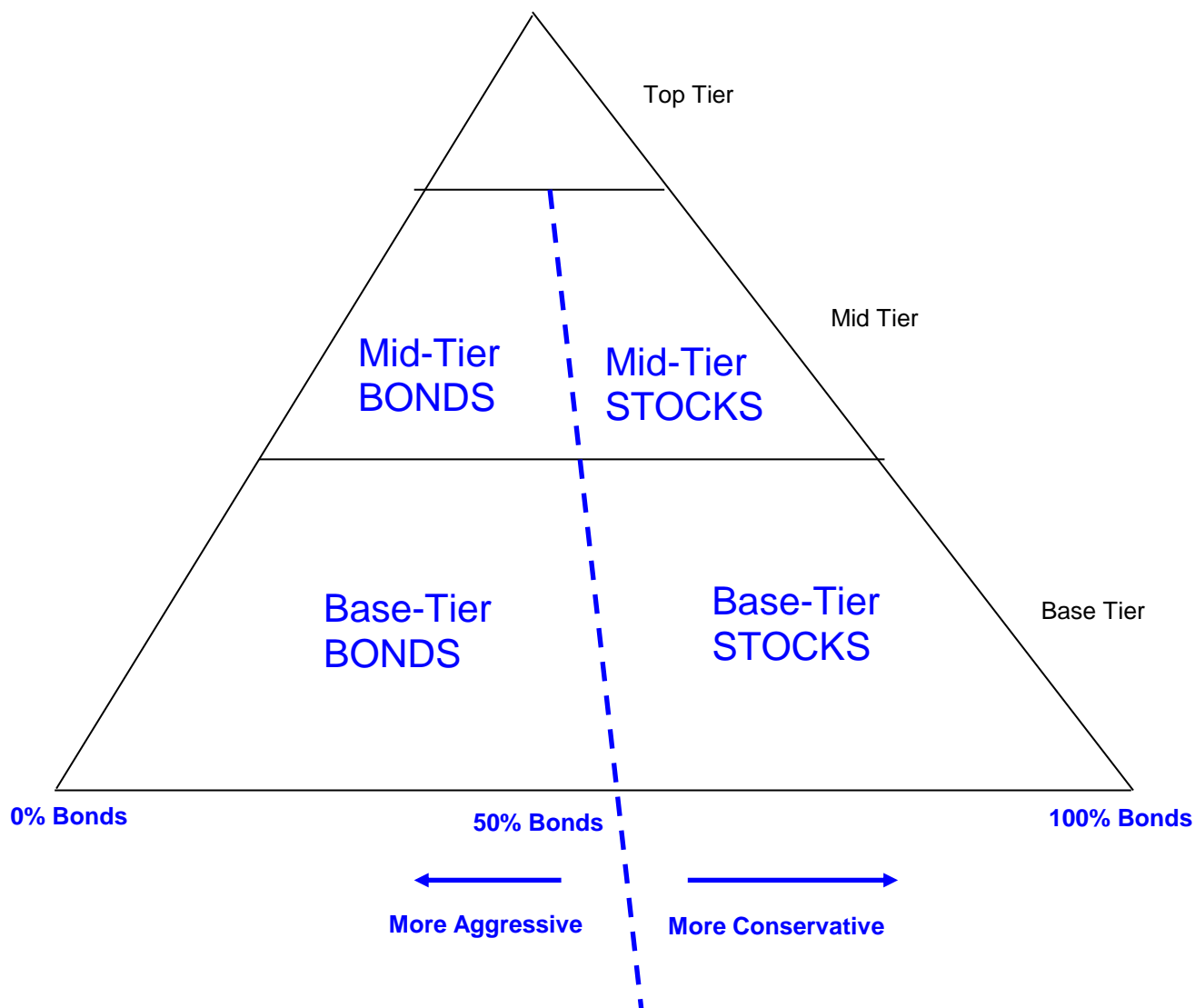
Allocating Assets to the Investment Vehicles - Stock/Bond Split

Typically Stocks and Bonds behave in different fashions. Stocks provide a higher return over time but are more volatile. Stocks provide a more consistent return, but underperform Stocks over time. We will divide the Base Tier and Mid Tiers each into BONDS and STOCKS. The historic rule of thumb is a good place to start:

> BOND Percentage of assets = Your Age
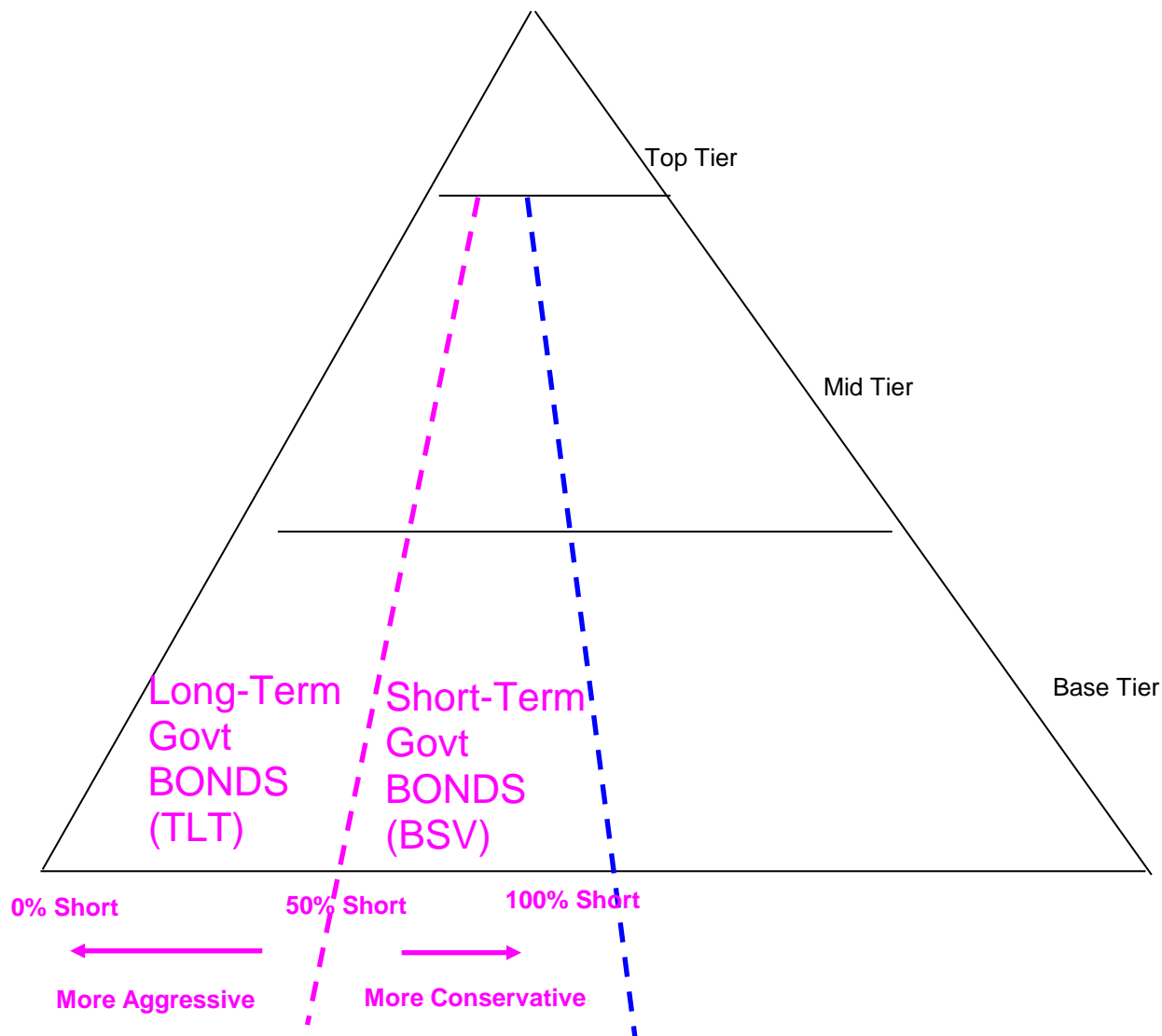> STOCK Percentage of assets = 100 minus Your Age

This historic rule of thumb is applicable for index-based allocations that are unmanaged. We can be a bit more aggressive since the allocations will be reviewed weekly.

Top Tier

Mid-Tier BONDS

Mid-Tier STOCKS

Mid Tier

Base-Tier BONDS

Base-Tier STOCKS

Base Tier

0% Bonds

50% Bonds

100% Bonds
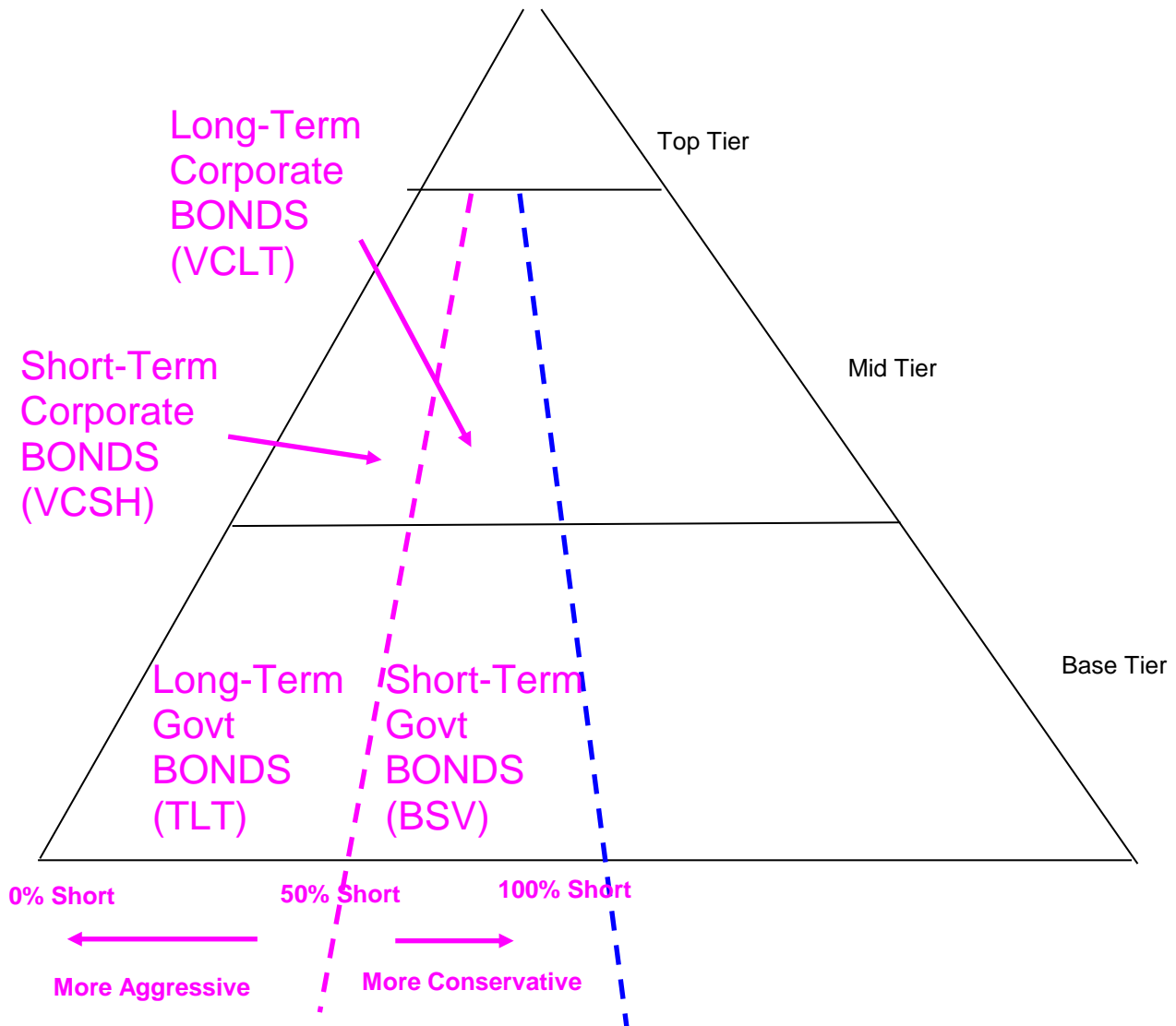
More Aggressive

More Conservative

Allocating Assets to the Investment Vehicles - Base Tier Government Bonds

Typically Short-Term and Long-Term Bonds behave in different fashions. Usually, Long-Term bonds provide higher return but they are more interest rate sensitive, and therefore more volatile. Short-term bonds provide less return because you are taking less risk, and they are less affected by Fed changes in interest rates. We will use a combination of bonds to diversify our risk. And we will determine the mix of Short-Term and Long-Term Bonds using a simple technical indicator to be explained later.

Top Tier

Mid Tier

Base Tier

Long-Term Govt BONDS (TLT)

Short-Term Govt BONDS (BSV)

0% Short

50% Short

100% Short

More Aggressive

More Conservative

Allocating Assets to the Investment Vehicles - Mid-Tier Corporate Bonds

Typically Short-Term and Long-Term Bonds behave in different fashions. Usually, Long-Term bonds provide higher return but they are more interest rate sensitive, and therefore more volatile. Short-term bonds provide less return because you are taking less risk, and they are less affected by Fed changes in interest rates. We will use a combination of bonds to diversify our risk. And we will determine the mix of Short-Term and Long-Term Bonds using a simple technical indicator to be explained later.

Top Tier

Mid Tier

Base Tier

Long-Term
Corporate
BONDS
(VCLT)

Short-Term
Corporate
BONDS
(VCSH)

Long-Term
Govt
BONDS
(TLT)

Short-Term
Govt
BONDS
(BSV)

0% Short

50% Short

100% Short

More Aggressive

More Conservative

Allocating Assets to the Investment Vehicles - Base-Tier Stocks

Typically US and World Stocks behave in different fashions. World stocks include both developed and developing countries. Given that we do not have a World bond portfolio, it is important that we include a World (excluding US) equity component in the overall base equity model. We will determine the mix of US and World stocks using a simple technical indicator to be explained later.
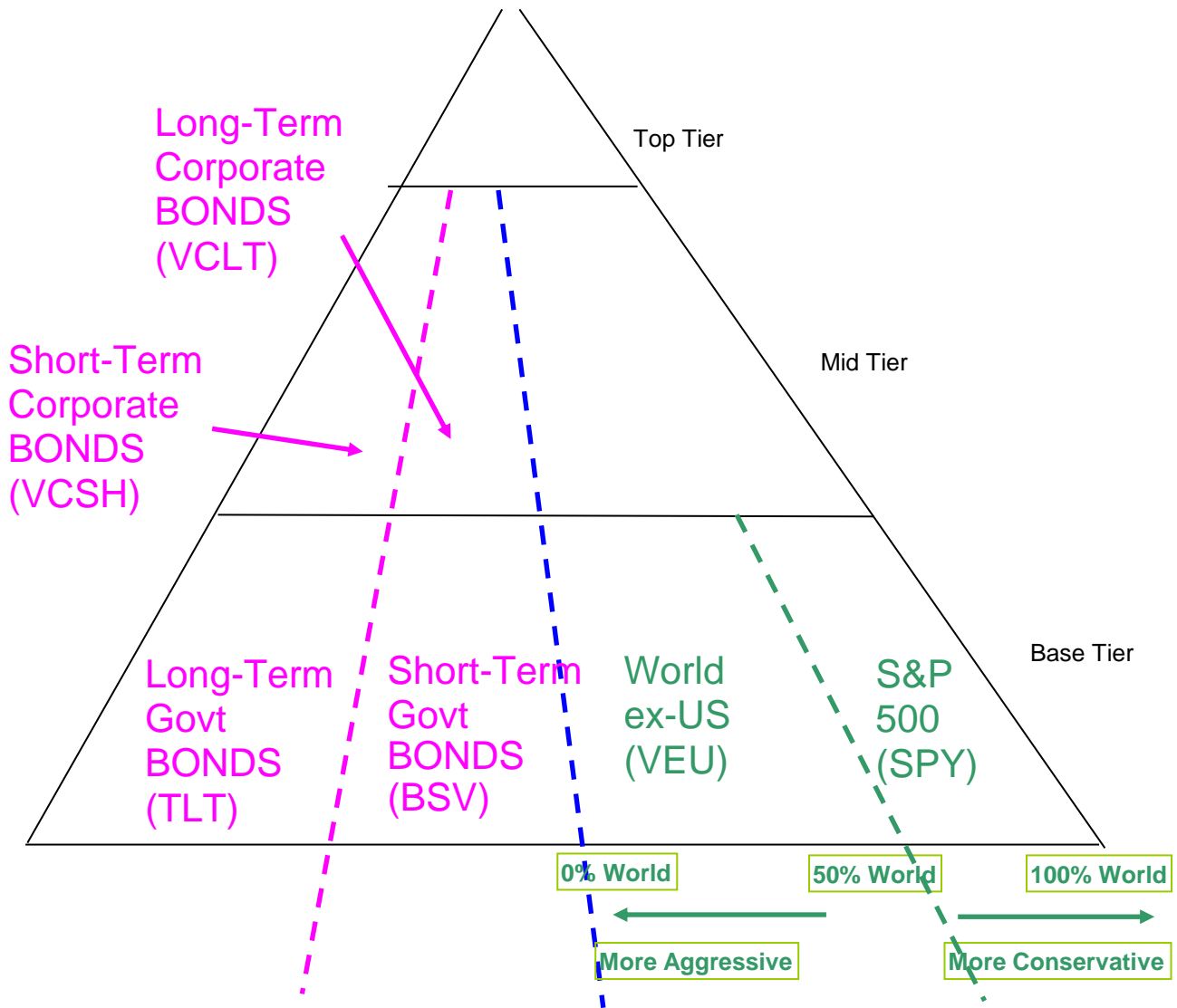
Allocating Assets to the Investment Vehicles - Mid-Tier Stocks

Use this category for individual stocks. That may include your company stock. It may include individual stocks that are selected using ValueLine or other newsletters. I will include here the Miley Fundamental Portfolio, that is primarily made up of small and mid-cap stocks that are not otherwise held in the Base.

Long-Term
Corporate
BONDS
(VCLT)

Top Tier

Miley
Fundamental
Portfolio

Mid Tier

Short-Term
Corporate
BONDS
(VCSH)

Base Tier

Long-Term
Govt
BONDS
(TLT)

Short-Term
Govt
BONDS
(BSV)

World
ex-US
(VEU)

S&P
500
(SPY)

0% World   50% World   100% World

More Aggressive   More Conservative
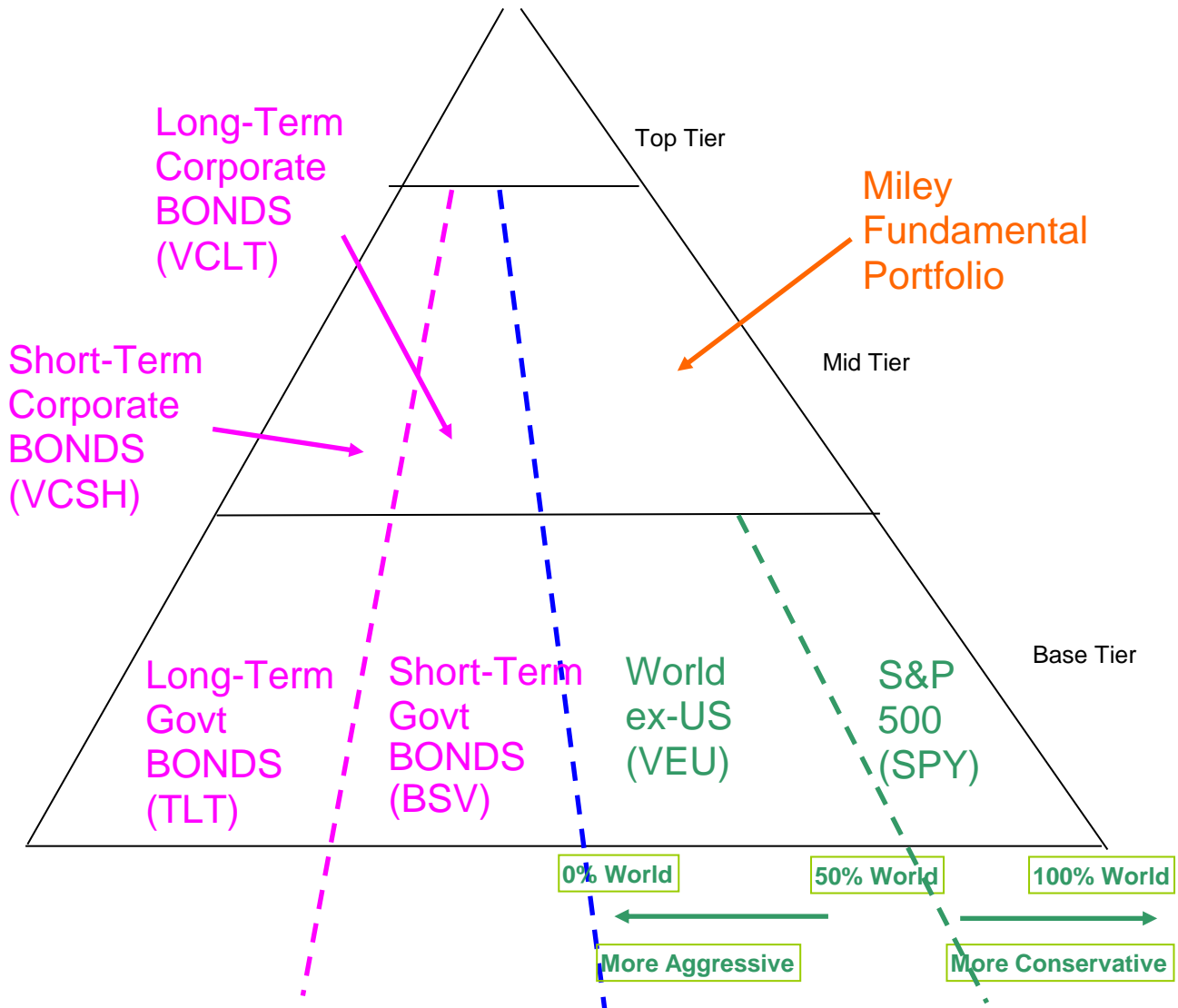
Allocating Assets to the Investment Vehicles - Top Tier

Use this category for diversifying to include some of the more volatile asset classes, including Gold, Real Estate, Currencies, Commodities, Leveraged and Inverse ETFs. This might also include highly volatile individual securities such as individual small-cap stocks.
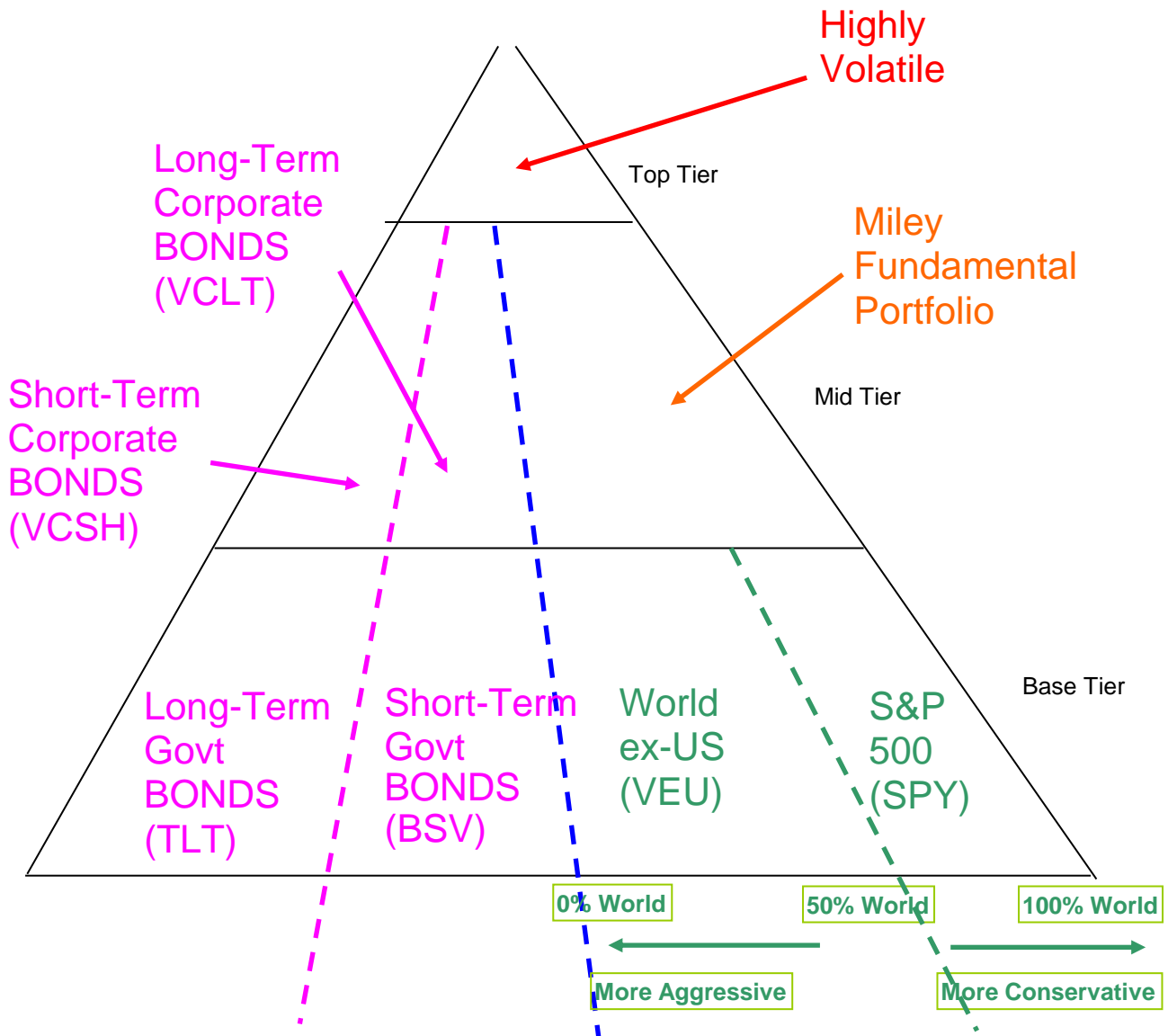
Setting the Mixes Using Simple Technical Indicators

There are three different proportions that must be set to effectively use this model:

        1) The proportion of Stocks to Bonds
        2) The proportion of Long-Term Bonds to Short-Term Bonds
        3) The proportion of World Stocks to US-only Stocks

To do this effectively we will use the following method:

        1) Create a few new indicators. We will divide the price of one asset into the price of the other.
                Example: indicator=VEU/SPY.
                Example: indicator=TLT/BSV.
                Example: indicator=VCLT/VCST.
        2) Plot each indicator on its own daily basis on a chart.
        3) Plot a 100 day moving average of that same indicator, on the same chart.
        4) Plot a 200 day moving average of that same indicator, on the same chart.

We will determine the proportions based upon the strength of the indicator against the two different moving averages. When the indicator is above the 100dma and the 200dma, we will weight our investment in favor of the symbol that we used in the numerator. Conversely, when the indicator is below the 100dma or the 200dma, we will weight our investment in favor of the symbol that we used in the denominator.

Example:

On November 6, 2013 the following indicator values were found for the basic Stocks-to-Bonds ratio:

SPY/AGG		1.64
SPY/AGG	100dma	1.57
SPY/AGG	200dma	1.50

Note that in this case SPY represents STOCKS, and AGG represents BONDS. The indicator value of 1.64 is greater than either of the two trailing moving averages, indicating that STOCKS are at present stronger than BONDS have been historically over the past 100 or 200 days. So we should take the most aggressive position that we are prepared to take in STOCKS versus BONDS. This will not always be the case, but it was the case as of November 6, 2013.

An Example: November 6, 2013
The following follows the process completely through for the period ending November 6, 2013.

Assumptions:
       1) Base-Tier will consist of 70% of total equity
       2) Mid-Tier will consist of 20% of total equity
       3) Top-Tier will consist of 10% of total equity.
       4) At no time will stocks be more than 75% of total equity.
       5) Both Long-term and Short-term bonds will be purchased.

Invested Percentages:

SPY =   70% of total equity because it is in the BASE tier
       X 75% of total BASE tier because SPY/AGG (1.64) is greater than either moving average (1.57)(1.50)
       X 30% of total BASE EQUITY tier because SPY/VEU (3.52) is less than 100dma (3.55)
       15.75% of total equity invested in the S&P 500 index (SPY)

VEU =   70% of total equity because it is in the BASE tier
       X 75% of total BASE tier because SPY/AGG (1.64) is greater than either moving average (1.57)(1.50)
       X 70% of total BASE EQUITY tier because SPY/VEU (3.52) is less than 100dma (3.55)
       36.75% of total equity invested in the World ex-US index (VEU)

BSV =   70% of total equity because it is in the BASE tier
       X 25% of total BASE tier because SPY/AGG (1.64) is greater than either moving average (1.57)(1.50)
       X 70% of total BASE BOND tier because TLT/BSV ratio (1.32) is less than 200dma (1.38)
       12.25% of total equity invested in the Short-Term Bond index (BSV)

TLT =   70% of total equity because it is in the BASE tier
       X 25% of total BASE tier because SPY/AGG (1.64) is greater than either moving average (1.57)(1.50)
       X 30% of total BASE BOND tier because TLT/BSV ratio (1.32) is less than 200dma (1.38)
       5.25% of total equity invested in the Long-Term Bond index (TLT)

VCSH =   20% of total equity because it is in the MID tier
       X 50% of total MID tier because SPY/AGG (1.64) is greater than either moving average (1.57)(1.50)
       X 30% of total MID BOND tier because VCLT/VCST ratio (1.04) is greater than 100dma (1.03)
       3.00% of total equity invested in the Short-Term Corporate Bond index (VCSH)

VCLT =   20% of total equity because it is in the MID tier
       X 50% of total MID tier because SPY/AGG (1.64) is greater than either moving average (1.57)(1.50)
       X 70% of total MID BOND tier because VCLT/VCST ratio (1.04) is greater than 100dma (1.03)
       7.00% of total equity invested in the Long-Term Corporate Bond index (VCLT)

Miley FF = 20% of total equity because it is in the MID tier
       X 50% of total MID tier because SPY/AGG is greater than either moving average
       X 100% of total MID STOCK tier
       10% of total equity invested in the Miley Fundamental Portfolio

Summary for November 6, 2013

Stock Investment		Bond Investment		Other Investment	
SPY	15.75%	BSV	12.25%	Top Tier	10%
VEU	36.75%	TLT	5.25%		10.00%
Miley	10.00%	VCSH	3.00%		
	62.50%	VCLT	7.00%		
			27.50%		

Backtesting Results - Introduction

In order to determine how this strategy might perform in the future, a backtesting analysis was performed to see how this strategy would have performed in the past. The following settings were used in this analysis:

1) Portfolio was reviewed and if necessary rebalanced once a week, over the weekend.
2) BUY orders were placed as BUY LIMIT orders using the prior day's closing price.
3) No commission fees were included.
4) A trailing StopLoss of 7% of initial price was applied to all positions. Stops activated immediately intraweek.

Using Model - return using model weighting

	2008	2009	2010	2011	2012	2013
BSV	-0.40%	0.10%	0.40%	0.10%	0.10%	0.00%
SPY	-0.10%	3.40%	2.40%	-1.50%	3.10%	5.60%
TLT	6.60%	-5.10%	2.10%	5.00%	-1.10%	-0.90%
VEU	-2.90%	17.70%	1.50%	-3.20%	3.30%	3.10%
VCSH			0.10%	0.10%	0.20%	0.10%
VCLT			0.60%	1.10%	0.60%	-0.30%
Total Return	-0.10%	15.40%	7.30%	1.50%	6.20%	7.60%

Historic Dividend Yields for Securities

	2008	2009	2010	2011	2012	2013
BSV	3.00%	2.50%	2.00%	1.75%	1.50%	1.10%
SPY	2.00%	3.00%	2.00%	1.90%	2.00%	2.00%
TLT	3.25%	3.25%	3.25%	3.25%	2.50%	2.25%
VEU	2.50%	2.25%	0.50%	0.60%	0.90%	1.00%
VCSH				1.90%	1.85%	1.70%
VCLT				4.25%	3.75%	3.75%

Using Model - estimated average position weighting

	2008	2009	2010	2011	2012	2013
BSV	19.30%	11.40%	11.70%	10.10%	8.50%	9.00%
SPY	10.80%	16.70%	20.28%	25.20%	20.80%	24.00%
TLT	26.60%	9.60%	15.50%	18.70%	11.50%	4.90%
VEU	14.90%	27.30%	18.20%	13.30%	17.40%	18.20%
VCSH			4.80%	4.50%	3.40%	4.90%
VCLT			8.70%	8.20%	6.30%	3.00%

Using Model - estimated annual Dividend income

	2008	2009	2010	2011	2012	2013
BSV	0.58%	0.29%	0.23%	0.18%	0.13%	0.10%
SPY	0.22%	0.50%	0.41%	0.48%	0.42%	0.48%
TLT	0.86%	0.31%	0.50%	0.61%	0.29%	0.11%
VEU	0.37%	0.61%	0.09%	0.08%	0.16%	0.18%
VCSH	0.00%	0.00%	0.00%	0.09%	0.06%	0.08%
VCLT	0.00%	0.00%	0.00%	0.35%	0.24%	0.11%
Model	2.03%	1.71%	1.23%	1.78%	1.29%	1.07%

Using Model - Estimated Annual Return (principle + dividend)

	2008	2009	2010	2011	2012	2013
BSV	0.18%	0.39%	0.63%	0.28%	0.23%	0.10%
SPY	0.12%	3.90%	2.81%	-1.02%	3.52%	6.08%
TLT	7.46%	-4.79%	2.60%	5.61%	-0.81%	-0.79%
VEU	-2.53%	18.31%	1.59%	-3.12%	3.46%	3.28%
VCSH	0.00%	0.00%	0.10%	0.19%	0.26%	0.18%
VCLT	0.00%	0.00%	0.60%	1.45%	0.84%	-0.19%
Model	5.23%	17.81%	8.33%	3.38%	7.49%	8.67%

Backtesting Results - Model versus S&P500

The chart below illustrates the difference in return if $1000 was invested on January 1, 2008 in one of three different vehicles: 1) the Model, or 2) S&P500, or 3) an intermediate Bond ETF.

Note that in the case of the S&P500 the Maximum Draw Down (drop from asset peak) is 55%. For most people this is far too much volatility. The Maximum Draw Down for Bonds is 12.83%; for the model it is 10.86%.

As we will eventually head into a period of expected 1) market correction, and 2) inflation and/or the easing, it makes sense that both the S&P500 and Bond investments will be more volatile than a Model which contains both of them in a non-correlated fashion.

$1000 Invested On 1/1/2008 using Model versus S&P500 and Bonds
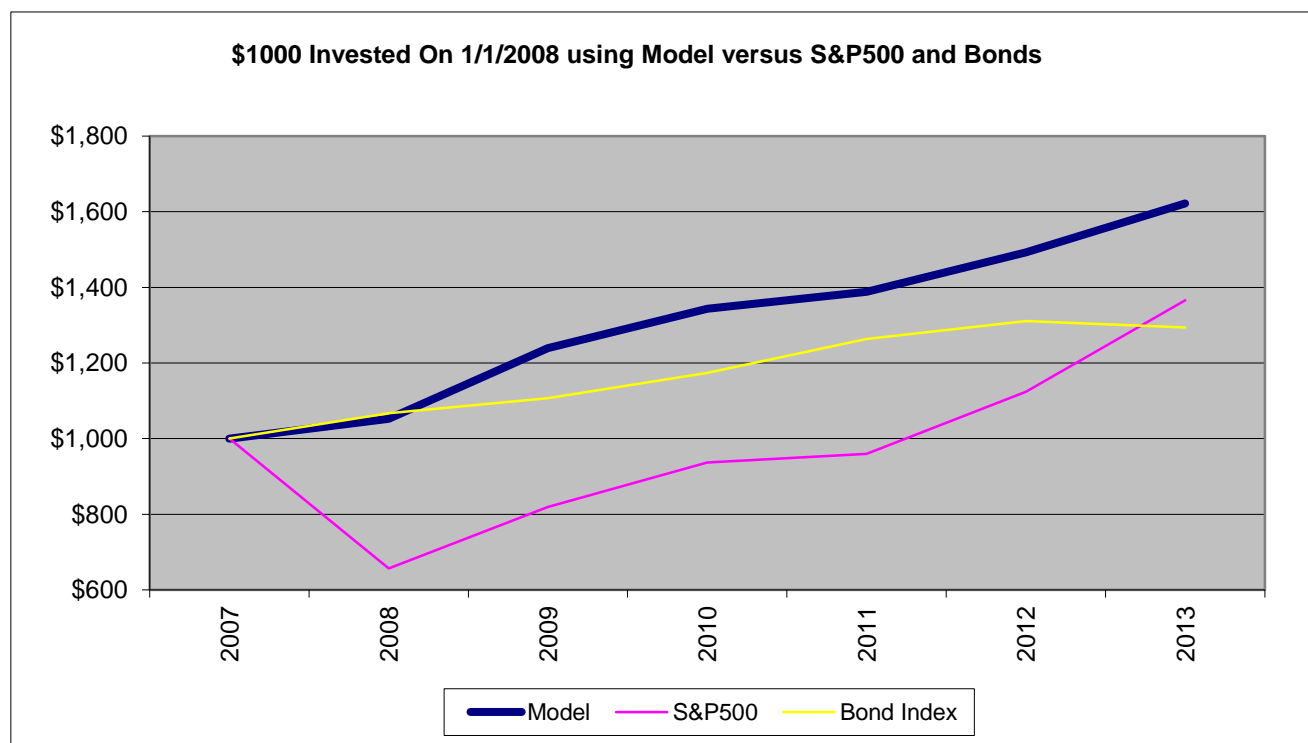
(the following chart is used in the graph above)

Model versus S&P500 and Bond Index							
	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Nov-13
Model		5.23%	17.81%	8.33%	3.38%	7.49%	8.67%
S&P500		-34.3%	24.70%	14.30%	2.50%	17.10%	21.50%
S&P500*.7		-24.0%	17.29%	10.01%	1.75%	11.97%	15.05%
Bond AGG		6.70%	3.70%	6.10%	7.60%	3.80%	-1.30%
Bond *.7		4.69%	2.59%	4.27%	5.32%	2.66%	-0.91%
1000 Model	1000	$1,052	$1,240	$1,343	$1,388	$1,492	$1,622
1000 S&P	1000	$657	$819	$936	$960	$1,124	$1,366
1000 Bond	1000	$1,067	$1,106	$1,174	$1,263	$1,311	$1,294

Notes:
Since Model performance represents only 70% of assets, an equivalent 70% was used for index comparison