



# HARVEST

## INVESTMENT SERVICES

"Harvest Gains and Limit Losses"

## AlphaSolutions 13/50 Model

*An investment model that follows market trends for growth and downside risk controls*

### Portfolio Goals

**Primary:** Seeks long term growth by investing in major equity indices when they are trended in or are advancing.

**Secondary:** Seeks to reduce market volatility by reducing or eliminating investments when major indices are trended out.

### Suitability

Investors that seek long term capital appreciation.

Investors that wish to minimize volatility and risk by utilizing an active approach to portfolio management.

Investors comfortable with investments in common stock.

### Investment Strategy

We employ a technical investment strategy based on a set of rules that analyze the trend of five major domestic indices to determine if a risk on or risk off approach should be taken. Risk on or risk off is determined by examining the trend of each index independently. The technical trend is the assessment of where the short term moving average is, relative to the long term moving average for each index.

Specifically, when the short term thirteen-day exponential moving average is crosses over or is above the longer term fifty-day exponential moving average then that index is trended in and we would invest in that index by utilizing an Exchange Traded Fund (ETF). The trend for each of the five indices is evaluated independently and twenty percent is invested in each index that is trended in. There will be times when the strategy will be fully invested, while other times, especially, when markets become more volatile, there will be positions that trend out and the strategy would not be fully invested.

### Risk Control Measures

We utilize an active approach to minimize downside risk, unlike a traditional buy and hold approach that stays fully invested regardless of market volatility or losses. The AlphaSolutions 13/50 Strategy would minimize risk by taking a risk off approach by liquidating equity holdings that are not trended in. As previously mentioned when the thirteen-day moving average is above the fifty-day moving average that position is trended in and we would invest in that position, conversely, when the thirteen-day moving average crosses below the fifty-day moving average we would consider that position trended out and we would liquidate that position and invest in cash until that index trends back in.

Following the trends helps to minimize or even avoid large losses during bear markets by liquidating equity positions and holding cash waiting for better market conditions when markets trend in.

## AlphaSolutions 13/50 Model Overview

The AlphaSolutions 13/50 strategy evaluates the trend of five major domestic indices, the S&P 500, the Dow Jones Industrial Average, the Nasdaq 100, MidCap and SmallCap stock indices.

An example of the moving average crossovers is illustrated below using the S&P 500. The illustrated example is from September, 2010 and through April, 2013. During the periods that the S&P 500 is trended in, as identified by the green trend status, the strategy would invest in a S&P 500 ETF until the thirteen day moving crosses below the fifty day moving average. When that position trends out as identified by the red trend status, we would sell the position, remain in cash, and wait for it position to trend back in.

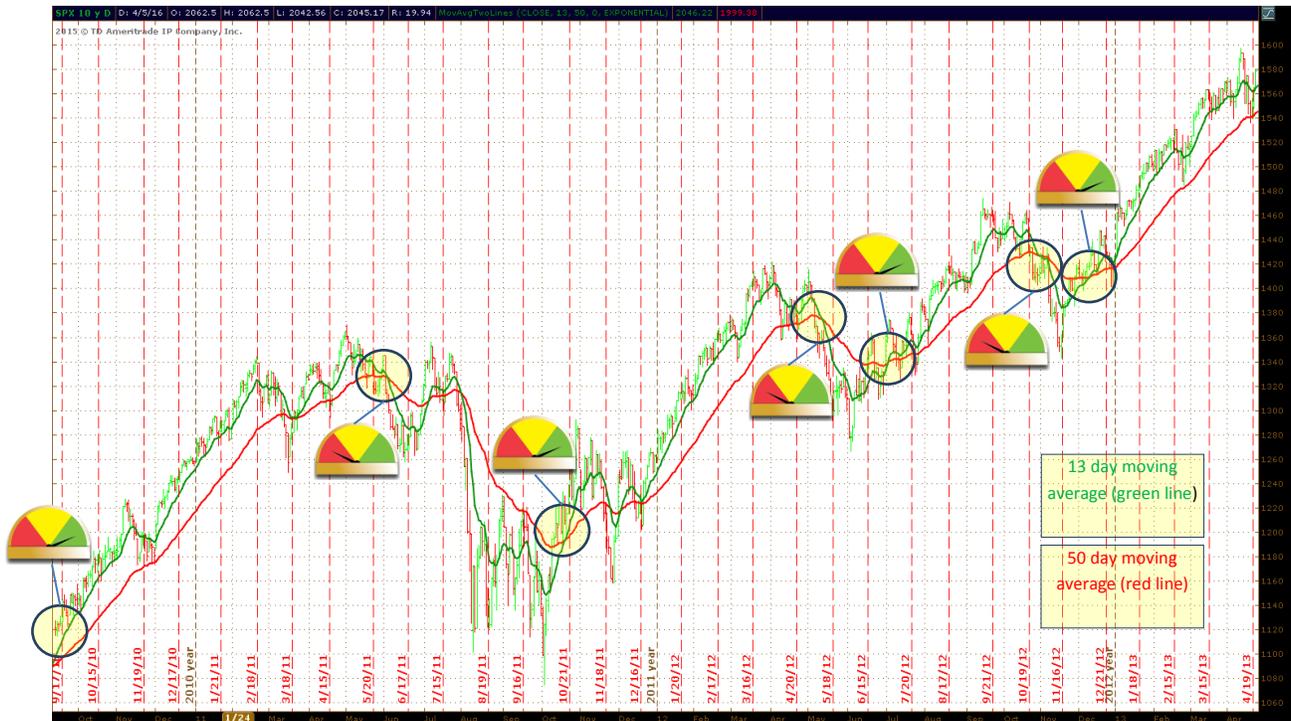


Figure 1 S&P 500 9/2010 – 4/2013

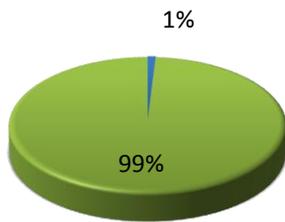


The thirteen day moving average (Green Line) crosses **above** the fifty-day moving average (Red Line) then the position is trended in and we would invest in that index.



The thirteen day moving average (Green Line) crosses **below** the fifty-day moving average (Red Line) then the position is trended out and we would sell that position waiting for it to trend back in.

## Allocation



■ Cash ■ Domestic Equity

## Portfolio Characteristics

Cost-effective diversification is primarily derived from the use of Exchange Traded Funds which track an entire index. These ETF's have exposure to many positions, often greater than a hundred positions.

Technical analysis is used to maximize growth and to minimize risk.

Each portfolio is managed within an individual's own separate account and is not part of a pooled portfolio.

**Universe of Indices:** S&P 500, the Dow Jones Industrial Average, the Nasdaq 100, MidCap and SmallCap stock indices. Maximum investment in any one index will be 20%.

## Current Holdings as of 10/1/2018

Cash			
Cash	1%	MoneyMarket	
Domestic Equity			
DIA	20%	SPDR Dow Jones Industrial Average ETF Trust Un	
MDY	20%	SPDR S&P MidCap 400 ETF Trust Unit Ser 1 Stand	
QQQ	20%	Invesco QQQ Trust Unit Ser 1	
SPY	20%	SPDR S&P 500 ETF Trust Tr Unit	
IWM	19%	iShares Trust Russell 2000 ETF	

## AlphaSolutions 13/50 Example

An example that can help clarify the AlphaSolutions 13/50 strategy is to examine how the strategy would have worked and performed in different market cycles. The first example is from the fall of 2007 through the spring of 2009. This period marked the end of the bull market where S&P closed at a high of 1565.15 and then the onset of the bear market due to the great recession where at its trough, the S&P closed at a low of 676.53 in March of 2009. The market correction during this period was a severe 56.8% market drop, while the AlphaSolutions 13/50 strategy performed very differently due to its rules based risk controls.



Figure 2 Oct 2007 - March 2009 SPY ETF

To make the example applicable the first purchase will be on October 9<sup>th</sup>, which is when the market hit a high and was referenced above. During this bear market the S&P 500 lost 56.8%. The AlphaSolutions 13/50 returned a negative 8.1% during this period as opposed to a 56.8% loss for a buy and hold investor. The 13/50 moving averages trended in twice, both for short periods, but the general trend of the market remained trended out until the market started to recover in March of 2009. The 13 day moving average crossed over the 50 day moving average and the market trended in on April 6<sup>th</sup>, 2009.

Purchase Amount	Purchase Date	Price	Shares	Sale Date	Sale Price	Sale Amount	ROR Per Trade
\$10,000	10/9/2007	\$156.48	63.906	11/9/2007	\$145.69	\$9,310	-6.90%
\$9,310	4/21/2008	\$138.31	67.316	6/11/2008	\$136.45	\$9,185	-1.34%
Strategy				Beginning Value	Ending Value	Cumulative Return	Annualized Return
<b>Alpha Solutions Rate of Return</b>				<b>\$10,000</b>	<b>\$9,185</b>	<b>-8.1%</b>	<b>-5.8%</b>
<b>Buy &amp; Hold Rate of Return</b>				<b>\$10,000</b>	<b>\$8,720</b>	<b>-56.5%</b>	<b>-44.4%</b>

Individual trades shown during a market correction, when prices were predominately in a decline. Market trades are from Oct 8<sup>th</sup>, 2007 to the market low of March 9<sup>th</sup>, 2009. Market trades were made on using the SPY ETF. Trades were opening prices, individual trades will differ from opening price. Individuals cannot purchase fractional shares of an ETF.

An additional example of the AlphaSolutions 13/50 strategy is after the market correction that resulted from the great recession, the equity market staged a strong recovery. The ensuing bull market recovered all of the losses suffered during the 2008, 2009 market correction and reached new highs in April of 2013 as shown below.

In order to demonstrate the AlphaSolutions 13/50 moving average through a full market cycle we extended the previous example to illustrate how the AlphaSolutions 13/50 strategy performed through both the market correction and then the ensuing market recovery. During the market recovery the market trend was for the most part upwards and the AlphaSolutions 13/50 followed suite with the thirteen day moving average being above the fifty day moving average for most of the recovery. The AlphaSolutions 13/50 strategy kept you invested in the equity market during the bull market recovery. It is the combination of the downside risk control coupled with market gains during the market recovery is why the AlphaSolutions 13/50 strategy adheres to the motto of, "Harvesting gains and limiting losses."



Figure 3: Oct 2007 - July 2009 SPY ETF

Purchase Amount	Purchase Date	Price	Shares	Sale Date	Sale Price	Sale Amount	ROR Per Trade
\$10,000	10/9/2007	\$156.48	63.906	11/9/2007	\$145.69	\$9,310	-6.90%
\$9,310	4/21/2008	\$138.31	67.316	6/11/2008	\$136.45	\$9,185	-1.34%
\$9,185	4/6/2009	\$83.34	110.214	7/13/2009	\$88.31	\$9,733	5.96%
\$9,733	7/16/2009	\$93.00	104.656	2/1/2010	\$108.15	\$11,319	16.29%
\$11,319	3/2/2010	\$112.37	100.726	5/17/2010	\$114.20	\$11,503	1.63%
\$11,503	8/3/2010	\$112.48	102.266	8/20/2010	\$107.56	\$11,000	-4.37%
\$11,000	9/13/2010	\$112.58	97.706	6/6/2011	\$130.09	\$12,711	15.55%
\$12,711	7/7/2011	\$135.16	94.041	8/2/2011	\$127.81	\$12,019	-5.44%
\$12,019	10/21/2011	\$123.09	97.647	11/25/2011	\$116.38	\$11,364	-5.45%
\$11,364	12/5/2011	\$126.84	89.594	5/14/2012	\$134.31	\$12,033	5.89%
\$12,033	7/5/2012	\$136.90	87.899	11/1/2012	\$141.65	\$12,451	3.47%
\$12,451	12/11/2012	\$143.06	87.033	6/27/2013	\$161.10	\$14,021	12.61%
<b>Strategy</b>				<b>Beginning Value</b>	<b>Ending Value</b>	<b>Cumulative Return</b>	<b>Annualized Return</b>
<b>Alpha Solutions Rate of Return</b>				<b>\$10,000</b>	<b>\$14,021</b>	<b>40.2%</b>	<b>6.1%</b>
<b>Buy &amp; Hold Rate of Return</b>				<b>\$10,000</b>	<b>\$10,295</b>	<b>3.0%</b>	<b>0.5%</b>

Individual trades shown during full market cycle; a market correction followed by a market recovery as shown in the stock chart above. Market peaked in Oct 2007 then fell to a market low in March 2009 followed with a recovery that had prices pierce through the Oct 2007 price in April of 2010. For completeness illustration ended when current trade trended out on June 27, 2013 instead of when market recovery was complete. Market trades were made on using the SPY ETF. Trades were opening prices; individual trades will differ from opening price. Individuals cannot purchase fractional shares of an ETF

Past performance is no guarantee of future results. Information provided in this report is for educational and illustrative purposes only and should not be construed as individualized investment advice. The investment or strategy discussed may not be suitable for all investors. All investments involve risk and although our rules based investment process utilizes downside risk controls, loss of principal can still occur. Principal values and investments returns are neither guaranteed nor issued by, guaranteed by, or obligations of a bank, savings and loan, or credit union; and are not insured or guaranteed by the FDIC, SIPC, NCUSIF or any other agency.

Current holdings are subject to change at any time without notice. In addition to the normal risk associated with equity investing, investments in small and mid-cap companies exhibit higher volatility and are less readily marketable than investments in larger companies. The S&P 500 Index is an unmanaged group of securities considered to be representative of the stock market in general, and its performance is not reflective of the performance of any specific investment. Investments cannot be made directly into an index.

Calculations do not reflect all fees, charges and expenses that might be incurred over the time frame including program fees, investment advisor fees and administrative fees. Individual performance may vary depending upon the timing of contributions and withdrawals. Historical returns data are calculated using data provided by sources deemed to be reliable, but no representation or warranty, expressed or implied, is made as to their accuracy, completeness or correctness. This information is provided "AS IS" without any warranty of any kind. All historical returns data should be considered hypothetical. All AlphaSolutions rules based managed models have been back tested over multiple market cycles to prove the validity and reliability of the rules based strategy. Historical back tested returns were based on the use of State Street Global Advisors SPY ETFs; different ETFs may differ from the use of the SPY Sector ETFs, past and future returns may be higher or lower.

Additional Definitions: The Compound Annual Growth Rate represents the annualized growth rate of an investment over a specified period of time. The Maximum Drawdown represents the greatest peak to trough decline over the life of an investment. Capture Ratio is a measure of the investment performance in periods when the benchmark has positive/negative returns. It tells you what percentage of the up/down market, as represented by the benchmark return, was captured. Standard Deviation is a statistical measurement of dispersion from an average, which, for an investment, depicts how widely the returns varied over the time period indicated. Alpha is an indication of how much an investment outperforms or underperforms on a risk-adjusted basis relative to its benchmark. Beta is a measure of price variability relative to the market. Sharpe Ratio is a measure of excess reward per unit of volatility.

Advisory Services offered through Harvest Investment Services, LLC, a Registered Investment Advisor.