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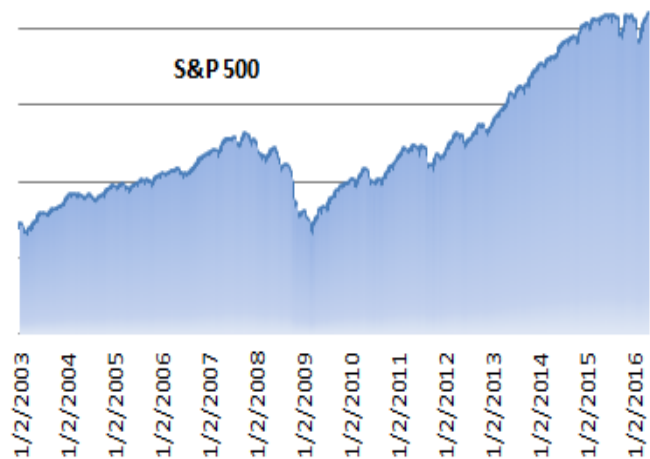
Smart Sapling, Inc.
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Approaching The Dip

The market has been climbing for about 7 ½ years now and at some point is due for a correction. Many articles are in general agreement that some sort of correction will occur within the next 3 years. Opinions vary greatly on the particulars, such as exactly when, how much, and at what rate. **What can we do?**

Conventional long-term planning will mostly tell you to ignore the impending dip and focus on the long-term results. The dips do happen and are difficult to predict. Attempts to time the market, sell at the peak and buy at the trough, are exceptionally hard to execute and most traders, experienced or novice, do this poorly.

A second approach is to monitor for the recession market correction as it occurs. When it's detected, get out for the remainder of the correction, and then get back in when it's over. This approach uses data from both the stock market and labor markets. With



The Benchmark

this method, you endure the beginning of the dip and miss the initial rebound after the recovery starts, so this is far from perfect market timing, but it is a viable approach.

A third approach, and the content of this article is to find alternate investments that are likely to do well or at least okay during the market correction, and simply buy those now and in three years' time, or whenever the correction appears to be completed, switch back into more standard equities. This is a conservative approach and provides stable returns.

Target Investments

In this article I looked at some bundled or diversified investments that performed well during the last recession and are likely to do well in the next – these are selected from the lists of Exchange Traded Funds (ETF's) and Mutual funds.

The idea for this article came to me after reading the AAI (American Association of Individual Investors) Journals review of mutual funds (Volume XXXVIII, No. 2 – Dated February 2016). In this edition of their monthly magazine they reviewed and ranked good and poor performing mutual funds and provide historical performance data. In particular, they provide the last bear market and last bull market returns. The bear market they define as from March 1, 2009, to May 31, 2015, and the bull market was prior to that from November 1, 2007, to February 28, 2009. *(an interesting side note is that they do not count the last year [June 1, 2015, to today] as part of the bull market...)* Also provided was the long-term return – ten years ending December 2015. The results clearly detail the last market correction and which mutual funds did well.

Expanding on this article and mutual

funds I also researched similar data for ETF's. In theory, ETF's are a better investment as their cost of operations per share is less expensive, and the mechanical nature of their investments is more reproducible.

The results are interesting in that 3 distinct groups of investments were produced.

The primary result (Group 1) is a list of mostly long-term government treasury type bond funds. These are straightforward, safe, and produce good returns per year in the range of 5 to 7%.

The second group (Group 2) is gold. Gold has not done well in the last 4 years and is on a cycle not well correlated with the overall equities market. Long term gold is probably a lesser choice, but over the next few years shows promise independent of other factors. Gold is worth considering.

The last group (Group 3) contains equities that will take a hit when the market drops, however much less so than average, and longer term provides the best

returns. In the longer term, these will provide returns many times over what the first two groups did.

The short list below are the top funds based on

the AAll Journal data. In addition to this list, there are many other similar ETF's and Mutual Finds producing similar results.

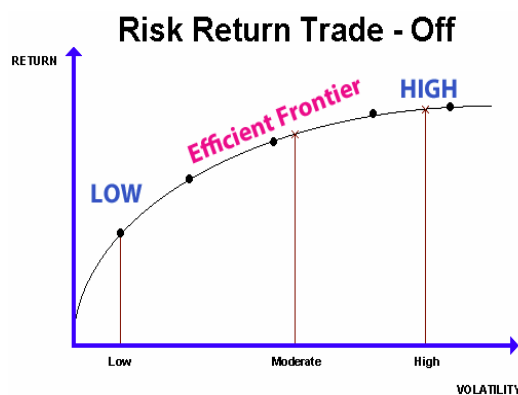
Results—List of Funds

Ticker	Category	Type	Name	10 Year Annual (%)	Bull Mkt Total Ret (%)	Bear Mkt Total Ret (%)
Group 3						
VDC	0203-Sec-ConStpl	ETF	Vanguard Consumer Staples ETF (VDC)	10.8	191.1	(27.9)
RBCGX	Stk-LC	Mutual	Reynolds Blue Chip Grth (RBCGX)	10.7	176.2	(7.7)
XLP	0203-Sec-ConStpl	ETF	Consumer Staples Select Sector SPDR® ETF (XLP)	10.5	178.6	(25.8)
Group 2						
IAU	0303-Com-PrecMtl	ETF	iShares Gold Trust (IAU)	10.1	22.2	18.2
GLD	0303-Com-PrecMtl	ETF	SPDR® Gold Shares (GLD)	10.0	19.9	19.9
Group 1						
WHOSX	B-GvLT	Mutual	Wasatch-Hoisington US Tr (WHOSX)	7.2	57.7	24.2
RYGBX	B-GvLT	Mutual	Rydex Govt LgBd 1.2x Str Inv (RYGBX)	7.0	57.8	26.5
TGMNX	B-MB	Mutual	TCW Total Return Bond N (TGMNX)	6.5	65.2	3.2
FLBIX	B-GvLT	Mutual	Fidelity Spar L-T Tr Bd lx Inv (FLBIX)	6.4	50.8	16.3
VUSTX	B-GvLT	Mutual	Vanguard LgTm US Try Inv (VUSTX)	6.4	51.8	15.5
PRULX	B-GvLT	Mutual	T. Rowe Price US Treas LgTm (PRULX)	6.3	48.5	17.2
VBLTX	B-GenLT	Mutual	Vanguard LgTm Bd Idx Inv (VBLTX)	6.3	73.2	2.2
TLT	0612-B-GvLT	ETF	iShares 20+ Year Treasury Bond (TLT)	5.9	43.5	19.8
IEF	0612-B-GvLT	ETF	iShares 7-10 Year Treasury Bond (IEF)	5.1	31.7	16.9

Portfolio Construction

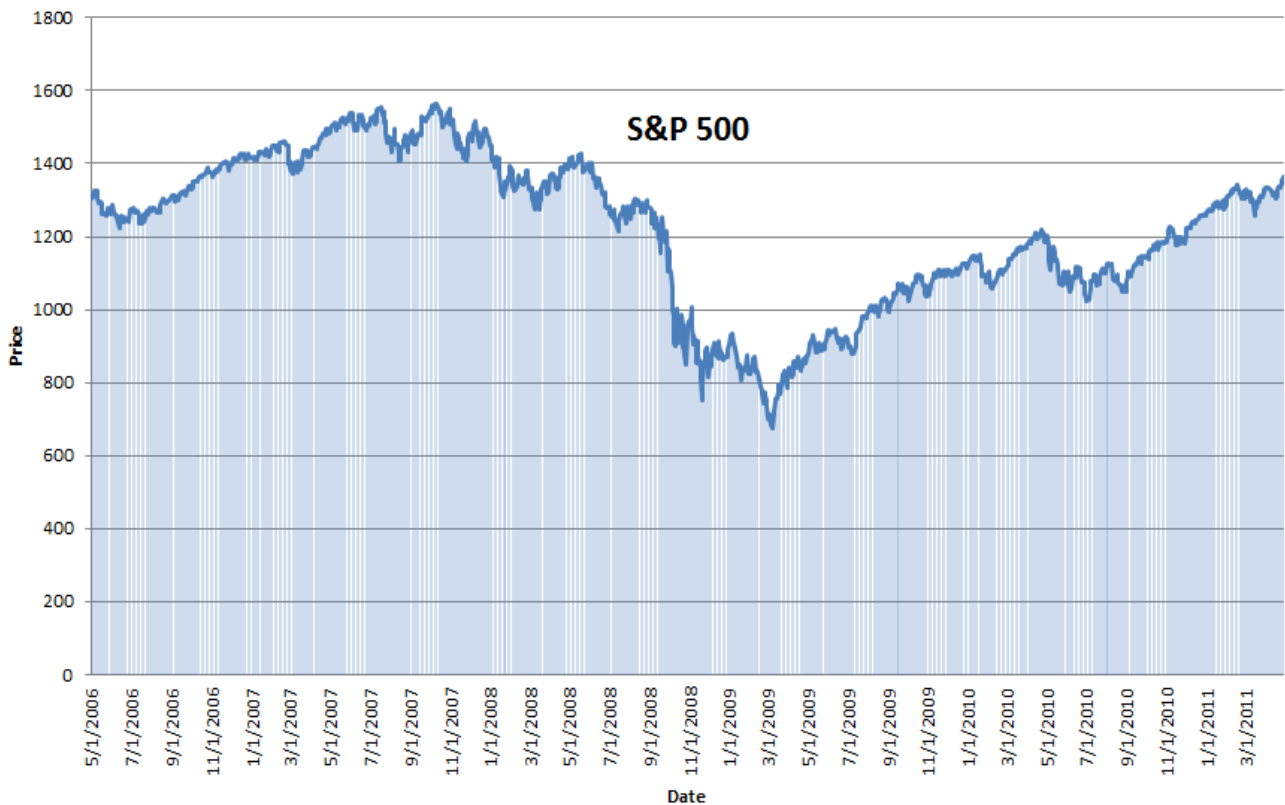
In the above table of results we have an interesting list of investment choices, but this is not quite a portfolio of investments. Blindly purchasing an equal sum of each or any arbitrary weighting, will not necessarily give you the optimal result. We need an intelligent way of weighting these options. To determine the portfolio I like to model these investments with the “efficient frontier” over a historical time period which is

both conservative and likely to be similar to the immediate future.



The time length chosen for the analysis is subjective. It should be long enough to contain sufficient variation in the data but not too long as to be irrelevant for current conditions. Making the assumption that history repeats itself and a portfolio of investments that performed well over the 5 years straddling the last bear market will perform well during the next few years.

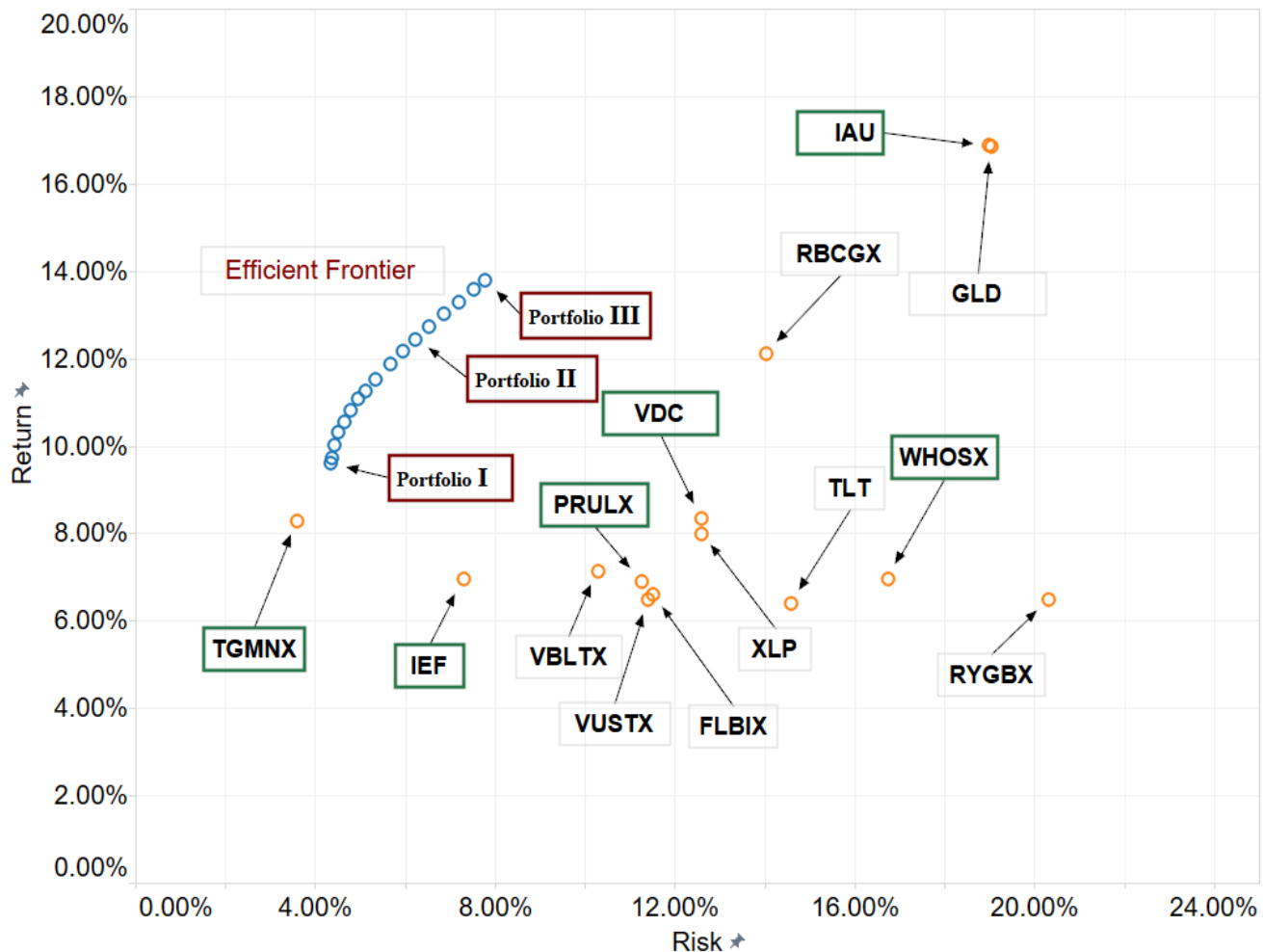
The bull market was from about November 1, 2007, to February 28, 2009. For this analysis, we will take in the time prior and after that from May 1, 2006, to May 1, 2011. To analyze the selections, the choices are plugged into the optimal frontier calculator and the lowest risk, lowest return, optimal portfolio, and highest risk highest return portfolios are determined. For this analysis, the maximum individual investment was set to 30%.



5 Year Period of S&P for Portfolio Construction

The S&P 500 over this entire period earned about 3.5% annually, with a 48% drop in price from the original date (05/01/2006) to the low of the recession (03/09/2009).

The analysis was performed in “R” and MS Excel with monthly data from Yahoo Finance. Graphically the raw frontier results are shown below.



Raw Efficient Frontier Results—Graphic

The optimum portfolios, based on this short list of investments, are shown in Table 2.

In contrast with the S&P 500, portfolio “I” produced an annual return many times the S&P over the same period and produced a positive return each year. Portfolios “II” and “III” performed even better.

If we assume future results will be similar to those during this recession time period the portfolio “I” has a median 9.6% annual return with a 95% certainty of producing at least 2.3% return each year.

Similarly, portfolio “II” has a median 12.4% annual returns with a 95% certainty of producing at least 2.0% each year. And portfolio “III” should have a median 13.8% annual return with a 95% certainty of producing at least 0.9% each year.

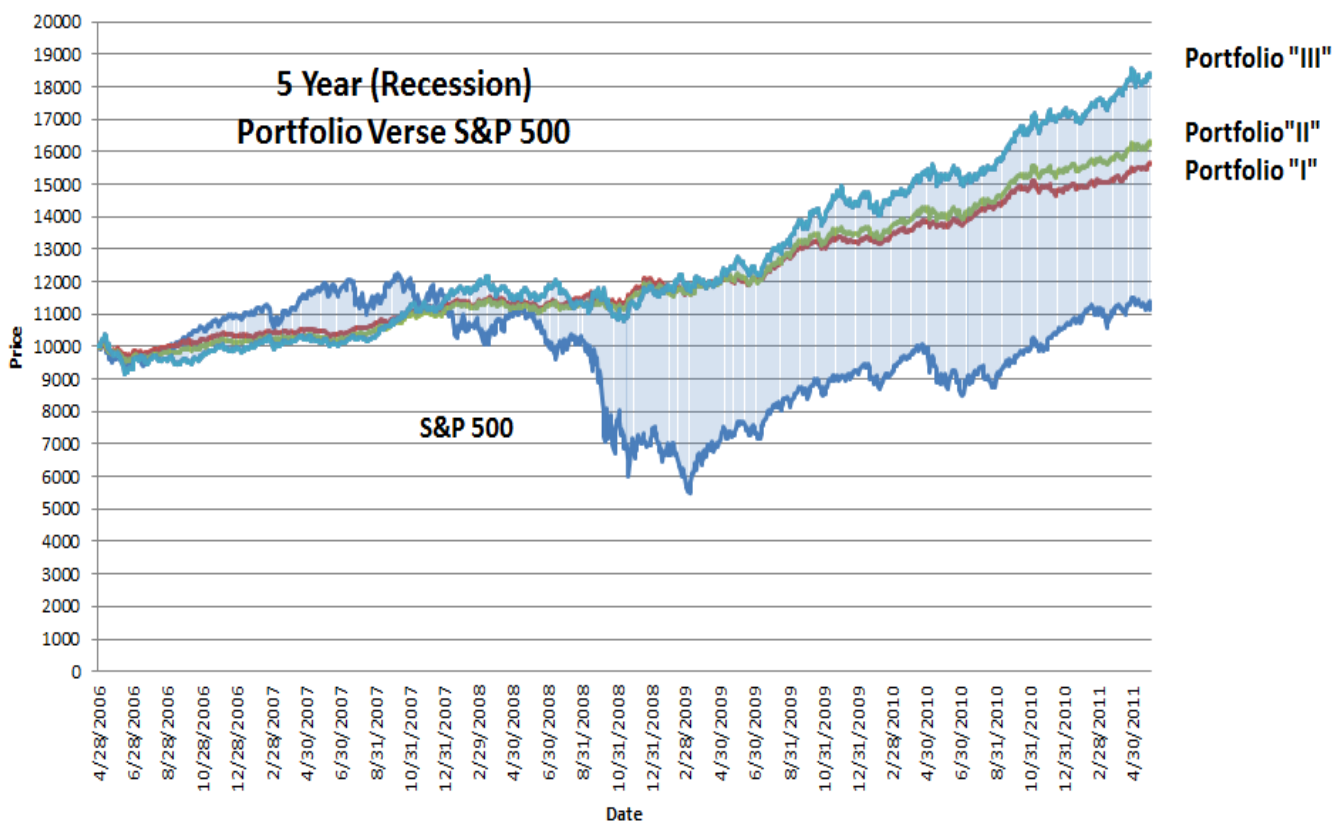
Ticker	Name	Portfolio Percentage			
		S&P	Low Risk	Optimum Sharpe	Higher Risk
		-	I	II	III
SPY	SPDR S&P 500 ETF	100%			
VDC	Vanguard Consumer Staples ETF (VDC)		5%	-	1%
RBCGX	Reynolds Blue Chip Grth (RBCGX)		22%	30%	30%
XLP	Consumer Staples Select Sector SPDR® ETF (XLP)	-	-	-	-
IAU	iShares Gold Trust (IAU)	-	-	19%	30%
GLD	SPDR® Gold Shares (GLD)	-	-	-	-
WHOSX	Wasatch-Hoisington US Tr (WHOSX)	-	-	5%	9%
RYGBX	Rydex Govt LgBd 1.2x Str Inv (RYGBX)	-	-	-	-
TGMNX	TCW Total Return Bond N (TGMNX)		30%	30%	30%
FLBIX	Fidelity Spar L-T Tr Bd lx Inv (FLBIX)	-	-	-	-
VUSTX	Vanguard LgTm US Try Inv (VUSTX)	-	-	-	-
PRULX	T. Rowe Price US Treas LgTm (PRULX)		13%	-	-
VBLTX	Vanguard LgTm Bd ldx Inv (VBLTX)	-	-	-	-
TLT	iShares 20+ Year Treasury Bond (TLT)	-	-	-	-
IEF	iShares 7-10 Year Treasury Bond (IEF)		30%	16%	-
		100%	100%	100%	100%
	Annual Return	3.5%	9.6%	12.4%	13.8%
	Stddev	17.9%	4.4%	6.3%	7.8%
	Expected Low Range Annual Return	-26.0%	2.3%	2.0%	0.9%

Portfolio III—for example—can be constructed from a \$10,000 investment pool as follows:

VDC	\$ 100
RBCGX	\$3,000
IAU	\$3,000
WHOSX	\$ 900
TGMNX	\$3,000

Over this period, the original \$10,000 grows to over \$18,000.

Graphically this portfolio, as compared to the S&P 500 over the 5 years straddling the last bear market performed as shown below.



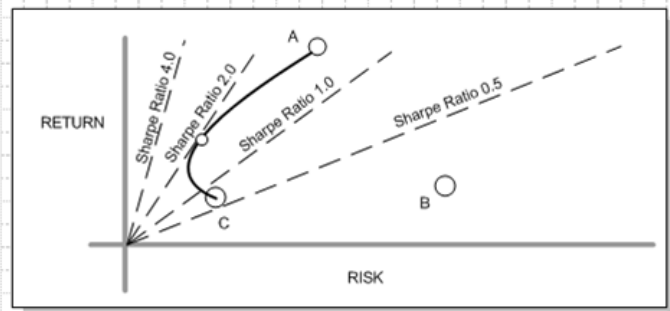
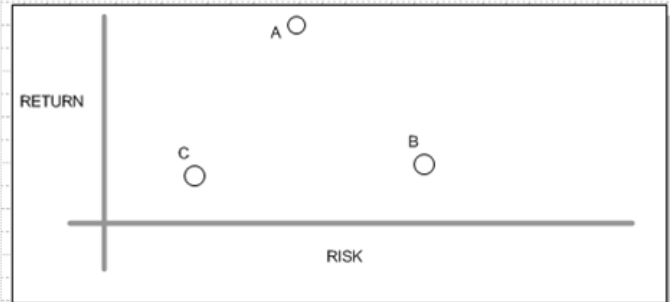
Graph 4

Shown here is the construction of a series of portfolios, constructed from Mutual Funds and ETF's that performed well during the last recession, and are likely to perform okay over the next one. The most conserva-

tive portfolio is mostly bonds with some equities while the least conservative one adds in more equities and an investment in gold.

As always investing carries risk. Monies at risk can be lost in a descending market. The risks should be understood and balanced with timelines in order to make reasonable decisions on investing.

Graphically what is the Sharpe Ratio??



John Kuest is an independent financial analyst who periodically produces articles /discussions on investing, modern portfolio theory and the efficient frontier.



better Decisions